Matter and Spirit

The Battle of Metaphysics in Modern Western Philosophy before Kant

James Lawler

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This book is dedicated to those who have devoted their lives to achieving a maximum level of clarity and coherence of thought while at the same time expressing, for all our benefit, their highest perspectives on the reality they were living—the true philosophers.

Contents

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Introduction

The Key to the Interpretation of Early Modern Philosophy

In one of his late works, Kant writes that

> *The Critique of Pure Reason* can thus be seen as the genuine apology for Leibniz, even against his partisans whose eulogies scarcely do him any honor; just as it can be for many different past philosophers, to whom many historians of philosophy only attribute mere nonsense. Such historians cannot comprehend the purpose of these philosophers because they neglect the key to the interpretation of all products of pure reason from mere concepts, the critique of reason itself (as the common cause of all these concepts). They are thus incapable of recognizing beyond what the philosophers actually said, what they really meant to say.[1]

Kant here not only links his pivotal work directly to Leibniz, but extends this connection and his "apology" or defense to other philosophers in whom he sees, beneath the words they actually use, a meaning akin to his own.

In what way can it be said that Leibniz's work too centers on a critique of pure reason—if only we look beneath the words he uses to the meaning he is attempting to express? Leibniz, to all intents and purposes, is the arch metaphysician who attempts to deduce a whole system of nature and society from speculative concepts about the ultimate nature of things, the "monads" of his *Monadology*. But by the aid of such speculative construction, Leibniz with great prescience anticipates later evolutionary theory. There is strictly speaking no birth and no death in the animal world, he argues, but only continuous metamorphosis from the simplest animal species to the most complex, and ultimately to the human being. Leibniz insists that his arguments from pure reason

are in complete accord with the data of the modern empirical sciences of inorganic and organic nature:

> I believe, therefore, that if the animal never actually commences in nature, no more does it by natural means come to an end. Not only is there no generation, but also there is no entire destruction or absolute death. These reasonings, carried on *a posteriori*, and drawn from experience, accord perfectly with the principles which I have above deduced *a priori*.[2]

What is essential to Leibniz's thought, as well as to the thought of certain central philosophers of the early modern period before Kant, is that the exercise of "pure reason" be brought into harmony with the procedures and findings of the latest sciences. Such an accord does not take place by the empiricist procedure of describing the world and reflecting on its appearances. It is only when reason takes the lead in its account of the world, by developing its concepts *a priori*, that the arrangement of thought accords with the information that, *a posteriori*, empirical research confirms.

The key to the sciences themselves, and not just to the philosophers, is that the employment of reason must be criticized. For two thousand years pure reason propounded the findings of the Aristotelian philosophy and the sciences of nature and society whose basic tenets Aristotle supposedly established. The refutation of this philosophy and the sciences that sprang from its roots came about abruptly, it might be said, when Galileo pointed a telescope to the heavens and observed that moons orbit the planet Jupiter. And so Jupiter too, and not only the earth, is a kind of planetary center with lesser bodies circling around it. And moreover it is evident that Jupiter is not attached to a crystalline sphere that carries it in orbit around the earth, as the astronomers of Aristotelian lineage proclaimed. And so it might really be the case that all these planets, including the earth, orbit around the sun, as Copernicus argues.

It is this Copernican revolution in science, Kant says in the Preface to his first *Critique*, that instigates that critique of pure reason that is the key to the understanding of the early modern philosophers who, like Leibniz, attempt to bring the constructions of reason into harmony with the findings of the new sciences. If it should seem to follow from the example of Galileo and the moons of Jupiter that all that is needed for scientific truth is to look into the skies, we should remember that for many more than two thousand years, specialists and ordinary people alike looked into the skies and saw the sun, planets, and stars apparently revolving around the earth. From his platform on the earth, Galileo, for all the increased power his telescope gave to his eyes, could observe nothing other than this. When he trained his telescope on one special place, he did so for theoretical reasons, guided by a new framework of thinking. What he directly refuted was a rather tangential aspect of the geocentric view of the universe. It is only within the framework of a large theoretical

construction regarding the solar system as a whole that the particular phenomenon of the moons of Jupiter creates a problem for the ancient astronomy of Aristotle and Ptolemy.

Because of this complexity in which empirical observation and theoretical construction combine into a scientific whole, early modern philosophy divides into two streams of thought, one of which takes the movement of physical matter, in principle observable by sensory means, as the foundation of scientific knowledge, while the other places primacy on the thinking process itself, on reason or spirit. The first stream of thought, that of materialism and empiricism, begins with Hobbes and continues in a complicated way in the evolution of British philosophy where it culminates, in Kant's own time, with the socio-economic science of Adam Smith. The second stream, placing primacy on the thinking subject, or spirit, beings with Descartes' "I think." This continental rationalism, again in a complex manner, evolves through Leibniz and Rousseau. In the occurring battle of metaphysics between matter and spirit there is a complexity and interweaving of influences. Thus Hobbes, the arch-materialist, is criticized as a rationalist by the arch-empiricist Hume. And Newton himself, who insists that he "feigns no hypotheses" and derives his principles entirely from empirical phenomena, regards thoroughgoing mechanistic materialism to be a form of unscientific metaphysics. For the greatest proponent of modern science, empirical science leads ultimately to God, or Spirit.[3]

Kant considered himself to be chiefly a metaphysician. Metaphysics—the philosophical investigation of the ultimate nature of reality—Kant writes in his *Critique of Pure Reason*, "is older than all other sciences, and would survive even if all the rest were swallowed up in the abyss of an all-destroying barbarism. . . ." However, "it has not yet had the good fortune to enter upon the secure path of a science."[4] As a result the battleground of metaphysics has the appearance of "mock-combat,"[5] an exercise in shadow-boxing, a ghostly dance of diverse "dreams of metaphysics."[6] Central to this mock-combat is the battle between materialists and spiritualists, the alternative between the primacy of matter and the primacy of spirit.[7] Kant proposes to raise the level of metaphysics from the phantom battles in which he finds it engaged in the works of his predecessors to the status of a science. What does it mean to raise metaphysics to the level of science? In his *Critique of Pure Reason* Kant suggests that we may have "more success in the task of metaphysics" if we proceed "along the lines of Copernicus' primary hypothesis. Failing of satisfactory progress in explaining the movements of the heavenly bodies on the supposition that they all revolved round the spectator, he [Copernicus] tried whether he might not have better success if he made the spectator to revolve and the stars to remain at rest."[8] This reversal of perspectives is the essence of Kant's so-called critical philosophy. It is a Copernican revolution in metaphysics. But this critique of the traditional conception of the relation between reason and reality is also central to a deeper understanding of Leibniz and other of Kant's early modern predecessors.

Kant therefore provides "the key" to understanding the first stages of modern philosophy.

The central problem of early modern philosophical theories—whether emphasizing matter, as in Hobbes, or spirit, as in Leibniz, or in the dualism of Locke and Descartes—is the comprehension of the significance of modern science, beginning with Copernicus. If there is still something left for Kant to do, it is only because these first efforts at criticizing the traditional conception of the role of pure reason were still insufficiently in tune with the perspective of modern science established by Copernicus. The early modern philosophical trends beginning with Hobbes and Descartes are extended reflections on the nature of modern science and critiques of the kind of reason that had justified the ancient sciences. Kant therefore sees his work as the completion or culmination of this two-sided competition between the proponents of matter and those of spirit to incorporate into the traditional concerns of metaphysics the revolutionary change of perspective implicit in modern science.

What Is "Modern"?

Consequently, the *modern* character of this philosophy must be highlighted and explained. To do this, in the historical logic of ideas, is to situate the rise of modern philosophy in relation to its philosophical predecessors. The early modern philosophers were acutely aware of the problems of modernity due to their problematic relation to the pre-modern philosophies of Greek and Roman antiquity and the scholasticism of the European Middle Ages. To understand or comprehend the modernity of modern philosophy, it is necessary to compare it with the preceding philosophy of earlier times. Because of its influence on medieval scholastic philosophy and theology, the philosophy of Aristotle plays a central role in this book's presentation as a point of comparison for grasping the specificity of the modern era.

The central characteristic for identifying this philosophical modernity is the acceptance of modern science as central for philosophical reflection. This science involves astronomy, starting with Copernicus, and physics, starting with Galileo—but also the social sciences. The most prominent social scientific theory at the time of Kant's critical works was the economic science of Adam Smith. An understanding of Smith's economic theory is central to Kant's ethics, since Smith's vision of an autonomous market society is explicitly challenged in the third—the most comprehensive—formulation of the Categorical Imperative. Kant's challenge to Adam Smith's vision of society continues in the path of the alternative "spirit-oriented" predecessors, particularly Descartes, Leibniz, and Rousseau.

For these reasons, it is necessary to preface a study of Kant, as well as post-Kantian philosophers, with a study of the transformation of philosophy in

modern times that stems from the modern revolution of science. We should have a broad understanding of the empiricist-materialist trend that dominated in England and the rationalist-idealist or spiritualist trend predominating in France and Germany. This is the subject of this volume: to show, first, the evolution of the mechanistic or materialist or naturalistic worldview in the thought of Hobbes and Hume, and in the social science of Adam Smith, and then the idealist/spiritualist trend that begins with Descartes and continues through Kant's great predecessors, Leibniz and Rousseau. Both trends attempt to compromise with the other, as Locke defends the spiritual nature and autonomy of individual reason on empirical grounds, and Descartes seeks to establish a mechanistic conception of the natural world that nevertheless supports the free human individual.[9]

The intention of "modern" philosophy to bring philosophy up to the level of modern science by no means implies that philosophy necessarily acquiesces in or imitates the sciences. Understanding what it means to make philosophy scientific depends on what is understood by science itself—that is, it depends on the metaphysics of science. There is the subject side of science—the thinking process of the scientist—and the object side, the results of that thinking in one particular area or another. The battle of metaphysics in its classical period before Kant consists precisely in the struggle between those who would bring forward the power of the thinking human spirit as the foundation of science—the advocates of "spiritualism"—and those who seek to explain human consciousness from the objective physical and social world—the advocates of "materialism."

The Social Orientation of the Two Trends

Fascinated by the accomplishment of the first science of motion in unveiling a vast mechanism of nature, Hobbes thinks it necessary to subordinate human consciousness to that mechanism. The result is a vision of human society as consisting of a multiplicity of individuals each of whom focuses competitively on individual material fulfillment and nevertheless subordinates himself or herself to the immensely greater power of the totality, which for Hobbes eventually takes the form of the Leviathan State. Culminating this line of thought, Adam Smith subordinates the political superstructure to the economic infrastructure. He argues that the totality of matter-focused, self-interested individuals gives rise to a largely benevolent global market, producing a swelling ocean of goods that raises, if not all boats, at least a growing percentage of the individual efforts that contribute to it.

Bringing to the forefront the free human spirit as the foundation of science, Descartes attempts to show how the vast mechanism of nature that science uncovers, including the natural forces of the human being, can become

the instrumentality of enlightened, scientifically instructed human purposes. If the free human spirit is the foundation of science, to serve the perfection of that spirit is the goal of scientific achievements. Separated from one another in physical terms, human beings are potentially united on the spiritual level of intellectual and moral communication. Descartes sketches an alternative vision of a consciously cooperative human community, mastering the forces of nature, life, and mind, thanks to the individual's spiritual need to share the secrets of the universe that the light of human consciousness progressively reveals.

The spiritualist metaphysics of Descartes, Leibniz, and Rousseau grounds an alternative vision of social life in which spirit-based cooperation replaces the competition of separate individuals over the accumulation of property. This theme is radicalized in the writings of Rousseau, who rejects complacent acquiescence in the progress of science and technology as automatically accompanied by moral and humanistic advance. If both Smith and Leibniz, from opposite metaphysical positions, pronounce the modern European world the best of all possible worlds, Rousseau denounces the moral degeneration of a world whose vaunted rationality is rather a "grotesque contrast of passion which thinks it reasons and an understanding in a state of delirium."[10] Although Rousseau is sometimes described as an anti-modernist Romantic, this citation indicates that his critique is not aimed at reason *per se*, but at the subordination of reason to egotistic desires, which he considers to be the characteristic feature of modern European civilization. Reason connected to the spiritual "heart" or "soul" that unites humanity can have an altogether different societal outcome from the reigning modality that subordinates reason to the individual's selfish pursuit of those material interests that inevitably divide us. Thus Kant sees Rousseau as the founder of a radically new science, the equivalent for the human sciences of Newton's discoveries for the science of physical matter.[11]

Did Kant Break from the Past?

Some might argue that the Kantian break with early modern philosophy was so fundamental that a serious consideration of these writers is not important for an understanding of Kant and subsequent post-Kantian thought. From this perspective the whole thrust of Kant's "mature" philosophy consists in his breaking away from the metaphysical speculations of his early "pre-critical" period, rooted in the outmoded quarrels of the early modern philosophers. The meaning of the *Critique of Pure Reason* is sometimes supposed to be a radical rejection of substantive issues regarding the nature of reality—that is, a rejection of traditional metaphysics—and their replacement by a radically new concern with the subjective categories of thought and problems of the theory of knowledge.[12]

From this standpoint the pre-Kantian philosophers seem to present only an historical interest for an understanding of the radically new departure that begins with Kant.

It might then seem that nothing is more remote from Kant's "critical" point of view than Leibniz's rationalist deductions on the inner nature of the "monads" as the ultimate building blocks of the world, and his ideas about God's wisdom in establishing a "pre-established harmony" connecting the actions of human beings among themselves and with the natural environment in such a way as to constitute "the best of all possible worlds." What can any of this have to do with the "mature" idea of Kant that "transcendent" reality "in itself" is unknowable, and that all we can really know are the subjective ideas we find in our own heads, which provide the "transcendental" background to our knowledge of the world?

However, the philosopher who supposedly puts an end to metaphysical speculations on the nature of God's plan for this world, and even to the question of whether anything like God exists, also describes God as "the inner vital spirit of man in the world," and writes that "If this concept [of God] were not postulated as spirit of the universe there would be no transcendental philosophy."[13] The essential feature of Kant's transcendentalism is that subjective categories of knowledge structure our *experience* of reality, but not reality in itself, not that which is truly transcendent of our limited experience and the sciences that build upon it. This transcendent reality includes not only God, but human freedom itself. Transcendental philosophy, no less than the sciences that it grounds, depends on the possibility and assumption of the spiritual independence of our consciousness from deterministic processes that characterize the phenomenal, so-called material world. This postulate of spiritual independence is a requirement of the Copernican revolution in science, which depends on the freedom of the mind to liberate itself from the standpoint of a passive observer whose basic ideas are allegedly founded on impressions deterministically imparted from the outside world.

Beyond the categories of knowledge within which science operates is a reality that cannot be scientifically "known" but may, indeed must, be the object of "thought." Beyond scientific knowledge, therefore, there is a kind of "thinking" that is not scientific, but is essential to understanding science itself.[14] The whole of the post-Kantian continental metaphysical evolution from Fichte, Schelling, and Hegel to Martin Heidegger and Jean-Paul Sartre springs from this idea of a kind of thinking that is not reducible to the forms of ordinary scientific thought. In this way, Kant rescues his predecessors in the spiritualist tradition from the illusory blows of the deterministic materialists. Unless Kant remains somehow a metaphysician in the traditional sense, concerned with the reality that transcends the limits of scientific knowledge, this whole post-Kantian evolution implausibly appears to be a rejection of and regression from the thought of Kant.

In his own philosophical evolution, Kant was first of all a student of Leibniz. It could also be said that Kant always remained a student of Leibniz, so that he writes that "The *Critique of Pure Reason* can thus be seen as the genuine apology for Leibniz, even against his partisans whose eulogies scarcely do him any honor. . . ."[15] This remark suggests that Kant's "critical" philosophy by no means consists in some totally new approach that leaves his predecessors completely behind him. In principle, there can be no truly critical philosophy without beginning with the philosophy that is criticized. Criticism does not necessarily mean rejection. It can also be a reinterpretation and transformation, which preserves and justifies in a new way the core ideas of a previous position.

Kant leaves no doubt that in the debate between materialism and spiritualism: he stands on the side of spiritualism. "Why do we have to resort to a doctrine of the soul founded exclusively on pure principles of reason?" he asks in the first *Critique*. "Beyond all doubt, chiefly in order to secure our thinking self against the danger of materialism. This is achieved by means of the pure concept of our thinking self which we have just given."[16] In his critical, antidogmatic way, Kant returns to Descartes' famous starting point, the thinking mind conceived of as independent of matter—but not of being. For Descartes, "I think" is followed by "I am," which leads to his meditation on the nature of being and time. Linked to the radical novelty of present being, independent of past conditioning, thinking is free to overthrow all apparent knowledge based on the standpoint of the passive observer that underlies pre-Copernican science.

The objective of Kant's defense of the concept of transcendent spirit is not only the critical defense of the principles of traditional Christian spirituality. The free spirit of the thinking person, according to the spiritualist, "continental" trend in early modern philosophy that Kant critically continues, is the indispensable foundation of modern science. If the combat of matter and spirit is a mock-combat, the reason is that the blows delivered by the determinists presuppose the very freedom of thought that they attempt to annihilate.

Postmodern and New Age Critiques

This book about the first stages of modern philosophy therefore offers background not just for Kant, but for all developments of "post-modern" thought. It provides us with the identity of "modern" philosophy: philosophy that attempts to incorporate the results of the early modern sciences and the scientific spirit into the diverse aspects of human life. The full intellectual history of this effort shows that such an enterprise by no means requires a rejection of spirituality. Materialism is only one possibility, and perhaps the less fruitful one. Our own twenty-first century metaphysical contest between materialist "Western" civilization and fundamentalist advocates of a return to traditional

religion fails to come to terms with this middle position, which is as much about the transformation of traditional religion as it is about the critique of materialism. Thus Rousseau's defense of a scientifically based spiritual core of all religions, which he calls the religion of nature, comes with one major caveat: "The duty to follow and love the religion of one's country does not extend to dogmas contrary to good morals, such as that of intolerance. It is this horrible dogma which arms men against one another and makes them all enemies of mankind."[17]

If a major current of contemporary philosophy is self-consciously "postmodern," this perhaps means that unlike "modern philosophy" the contemporary postmodernist no longer takes the spirit and achievements of modern science as a serious matter for philosophical reflection. No doubt Anglo-American linguistic and analytic philosophies, continuing the spirit of Humean empiricism, also take this position. It seems however that the task of incorporating the achievements of science is more than ever required of philosophy. The immense expansion and transformation of the sciences in the twentieth century have no doubt substantially altered the scientific context of philosophy. But the new, often bewildering, developments of twentieth and post-twentieth-century science do not arise on the basis of a radical rejection of the early science of Copernicus, Galileo, and Newton. Einstein writes that the true beginning of physics is to be found with Galileo. The whole development of physics through relativity theory and quantum mechanics, he shows in his book on *The Evolution of Physics*, is a step-by-step process that can be understood starting from Galileo's simple reasoning about inertial movement: "The discovery and use of scientific reasoning by Galileo was one of the most important achievements in the history of human thought, and marks the real beginning of physics. This discovery taught us that intuitive conclusions based on immediate observation are not always to be trusted, for they sometimes lead to the wrong clues."[18] In saying this, Einstein simply repeats the basic "rationalist" methodological ideas from Descartes to Kant, who therefore remain vital thinkers for the crucial tasks of the present moment.

The emergence of a popular current of nonsectarian spirituality in contemporary "New Age" writings finds scientific support in the indeterminism of quantum mechanics and the space-time and matter-energy relativism of Einstein. James Redfield writes: "Einstein's work was like the opening of Pandora's box. The paradigm shifted away from the concept of a mechanistic universe, and the stream of new discoveries began to prove just how mysterious the universe is."[19] Redfield sees this shift as breaking from the philosophical paradigm established by Descartes: "Cartesian dualism and Newtonian physics established a philosophical position that was quickly embraced as the reigning worldview for the modern age. . . . If pressed, scientists would refer to a deistic notion of God, a deity that first pushed the universe into operation, leaving it ever afterward to operate totally by mechanistic means."[20]

Redfield's summary unwittingly reflects what might be called the expropriation of one trend in modern philosophy by another. The dominance of the mechanistic worldview has concealed a sophisticated alternative to the mechanist outlook that took shape at the very beginning of the modern period with the work of Descartes. In the twentieth century the apparent triumph of the mechanistic materialist philosophy lost its alleged scientific underpinnings. Mechanism retains its plausibility, however, thanks to the continued expansion of its socio-economic extension: the apparent mechanism of the global market. The new trend for nonsectarian spirituality will be all the stronger for reappropriating the authentic spiritual heritage found in modern Western philosophy. Despite legends to the contrary, the Cartesian direction in modern philosophy provides from the very start an anti-mechanistic philosophical standpoint. After laying out the antithesis of spirituality and materiality, Descartes argues that the apparent mechanism of the universe can become subservient to the radical freedom of the human spirit. Subordinating matter to spirit, Descartes should not really be classified as a dualist. Scientific thinking, Descartes argues, must be linked to the transcendent originality of present being detached from conditioning by the past and sustained in the here and now by self-subsistent Being, which is Descartes' basic definition of God. Otherwise the mind is subject to the illusions of perceptual appearances of the surrounding environment, both natural and social, in which everything, from the sun and the stars to the market place, acquires the status of independent and separate realities. "Scientific reasoning," as Einstein rephrases Descartes' thought, teaches us "that intuitive conclusions based on immediate observation" cannot provide a firm foundation for knowledge.

Underneath the various forms of "I think" there must be the unifying sense of "I am," on which is based the recognition that in my present being I am free from the conditioning of the past. This past conditioning includes traditional hierarchical social systems, whether feudalist or capitalist. In the tradition of Descartes, the spirit-based mind at the core of the scientific revolution is free to create a radically new world, to usher in a New Age based on the equality of human "*bon sens.*"[21] The individual of good sense is the premise of all real science. She is also the source of a new social order that will be radically different from the mechanistic order of competition for wealth, leading to material and spiritual inequality, that has predominated until now.

Part One

The Matter-Based Philosophy of the British Tradition

Chapter One

Hobbes on Morality and the Modern Science of Motion

The Contrastive Background

In his *Critique of Practical Reason*, Immanuel Kant (1724–1804) writes that "[N]o one would dare introduce freedom in science had not the moral law and, with it, practical reason come and forced this concept upon us."[1] Morality, Kant writes, is intimately linked to the assumption that human beings have free will, for the simple reason that without freedom of choice we would not be responsible for our lives. And yet Kant must "dare" to assert such freedom in opposition to science. To understand the linkage between morality and freedom, it is first necessary, therefore, to understand why science appears so dauntingly to deny the freedom that, Kant thinks, is a fundamental condition of moral responsibility.

To appreciate the difficulty that Kant faces in defending a morality of freedom and responsibility we have to consider seriously the intellectual context in which he writes. In general, major scientific and philosophical developments take place by overcoming a prevailing set of assumptions. To fully understand or appreciate the new development, it is necessary to understand the previous paradigm that it replaces. We can call this intellectual context which Kant is opposing the classical Enlightenment. Enlightenment philosophy as a whole is based on the requirement that our thinking about life in general be in accord with modern science. Kant aligns himself with such Enlightenment, but only after subjecting some of the central ideas of earlier, "classical" Enlightenment thought to his "critique." Kant's three "Critiques" address the major conceptions of the classical Enlightenment and subject them to criticism and reinterpretation. The result is the new paradigm of Kant's "critical Enlightenment" philosophy.

To fully appreciate Kant's critical Enlightenment conception of freedom, therefore, we have to sketch certain main lines of classical Enlightenment thought. This takes us back to the revolution in science associated with Copernicus's revolution in astronomy and Galileo's revolution in physics, and

then to Newton's grand synthesis of physics and astronomy. When Kant calls his own philosophical project a Copernican revolution in philosophy, he aligns his thought with the major scientific developments of the modern era, developments that gave rise to the general philosophical trend of scientific philosophy called the Enlightenment. At the same time, in describing his own philosophy as producing a new revolution in philosophy "along the lines of Copernicus' primary hypothesis,"[2] he implies that classical Enlightenment philosophers before him had not adequately understood the deep, underlying significance of the modern developments in science. For Kant, therefore, the classical Enlightenment philosophy is not fully enlightened, not fully appreciative of the revolutionary implications of modern science. So when Kant dares to introduce freedom in the face of the prevailing deterministic conception of science characteristic of the classical Enlightenment, he does so in the name of a more adequate understanding of the nature of modern science itself, and one that will be able to accommodate the concept of free will. However, before we can appreciate Kant's accomplishment, we must go back to the classical Enlightenment and understand its complex development.

But this is not the end of our regression. Since the advance of ideas proceeds by contrasting them with other ideas, we will not be able to appreciate adequately the meaning of the modern revolution in science without some general appreciation of the conception of the world that preceded that revolution. The medieval conception of the world that was challenged by the scientific revolution inaugurated by Copernicus and Galileo was dominated primarily by the thought of Aristotle. This was true not only for its conception of the natural world, but also for its understanding of the nature of society, as well as its theory of knowledge and of scientific methodology. To understand the nature of the modern scientific revolution, we have to go back to the ancient philosophy of the Greeks, the beginnings of philosophy in the Western tradition. No doubt, here too there has to be a contrast—to the prephilosophical outlook of earlier times. But for this work we will be content with contrasting the modern scientific framework, as this is expressed in the ideas of the classical Enlightenment, with the ancient cosmology and sociology, as well as philosophical conceptions of knowledge and reality, of Plato and especially of Aristotle.

Reflective philosophical thought requires a critical reworking of ideas that come to us from the past. This philosophical engagement with the history of philosophy is not a matter of abstract historical curiosity. It is of vital significance for understanding the issues of our own time. Since each philosophical development contrasts with a previous position, and so requires that we understand this previous position, the past remains present in a fundamental way. In developing his theory of morality, Kant does not simply break away from his predecessors—whether the early modern philosophers of the classical Enlightenment or the philosophers of ancient Greece. He shows how these previous ideas continue to

reflect aspects of living experience. Our reflection in this book on central ideas of "classical Enlightenment" thinkers, in their contrast with the ancient philosophy of Plato and Aristotle, will therefore serve as a crucial intellectual foundation for understanding later philosophical developments, starting with Kant's theory of the revolutionary implications of moral experience for a deeper understanding of the nature of modern science. Here we only note the later concerns of Kant to orient our investigation of the classical Enlightenment thinkers discussed in this book.

Determinism and the Illusion of Freedom

Kant writes of *daring* to introduce the concept of freedom into science itself. This implies that for Kant the prevailing, classical conception of modern science in his intellectual context primarily insists on necessity as opposed to freedom—necessity alone, and *not* freedom. It is above all Thomas Hobbes (1588–1679) who presents a clear, powerfully argued, and eloquent presentation of the classical conception of the incompatibility of modern science with the traditional conception of free will. Based on the findings of the new sciences, Hobbes forcefully argues that there is no such thing as "free will," and that the entire reality of our experience is determined by the causal laws of the new sciences, starting with the new physics of Galileo. Hobbes contrasts the nature of the real world, conceived of as governed by deterministic laws, with an illusory concept of freedom from such laws. Hobbes therefore paradigmatically represents the conception of science against which Kant "dares" to assert the reality of human freedom.

At the beginning of the modern era, Hobbes engaged in a debate over the traditional Christian idea of free will with the Bishop of Derry, Dr. Bramhall. In reply to the arguments of the Bishop that were based on the teachings of the scholastic philosophers who reconcile Aristotle with Christianity, Hobbes simply points to the modern science of motion, formulated by Galileo Galilee:

> [W]hen a man doth any thing freely, there be many other agents immediate, that concur to the effect he intendeth, which work not freely, but necessarily; as when the man moves the sword freely, the sword woundeth necessarily, nor can suspend or deny its concurrence; and consequently if the man move not himself, the man cannot deny his concurrence. To which he cannot reply unless he say a man originally can move himself; for which he will be able to find no authority of any that have but tasted of the knowledge of motion.[3]

When anyone is engaged in so-called free actions, we recognize that such actions are impossible unless there are instruments that operate in strict necessity. If I

decide to kill someone with a sword, my body must follow orders from my will as I plunge the sword into my enemy. The sword itself operates necessarily according to its make-up and according to the force of the motion transferred to it by my arm. Thus for any purposeful action to succeed, a chain of causes must "concur" in producing the intended effect. Should the individual's will be the only exception? Doesn't it too "concur" with other causes that produce the will to kill? Is that will something that is uncaused? If so, such a freely acting, uncaused will would violate the fundamental law of physics. No one who has "tasted of the knowledge of motion"—that is, who understands the simple principles of modern physics—can believe that the will alone is an exception to the universal law of motion.

Hobbes formulates the law of inertial motion discovered by Galileo: "When a body is once in motion, it moveth (unless something else hinder it) eternally. . . ."[4] This conception of motion was later given its classical formulation by Newton as the first law of motion: "Every body continues in its state of rest, or of uniform motion in a right line, unless it is compelled to change that state by forces impressed upon it."[5] According to this law, an object remains at rest, or in motion in a straight line, until or unless the force of another object coming in contact with it causes it to change its motion in some way. The same law applies to the body that caused the change or effect. The object which produces the change in motion has received its motion from a third object, and so on in a continuous chain of causes, until one reaches a First Cause, commonly called God, Who creates motion in the first place:

> Curiosity, or love of the knowledge of causes, draws a man from consideration of the effect to seek the cause; and again, the cause of that cause; till of necessity he must come to this thought at last, that there is some cause whereof there is no former cause, but is eternal; which is it men call *God*. . . . though they cannot have any idea of Him in their mind answerable to His nature.[6]

With the exception of the First Cause, which we call God, no ordinary material body, according to the law of inertia, can move itself. The concept of free will, on the other hand, asserts that human beings have the capacity to initiate physical motions of their own that do not depend on prior physical motions. Once one has tasted the elegant beauty and explanatory power of the science of motion, Hobbes simply affirms, one has to reject this traditional concept of free will.

The universe consists entirely of entities of various magnitudes occupying space, that is, bodies, which are at rest or in motion through the action of and reaction to other bodies. In addition to the law of inertia, Hobbes formulates a law of action and reaction: "All resistance is endeavor opposite to another endeavor, that is to say, reaction."[7] Not all motion is observable; hence Hobbes uses the term "endeavor" to describe motions that that are smaller than can be calculated with ordinary numbers, such as the motion that we must conceive of as taking place through the smallest possible physical point in space.[8]

Human thought is no exception to the laws of physics. The conception of infinitesimal motions or endeavor allows us to understand the physicality of human thought and "spirit." Hobbes defines spirit as "a thin, fluid, transparent, invisible body."[9] Thought takes place in miniscule portions of the brain beyond our capacity to observe and measure by ordinary means. What is called spirit or mind is no immaterial substance but a subtle, fluid form of body, which like every other finite body operates according to the basic laws of physics.

Nothing exists, therefore, except bodies, as Hobbes writes in *Leviathan*:

> The world (I mean not the earth only, that denominates [in Scripture] the lovers of it "worldly men," but the *universe*, that is, the whole mass of all things that are) is corporeal, that is to say, body; and hath the dimensions of magnitude, namely, length, breadth, and depth: also every part of body is likewise body, and hath the like dimensions; and consequently every part of the universe is body, and that which is not body is no part of the universe: and because the universe is all, that which is no part of it is nothing, and consequently nowhere. Nor does it follow from hence that spirits are nothing: for they have dimensions and are therefore really bodies; though that name in common speech be given to such bodies only as are visible or palpable; that is, that have some degree of opacity: but for spirits, they call them *incorporeal*, which is a name of more honour, and may therefore with more piety be attributed to God Himself; in whom we consider not what attribute expresseth best His nature, which is incomprehensible, but what best expresseth our desire to honour Him.[10]

Scientific Knowledge of Finite Reality and Infinite Spirit

Hobbes here affirms that the determinism of scientific thought culminates in mystery. We know some phenomenon only when we know the totality of causes that both necessarily lead to its production and are by themselves sufficient to produce that effect. We have knowledge only when we can say that given such and such causes, the effect necessarily follows. In scientific analysis, when we proceed from effect to (probable) cause, it is necessary to suppose a complete chain, or system of chains, of causes. If knowledge consists in tracing definite physical phenomena to their causes, there cannot be an infinite regress of such causes. No scientific analysis can trace the regress of causes endlessly, or comprehend how such a regress is possible. Without a "first link" to unify the various chains of causes that lead to any effect, no effect would be produced with absolute or complete necessity. One chain of causes depends on another, which depends on another, and unless these various chains are regarded as connected to each other

in a totality of causes, no particular effect would be strictly necessary. Thus while modern physics must reject the idea of free will in human beings, Hobbes tells Bishop Bramhall that without God as the "first link" to unite the various chains of causes, the necessity of scientific law would not be conceivable:

> Nor does *the concourse of all causes* make one simple *chain* or concatenation, but an innumerable number of chains, joined together, not in all parts, but in the first link God Almighty; and consequently the whole cause of an event, doth not always depend on one single chain, but on many together.[11]

The idea of a First Cause in which all regress stops is therefore inevitably posed to the scientific mind, and in this way science itself points to the incomprehensible, which in religion we call God. Philosophically speaking, God is understood to be a being that initiates the original motions and the laws or regularities that govern them. But all we can then say about God is that He/She/It exists. "For there is but one name to signify our conception of His nature, and that is I AM."[12] To go beyond this, and pretend to examine the inner nature of God as the Scholastics do, is to indulge in empty word games with no rational meaning. Thus to say that God is an incorporeal substance, which is what "spirit" is usually taken to mean, is either a term of honor and religious devotion—as Hobbes says in the previous citation—or an absurdity, if it is understood strictly. While religious piety and feeling should be allowed certain honorific expressions in the face of the conceptually incomprehensible, philosophers should never pretend—as do the scholastics—that in using unintelligible terms they are saying something meaningful:

> And words whereby we conceive nothing but the sound are those we call *absurd, insignificant* [meaningless] and *nonsense.* And therefore if a man should talk to me of a *round quadrangle;* or *accidents of bread in cheese; . . .* or *immaterial substances;* or of a *free subject; a free will;* or any *free* but free from being hindered by opposition; I should not say he were in an error, but that his words were without meaning, that is to say, absurd.[13]

Thus to speak of spirit as immaterial substance is just as absurd as to speak of free will, because nothing can be conceived by such combinations of words. But what does that make of God, whose existence is implied at the limits of science itself? Hobbes writes that the only beings we can imagine are finite, limited, or bounded bodies, for all our knowledge begins in ordinary sensation, and we can only have sensations of bodies in determinate places, with definite sizes and shapes, and with divisible parts. When the scholastic philosophers, generally exponents of Aristotle, speak of God as "all in this place and all in another place at the same time," such expressions are nothing but "absurd

speeches, taken upon credit, without any signification at all, from deceived philosophers and deceived, or deceiving, Schoolmen."[14]

But this does not prevent Hobbes from forming a kind of anti-concept of God as an infinite being beyond all the limits to which the sense-bound human mind is confined. We can have no real conception of infinite magnitude, infinite time, etc. So when we follow the chain of causes to a first cause, we say that God is infinite, meaning beyond the finite effects that we can comprehend by finding their causes. In this we are acknowledging our inability to comprehend what goes beyond all finite, imaginable, and conceivable reality. We are not saying that the being we are referring to does not exist, nor are we saying something absurd. We are acknowledging the limits of our own ability to conceive of this reality and paying respect to the unlimited source of the beings of our experience. Hobbes, the thoroughgoing materialist, is therefore not an atheist: "the name of *God* is used, not to make us conceive Him (for He is incomprehensible, and His greatness and power are inconceivable), but that we may honor Him."[15]

Despite his use of "negative theology," Hobbes offers a positive conception of the nature of God consistent with his materialism. In his debate with Bishop Bramhall, Hobbes defines God as "one, pure, simple and eternal corporeal spirit."[16] Hobbes does not define spirit in the traditional scholastic-Aristotelian sense as the opposite of matter, as something immaterial. Except when taken as an expression of religious piety or of the incomprehensibility of God to scientific, conceptual thought, the notion in itself of an immaterial substance is absurd or logically contradictory, since by substance we inevitably imagine an entity in some place and time, that is, a body. And besides, there is nothing in the Bible that requires that we conceive of God as incorporeal—Hobbes asserts with the confidence of a master of scriptural references:

> We who are Christians acknowledge that there be angels good and evil; and that they are spirits, and that the soul of man is a spirit; and that these spirits are immortal. But, to know it, that is to say, to have natural evidence of the same: it is impossible. For all evidence is conception . . . and all conception is imagination and proceedeth from sense. . . . And spirits we suppose to be those substances which work not upon the sense, and therefore are not conceptible. But though the Scripture acknowledge spirits, yet doth it nowhere say, that they are incorporeal, meaning thereby, without dimensions and quantity; nor, I think is that word incorporeal at all in the Bible; but it is said of the spirit, that it abideth in men; sometime that it dwelleth in them, sometimes that it cometh on them, that it descendeth, and cometh and goeth; and that spirits are angels, that is to say messengers: all which words do consignify locality; and locality is dimension; and whatsoever hath dimension is body, be it never so subtile. To me therefore it seemeth, that the Scripture favoreth them more, who hold angels and spirits for corporeal, than them that hold the contrary.[17]

In other words, while we must admit that God is incomprehensible, let us not attribute to God inherently meaningless terms such as that of being an incorporeal substance. As the only reality we know or could possibly know are bodies, let us conceive of God as a body, though an infinitely great and infinitely subtle one, beyond all that we can imagine and so conceive. Scriptural references and philosophical argument therefore give Hobbes confidence that, like the material beings of our experience, God, the source of the material beings, is likewise a physical being. As a corporeal being, God possesses magnitude or physical extension. As an infinite corporeal substance, God is a being that extends beyond all imaginable bounds of the universe as observed in sense experience. As a simple being, God is everywhere the same—not composed of differentiated parts as are ordinary finite beings. Although the causal argument for God's existence leads back in time to a First Cause at the beginning of the universe, the concept of God that Hobbes derives from this argument is not that of a remote being located in the past—the remote, indifferent God of deism. To locate something at a definite time in the past is to conceive of it as a finite, "conceptible" object. But God is beyond temporal location, eternal. Hobbes' physical, but subtle, invisible, all-embracing and all-transcending God is something like the "ground" of all finite reality. The idea of God as the "ground of Being" is elaborated by twentieth-century theologian, Paul Tillich. Hobbes would at least have been happy with the physicality of the term "ground."

God's original creative action in imparting motion to material bodies incapable of moving themselves is the kind of exception to the rule that sets up the rule to begin with. It goes against the very notion of God to ask the question: What, in turn, caused God to create the universe? This idea corresponds to traditional notions in Christian theology that God "transcends" the universe. Hobbes accepts this transcendence in the sense that he argues that Christian revelation, which is focused on the idea that God has become a human being in the form of Jesus Christ, transcends what we can know through scientific method, and yet fills in some of the mystery that science must recognize at the ground of existence. However, in arguing on philosophical grounds that God is not an immaterial spirit, but a material or bodily being, Hobbes breaks with an orthodox theology which holds that there is a radical difference between matter and spirit, as well as between God, as infinite immaterial spirit, and the material universe that God has created.[18]

The Leopold and Loeb Murder Trial

Kant claims that it is the experience of morality that emboldens us to question the apparently fundamental assumption of modern scientific thought that everything (ordinary finite objects, including the actions of human beings) can

be explained by causal laws. If *all* motions are governed by a chain of causes, then these causes must determine whether or not, for example, someone kills someone else. Killing requires physical motion, the motion of plunging the knife or pulling the trigger, the action of the blade or bullet on soft human tissue. Basic laws of physics are supposed to explain such motions by prior motions, going back to the creation of the physical universe.

But if Hobbes is willing to make one exception to the laws of motion, for the creation of those laws in the first place, he is unwilling to make an exception for the will of individual human beings. If the human will were truly free or uncaused, then every action whose origin stems from such free human choice would be like God's initial creation of the universe. The laws of physics would then be broken, not just once, in the origin of the universe—if the procedure for the establishment of the laws can be called an exception to them—but millions and billions of times in the ordinary everyday actions of human beings.

After God begins the course of worldly events in creation—after the clock of the universe, so to speak, gets first wound up—there should be no other exceptions to the basic rule of causal determinism. To suppose that an ordinary human being has the capacity to choose whether or not to pull the trigger or swing the sword, for example, is to suppose that ordinary human beings are like God, capable of initiating chains of events, capable of acting creatively. If human beings acted from free will, physical motions would occur whose cause would not be other physical motions. But according to the new science, no body can move unless another body acts upon it by physical contact. Were there such a thing as a "free will," such a conception would introduce a tremendous number of exceptions to the basic laws of physical motion. So Hobbes concludes that the concept of "free will" must be incompatible with the general outlook of modern science.[19]

This conception of science continues to have force into recent times. In the early twentieth century, Hobbes's conception of scientific determinism was defended by Clarence Darrow in the 1924 murder trial of Leopold and Loeb, two young men who committed a seemingly purposeless murder. In defending the killers, Leopold and Loeb, Darrow defends that classical Enlightenment, scientific approach of Hobbes. He doesn't argue that the defendants were innocent of the accusation. He doesn't argue that they were not responsible for what they did because of insanity or other extenuating circumstances. He argues, more radically, that no one is really "responsible" for anything, if by this term one implies that we do something "of our own free will." That this must be so, Darrow argues, is clear to anyone with the least understanding of what is involved in the scientific outlook. Consider some of the general causes that produced Richard Loeb, the eighteen-year-old who was the leader of the two. In 1914, at the beginning of World War I, he was eight years old. Darrow recalls the daily events as widely reported at that time:

> We read of killing one hundred thousand men in a day. We read about it and rejoiced in it—if it was the other fellows who were killed. We were fed on flesh and drank blood. Even down to the prattling babe. I need not tell your honor this, because you know; I need not tell you how many upright, honorable young boys have come into this court charged with murder, some saved and some sent to their death, boys who fought in this war and learned to place a cheap value on human life. You know it and I know it. These boys were brought up in it. The tales of death were in their homes, their playgrounds, their schools; they were in the newspapers that they read; it was a part of the common frenzy—what was a life? It was nothing. It was the least sacred thing in existence and these boys were trained to this cruelty.
>
> It will take fifty years to wipe it out of the human heart, if ever. I know this, that after the Civil War in 1865, crimes of this sort increased marvelously.[20]

However psychologically callused by such incessant denigration of human life, not everyone raised in the climate of World War I became a cold-blooded killer. Darrow supposes that there must have been something "missing" in the formation of Loeb's personality to explain the brutal crime:

> Is Dickey Loeb to blame because out of the infinite forces that conspired to form him, the infinite forces that were at work producing him ages before he was born, that because out of these infinite combinations he was born without it? If he is, then there should be a new definition for justice. Is he to blame for what he did not have and never had? Is he to blame that his machine is imperfect? Who is to blame? I do not know. I have never in my life been interested so much in fixing blame as I have in relieving people from blame. I am not wise enough to fix it. I know that somewhere in the past that entered into him something missed. It may be defective nerves. It may be a defective heart or liver. It may be defective endocrine glands. I know it is something. I know that nothing happens in this world without a cause.[21]

"I know that nothing happens in this world without a cause." This is essentially the same argument that Hobbes made three hundred years previously. No social scientist, no scientific psychologist, would accept as an explanation for the killing committed by Leopold and Loeb the notion that they did it "of their own free will." The scientific psychologist or the scientific sociologist would want to know about the *causes* that led to the act. How were these young men treated by their parents? What sort of education did these young men have? What kind of social milieu affected them? Perhaps there were certain biological

causes at work, or the absence or defect of some part of the organism or the genetic makeup that rendered them relatively insensitive to ordinary feelings of sympathy or empathy.

According to Hobbes and Darrow, scientists regard such killing as the convergent effect of all sorts of causes—an infinite number going back to the beginning of things. They think of social and psychological causes as complicated physical motions in conformity with the Newtonian laws of mechanics. To assert that Leopold and Loeb *themselves* were "responsible" for their action is to imply that they could have acted otherwise, despite all such causes. To assert that they acted the way they did out of their own "free will" is to regard them essentially as "uncaused causes" like God. This notion is contrary to the basic idea of science, with its fundamental "law of causality."

Darrow does not argue that Leopold and Loeb should not be imprisoned. Society needs to protect itself from individuals who threaten it. Society needs to issue punishments to intimidate others from committing similar crimes. But such a system of punishment does not have to suppose that individuals act freely. It does not have to suppose that they are "responsible" for what they did in the sense that they "freely chose" to do it. It does not have to cast blame.

Punishment, as a method of training or of social control, does not require any belief in free will. Young dogs are "punished" for biting their owners in order to prevent such actions in the future. There is no need to suppose that the dog acts out of free will. Such an assumption is actually harmful to the training process. The idea that the dog bites its master "of its own free will" suggests that the dog has freely adopted some sort of evil intention contrary to what it knows to be good. It is much healthier for the trainer to think of the unwanted action either as a natural one that needs to be counteracted, or as the effect of past conditioning that needs to be reversed. The idea of the animal's engaging in deliberately or freely chosen evil acts may provoke in the owner an element of anger or even rage that results in excessive or inappropriate punishment. To lash out at an animal for "deliberately" violating certain rules is unlikely to solve the problem because of a failure to understand its true causes.

The same is true with human criminals. The idea of free will encourages the jury to exaggerate the punishment. Regarded as free agents of evil, rather than as "victims of circumstances," the criminals are demonized. The jury cannot understand what kind of beings would freely decide to kill an innocent human being. The result is to lash out at them angrily, to exaggerate the punishment that would be appropriate and effective if the matter were regarded more calmly. And the real causes of the event are left in the dark.

Instead of treating Leopold and Loeb as evil demons who freely decided to contravene the obvious codes of civilized life, a scientifically informed jury would look at their actions as part of a transmission belt of causes that extends beyond them into their environment. To claim that these two men themselves are responsible for what they did is to exonerate their parents, their society. Or

perhaps it is to overlook some biological defect that should be investigated and treated as an illness. The unscientific idea of free will encourages an hysterical response to the act. It encourages us to turn the microscope of scientific analysis away from the causes that exist in nature and in the environment, causes that led these two men to do what they did.

The Fact of Morality

Are we uncomfortable with Darrow's perspective, despite its irreproachable logic based on the apparent requirements of science? Kant clearly recognizes the power of this deterministic approach, and yet finds it fundamentally inadequate. Against Hobbes and the future Darrow, and on the side of a commonsense jurist, Kant does not accept the argument that human actions are only reactions to such external causes as biological nature, circumstances, and education. Human beings are more than animals that are either well or poorly trained. Moral experience requires that we recognize that human beings *are* responsible for our actions. Perhaps then we *are* like God; we human beings *can* initiate chains of events that might have been otherwise. The moral experience of personal responsibility suggests that we must be capable of performing certain actions of our own free will.

For Kant, far from this being contrary to science, it is rather the conception of human actions as resulting from external causes that contradicts an important *fact* of our experience—the fact of morality.[22] This fact is just as legitimate for scientific investigation as are the facts that led Galileo and Newton to form their laws of motion. This fact of morality implies the idea of free will, for without a capacity to act independently of external causes, moral experience—as we commonly understand it—would be illusory. Thus, Kant does not hesitate to write that "determination according to natural laws is excluded by the fact of freedom."[23] But how is it possible to reconcile this alleged "fact" with the procedures and empirically verifiable findings of modern science?

Actually, Kant essentially argues, the idea that modern science demands a deterministic conception of reality is a failure to appreciate the profound philosophical implications of the post-Copernican era of scientific revolution. Because of the apparent contradiction between the deterministic outlook of modern science, on the one hand, and the freedom connected with moral experience, on the other, Kant argues that the fundamental nature of modern science has to be reexamined and placed on a completely new intellectual foundation.

In his critique of the deterministic conception of science, Kant essentially continues a parallel line of modern philosophical thought that developed in contrast to that of Hobbes. René Descartes (1596–1650) initiated a radically different interpretation of modern science, centering on the freedom of the

immaterial human spirit. The classical modern Enlightenment perspective is actually split between two opposing basic trends—a deterministic and materialist perspective, and a freedom-oriented and spiritualist perspective, where spirit is understood precisely in the sense of "incorporeal substance."

The Pre-Modern Geocentric View of the Universe

Despite this opposition, both trends of early modern philosophy have in common their rejection of fundamental features of the premodern worldview. To better understand the basic characteristics of the Enlightenment view of the world, therefore, it is necessary to turn our attention to this earlier perspective whose paradigm, stemming from the fusion of Aristotle with Christianity, dominated the world of thought at the time of Hobbes and Descartes. To better understand the revolutionary nature of modern science, it is first necessary to understand clearly how modern scientific discoveries profoundly changed the traditional conception of the world. It is necessary to comprehend the main outlines of the *premodern* worldview in order to appreciate the nature and achievements of the *modern* worldview.

In the first place, the traditional worldview is geocentric, lococentric, or egocentric. Early peoples thought themselves to be in the center of the universe, or at least relatively near to such a center. The reason for this is obvious. This is the way the world actually appears to people in direct sensory observation. Ordinary objects are directly viewed as ranged around the observer. The sun journeys above us across the sky. The stars at night seem to revolve in a great vault over our heads as we observe them from an unmoving standpoint. On the horizontal plane, the horizon circles us and the various objects of perception are ranged around our bodies.

The experience of traveling over great distances requires a reevaluation of this first impression. Not everywhere in the known world could be the center of the universe. Medieval Christian maps of the world, for instance, place Jerusalem, the sacred city of the life and death of Christ, in the geographical center of the world. This idea that the center is not exactly where one is presently located requires that people adjust their thinking somewhat about what they are actually seeing. They are not seeing things from the "true" perspective that comes from being directly in the center. They must decenter themselves to some degree. From this comes the religious idea of the sacred pilgrimage to the true Center.

Despite this need to decenter to some extent the perspective of the observer, the idea that we could or should view the world from a true center persists. There is no *radical* decentering of one's experience of the world such as comes with the modern revolution in science. Until the fundamental scientific revolution initiated by Copernicus, with few exceptions people continued to think of as well as to see the earth as the fixed platform or observatory

around which the sun, moon, planets, and stars revolve. This view of the cosmos is found in Aristotle's books *On the Heavens* and *Physics*. Although Greek and later scholars demonstrated that the earth was round, and not the flat disk it might appear to be in ordinary perception, this round earth was still generally thought to be in the center of the universe. In the ancient view, formulated by Aristotle, the thinking person is a passive observer, a contemplator, who takes for granted that his physical body in geocentric space is essentially a center before which the objective nature of the world can reveal itself.

The idea that the earth itself is in motion around the sun, and the eventual idea that the sun too is in motion, produced a profound alteration of the premodern conception of the universe, and of the place of human beings in it. The educated modern person who looks up at the night sky has difficulty seeing what the premodern individual saw: the vault of heaven revolving above her as its center or focal point. Instead, thanks to modern scientific ideas, we rather see spread before us an immensity of both distance and time in which the observer's position appears completely insignificant. Writing not long after Hobbes, the philosopher and scientist Blaise Pascal (1623–62) expresses the new perspective: "Because of its space the universe takes a hold of me, 'comprehends' me, and swallows me up as a mere point; because of thought, I comprehend it."[24]

Pascal expresses the perspective of the Copernican revolution in astronomy, that one's position in physical space is quite insignificant to a proper understanding of things as they actually are. Everything in the post-Copernican world depends on the activity of one's own thinking. Instead of passively contemplating the world as it directly appears to us, we must actively comprehend it through a system of scientific conceptions. For Hobbes, we must mentally reduce the apparently self-perpetuating motions of heavenly and earthly bodies to a complicated system of externally determined, straight-line motions. For both Hobbes and Descartes, the world we see around us is to a considerable extent an illusion that must be corrected by proceeding from principles stemming from the activity of the thinking subject. Kant's idea of a Copernican revolution in philosophy continues this reversal of perspectives. For the modern thinker, the world as it appears to an observer in a particular location at a particular time is no longer regarded as the true world, as the world as it is in itself. The framework from which we regard the world is relative to the standpoint we actively take up in relation to it. The implications of this revolutionary relativism become clearer when we consider other features of the ancient worldview.

The Aristotelian Conception of Motion

If the deterministic model of scientific explanation implies that nothing moves itself, the ancient worldview maintained the opposite idea. For Aristotle, all objects are capable of moving themselves. This is in fact the way things immediately

appear to us. Just as the sun seems to move across the vault of the heaven in a circular motion, it certainly *seems* that plants turn toward the sun, that animals seek food, that human beings pursue goals that they formulate for themselves. Things *seem* to move themselves, and so, Aristotle assumes, they really do. This does not mean that these self-moving beings are acting arbitrarily (or by free will). Aristotle argues that things move the way they do because of their inner natures. Sometimes, of course, their actions are "determined" by external causes, as when a falling boulder crushes a rabbit. But when the rabbit goes after the farmer's prize lettuce, it does so because it is the inner nature of the rabbit to do so. External causes—the only kind of cause recognized by the modern science of physics—are only one kind of cause. There are also internal causes, Aristotle says, having to do with the inner nature of the thing.

Not only do plants, animals, and humans move themselves, Aristotle argues; even the inorganic elements of the world—fire, water, earth, and air—have their own distinctive ways of moving. How else explain the fact that when you push a teacup over the edge of a table, it goes crashing to the floor? There is the external or "unnatural"[25] cause of motion, as when I move the teacup from one place to another across the table. This is motion by direct contact from one object to another. But what happens when my elbow accidentally pushes the teacup over the edge of the table? When the teacup goes over the edge of the table my body is no longer in contact with it. I therefore have nothing to do with what happens next. The teacup *apparently* falls to the ground all by itself. And so it really does, says Aristotle. Aristotle concludes that the "natural" motion of objects like teacups is to move downward in relation to "the center," to its natural place in the center of the sphere of earth. The downward movement of the teacup is the movement that is caused by its own internal nature. It follows its own inner purpose or "telos" as it strives to achieve its natural place.

The fact that fire moves upward is explained the same way. The natural place of fire must be in a sphere around the earth. Earth, water, air, and fire form concentric spheres. These spheres are not perfectly organized as a result of the imperfections of the sublunary world, and so some earthly elements protrude above the sphere of the water and so naturally want to fall or sink downward, while fire on earth is clearly out of its element and so seeks to rise upward to its natural place. Above all these spheres is the pure ether of the heavens in which the spheres of the moon, sun, planets, and stars revolve in more orderly fashion. Although the irregularities of planetary motion cause problems with this view, the astronomy of Ptolemy in the second century A.D. develops a model of rotations within rotations that appears to reconcile theory and appearances. Hence, Galileo's book on astronomy, in which the Aristotelian view is contrasted with that of Copernicus, is entitled *Dialogue Concerning the Two Chief World Systems, Ptolemaic and Copernican* (1632).

No one can fault Aristotle's reasoning on the grounds that it contradicts the evidence of "experience." While heavy objects fall down, fire goes up. This

is certainly the way these motions are observed to take place. Aristotle constructs a cosmology that accords with the way we perceive these ordinary movements and that allows us to save or keep these appearances as reality. By contrast, we modern individuals are immersed in the alternative explanatory framework of the "new" physics and astronomy. For hundreds of thousands, perhaps millions of years, human beings understood the world, including what we moderns think of as "dead matter," to be alive or self-moving. But thanks to the revolutionary change in attitude produced by the Copernican revolution, we no longer take what we directly observe at face value. Instead, we accept what modern science tells us is happening and let these conceptions inform our direct experience. Accepting the physical law of inertia, we do not see the teacup as moving itself. Despite what appears to happen before our eyes, we believe that something else, that we don't see at all—the gravitational force of the earth—is moving it and causing it to fall. Modern science tells us that what is really happening is something completely invisible, something apparently mysterious. Somehow, invisibly, the earth itself reaches up and pulls the teacup downward. Of course, believing in such invisible causes is not the same as accepting the word of a religious authority. While most of us take this explanatory framework on faith in the authority of science, we believe that if we devote sufficient time to the study of the science we will come to these same conclusions ourselves, using our own autonomous intellect.

In the traditional worldview there are radically different kinds of movement. Aristotle defines upward and downward motion, quite simply, in relation to "the center": "for any one can see that fire moves in a straight line away from the center."[26] And when we direct our gaze upward toward the vault of the sky, what do we observe? The sun, moon, planets (usually), and stars move across the sky in a kind of circular motion. That makes at least three different kinds of motion, connected to three fundamentally different kinds of objects: downward for inherently heavy things, such as bodies made up mostly of earth, upward for inherently light bodies, such as fire, and the circular movements of the heavenly bodies. More generally, Aristotle holds that there are two fundamental kinds of natural movement, straight (either up or down), and circular. The stars that move across the sky in great circular wheelings must do so because of their intrinsic natures, which must therefore be fundamentally different from earthly bodies of all kinds. If the circular motion of the stars were unnatural and imposed upon them as when a physical object is moved sideways on a horizontal surface, Aristotle argues, how could such unnatural motion persist for more than a relatively short time? To account for their naturally circular motion, stars must therefore be composed of an altogether more divine, more perfect substance than the substances of earthly bodies with their straight-line, up-or-down motions. All of this is based on direct sensory evidence:

> The mere evidence of the senses is enough to convince us of this, at least with human certainty. For in the whole range of time past, so far as our inherited records reach, no change appears to have taken place either in the whole scheme of the outermost heaven or in any of its proper parts.[27]

Based on empirical observations of the different ways the observable universe behaves, Aristotle concludes that 1) in addition to external or "violent" or "unnatural" causes of motion, everything has internal or natural causes of movement; 2) there are a number of fundamentally different kinds of such natural motions in the world. It is important to stress that this Aristotelian conception of the universe as self-moving, but with radically different kinds of motion, is based on direct observation of empirical phenomena. Aristotle simply derives his conception of intrinsic natures and causes from the way things actually appear to us when we look at them. "For anyone can see," he says, "that fire moves in a straight line away from the center." Aristotle bases his physics, biology, astronomy, and other sciences, including the sciences of human motion—such as ethics and politics—on careful observations of the different behaviors of things. He explains these differences primarily by qualitative differences in their internal natures.

Problems with Aristotelian and Copernican World Systems

In hindsight, we can recognize important empirical difficulties with some of Aristotle's notions. Aristotle's conception of the naturally downward motion of "heavy" objects plausibly explains such phenomena as teacups falling off tables. But what about teacups thrown across a room? According to his theory of natural downward motion, when the teacup is no longer in contact with the hand of the person throwing it, its own natural tendency to move downward should immediately take over. However, rather than moving directly downward once it leaves the hand, it moves in an arc for some time, depending on the force with which it is thrown.

Aristotle proposes an ingenious explanation for this forward motion.[28] The force of the thrown object on the surrounding air, he argues, displaces air ahead of the object, causing that air to move around the object and push it from behind. Air currents, "impregnated" by the force propelling the projectile, externally cause it to go in the direction in which it is thrown, unnaturally constraining its own internal motion downward. The resultant combination of these external and internal, unnatural and natural, forces is the trajectory that we empirically observe.

An experiment might be devised to test this explanation. One might tie a ribbon to the end of an arrow and then shoot the arrow in some direction. If

wind currents generated by the initial thrust of the arrow are the cause of its continued forward motion, the ribbon behind it ought to be blown in the direction of the flight. If the ribbon trails behind the arrow, Aristotle's entire theory of motion would be seriously shaken. The inconsistency of this phenomenon with the general outlook regarding natural motions could become the basis of a theoretical revolution leading to the downfall of the entire cosmology of the ancient and medieval European worlds. Presumably Aristotle did not think to make such a simple experimental test. It is understandable why he did not do so. The implications of such a test would have challenged not only a particular cosmology, but also the more fundamental idea that the world is by and large the way it appears to be.

The theory of motion first proposed by Galileo seems to solve the problem of the teacup flying across the room without resorting to the easily refutable theory of invisible air currents. According to Galileo's conception, the teacup has no "natural" movement of its own. Its motion is inertial: some other moving force transfers its motion to it. The teacup acquires its forward motion directly from the movement of the hand of the person who throws it. It is not necessary for the hand to remain in contact with it for the teacup to continue moving in the direction imparted to it by the hand. It has acquired "inertial motion" from the action of the thrower. Galileo observed that when one slides objects across a surface, they continue in motion on this surface for some time before coming to rest. If the surface is polished they slide even further. He extrapolated from this observation the concept that in a perfectly frictionless medium, an object would *never* stop moving. It would move forever in the direction imparted to it. Once the object acquires motion from an external source it will continue moving in that direction forever, until or unless some other force causes it to change its motion. This astonishing implication of Galileo's theory of motion has been strikingly verified in the twentieth century, when the theory was tested in conditions of relative weightlessness in outer space. Contrary to Aristotle, then, there is no natural motion either up or down. There is no center. All motion is really in a straight line. Some motions are circular only as a result of constant external force acting on objects that would otherwise move in straight lines. The direction of *any* motion is simply that imparted to it through contact with other moving bodies. *All* movement is therefore, in Aristotle's terms, "unnatural."

A new problem arises, however, with this explanation. Aristotle's theory readily explains why an object like a teacup moves downward, but not why it moves across the room. The Galilean theory has the opposite difficulty. It can easily explain why the object moves across the room, but not why it moves downward! If there is no internal "natural" motion downward, there must be an external cause acting on the object that counteracts the inertial motion in the direction in which it is thrown. This supposed other cause is the well-known "force of gravity" of modern physics. According to this theory, the earth invisibly exerts a force on the object that causes it to move toward its center.

Aristotle supposes invisible air currents as the external cause that moves the object in a direction contrary to its "natural" motion downward. Aristotle's theory of invisible air currents, while incorrect, at least proposes a verifiable mechanism for the forward motion: the direct contact of air currents. Galileo explains forward motion by acquired inertial motion. He then must also invoke an invisible cause to explain deviation from the inertial motion that gives the teacup its actual movement in an arc to the ground. But in this universe in which *everything* is supposed to be moved by external, "mechanical" causes, there is no obvious mechanism for explaining the operation of the supposed invisible downward-impelling force. A "force of gravity" is now required as a mechanism for explaining deviation from the given motion. But this is far more mysterious than Aristotle's false but readily testable air currents. How does the earth "pull" the teacup downward? Are there invisible "hooks," tiny invisible "gravitons" that cause the motion downward? Newton argues that it must be one of two things: either the object is moved by such invisible material particles—not yet discovered by science to this day—or it is moved by a nonmaterial cause. In other words, the scientist is forced, however reluctantly says Newton, to evoke the causal force of Spirit or God.[29]

From Contemplative to Active Science

Let us leave aside the problems raised by the theory of gravity, noting only that there are such problems. The main idea here is that in the mechanistic world-view of modern science the motion of the teacup must come entirely from external causes. These are said to be the combination of the movement of the throwing hand and the causal action of the earth itself—however that is to be explained. Nothing therefore moves itself. This idea of universal external causality—the deterministic world view—poses fundamental problems for anyone who believes that moral responsibility is a reality that implies free will, and so that human beings do in fact move themselves. For the mechanistic world system defended by Hobbes, this belief is just another illusion of an archaic, prescientific way of thinking, like the apparent movement of the sun around the earth.

It is important to note a major difference between modern physics and ancient physics. Galileo proposes experiments to test his theories, but Aristotle does not. The notion that without external interference objects would continue in a straight line *forever* seems to be brilliantly demonstrated in outer space, where the effect of gravitational influences of other bodies is negligible for most practical purposes. Galileo could not have made such an experiment, if he even imagined it. He is supposed to have dropped objects from the leaning tower of Pisa to demonstrate his theory that the rate of falling objects is unrelated to their mass. Whether Galileo actually performed this experiment

is not certain, but that his ideas are so classically connected with experimentation is a reflection of the new, experimental spirit of modern science. Kant stresses Galileo's experiments with balls of differing weights rolling down inclined planes.[30]

Aristotle did not shoot an arrow with a ribbon on it, or even imagine such an experiment, because his conception of scientific knowledge is fundamentally different from that of modern sciences. Aristotle *observes* phenomena, classifies objects according to different kinds or natures, and draws general ideas from his observations. Knowledge, for Aristotle, is essentially contemplative or passive. The active power of the mind is confined to extracting the essential features of the object from the image of it that we receive in perception. The "form," "intellectual species," or essential characteristics of an individual object—properties that it has in common with other objects and that make it the kind of thing that it is—is transferred to the mind through perception and extracted from the image of the object by the active power of the mind to produce adequate or objective concepts or ideas. But this intellectual extractive activity is founded on a more fundamental passivity—the transmission of the species characteristics of the object directly to mind. The adequacy of the intellect and the thing, which constitutes truth, occurs when the mind carefully examines the objects placed before it through the medium of sensory experience. With this conception of the relation between reality and our knowledge of it, there is no need for the experimental, hypothetico-deductive method: for the active involvement of the knower in constructing theoretical hypotheses, in deducing possible outcomes, and then testing them or comparing them with experience.

The modern scientist, on the contrary, actively intervenes in the world of phenomena, constructing situations that do not occur naturally, in order to test possible ideas or hypotheses. The "appearances" do not directly yield up their nature but must be explained by causes that can appear quite different from their effects. Thus, inertial straight-line motion not only explains the behavior of "heavy" downward-moving objects, but upward-moving ones as well. Up and down are not essential characteristics of motion, and there is no center from which to measure direction. Even the supposedly divine circular motion of the planets can be explained by a complication of contrarily acting straight-line motions. The heavens and the earth, despite appearances to the contrary, have essentially the same nature and move by the same causes.

We should note that the two methods of science—the ancient contemplative method, and the modern experimental one—correlate with the corresponding conceptions of the nature of the objects of investigation. In a world thought to consist of entities with their own inner, natural motion, the appropriate method of study is that of noninterfering observation or contemplation. For any active intervention would introduce distorting "external" causes that would interfere with an understanding of the natural behavior of the object.

However, if *all* motions are externally caused, there is no danger that deliberate intervention in the movements of objects will prevent us from observing how they "naturally" behave. Since there is no fixed, independent "natural" behavior, we are encouraged to see "what would happen if" we do one thing or another to the object of investigation.

The Analytic-Synthetic Method of Scientific Philosophy

Hobbes recognizes that everything that we observe is only an appearance, something not to be taken at face value. The true nature of the appearance is not mentally extracted directly from the appearance itself, as Aristotle claimed. This true nature can only be grasped by uncovering the external, often invisible and hidden causes that produce the effects that we observe. We go from effects back to causes. And then we go from knowledge of the causes to a "deduction" of their effects—which means to a mental construction of the process by which the effects are actually produced from out of their causes. The phenomenon that is present before us in contemplation is not reality but appearance. The reality is found only in the total process that produces the effect, and the mind must actively pursue this reality by going to the causes that produce the appearance. Hobbes puts it this way, with emphasis:

> *Philosophy is the knowledge we acquire, by true ratiocination, of appearances, or apparent effects, from the knowledge we have of some possible production or generation of the same; and of such production, as has been or may be, from the knowledge we have of the effects.* Method, therefore, in the study of philosophy, *is the shortest way of finding out effects by their known causes, or of causes by their known effects.*[31]

We begin with the objects of sensory experience given in ordinary experience. This tells us that something is. But ordinary experience is not scientific knowledge. The objects of sensory experience are totalities of complicated phenomena, with many different aspects or parts. To understand the whole it is necessary to break it down into its constituent parts, to "resolve" it into its basic components. The preliminary stage of scientific method consists of the "resolutive" or analytical dissolution of the complex object into its basic components. To know that something exists, sensory experience of the whole or "concrete" object is enough, although what exists may be a mere appearance. But to understand this object scientifically, it is necessary to understand the simpler components or "parts." It is first of all necessary to break down the concrete whole into the abstract "parts."

Scientific method properly speaking is found in the "compositive" or synthetic phase: building up the whole out of its parts. For Hobbes the ultimate

starting point is that part or element that is universally found in all beings: the "one universal cause, which is motion."[32] Hobbes applies this reconstructive method to the study of human beings, mentally constructing the whole human person from its "parts." He begins with the basic laws of inorganic bodies (involving shape or "figure," mass or quantity, and motion), proceeds through the laws of sensory or animal life and finishes with laws of human reason. Let Hobbes put this in his own words:

> It is common to all sorts of method, to proceed from known things to unknown; and this is manifest from the cited definition of philosophy. But in knowledge by sense, the whole object is more known, than any part thereof; as when we see a man, the conception or whole idea of that man is first or more known, than the particular ideas of his being *figurate*, *animate*, and *rational*; that is, we first see the whole man, and take notice of his being, before we observe in him those other particulars. And therefore in any knowledge of the *hoti* [whether], or that anything *is*, the beginning of our search is from the whole idea; and contrarily, in our knowledge of the *dioti* [whence], or of the causes of anything, that is in the sciences, we have more knowledge of the causes of the parts than of the whole. For the cause of the whole is compounded of the causes of the parts; but it is necessary to know the things that are to be compounded, before we can know the whole compound. Now, by parts, I do not here mean parts of the thing itself, but parts of its nature; as, by the parts of man, I do not understand his head, his shoulders, his arms, &c. but his figure, quantity, motion, sense, reason, and the like. . . .[33]

Aristotle and Hobbes on Scientific Method

The contrast between Hobbes's conception of scientific method and that of Aristotle is instructive. Hobbes follows Aristotle in arguing that true scientific knowledge consists in explaining effects from their causes. Moreover, this explanation involves a process of rational thought going from an initial starting point to the effect or phenomenon to be explained. For Aristotle this knowledge is the result of a logical syllogism, in which the effect is seen as a conclusion that follows necessarily from premises that represent the causes—so that given the premises or causes the effect must be what it is and could not be otherwise than it is.[34] Aristotle takes examples of rigorous scientific knowledge from geometry. An early biographer states that Hobbes's first reading of Euclid's *Geometry* produced a profound impact on him. The deductive steps in a geometrical demonstration provide both Aristotle and Hobbes with an ideal model of scientific thought.

Hobbes also follows Aristotle in holding that the deductive, logical side of scientific method is only one part of scientific method. The other side has to do with the knowledge of the premises or starting points of the scientific argument. It is in their respective accounts of this part of scientific method that the difference between Hobbes and Aristotle is most evident. The premises can be the conclusions of previous syllogisms, Aristotle says, but this cannot always be the case. There must be premises that are known to be true directly, intuitively; otherwise there would be an infinite regress, and nothing would ever be known. Because they are directly intuited or self-evident, these "basic truths" are prior to and better known than the logically mediated knowledge of the conclusions that we draw from them. Thus, for Aristotle, direct, intuitive knowledge has precedence over knowledge by logical construction. Everything hinges therefore on direct empirical knowledge of basic truths taken from contemplation of objects in experience. But this, we have seen, is the fundamental problem with the ancient, pre-Copernican worldview. It privileges the given standpoint of the contemplative observer of reality, and takes for granted that fundamental truths are available from this standpoint. By contrast, the Hobbesean starting point is the result, not of direct observation or contemplation, but of *analysis*—the active operation of the microscope of abstract thought ferreting out the key aspect of reality from the multitude of its disguises and hiding places.

If Aristotle's approach to the starting point differs from that of Hobbes, the nature of the scientific argumentation or demonstration turns out to be quite different as well. Applied to the knowledge of the material world, Aristotle's seemingly deductive approach consists in a hierarchical arrangement of qualitatively different types of beings, descending from the most universal to more and more specific types in a classificatory schema or arrangement of basic phenomena. The most general principle of all beings is being itself. Something must first of all be or exist. From this universal starting point the "deduction" consists in situating the observed object in a hierarchical, classificatory "tree" consisting of an arrangement of the various genera and species. If the object of investigation is a particular human being, we know this object scientifically when we recognize that the individual human being has the generic properties of heavy matter, of vegetative life, of animal locomotion, and finally, distinguishing the human being from all other animals, the specific feature of rationality. We might then further arrange our knowledge of this individual by recognizing that he is Greek, Athenian, a man, the son of Apollodorus, etc.

All of these basic or essential characteristics are "premises" at different levels of classification in the understanding of the particular human being. They are derived by observation of the qualitatively different types of beings that we see around us. The arrangement of the different types of beings in a quasi-geometrical system does not really explain the different components of the system

as a production of effects from causes. There is no explanation of how being produces the next level of the hierarchy—the inorganic objects. There is no explanation of how inorganic objects produce life, etc. Aristotle's knowledge of effects from causes is therefore not a knowledge of the objective causal process that causes the effects—at least as we understand such causation in our post-Copernican science—but a subjective certainty produced in us as we see how something fits into a scheme of organization of the phenomena. When we see how the phenomenon we are studying fits into a classificatory schema, descending from the most universal and best known objects, we have the assurance that we understand it.[35]

For Aristotle such subjective certainty is also objective knowledge of reality. When Aristotle writes of knowledge of effects from causes, he is operating within his own framework in which material or mechanical causes are "unnatural" and so not the essential or basic causes. The natural causes or causes from the nature of things are the "forms" of things or their formal characteristics. In Aristotle's framework, the formalist hierarchical arrangement of the various types of beings in our classificatory intellectual scheme counts as a knowledge of the causes of the things themselves. But there is a fundamental difference between classification of biological species in the system of Linnaeus, which goes back to the Aristotelian model of science, and an understanding of the evolutionary emergence of complex organisms from simple cells, as in the science of Darwin. In his conception of scientific method, where only the knowledge of mechanical, generative causes counts as truly scientific knowledge, Hobbes reflects and consolidates the modern scientific approach that leads to Darwin.

Hobbes speaks of the "parts" of the human in a quasi-Aristotelian way as consisting of "figure, quantity, motion, sense, reason, and the like. . . ." But these components are not merely arranged in hierarchical order. They constitute the process of development of the object. Thus, at the level of geometry, there is the point in space and the motion between the points producing the line. Hobbes criticizes the traditional understanding of geometry for failing to recognize the strictly causal character of geometrical constructions—causes of which we have certainty not because of intuition but because we ourselves are the agents of the creation of the geometrical figures.[36] We produce the lines by connecting the points. We connect the lines in surfaces and produce figures. We suppose that objects in physical space, which we do not ourselves construct, are nevertheless like those figured or extended objects that geometry demonstrates. These figured or spatial bodies move according to laws of physics, such as the laws of inertia and reaction. Such movements can be mentally reconstructed by us in a geometrical, deductive, or synthetical manner. Complex forms of motion, like the falling of a leaf from a tree, or the movement of the planets in their elliptical orbits, can be seen as logically compounded from initial straight-line motion. (In the next chapter we will discuss the further development of straight-line motion to the more complex forms of "sense, reason

and the like.") Newton later follows Hobbes in proposing the method of analysis and synthesis, writing that

> As in mathematics, so in natural philosophy, the investigation of difficult things by the method of analysis, ought ever to precede the method of composition. . . . This is the method of analysis; and the synthesis consists in assuming the causes discovered, and established as principles, and by them explaining the phenomena proceeding from them, and [thereby] proving the explanations.[37]

For Aristotle, on the contrary, irreducibly different natures are hierarchically superimposed on top of one another, the most general being placed first, the more specific coming later. Instead of straight-line motion actually causing circular motion, as in Hobbes, the sublunary straight-line motion is hierarchically subordinate to the higher-level circular motion. In the descent from more to less universal characteristics, human rationality comes after animality, not because the secret cause of rationality is found in a complication of animality, but because animality refers to more general characteristic of beings, such as the ability to move from place to place and to reproduce offspring, which the human being shares with other animals. To understand what rationality is we do not look at its hidden cause in animal sensuality. We simply observe the rational behavior of some individual or individuals and extract from this observation the concept of rationality. Theoretically, we need only examine one human being to extract an adequate definition of the human being, since the form of humanity is found in each human individual. In Aristotle's theory of knowledge, this form of humanity, as has been stated, is transferred to the mind of the observer through the medium of sensation and extracted from the sensory image by the activity of the intellect.

From Geometry to Physics

According to his early biographer, Hobbes was forty years old when he discovered Euclid's *Geometry*.[38] This was a definitive moment in his intellectual development and provided for him the model of scientific thought as a deductive process that begins in simple principles or "parts" and develops into the complex reality (wholes or totalities) we observe around us. What interested Hobbes in geometry was not only the logical necessity of the arrangement of axioms, theorems, and conclusions, but the very generation of the more complex figures out of the simpler ones. The geometry of the circle is not a matter of definition and arrangement of characteristics, but the science of the generation of the circle itself out of simpler figures—the center point and the line, as the radius. Geometry is not a contemplative science of the arrangement of

figures but an active process of producing those figures in an orderly, necessary way. Because we ourselves are the causes that produce those figures, we know the phenomena or effects of our actions with absolute certainty.[39]

But Hobbes recognized a fundamental difference between the constructions of geometry and those of physical science. In geometry we proceed with absolute certitude because we ourselves are the constructors of the objects we are trying to explain. However, in the natural sciences we are not the causes of the objects we are investigating, and therefore cannot be certain of the particular causal processes that produce them. Because he is concerned with the mechanical-generative process by which an effect comes into being, and not the formal arrangement of a classificatory schema, Hobbes is not so certain of the "premises" of the intellectual reconstruction of that process. We can proceed only by formulating possible hypotheses about such causes because God is the cause, and not we ourselves, of the phenomena of the natural world, and "there is no effect in nature which the Author of nature cannot bring to pass by more ways than one."[40]

The human investigator into the causes of the natural world can therefore imagine alternate possible courses of events that would lead to the same effects. In natural science, therefore, the analytic method or "method of discovery" does not produce absolutely certain first principles so much as possible first principles, or hypothetical first principles or causes of events. The synthetic method, or "method of demonstration," that builds on such foundations is therefore a hypothetico-deductive process. Its results are never certain, only probable. Scientific explanations must offer logically self-consistent and possible or imaginable causal sequences in their quasi-geometrical, step-by-step constructions. However the field of possible explanations is capable of being narrowed by newly discovered facts which refute one or more of the proposed explanations. The best we can hope for in the natural sciences is therefore "to have such opinions as no certayne experience can confute, and from which can be deduced by lawfull argumentation, no absurdity."[41]

In his own scientific pursuits, Hobbes was generally faithful to this approach by sometimes proposing alternate possible explanations of phenomena.[42] To be consistent, Hobbes should extend this uncertainty to the fundamental laws of physics themselves—above all to the principle of inertia itself. In socio-political life, on the other hand, we ourselves are once more the agents of construction. Hobbes therefore sees his own work of political science, *Leviathan*, as next only to geometry in certainty, implying that natural science rests on potentially refutable hypotheses.[43] Hypothetical reticence here is particularly necessary since the basic physical movements underlying the objects of ordinary experience are themselves held to be invisible "endeavors"—the smallest, most subtle, invisible motions necessarily required in the passage of an object through a point in space, or the rapidly transmitted and fluid "spiritual" motions required in the explanation of thought. Thus Hobbes writes:

> In thinges that are not demonstrable, of which kind is the greatest part of naturall philosophy as dependinge upon the motion of bodies so subtile as they are invisible, such as are ayre and spirits; the most that can be atteyned unto is to have such opinions, as no certayne experience can confute, and from which can be deduced by lawfull argumentation, no absurdity.[44]

But Hobbes clearly sees no possible alternative causal account to that proposed by Galileo: inertial straight-line motion transmitted through direct contact from one physical object to another. Hobbes is therefore certain that the "causes of universal things" are "manifest of themselves . . . for they all have but one universal cause, which is motion."[45]

Chapter Two

Freedom as the Realization of Desire

Extending External Causality to Life and Humanity

To understand the great difficulty of introducing morally related freedom into science, it is necessary to see how the modern notion of external causality has been extended to the study of plants, animals, and, above all, to human beings. We need to ask whether the conception of universal, external causality can plausibly explain the growth of a flower or the complex actions of human beings. The ancient physics of Aristotle represents the universe as consisting of fundamentally different kinds of "natural motions." By contrast, classical modern physics states that *all* motion is reducible to straight-line motion conveyed to an object through direct contact with an external cause whose motion, in turn, must be explained by another external cause, and so on. The causal chain continues until the First, Uncaused Cause originally sets the newly created material world in motion. Newton's first law begins with the words, "Every body . . ." It does not state what only inorganic bodies do, but what *every* body in the universe must do, including human bodies. Its extension is not to a particular kind of being but to all material beings, universally. Extrapolating from the laws of physics, Hobbes reasons that there is nothing in the universe except bodies, including the unfathomably great body of God.

A common illustration of the operation of Newton's first law is the movement of the balls in a game of billiards or pool. A ball stays in its place until another ball strikes it. Depending on the force and direction of the moving ball, the one that is struck will *necessarily* move with a certain speed in one direction or another. But surely, you will say, human actions, or even the motions of plants and animals, are not like that.

Aristotle would agree with the objection. For Aristotle, while plants share the characteristics of nonliving heavy bodies, to these are added distinctive characteristics of vitality, such as growth and reproduction, which set them

apart from nonliving beings. Animals share properties in common with plants, but are set apart from merely vegetative existence by qualitatively distinguishing characteristics, such as sensation and the ability to move from place to place. Human beings are animals too, but are distinguished from the rest of the animal kingdom by the specific difference of possessing rationality. Thus the laws governing heavy bodies—that they naturally move downward toward the center—also apply to human beings. But these same characteristics could not possibly explain what is distinctively different about human beings—those features of vitality, animality, and rationality that progressively set apart narrower groupings of beings. The obvious distinguishing features of these broad categories of existents are the expressions of radically distinguishing internal natures. To recognize the sequence of genera and species, in a logically ordered arrangement, is to present a causal account of the object of investigation. This is not a mechanical, "unnatural" account, but an account of the essential *forms* that give distinctive shape to the otherwise amorphous *matter* of the thing.

The Great Deception of Sense: Part One

Hobbes recognizes that plants, animals, or humans do not *appear* to behave like passive, inert, physical objects such as billiard balls. Plants, animals, or humans *seem* to have their source of motion inside themselves. They *appear* to move themselves. But after Copernicus overthrew the geocentric view of the universe, no sophisticated thinker is going to be taken in again by appearances, as was the case for those millennia when the greatest minds of humanity were fooled by the apparent movement of the sun through the "heavens." Hobbes writes, emphasizing the important categories:

> *Whatsover accidents* or qualities our senses make us think there be in the *world*, they be *not* there, but are *seeming* and *apparitions* only: the things that really *are* in the world without us, are those *motions* by which these seemings are caused. And this is the *great deception of sense*.[1]

There are two ways in which we are deceived by our senses. One is in the belief that when we sense something, the object of our sensation is something existing outside of us in the external world. The second is in the belief that the qualities of our sensation are replicas of the qualities of that externally existing object. We are deluded in both these respects, Hobbes claims. In the first place, we do not directly sense an object outside of us, for the true object of sensation is in internally generated quality—an image or "phantasm" in us—from the Greek word "phantasma," meaning appearance. The externally existing object is the cause of that inner experience but is not what is directly sensed. Second,

the properties of the image are not replicas of the externally existing object, since the reality of that object—the externally existing source of our sensation—consists only in those motions by which it is described in the new science of physics. And we only grasp those real motions through the scientific method of analysis and synthesis—not through immediate sensation.

The world we see around us through sense perception is therefore not what it seems to be. And yet our only access to the reality of that world is through the information conveyed to us by our senses. However, it is not the immediate, direct sensory experience that provides the "building blocks" of our knowledge. It is only by scientific reflection on the information conveyed to us by our senses that we are able to correct the illusory appearances and arrive at the truth of the matter. Hobbes continues the above citation, adding that the deception of sense "is by sense corrected: for as sense telleth me, when I see *directly*, that the colour seemeth to *be* in the object; so also sense telleth me, when I see by *reflection*, that colour is not in the object."[2]

Hobbes's argument is not that senses are sometimes deceptive, but that they are always deceptive. Color is not a property of the object that I see, but a property of my seeing the object—a property produced in me through the causal motions initiated by an external object. In fact, it is not only color that is in me, but all the qualities or properties that I see, or hear, or smell, or taste, or touch—or all these sensations together—are only subjective experiences taking place in me. In sense experience, what I see is not the object itself, but its image produced in me—its representation or its "phantasm."

In the ordinary way of describing illusions, sense is by sense corrected in the following manner: when I see an oar bent in the water, my visual sense is deceived, but with my hand I can feel the oar's straightness. But Hobbes has in mind a more general deception, as is clear when he says that I see objects as colored, and yet color is not a property of the object. Certainly if the color that I see were not a real property of external objects, I could not correct the illusion by using some other sense, or manner of seeing, that would grasp the true color. This is not about mistaken colors, seen through rose-tinted glasses, but any color that I seem to see. If all senses are illusory, how can sense be corrected by sense? Hobbes's answer is that the "sense" that does the correcting is not "direct" sensation, but indirect sensation: sensation that is corrected by scientific thought—when I equip my visual and other sensory experiences with scientific understanding. Such understanding proceeds from the data of sensation by analysis to the primary movements, and then reconstructs that data in thought so as to return to the world, which is now comprehended scientifically. Then when I look around me I am no longer deceived by the beautiful appearance of a brightly colored world.[3]

The ordinary way of regarding sensation as a direct perception of an object outside of me must be rejected as an unscientific or prescientific illusion that is corrected by a developed scientific understanding of sensation and other

dimensions of human subjective experience. The need for such correction of the great deception of sense is evident from sensory experience itself, if we think with sufficient clarity about what we see around us. Hobbes points out that "sense telleth me, when I see by *reflection*, that colour is not in the object." When I see a reflection of a tree in a mirror or on the surface of a body of water, I normally recognize that what I see is not the tree itself, but its image or reflection. The properties of this image—its color, its shape, its size, etc.—are clearly not in the tree itself, but in the reflection outside of the tree. The color on the surface of the water is not the color of and in the tree itself, but a property of the image of the tree. Now when I apparently look at the tree directly, rather than in a mirror or in its reflection in a pond, science explains that I am still seeing that tree through an image. This is the image that is formed in me through the physical interaction of the external object with my organs of sight. The color that I see is a property of the image in me. I do not see the tree directly, although this is how it *seems* to me, but only the image or reflection of the tree that is formed within me. Hobbes explains the paradox that arises because of the fact that while we seem to perceive objects existing outside of us, in fact our perceptions are experiences taking place entirely within us:

> Because the image in vision consisting in colour and shape is the knowledge we have of the qualities of the object of that sense; it is no hard matter for a man to fall into this opinion, that the same colour and shape are the very qualities themselves; and for the same cause, that sound and noise are the qualities of the bell, or of the air. And this opinion hath been so long received, that the contrary must needs appear a great paradox; and yet the introduction of species visible and intelligible (which is necessary for the maintenance of that opinion) passing to and fro from the object, is worse than any paradox, as being a plain impossibility.[4]

The last part of this citation is a reference to the Aristotelian notion of the "species" or "form" of the thing as the vehicle of perception and knowledge. Like Hobbes, Aristotle argues that perception arises within the perceiver as a result of a process going "from the object" to the perceiver. In taking this position, Aristotle rejects the opposite Platonic view that sensing moves *from the subject* outward to the externally exiting object, and is therefore a direct contact with that thing. Vision is presented in Plato's *Timaeus* as consisting of rays of light going from the viewer to the object, and meeting there with the light of the sun also illuminating the object. This combining of light sources from the eye and the sun allows vision to take place, in fact actually creates the perceived object—not in the mind, but outside of the mind in the thing itself. According to the astronomer Timaeus, "When the light of day surrounds the stream of vision, then like falls upon like, and they coalesce, and one body is formed by

natural affinity in the line of vision, wherever the light that falls from within meets with an external object."[5]

The Platonic conception of vision provides a theoretical explanation that corresponds very closely to actual experience. When we see something, we do not experience something inside of us, but something outside of us—as if we extend outward to meet the distant object itself. Plato's theory supports the sensory phenomenon that Hobbes calls "the great deception of sense." The comic book Superman is depicted as having X-ray vision. A powerful, penetrating X-ray goes out from Superman's eyes, penetrates intervening barriers, and illuminates the intended object. For Plato, all vision involves a ray of light going from the eyes of the viewer to the thing. For the vision of ordinary mortals, of course, not only do intervening obstacles stop the ray of light extending from our eyes, but this light is too feeble to illuminate objects in the dark. An external light source is equally required. The object of sight is therefore the result of a confluence of two light sources, one from within us, and one from outside of us.

For Aristotle, however, the causal action goes from object to the subject and the sensory image is something inside us. It would seem then that Aristotle must affirm "the great deception of sense." And yet Aristotle wants to keep the common sense idea that we directly perceive the properties of the external object. Aristotle accordingly argues that the qualities of the sensory image are the very same qualities that exist in the external object—not just their reproduction or copies in us, but those same qualities themselves. These qualities—the form or species of the object—become detached from the external object and transmitted to the perceiver (while of course still remaining in the object). So when we perceive the color or shape of the tree before us, we can say with the man in the street that what we perceive is indeed the color and shape of the tree itself. Aristotle writes in *On the Soul* that "By a 'sense' is meant what has the power of receiving into itself the sensible forms of things without the matter. This must be conceived of as taking place in the way in which a piece of wax takes on the impress of a signet-ring without the iron or gold. . . ."[6] The sensory image conveys to the mind the essential form or species of the object, separated from its conjunction with the matter of the existing individual while continuing also to exist there. As a *nonmaterial* form that shapes the matter, apparently, it has no trouble existing in two places at once. Aristotle wants to have his cake and eat it too. Although the "species" comes "from the object" it at the same time "passes to and fro" between object and subject. No wonder the materialist Hobbes is disgruntled with this concept and finds it obviously "a plain impossibility."

Aristotle's theory of the sensible and intellectual species or forms passing "to and fro from the object" is the epistemological foundation of the pre-Copernican view of the world, which holds that the truth of reality directly reveals itself to the contemplative mind. As in the theory of free will, so here,

knowledge of the basic laws of the new science is clearly incompatible with the ancient perspective. The causal process is one of matter in motion going in a one-way direction from the object through a medium to the subject. What we perceive is not the externally existing object or the properties thereof, but the effect that this object produces within us as it interacts with the organs of sensation. It is therefore necessary to make the paradoxical assertion, unpopular with common sense, that we do not see the tree before us, but only some sort of image or reflection of the tree existing in our heads. A scientific account of sensation shows that a direct perception of the external thing is not possible.

The Great Deception of Sense: Part Two

There is a second part of the deception of sense—the belief that the properties we experience in sensation are replicas or copies of properties existing in the external object. In this more sophisticated account, we do not perceive the qualities of the object directly; we perceive the green qualities of the reflection of the tree within us. However, we still maintain a kind of direct correspondence between the properties of the image and those of the object: the green qualities of the tree leaves in the inner reflection replicate the green qualities of the tree leaves existing in the real tree outside of us. But for this to be the case, it is necessary to demonstrate scientifically how the allegedly colored tree transmits its color to me in a causal process. But an examination of this process shows that there is not and cannot be a transmission of color from the object to the perceiving subject.

In the following citation, Hobbes reconstructs an account of the causal process that produces both the sensation and the illusion that we directly perceive an object existing outside of us in the external world. This account allows for no transmission of the qualities we experience when we perceive something through the senses. Hobbes writes:

> But that from all lucid, shining and illuminated bodies, there is a motion produced to the eye, and, through the eye, to the optic nerve, and so into the brain, by which that apparition of light or colour is effected, is not hard to prove. . . . From such motion in the fire [in the case of looking at a flame] must needs arise a rejection or casting from itself of that part of the medium which is contiguous to it, whereby that part also rejecteth the next, and so successively one part beateth back the other to the very eye; and in the same manner the exterior part of the eye (the laws of refraction still observed) presseth the interior. Now the interior coat of the eye is nothing else but a piece of the optic nerve, and therefore the motion is still continued thereby into the brain, and by resistance or reaction of the brain, is also a rebound in

> the optic nerve again, which we not conceiving as motion or rebound from within, think it is without, and call it light. . . .[7]

If we begin with the simple motion of bodies, we must explain on this basis complex movements of complex organisms that are able to sense those bodies. But sensation itself can only be an effect of bodies in motion—an effect taking place in a complex organism such as the animal or the human body. And this is what the scientific conception of sensation or perception explains: the organism senses the world around it only as a result of the action of external bodies impressing themselves on the sensitive one. How does that happen in the case of ordinary vision? In vision the contact with external bodies takes place through an intermediary—the air or some more subtle medium that stands between ourselves and the object. We sometimes say that rays of light, either pure or refracted into various colors, are extended to us from an object through the medium between ourselves and the object—reversing Plato's idea that the rays actually go out from us to the object. However, it is not light itself that travels from the object to the eye, but invisible motions of some kind transmitted from the external source to the eye, and through the eye via the optical nerve to the brain.[8]

The cause of those motions in the medium is the motion of the source of the movement—the object that we seem, mistakenly, to directly perceive. Hobbes argues that the source of our sensory experience gives off a kind of pulsating movement that presses and compresses the medium, which immediately passes on this received motion through its various parts to the eye and nervous system. There is no need for or possibility of any light or color in this movement of the originating source interacting with its surrounding medium—only movement of a certain type whose effect *in us* is light and color. For the source to act on the medium, there must be a kind of movement in the source that is capable of being transferred to it by direct contact, according to the basic laws of motion. And since the medium is invisible, the movement impressed on the medium from the source is invisible—that is, not anything like the light or color that we see. It is all a matter of bodies in motion having certain dimensional properties. Since these properties of the medium are invisible, various theoretical hypotheses regarding the nature and shape of the movements are possible, with some being more likely than others. Hobbes vigorously defends his own views against rival ones as more likely to explain the effects.[9] But more generally, all modern thinkers in the debate must agree that physical movement causes physical movement until the final effect of this process occurs in us, which is also a physical movement—the perception of light or color, the subjective experience that we call the seeing of an illuminated or colored object. This subjective experience, the "phantasm" of perception, must also be a physical movement, although of a fluid, "spiritual" type occurring in extremely minute portions of the brain.

That it is possible to experience light without any external source of that light is evident when the eye is struck with someone's fist, and the injured person sees sparks. Hobbes takes this phenomenon as more sensory evidence (the deception of sense by sense corrected) that the experience of light is something produced inside of us, rather than something transmitted to us from the object. What is transmitted is only invisible, colorless motion of the appropriate kind.

In the "phantasm" of sensation we only *seem* to see an object outside of us. Were we to see the subjective image *as* a subjective image, like the reflection in a mirror or on the surface of a body of water, there would be no "great deception of sense." We would recognize clearly that what we are seeing is a reflection or image—the secondary effect of a process and not the original source itself. So why does it seem that we experience the object directly? This deception occurs, Hobbes hypothesizes, because the movements that are rapidly transmitted through the optical nerve *react* on the center of perception in the brain and travel back up the optical nerve to the eye once more and in the direction of the source of the light. It is this rebound movement back toward the object outside of us (though still remaining in one's body) that is the "phantasm" we experience. As perception occurs in the reaction or rebound movement toward the object, we have the feeling that what we are seeing is not the reflection or image occurring within us—which is what the scientific account tells us it must be—but the object outside of us. It is this "rebound in the optic nerve again, which we not conceiving as motion or rebound from within, think it is without, and call it light."

Complicated Animal Movement of Desire

The general problem then is to see how the laws of physics can be explanatory, despite ordinary appearances, not only of inorganic bodies, but also of the specific features of organic and even human life. The task of science is to *develop* universal causal laws by proceeding in steps. We begin with the simple motions of balls rolling on inclined planes. Then we move on to more complex forms of motion, such as the irregular movements of leaves falling from trees, the upward movement of the flame, the orbital motions of the planets around the sun, and the movements of systems of suns in the more immense patterns of galaxies. These apparently radically different forms of motion can be explained from the same initial axiom of straight-line, inertial motion. Their different appearances are simply functions of quantitatively more complicated combinations of straight-line, inertial motion.

When we turn to plants, animals, and human beings, we must develop more complex models that express the same law of causality. According to Hobbes, the apparent internal causes of motion in organic beings are simply

more complicated expressions of the basic laws of motion that operate in billiard balls. Certainly, animals and human beings are not obviously bumped around like billiard balls. They seem to act to achieve goals or purposes stemming from within themselves. However, animals and humans are obviously dependent on the environment. Because we have been constructed in certain ways, we have needs that must be fulfilled from things existing outside ourselves. We experience these needs in the form of having certain *desires* that impel us from within to seek the things that, thanks to nature, circumstance, past experience, and education, we believe will satisfy those desires.

The account of sensation that we described above is not complete. According to Hobbes, the rebound movement that occurs in the brain continues into the heart where it reacts with other "vital motions" of the body to produce the experiences we call pleasure or pain, desire for the object or a desire to evade it, love and fear, which are movements toward the object of sensation or a movements away from it. So Hobbes writes that

> conceptions or apparitions are nothing really, but motion in some internal substance of the head; which motion not stopping there, but proceeding to the heart, must there either help or hinder that motion which is called vital; when it helpeth, it is called DELIGHT, contentment or pleasure, which is nothing really but motion about the heart, as conception is nothing but motion within the head . . . and the same delight, with reference to the object, is called LOVE.[10]

A desire is not the product of an arbitrary act of free will. We do not create our desires but find ourselves *having* certain desires. If we are hungry, it is not because we caused ourselves to be hungry by an act of free will. It is because of biological processes in the organism that produce this particular desire, this inner sense of what it is that we need. The fact that we desire, say, a pizza, rather than a pickled egg to satisfy our hunger is also not a result of free will, but an effect of past experience and social conditioning. Thanks to these biological and social-psychological causes, some of us have a desire for pizza and an aversion to pickled eggs. The perception of a pizza, combined with the memory of previous satisfactory experiences with similar objects, interacts with the vital motions focused in the heart to cause a desire to eat the pizza. In the absence of an object in direct experience, then memory and imagination—which Hobbes calls "decayed sense"—elicit in the hungry individual the idea or representation or phantasm of a pizza in our heads. A sense of anticipated pleasure is created in us when we imagine the pizza that we want. If someone were to suggest pickled eggs instead, our conditioned response to this might be a feeling of repulsion. There is no need to invoke any notion of "free will" in all of this.

Religion and Morality as Forms of External Causality

Having formed a representation or idea of an object or activity that will satisfy our desire, the next step is to move toward the realization of that idea. In a modern world, a very important means for acquiring what we need is money. Suppose we find that we don't have enough money to buy the pizza we have our heart set upon. There is the pizza on the counter shelf, inaccessible to us through ordinary means. The thought naturally suggests itself to employ extraordinary means: we might *steal* the pizza. However, if we are properly educated, the thought of stealing something, like the thought of pickled eggs, evokes painful images, such as that of possible imprisonment or at least disapproving looks and treatment from others. Moreover, thanks perhaps to biological dispositions of sympathetic identification with others, the idea of injuring or even killing the hapless employee in the store also evokes in us a certain painful feeling of repulsion.

The proposed course of action may evoke another thought, ingrained in us from religion classes in childhood. Surrounded by thunder and lightning, the voice of God on Mount Sinai commands Moses, "Thou shalt not steal." And down through the ages, in many different forms, children have been told that stealing is evil or "immoral." Consequently, in morally well-educated people, the idea of taking property belonging to another evokes those strong negative feelings, that strong sense of displeasure, that we associate with certain conceptions of moral right and wrong.

It is not only the thought of God outside of us that bothers us. There is also the possibility of a disapproving look from within ourselves, which we call our own conscience. This too can be explained by causal influences. We will never forget the day we took a quarter from a pile of change left by our parents. Our parents were angry and punished us. We were "grounded" for a week. Since then, the thought of taking what does not belong to us evokes an image of the disapproving look that haunts us with the threat of possible punishment or at least inner disapproval. Conscience is simply the internalization of this look of disapproval coming from significant others. We don't want the pizza *that* badly, so as to risk any variety of such negative consequences.

Do we need the concept of "free will" to explain all these things? Isn't it enough to regard human beings as complicated entities governed by a variety of kinds of causes, not only physical ones but intellectual or ideological ones, including what we call "morality?" Does "morality" require a notion of freedom from causes, or free will, or is it not just another one of those causes that can be explained by other causes—parental disapproval, religious instruction, perhaps a natural, biologically based desire to please others—a pleasure in giving pleasure.[11] A scientific approach to explaining human behavior must factor in a number of complicated causes.

The result of these complicated causes is the apparent "self-movement" that Aristotle takes at face value. Human beings *seem* to move themselves from within themselves. But if we are ultimately moved by our desires, and if these desires are reactions or rebounding effects of chains of causes extending into the environment and into the past history of the species, then everything happens in accord with Newton's first law. We do not *really* move ourselves. We only *appear* to do so.

From Desire to Rational Self-Interest

This deterministic account of religion and morality is not complete. While Hobbes recognizes the causal character of religion and morality in shaping human action, he also recognizes that religion, which he as a Christian believes has a supernatural source in revelation, is not reducible to the imperatives of social life, and argues that morality has a distinctive *rational* component. Hobbes recognizes that the factors of social life that influence human behavior are themselves the products of human beings acting for specific reasons. Organized society is not, therefore, equivalent to the natural environment that surrounds the animal, or that surrounds the human individual in "the state of nature."

Human beings are more than animals, which are subject to the causal influences of their environments interacting with organisms of a specific type. The distinctly social environment in which morality and religion operate as causes is itself the product of human activity. The human being actively produces a second nature or artificial environment, a social organization. Human beings thus seem, in some sense, to be like God—to be causes of themselves. The analogy of the influences of religion and morality with the training of animals is inadequate to account for the more complex activity of rationally acting human beings. Of the "parts" of the human consisting of "figure, quantity, motion, sense, reason, and the like" we have so far only covered the development or complication of movement up to sense and sensory desires. It is necessary to take the next step from sense-induced desire to reason and rationally examined desires—what Hobbes calls self-interest.

We must therefore discuss one additional causal factor, which is often taken as grounds for making an exception for human beings from the laws of motion. Human beings, Aristotle argues, differ from other animals by the possession of the faculty of reason. Does the capacity to reason make such a fundamental difference that it frees human beings from causal laws? Not if reason is understood as an instrument of desire itself.

Human beings are subject to a variety of influences and may experience at any one time different desires. Unlike animals, we use our intelligence or reason to evaluate the future effects our actions. An action that seemed at first to gratify a desire had produced terrible results in the days and weeks ahead. The

next time such a pleasurable possibility arises, we recall that past experience, we weigh up the expected pleasures and pains, and decide, for the sake of gaining more pleasure than pain in the long run, to forego or resist the pleasurable experience of the moment.

This capacity to resist what is immediately pleasurable, thanks to the power of reason, is sometimes mistakenly called free will. But this function of rational evaluation is only an expression of the fact that human desires are more complex than animal desires. They take in the long range of the future. Thanks to our rational abilities we can sacrifice the short-range pleasure for the sake of long-range pleasures. The term that we use to describe the long-range pleasures or advantages, as these are estimated by rational considerations of future consequences, is "interest." Thus to explain why individuals do what they do, social scientists try to understand not only how immediate circumstances and related desires affect their behavior but also what individuals see as in their long-range interests. There is no need to suppose a power of free will that is capable of contradicting desires. It is simply a matter of the stronger desires, some of which may be of a long-range nature, becoming more effective than weaker, short-range ones. This power of rational self-interest is possible thanks to our rational capacity to represent future consequences and imaginatively picture to ourselves these consequences in the present moment.

Kant himself gives a graphic illustration of this power of reason to overcome short-term desires.[12] Consider a certain individual who claims to be unable to resist his lustful desires. Suppose, Kant proposes, that a gallows is constructed outside the house in which the lustful desire is to be satisfied, and users of the services of the house are forthwith hung by the neck until dead. Will the subject of our consideration, under these circumstances, still be unable to resist his lustful desires? Of course he will be able to resist them, Kant affirms. Does this mean that the person possesses free will, an ability to resist the determining force of desire? Not at all. What happens in this situation is that the individual has two desires: the desire to have the pleasure of satisfying his lust in the short run, and the more powerful desire to continue to live. Thanks to reason and imagination bringing future consequences into present awareness, it is the long-run desire to live that is more powerful. There is nothing "free" about the choice between these two desires, Kant argues, in agreement here with Hobbes; the more powerful one will determine the action. Another way of putting this is to say that the individual acts in this situation out of rational or "enlightened" self-interest.

Social scientists understand that individuals act on the basis of their desires and what they perceive to be their interests. For example, both cigarette companies and anti-smoking organizations try to discover the underlying needs and desires that smoking satisfies. Advertisers are experts at appealing to such desires and interests in order to produce the effect they want. Consequently, carefully arranged "hidden persuaders" are regulating our actions by creating or shaping

our desires. Anti-smoking health promoters try to counteract the appealing advertising that cigarette companies use to win over new customers. A battle is raging over the minds and hearts of young people in this area. This battle presupposes that young people do what they do, not because of free choice, but because of their desires and what they perceive to be their interests. It also presupposes that desires and perceptions of interests can be determined by outside causes.

At this level, the human being is regarded as an animal, subject to environmental and biological causes. However, it is also possible that the individual *herself* can take charge of her behavior. Already suffering from the effects of her habit and equipped with a scientific understanding of the causes of her desire and of the long-term consequences of satisfying those desires, she pictures Kant's gallows awaiting her after so many lustful indulgences in her habit. The fear of death concentrates the mind, and with the grim outcome drawn in imagination, she may be able to overcome her short-term desire. And if the imaginary picture of long-term goals is too feeble to counter the force of immediate desire (in Kant's example, the gallows is a present fact of sensory experience, not an imagined one in some remote future), she may at least consent to allow others to help her and even, in cases of raging addictions, to impose a cure by force.

The long-term desire or interest does not readily win over the short-term desire. In the immediate or short-range situation there is a strong craving for a cigarette. However, the individual has formed a conception of future negative consequences from continuing such behavior and so desires to end the addiction. Goaded by painful experiences, she desperately desires to achieve the healthier and happier lifestyle that she associates with a smoke-free life. To achieve this goal, she employs both material and psychological techniques to lessen the pain of withdrawal in order to achieve the supposed pleasures that come from a longer, healthier life. She struggles to become free of the addiction.

Freedom as the Realization of Desires

The last sentence includes the term "free." However, in this usage it does not mean "free will." It means "freedom from" addiction and "freedom to" live longer, healthier, with fresher breath, with more money for other things, with fewer looks of disapproval from nonsmokers, etc. "Freedom" does not mean "free will" or "freedom from causes," but *the ability to realize our desires.* Such a conception of freedom, Hobbes argues, is completely compatible with the deterministic, scientific view of the world. In a passage cited in the previous chapter, Hobbes regards as absurd the concept of "*a free will*; or any *free* but free from being hindered by opposition. . . ." When something opposes the realization of our desires we want to be free from this hindrance, a conception of freedom that does not imply free will. In the following passage, Hobbes summarizes his argument:

> Liberty and necessity are consistent: as in the water that hath not only liberty, but a necessity of descending by the channel; so likewise in the actions which men voluntarily do, which, because they proceed from their will, proceed from liberty, and yet because every act of mans will and every desire and inclination proceedeth from some cause, and that from another cause, in a continual chain (whose first link is in the hand of God, the first of all causes), proceed from necessity. So that to him that could see the connexion of those causes, the necessity of all men's voluntary actions would appear manifest.[13]

If "freedom" means the ability to realize our desires and interests in the face of obstacles or forces that oppose this realization, it is possible to speak meaningfully of the absence of freedom, of constraint, imprisonment, or slavery. Sometimes when we desire something, there is an obstacle or constraining force blocking our way. When we were "grounded" for taking that quarter from our parents' change pile, our house became our prison. Our desires to get out of the house were opposed by the superior power of our parents. When the term of our confinement ended, we rushed into the outdoors and in doing so experienced "freedom." In this context, the term freedom does not convey any "counter-causal" meaning. Certain *external causes* or impediments were finally removed, so that the *internal causes* of our actions, the desires that were welling up inside us, could be realized. Far from the action being "free" in the sense of being "independent of all causes," it was completely predictable that at the moment when the term of punishment was ended we would fly from our house. We experienced "freedom," but the scientific observer would recognize a wholly determined action.

It is in this sense, Hobbes argues, that human beings possess "natural liberty." Each of us seeks naturally to realize his or her desires. When I am able to achieve my goals, after having been prevented by some circumstance from doing so, I experience a sense of freedom. This is no different in principle from what happens when a river is prevented from flowing in its bed, and then suddenly finds a way to "break free" from the obstacle that blocks its normal course. It is no different from the action of a dog that is tied down a few feet from a meal, and is suddenly released. Such "freedom" in human behavior is therefore completely in accord with Newton's first law. In principle, all such actions performed in the name of freedom are understandable in strictly deterministic terms.

Operant Conditioning: Freedom as Cause of Behavior

The stimulus-response theory of human activity was developed by physiologists and psychologists in later centuries in line with the basic Hobbesean

psychological theory presented here. In the twentieth century, B. F. Skinner is well known for his further elaborations of this theory. In his work *Beyond Freedom and Dignity* and other writings, Skinner essentially repeats Hobbes's critique of free will and elaborates the conception of "freedom" that is compatible with the deterministic view of human behavior. Skinner adds the notion of "operant conditioning" to the classical stimulus-response theory of conditioning. The theory of operant conditioning, Skinner argues, captures the surface feeling or appearance—Hobbes would say "phantasm"—of "self-motion" much better than classical stimulus-response theory according to which the initial impetus for action comes directly from outside the organism. In proposing a causal theory of behavior that captures the subjective experience more closely than another causal theory, Skinner follows the spirit of Hobbes's own attempt to capture this experience of movement from inside to outside in his idea of a rebound or reaction in the brain that continues into the outward directed desire of the heart.

Operant conditioning supposes initial random behavior that is then either positively or negatively reinforced by the consequences of that behavior. Initially random behavior whose consequences provide pleasure tend to be repeated, while those behaviors that result in negative consequences tend in the future to be avoided. Initially random behavior produces effects, and so we feel ourselves to be "first causes." "Idealistic" theories of free will, Skinner argues, appeal to such feelings. Thanks to the theory of operant conditioning, we can conceive of organisms, including human beings, as "initiating" or "creating" behavior, in the sense of engaging in random acts, without supposing any "free will," or power of action that is independent of deterministic causes. The capacity for the random behavior that begins the chain of causes is itself an effect of prior evolutionary selection. Organisms that can engage in random behavior have a better chance of survival. The organism is only apparently the initial cause of certain effects, for the capacity for randomness is itself the result of connections between the organism and the environment arising out of the evolutionary history of the species.

The psychologist can manipulate experimental environments so that the organism will apparently independently discover certain results of initially random or accidental behavior and then repeat this behavior in the future. Operant conditioning is a highly effective means of controlling individuals because they do not feel externally constrained. They feel "free." The feeling of "freedom," understood as the freedom from external controls to realize internally generated desires, is itself a very effective controlling cause. Skinner criticizes the common opposition between freedom and "control." To feel free, he says, is to be free from "aversive" or negative forms of control. But there are forms of control whose effects are experienced positively. The most effectively controlled individual is the one who maintains his sense of being free from external controls while nevertheless acting in ways determined by outside

conditions. To illustrate his conception, Skinner cites Jean-Jacques Rousseau's *Emile,* a book describing the author's conception of the ideal form of education:

> Let [the child] believe that he is always in control, though it is always you [the teacher] who really controls. There is no subjugation so perfect as that which keeps the appearance of freedom, for in that way one captures volition itself. The poor baby, knowing nothing, able to do nothing, having learned nothing, is he not at your mercy? Can you not arrange everything in the world which surrounds him? Can you not influence him as you wish? His work, his play, his pleasures, his pains, are not all these in your hands and without his knowing? Doubtless he ought to do only what he wants; but he ought to want to do only what you want him to do; he ought not to take a step which you have not foreseen; he ought not to open his mouth without your knowing what he will say.[14]

Appearance and Reality

Hobbes therefore argues that it was wrong of Aristotle to think that somehow plants, animals, and human beings, no less than falling stones, actually move themselves. Like the apparent motion of the sun around the earth, such apparent "self-motion" is an illusion that stems from our taking surface behavior at face value. The great lesson of modern science, by contrast to the "science" of the ancient world, is that things as they appear to us in immediate experience are not the same as things as they are in themselves.

Copernicus explains the movement of the planets by "bracketing" the ordinary perception of the world in which he, along with everyone else, sees the sun move in a great curve around the sky. Instead of taking this appearance as "real," Copernicus, thanks to the power of thought, adopts a new standpoint—that of the sun as the center of the solar system. Galileo too puts aside the standpoint of ordinary experience—long ago identified with the nature of things by Aristotle—and adopts a new standpoint from which to explain what appears to us. That new standpoint is that of *inertial straight-line motion.* If we take straight-line motion as the starting point or focal point of our theory, we can explain all the apparently different kinds of motion as complicated outcomes of inertial straight-line motion. The objects that we directly experience are then reconstituted in thought as effects of causal laws stemming from that initial or basic principle. This is the resolutive/compositive or analytic/synthetic method of science that Hobbes opposes to the contemplative empiricism of Aristotle.

Because of the success of the new post-Copernican world view, it is difficult for us to appreciate how much the "weight of evidence" from ordinary experience is against it. The sky still can be seen as a roundish dome over which the sun passes. Thanks however to the idea that "the sun doesn't really go around the earth" most people, I think, largely ignore this fact of our experience. In

the premodern world, this phenomenon was interpreted and given meaning by philosophy, science, religion, folk tales, song, and poetry. But today we hardly give it any thought at all. What is there really to think about if something is "merely" an "appearance," a kind of optical illusion, "unreal"?

Before the scientific revolution initiated by Copernicus and continued by Galileo, Kepler, Newton, and others, phenomena that most of us no longer regard as significant provided overwhelming evidence for a certain conception of the world. Of course there were other phenomena that, if thought about seriously, could have opened up possibilities of revolutionary change—the illusion of sense capable in this way of being corrected also by sense. At least once in his life, Aristotle must have seen a projectile with a streamer attached that was trailing behind it. This fact of experience, when considered thoughtfully, challenges an otherwise overpowering worldview that is massively confirmed in ordinary experience. Quite understandably, Aristotle did not seize on this particular phenomenon as a challenge to an otherwise satisfying conception of the world.

Similarly, while ordinary experience creates a powerful impression that the earth is flat, observation of a ship sinking gradually over the horizon conflicts with the great mass of direct experience that supports the flat-earth view. Hence the Aristotelian conception of the earth as a sphere departs significantly from the vast body of ordinary appearances. Conceiving of the earth as a sphere requires that ordinary experience be profoundly reconceptualized on the basis of relatively infrequently observed phenomena. But this move away from ordinary experience did not go not far enough to break radically from the standpoint of the passive observer. Straight-line motion, similarly, is an observable phenomenon, but it is far from being the most commonly observed form of motion. In fact, except for falling bodies, it is very uncommon. Abstracting from observation of falling bodies, Aristotle took downward moving straight-line motion to be primary, and then only for certain types of bodies. It takes an incredible leap of thought to isolate the simple phenomenon of straight-line motion, irrespective of direction, and then take it as the basis of—as the key to the understanding of—*all* other forms of motion.

The Revolutionary Social Power of Scientific Enlightenment

It is as Pascal says. As we observe the immensity of the universe from our location at some insignificant point in time and space, that immensity seems to swallow us up. However, through the power of thought we can turn the tables on this relationship between subject and object. We ourselves can "comprehend" or encompass the entire universe. Who then are we, the thinking human beings who have this power to comprehend the universe? The great problem of modern philosophy is how to extend the scientific approach that has revolutionized

physics so as to understand who or what we human beings ourselves are. It is the program of "Enlightenment" to turn the newly awakened mind of modern experimental science to human life itself. In this Enlightenment perspective, the study of any object is not a "contemplative" recording of the truth—the characteristic outlook of the ancient worldview. The scientific mind does not simply observe what occurs under our noses. It takes up new standpoints and as a consequence changes everything, to the point that the way things appear in direct experience may sink into insignificance for us.

The Enlightenment perspective, turned toward society itself, produces similar results. The order of things inherited from the past, and represented as "natural," turns out to be an unreal appearance. The challenge that the new scientific ideas brought to the traditional social system took place on different levels. Because of the hierarchical order of the Middle Ages, Aristotle became an Authority. His own ideas, born out of observation of the world around him, became embedded in a system of religious dogma and political power. As a result, the authority of the Church stood behind Aristotle's ideas. To doubt Aristotle was therefore to doubt the Church. And because a dogmatic religious theory of the divine right of kings justified the privileges and immunities of the state, to doubt the Church was to doubt the hierarchical order of the state.

We can appreciate the threat that the new science posed to the traditional social order by considering the social significance of the moons of Jupiter. Thanks to his newly constructed telescope, Galileo discovered that the planet Jupiter has moons that circle it just as our moon circles the earth. Here is a fact that contradicts one of the basic elements of the Aristotelian-Ptolemaic cosmology. In this cosmology, the planets and stars are thought to be attached to transparent revolving spheres. To recognize the falsity of the ancient and medieval cosmology all one has to do is to look through the telescope. Galileo could show that Jupiter is not attached to any such sphere, since its moons pass freely around it.

In Berthold Brecht's play, *Galileo*, the Aristotelian authorities refuse to make this simple observation, preferring instead to cite Aristotle.[15] To look through the telescope would indeed have been dangerous. Because the hierarchies of religion and politics were linked to a certain cosmology, the simple fact of the moons of Jupiter threatened to undermine the entire social and political structure. Brecht depicts a street scene, "On April Fools' Day, thirty two," in which a crowd mocks the old beliefs and the authorities who justify their power and wealth by such beliefs. A balladeer, who is selling pamphlets explaining Galileo's ideas, sings:

> When the Almighty made the universe
> He made the earth and then he made the sun.
> Then round the earth he bade the sun to turn—
> That's in the Bible, Genesis, Chapter One.
> And from that time all beings here below

Were in obedient circles meant to go:
Around the popes the cardinals
Around the cardinals the bishops
Around the bishops the secretaries
Around the secretaries the aldermen
Around the aldermen the craftsmen
Around the craftsmen the servants
Around the servants the dogs, the chickens and the beggars. . . .
Up stood the learned Galileo
Glanced briefly at the sun
And said: "Almighty God was wrong
In Genesis, Chapter one!"
Now that was rash, my friends, it is no matter small
For heresy will spread today like foul diseases.
Change Holy Writ, forsooth? What will be left at all?
Why: each of us would say and do just what he pleases! . . .
The carpenters take wood and build
Their houses—not the church's pews.
And members of the cobblers' guild
Now boldly walk the streets—in shoes.
The tenant kicks the noble lord
Quite off the land he owned—like that!
The milk his wife once gave the priest
Now makes (at last!) her children fat.
Ts, ts, ts, ts, my friends, this is no matter small
For independent spirit spreads like foul diseases
People must keep their place, some down and some on top!
(Though it is nice, for a little change, to do just as one pleases!)[16]

The new science challenges social hierarchy at a fundamental level. In the old system knowledge or truth was not something accessible to just anyone. It was the prerogative of the Church, a hierarchical institution that claimed privileged access to the truth through divine revelation. Like the Copernican theory, the moons of Jupiter threatened this establishment, first of all, because it contradicted teachings about the structure of the universe that had been passed off as divinely approved. But there was a deeper problem. This is the fact that modern science radically democratizes the nature of knowledge.

The Democratic Impulse of Modern Science

That it has become possible to introduce such facts as the moons of Jupiter into our experience is a result of the wonderful technological extension of ordinary

sight, the telescope. While in the ancient view the nature of things was seen as essentially fixed, the practical application of science was transforming the natural abilities of human beings themselves. As a result, anyone, any ordinary peasant in the field, can look through Galileo's telescope, observe the moons of Jupiter, and recognize that Jupiter is not attached to a glass sphere but moves in empty space. Thanks to the telescope, it doesn't take a rocket scientist, so to speak, to see the moons of Jupiter and so refute a two-thousand-year-old cosmology and related vision of human life on earth.

Knowledge, as Francis Bacon (1561–1626) says, is therefore power. The democratic impulse of modern science places the transforming power of knowledge at the disposal of everyone. True, this science contradicts much of ordinary experience and the popular beliefs founded on appearances, but so do many of the claims of revealed religion. However, the latter is based on the notion that there are truths that are inaccessible to ordinary mortals, who must therefore take the word of religious authorities and people born to power. Modern science, by contrast, places the instruments of knowledge in the hands of anyone who wishes to take them up.

This is not only true in the case of technological extensions of sensory capacities, such as the telescope, which open up previously concealed secrets of the universe to the gaze of anyone. It is also true on the conceptual level, on the level of the thinking process itself. It is not difficult to grasp the nature of straight-line motion, the starting point of modern physics. Nor is it so difficult to follow the steps that lead from simple basic principles to the explanation of more complex forms of motion. It is not so difficult to understand, for example, how the zigzag motion of a falling leaf can be understood as a combination of straight-line motions. Once the system of ideas has been established, with one simple step leading to the next, it is only a matter of patience or motivation, rather than special "brain power" or supernatural revelation, to follow the steps that lead to the understanding of more complex forms of motion.

Descartes, another great pioneer of modern scientific philosophy, puts this point clearly when he writes, at the beginning of the *Discourse on Method*:

> Good sense is of all things in the world the most equally distributed, for everybody thinks himself so abundantly provided with it, that even those most difficult to please in all other matters do not commonly desire more of it than they already possess. It is unlikely that this is an error on their part; it seems rather to be evidence in support of the view that the power of forming a good judgment and of distinguishing the true from the false, which is properly speaking what is called Good Sense or Reason, is by nature equal in all men.[17]

Both Hobbes and Descartes argue that to comprehend the universe, at least to the point that established sciences of the day permit us to do so, two

things are necessary. The first is to begin with the right starting point, which can be something as simple and easy to understand as motion in a straight line. This simple, most general starting point is found through a process of analysis in which the complexities of the world around us are mentally dissolved into their basic components. Then it is only necessary to reconnect the aspects of existence synthetically, going in simple steps to the comprehension of more complicated applications and elaborations of this starting point.

Revolution in Social Theory

Let us now apply this approach to the study of human society. From what has been said so far, it is not surprising that in his scientifically informed theory of society, Hobbes does not merely extrapolate from the surface appearances of the existing society. The society he directly observed around him was by and large that of a hierarchical social order. In both ancient Greece and Rome as well as European feudalism, philosophers maintained that there is a natural hierarchy of human types, with some people born to rule, and others to serve. Instead of extracting essential natures from the surface appearances, Hobbes begins with the simplest "parts" of the social totality, which he takes to be the separate human individuals. He agrees with Descartes that each individual is possessed with the same basic common sense or ability to reason. As reason is the distinguishing feature of human beings, all human beings are in this respect fundamentally or essentially equal. Hobbes therefore arrives at the basic element and simple starting point of the modern science of society: essentially equal individuals having desires that arise out of their conditions and capable of reasoning about their long-term interests. Hobbes explicitly contrasts the modern position with that of Aristotle:

> The question who is the better man has no place in the condition of mere nature, where (as has been shown before) all men are equal. The inequality that now is has been introduced by the laws civil. I know that Aristotle in the first book of his *Politics*, for a foundation of his doctrine, maketh men by nature, some more worthy to command, meaning the wiser sort, such as he thought himself to be for his philosophy; others to serve, meaning those that had strong bodies, but were not philosophers as he; as if master and servant were not introduced by consent of men, but by difference of wit: which is not only against reason, but also against experience. For there are very few so foolish that had not rather govern themselves than be governed by others: nor when the wise, in their own conceit, contend by force with them who distrust their own wisdom, do they always, or often, or almost at any time, get the victory.[18]

To understand the radical theoretical and practical significance of this concept of essentially equal individuals, we have to keep in mind the historical context in which it was first developed. In the late middle ages, feudal social hierarchy, founded on privileges and duties of birth, appeared to be a fact of nature having the same power of self-evidence as the geocentric cosmology. No doubt there were relatively small numbers of self-determining individuals independently pursuing their interests, mainly in the field of commerce. But this had always been the case. Such individualists were generally viewed as a defective element in an otherwise well-constructed system of hierarchical order.

The insatiability of the pursuit of wealth, the Stranger says in Plato's *Laws*, "makes the orderly and temperate part of mankind into merchants, and captains of ships, and servants, and converts the valiant sort into thieves and burglars, and robbers of temples, and violent, tyrannical persons . . ." All of whom, he says, are unfortunate, for "Must not they be truly unfortunate whose souls are compelled to pass through life always hungering?"[19] Consequently, in *The Republic*, his program for an ideal state, Plato forbids the rulers all access to gold and silver. This removes the temptation of pursuing their individual interests rather than upholding the interest of the community as a whole. They will not therefore be like the "always hungering" merchants. Furthermore, he recommends that rulers promote the "lie" that individuals are born with qualitatively different types of souls—so that they will be content with their lot in life.[20]

Similarly, Aristotle describes "retail trade" as the boundless pursuit of wealth in the form of money. Because there are no limits to the accumulation of coin or money, all virtues are turned into means to this end and so are corrupted. This practice generates a confusion between real wealth, which consists in the material and spiritual goods of life, with money. "But how can that be wealth of which a man may have a great abundance and yet perish with hunger, like Midas in the fable, whose insatiable prayer turned everything that was set before him into gold?"[21]

What was new and revolutionary in Hobbes's seventeenth-century construction of a science of society was to take the typical standpoint of individuals who are insatiably "hungering" after the accumulation of wealth as the simple starting point for a complete reconstruction of society. We have seen how Hobbes proposes to reconcile human activity with basic principles of physics. The key notion is to see desires and interests as the central motivating forces of human behavior and to propose an explanation of desires and interests that is compatible with physical laws of external, deterministic causality. This idea provides a broad framework and a research paradigm for detailed scientific investigations. This paradigm continues to inspire modern-day psychologists such as B. F. Skinner. However, establishing this compatibility with natural science is only half of the task. This merely shows that we can think of human activity in a way that is consistent with physical laws. Hobbes goes beyond providing a very general conception for further investigations and refinements

at the level of individual psychology. He elaborates a distinctive theory of society and the state that is consistent with the physics of Galileo. He shows the next steps of the development of a system of knowledge that begins with straight-line motion, proceeds to complicated motions of falling leaves, plants, and animals, and culminates in the concept of desiring, rationally self-interested human individuals.

Possessive Individualism: In Hobbes's Day and Our Own

Before continuing with this exposition, let us take a moment to reflect on the historical significance of Hobbes's thought in relation to our own time. It is crucial to understand how well developed is the deterministic theory of causality if we are to grasp the problems faced by philosophers who challenge the deterministic interpretation of science. When Kant writes that he "dares" to introduce the notion of "freedom" into science it is necessary to appreciate just how formidable a task this was in Kant's day. In some ways, this is perhaps an even more formidable task today. Deterministic ideas have not only not lost their power, but have perhaps become even more powerful in the contemporary world. However, this power is no longer primarily due to the influence of the physics of Galileo and Newton. Post-twentieth-century physics presents a fundamentally new scientific frame of reference for philosophical reflection that challenges the early modern mechanistic view of nature. When we turn to Descartes and subsequent anti-deterministic philosophers in the tradition of continental European rationalism, we will see that aspects of post-twentieth-century physics have long been anticipated. What continues to give life to the mechanistic outlook today is not the physics on which it was allegedly founded, but the sociological, economic, and political elaborations given to it by Hobbes and his successors. Today, as the standpoint of the merchant pursuing individual gain dominates the global economy, Hobbes's social theory, founded on this principle, seems far more self-evidently true than when it was first proposed.

In the context of his own time, Hobbes's social theory of the primacy of relatively equal individuals challenged the dominant conceptions of late European feudalism. The individualism that he proposes as the foundation of society would not have seemed self-evident in Hobbes's own time. Today, however, it has come to seem overwhelmingly obvious. Hobbes's conceptions and the phenomena they reflect have become the new "appearance" of our own society. A stretch of the imagination is therefore required to see how revolutionary and liberating Hobbes's thought was in its own time. We no longer face the social context of feudal hierarchical authority in relation to which Hobbes gave voice to a radically different and revolutionary conception of society as one constituted by the activities of separate but equal individuals. Today the social principle of

"possessive individualism"[22] that forms the core of Hobbes's argument appears to be the obvious reality of social life. Distinctly "modern" social phenomena, which Hobbes incisively singled out in his social theory, have become the massive "evidence" of contemporary experience, comparable to the social hierarchies of birth characteristic of the Middle Ages. Because of this fact, the basic theoretical principles, originally linked to classical physics, continue to appear plausible although their foundation in physics has been challenged by new physical theories. If today we are dissatisfied with this conception of human nature and society, if we recognize its limitations more and more clearly, we are in a better position to appreciate the challenges raised to the paradigm of possessive individualism by our forerunners in the early modern period. These challenges, beginning with those of Descartes himself, will be explored in the second part of this book.

Kant's "critique" of determinism in human affairs challenges the society of "possessive individualism" that is connected with it. Kant, we have said, proposes certain "facts" that seem to contradict this entire schema. Like the miniscule facts that once challenged the great worldviews of premodern society, Kant's "fact of morality" challenges the classical modern worldview itself. There is something we all know, some datum of experience, that requires an explanation incompatible with the deterministic conception of the world and all its ramifications and extensions or elaborations in psychology, sociology, economics, and political science. It is this datum of experience that makes us uncomfortable with Clarence Darrow's defense of Leopold and Loeb. Surely, somehow, these individuals must be seen as responsible for their actions in some more fundamental sense than that proposed by Hobbes and behaviorist psychology.

However, before exploring this contrary perspective in the line of philosophy leading up to Kant, we need to continue spelling out the implications of Hobbes's groundbreaking concept that he proposed in the context of a society that was to all appearances a highly stratified, feudal one, in which people occupied their places in this hierarchy as a result largely of the circumstances of their birth. Since nothing is more natural than the fact of being born, the social inequalities that an observer like Aristotle would perceive therefore appeared to be characteristics of the individual's natural constitution.

Life, Liberty, and the Pursuit of Happiness

We now need to take the next step beyond Hobbes's outline of the psychology of the desiring and self-interested individual and into his conception of the spheres of social life. Hobbes proceeds in these three basic steps. 1) We begin with the basic form of motion—straight-line inertial motion—that provides the foundation of physics. 2) We then recognize how such physical motion takes a

more complicated form in human beings. This more complicated form consists of viewing human beings as desiring beings capable of reasoning about their long-range interests. 3) Finally, we reconstruct the social order that we observe on the basis of such self-interested human individuals interacting with one another.

Hobbes interprets freedom, consistently with deterministic physical laws, to mean that human beings naturally seek to realize their desires by any and all effective means. Using terminology from ethical and legal discourse, Hobbes describes the original "right of nature" as a natural right of human beings to freedom—that is, to pursue the realization of their desires and interests by any feasible means:

> The *rights of nature*, which writers commonly call *jus naturale* [natural right], is the liberty each man hath to use his own power as he will himself for the preservation of his own nature; that is to say, of his own life; and consequently, of doing anything which, in his own judgement and reason, he shall conceive to be the aptest means thereunto.
>
> By *liberty* is understood, according to the proper signification of the word, the absence of external impediments; which impediments may often take away part of a man's power to do what he would, but cannot hinder him from using the power left him according as his judgement and reason shall dictate to him.[23]

Once we appreciate the general philosophical framework provided by Hobbes, this idea of a natural right of freedom is hardly more than a truism. If human beings are moved to action by their desires, and if freedom simply refers to realizing those desires rather than being prevented or frustrated by some external force or circumstance, then human beings have a natural desire to be free. We naturally resist obstacles or impediments to the realization of our desires. Actual freedom, in this fundamental sense, is merely the state in which certain impediments to the realization of desires are removed so that one's desires can be realized.

So far, the same is true for dogs and cats. The main difference between human beings and animals is the greater range or extent of the desires that we human can have. Thanks to thought or reason, we can represent to ourselves long-range future consequences of our actions. Unlike animals, we are not content with having found enough food for the day. Because of thought, connected to language, we can represent objects and situations that are not present to our senses. We can project ourselves in imagination into the future. Certain ways of attaining food today may compromise our ability to attain food tomorrow or next year. As this future is uncertain, we naturally worry about tomorrow, and next year. We can recognize that by satisfying a desire in the

present we will jeopardize our "happiness" in the future. Happiness simply means the satisfaction of desires on a long-term basis. Since the satisfaction of long-range desires requires planning for the future, human beings naturally engage in the rational "pursuit of happiness."

Thomas Jefferson inscribed the Hobbesean theory in the Declaration of Independence of the American colonies from England when he wrote:

> We hold these truths to be self-evident, that all men are created equal; that they are endowed by their Creator with certain unalienable rights; that among these are life, liberty, and the pursuit of happiness. That, to secure these rights, governments are instituted among men, deriving their just powers from the consent of the governed. . . .[24]

In Hobbes's time, however, these principles of equality and liberty were hardly thought "self-evident." The fact that they came to be regarded as such was the result of the spread of Enlightenment thought into the eighteenth century. The revolutionary implications of this thought became clear in the seventeenth-century when the rebellious forces of Thomas Cromwell overthrew the English monarchy and established a short-lived republic. Out of this confrontation of monarchy and republic emerged the modern British monarchy with its dependence on parliament. These implications rebounded back against England in the eighteenth century when the British monarchy with the support of parliament attempted to reestablish feudal-like hierarchical authority in relation to the American colonies.

In our presentation of Hobbes's thought so far we have reached that point in the Declaration of Independence at which the basic principles have been theoretically established—if not merely declared to be self-evident. The next step is to justify the next sentence: that governments are needed to secure basic rights, and that these governments derive their legitimacy from the consent of the governed.

Aristotle's View of Natural Social Harmony

To take this next step, it is necessary to reflect more deeply on the previous one, so as to see the vital problem that is created once it is admitted. We have stressed the key notion for Hobbes of individuality. Beneath all the distinguishing features of people—their sex and age, their race, class, and nationality—Hobbes singles out something more general and so almost invisible by comparison with the seemingly more concrete attributes. Human beings are *individuals* seeking to realize their desires, *each in his or her own way*. Certain desires, of course, are common to all human beings. All human beings desire food. But although all human beings have the natural desire to eat, it does not

follow that we agree with one another in the way we pursue the realization of our "common" desires. In our pursuit of happiness we frequently come into conflict with one another. Moreover, at this point in the unfolding of social theory, there is no place for any objective or absolute right or wrong. Thus Hobbes writes:

> Every man . . . calleth that which pleaseth, and is delightful to himself, GOOD; and that EVIL which displeaseth him: insomuch that while every man differeth from other in constitution, they differ also one from another concerning the common distinction of good and evil. Nor is there any such thing as *agathon hoplos*, that is to say, simply good. For even the goodness we attribute to God Almighty, is his goodness to us.[25]

It was a great mistake of the ancient theory of human nature to reason from the existence of common desires among all human beings to the notion that the satisfaction of desires must be a naturally harmonious social process. When Aristotle asserts that human beings are "political animals," he means that human beings have a natural desire to engage in cooperative activities together, of the kind that takes place in a politically organized society. But for Hobbes, the (feudalistic) socio-political order that the people of his time observe around them is the product of fundamentally different causes. It is not our natural harmony with one another that produces the social order, but our natural *disharmony*.

Aristotle recognizes that there are different types of societies, including relatively egalitarian ones. Despite this variety, he proposes a method for determining which of all these different forms of society constitutes the form of society that is natural for human beings: namely, to examine the form of society that is most mature. "For what each thing is when fully developed," Aristotle writes, "we call its nature, whether we are speaking of a man, a horse, or a family."[26] The primary forms of society, he argues, reflect different stages in the maturation of human nature. At an immature stage, societies consist of relatively equal human beings living in kinship-based groups. Larger barbarian groupings too remain relatively undifferentiated and egalitarian. However the more mature development of "civilized" human societies, such as those of the Greek peninsula, replaces this original undifferentiated kinship system with their hierarchically differentiated, politically organized systems. Just as we can only understand the nature of an individual human being after he has outgrown childhood and adolescence, so we can only understand the true nature of society in its mature stage of development.

The Greek city-state or *polis*, Aristotle argues, emerged as a result of a natural maturation of the human species moving from the family principle to a law-based polity beyond kinship. In the Greek polis, certain free human individuals are able rule themselves. But this freedom of some human beings

presupposes the slavery of others. Without slaves to perform much of the work, Aristotle argues, the high level of cultural and political activity of the Greek city-states, based on considerable leisure for some, would not be possible. Another necessary condition is the subordination of women as semi-slaves, working in the home. This internal differentiation of society, Aristotle supposes, is the result of nature. What Plato presents as a socially useful but shameful myth, Aristotle believes to be a fact of experience. "For that some should rule and others be ruled is a thing not only necessary, but expedient; from the hour of their birth, some are marked out for subjection, others for rule."[27] Some individuals are naturally slavish, and so, since happiness is the fulfillment of one's natural inclinations or nature, they can only be truly happy in the condition of slavery. Women are naturally incapable of free political activity, and so are most happy when they are occupied with the affairs of home economy. Hence, the existing state of affairs, with its fundamentally different social functions, is due to the existence of fundamentally different kinds of human natures.

Here is another case, like that of the sun moving around the earth, in which surface appearances are taken at face value, as direct evidence of the nature of a thing, as self-evident truths from the point of view of the discerning observer, rather than as effects that need to be explained by some prior or underlying causes. As in his physics, where he "explains" different apparent movements as reflections of different natures, so in his politics, Aristotle "explains" the complex differentiation of Greek male-dominated, slave democracy as the harmonious expression of different kinds of human natures.

However, from the apparent phenomena of the existing hierarchical order we should not jump to the conclusion that people naturally desire to live in such political "harmony," and that in political society they are somehow fulfilling natural desires. Thanks to the Copernican revolution in science, we can no longer accept such appearances at face value. Hobbes argues, instead, that the apparent surface harmony of "law and order" enforced by the state should be seen as the effect of underlying causes that need to be uncovered. "The inequality that exists now," Hobbes writes, should be seen as an effect of underlying causes starting from the natural equality of human beings with unique, individual desires.

The Natural Equality of Human Beings

To understand how the inequality of hierarchical society arises out of natural equality, let us begin with the simplest elements of any society—individuals seeking to realize their desires—and see what happens when self-interested human beings enter into causal relations with one another. The basic desires that we share with other human beings, for example the desire for food, are

desires each of us has *as an individual*. Because we have basic desires in common, Aristotle argues that we naturally want to live together in harmony. However, if two individuals desire the same thing, and if the use or possession of that thing by one of them excludes the use or possession of it by another, the common character of their desires will lead them to war, not peace or harmony.

Aristotle solves this problem by supposing that there is a natural inequality between human beings in terms of their ability to realize their desires. Instead of supposing that two relatively equal individuals inevitably fight over some desirable object, in his perspective of qualitatively different natures the problem is solved because one person naturally tends to submit to the other. Some individuals therefore are in control of the social wealth while others, submitting to the first group, are naturally suited to work for their masters in order to produce that wealth. Hobbes rejects this doctrine of natural inequality. Such inequality or subordination is an effect or outcome of social processes that have their origin in something quite different, indeed opposite, to the apparent effects: the fundamental equality of naturally free human individuals.

Hobbes argues that the observed inequalities are not based on differences in human nature. The individual elements of society, the "parts" that make up the whole, are fundamentally equal. Hence the observed inequalities of ordinary experience—those major inequalities of wealth, power, prestige, opportunity, etc. that we observe around us—must arise out of the conflicts and struggles of individuals who are essentially equal. Of course, there are natural differences in physical strength and intellectual acumen, but the fact of basic common sense or reason renders these individual differences of secondary importance. Hobbes explains this point succinctly:

> Nature hath made men so equal in the faculties of body and mind as that, though there be found one man sometimes manifestly stronger in body or of quicker mind than another, yet when all is reckoned together the difference between man and man is not so considerable as that one man can thereupon claim to himself any benefit to which another may not pretend as well as he. For as to the strength of body, the weakest has strength enough to kill the strongest, either by secret machination or by confederacy with others that are in the same danger with himself.[28]

Whatever their differences of body and mind, rational human individuals are "practically equal" and equal in practice. Such practical equality between individuals, each of whom desires goods whose consumption, use, or possession excludes the other, leads to a constant state of warfare:

> From this equality of ability ariseth equality of hope in the attaining of our ends. And therefore if any two men desire the same thing, which nevertheless they cannot both enjoy, they become

> enemies; and in the way to their end . . . endeavour to destroy or subdue one another.[29]

The condition of human beings in this original state is therefore one of

> war of every one against every one, in which case every one is governed by his own reason, and there is nothing he can make use of that may not be a help unto him in preserving his life against his enemies; it followeth that in such a condition every man has a right to every thing, even to another's body.[30]

There is an exception to this rule in the case of members of a family. The biological bonds of the family create a harmony, a sharing of goods, that does not hold in the interaction of individuals from different families.[31] Such naturally "altruistic" behavior remains largely limited to narrowly defined families. The egotism of individuals is generally a family-centered egotism, although such egotism of the family can be extended to the interests of "cities and kingdoms, which are but greater families."[32] The extension of the principle of family unity to cities and kingdoms presupposes, however, developments beyond "the natural condition of mankind." In the original or natural state of existence, the so-called state of nature,[33] Hobbes agrees with Aristotle in supposing that individuals exist first of all within small families. The individual identifies with the small family group as though this forms part of his/her own being. We might therefore modify the initial principle somewhat: each human being naturally desires goods for him and herself, as well as for his or her family. Having pointed out this exception to the rule of possessive individualism, we will put it aside and consider the relationships between individuals who do not belong to the same family.

In general, the life of human beings can be compared to a competitive race which has "no other goal, nor no other garland, but being foremost." Through this idea of a competitive race all the human passions can be understood. Hobbes writes pithily of this natural state of human competition:

> To fall on the sudden is disposition to weep.
> To see another fall, is disposition to laugh.
> To see one out-gone whom we would not is pity.
> To see one out-go we would not, is indignation.
> To hold fast by another is to love.
> To carry him on that so holdeth, is charity.
> To hurt one's-self for haste is shame.
> Continually to be out-gone is misery.
> Continually to out-go the next before is felicity.
> And to forsake the course is to die.[34]

Chapter Three

Leviathan: The Making of a Mortal God

Rational Reconstruction of History

Hobbes presents a rational reconstruction of human history following the resolutive and compositive (or analytic and synthetic) method that he associates with authentic science. We begin by resolving or analyzing society into its simplest components. Once we are in possession of these, we follow the step-by-step process whereby out of the simplest elements or elementary motions the complex social order is built up. Although in the synthetic, scientific demonstration, Hobbes presents his rational reconstruction as an historical process beginning with the "state of nature," in the method of discovery or analytic phase of science he begins with an analysis of his contemporary society. The existing society that he observes around him is what needs to be explained as an effect of a series of causes, and so is the end point for the reconstructive or synthetic phase of the intellectual process. It therefore provides his actual point of departure for the analytic phase of the process. We begin, empirically, "in knowledge by sense," by which "the whole object is more known." We begin with sensory knowledge of the existing society. But such sensory knowledge of the object that is empirically present to sensory experience does not directly contain the possibility of a scientific understanding of the object. For that, the complex object of direct sensory experience must be regarded as an appearance or effect of a process whose origin is not immediately obvious. The origin of the process is discovered through intellectual analysis of the actually present reality in order to isolate its simplest or most universal elements or movements. The whole is then reconstructed as the effect of the process that begins with the simplest motions.

At the end of the "resolutive" or analytical phase of scientific method, Hobbes isolates what he regards as the fundamental elements of human society: relatively equal individuals seeking to realize their desires in rationally effective ways. The compositive or synthetic phase follows. Beginning with

these elements or elementary movements of human society, we mentally follow, step-by-step, the real, objective process by which these elementary movements most probably have produced more complex relationships, until we return once more to the composite whole from which we began. Whereas in the beginning this composite whole is an object of uncomprehended sense perception, in the end the whole is the object of scientific comprehension.

To illustrate Hobbes's conception, let us begin, simply enough, with two individuals—we will name them *A* and *B*—who desire the same object. If food is scarce and there is only so much to eat, two human beings (of different families) will naturally tend to fight over the same food. This is because, although they have in common the same desire for food, each individual desires certain particular food for him or herself, as an individual. Consequently, the state of nature is a state of war, a "war of every one against every one." If *A* is more powerful than *B*, *B* may experience painful consequences as a result of fighting for the scarce item of food. Because he is a rational being, *B* will remember the past painful experience and recognize in the future that it is not in his long-range interests to fight *A* again, at least not on a one-to-one basis. For the sake of his longer-range interests, he suppresses his immediate desire for food, letting *B* take what he can first, and hoping that the leftovers will keep him alive.

B may eventually discover, however, that *C* was also painfully treated by *A* in a similar contest over a desirable but scarce object. Although *A* is stronger than either *B* or *C* individually, these two individuals recognize—thanks to basic rational capacity—that two is greater than one. They conclude that by working together they might be able to overpower *A*. By combining their strength and cunning, they succeed in defeating the individually more powerful *A*. The basic principle of fundamental, practical human equality has been uncovered and tested in this way.

To understand what is happening here, there is no need to introduce the concept of free will. Everything is understandable in terms of causal laws connected to the dynamics of desire-satisfaction. It is, however, meaningful to speak of freedom, and the desire to be free, as long as we are aware of what we mean by such expressions. When *A*'s power and control stands as an impediment to the satisfaction of *B*'s desires, *B* feels unfree. Thanks to the effectiveness of their combined forces, *B* and *C* *free themselves* from *A*'s interference with the satisfaction of their desires. By their triumph over *A*, *B* and *C* give expression to the natural state of freedom, which is nothing more than the impulse of each individual to satisfy his or her desires by the most rational and effective means.

The Discovery of Natural Law

At this simple stage of Hobbesean step-by-step reconstruction of human history, there can as yet be no such thing as general "moral compunction" against

using any means, including killing another human being, that enable one successfully to satisfy one's desires. Good and evil are simply words to describe what each individual desires to have or avoid. Nor are there as yet any positive legal restrictions to human behavior such as we are accustomed to in developed political society. We still do not have those developed religious and moral instruments of control, described in the last chapter, that operate in organized societies to constrain the actions of individuals for social purposes. In the hypothesized initial or natural state of affairs, no principle operates other than individual self-interest—above all, the individual's interest in preserving and promoting one's own life. In this "state of nature," all means to achieving such interests are "legitimate." Because there is no state as yet, there are no positive laws as we understand them today.

Hobbes is attempting to explain scientifically why the state with its positive laws is necessary. But this means to derive this necessity, not from the behavior of people already governed by such laws, but from a state of affairs that is prior to or underlying life in political society. Aristotle conceives of the human being as a "political animal" only because he extrapolates his conception of human nature from the behavior of people living in developed political societies. He therefore assumes that which needs to be explained. To really explain behavior in political societies we must go back behind political society and imagine a state of affairs in which there are no socially recognized and legally enforced rules of behavior. In his contemporary social order, Hobbes finds glimpses of such a condition in the lawlessness that plagues travelers of lonely highways with little police protection, where "highway robbery" was the norm. But more tragically, the state of nature erupts in the widespread destructiveness of civil war. In his reconstruction of the order of political society, Hobbes takes such phenomena, normally confined to the margins of existing society but sometimes threatening to reemerge in its heart, and finds in them the starting point from which the political state itself can be understood. Thus he finds the historical origin of the state in particular phenomena of his own contemporary society. If you want to know what life was like before the state existed, examine the behavior of individuals today in areas of life where the effect of the state is minimal or, in the case of civil war, null. If human beings are capable of destroying political society, surely this shows that they are not naturally or instinctively political. Thus in the chaos of the wars of his own times, Hobbes finds the key to the creation of the state in the first place: individuals struggling with one another to survive and to satisfy their desires by any means available.

Yet even in such an apparently lawless condition law is still found to be in operation. The behavior of human beings outside the political laws of the state is still subject to the laws of nature. Nothing ever escapes natural law. For the human beings in this primary condition of existence, the fundamental form that natural law takes is the law of life itself, the law of self-preservation. This law is both a fact of nature, like the laws of biology, and a principle of conscious

behavior—a precept or rule of action that the individual more or less understands and follows in something like this form: I must do whatever I can to survive and satisfy my desires as best I understand them. From the natural law of life there directly follows the first natural right or liberty, the right to do whatever is necessary to promote one's basic interest in life. Hobbes founds the right of nature, *jus naturale*, discussed in chapter 2, on the law of nature, *lex naturalis*:

> A *law of nature*, *lex naturalis*, is a precept, or general rule, found out by reason, by which a man is forbidden to do that which is destructive of his life, or taketh away the means of preserving the same, and to omit that by which he thinketh it may best be preserved.[1]

The "law" of nature is not the same thing as the right of nature, mentioned previously: "the liberty each man hath to use his own power as he will himself for the preservation of his own nature," and to use any means possible to achieve this end, including the destruction of other individuals. A right has to do with freedom, whereas a law involves necessity or the cessation of freedom. There cannot be both a right to act and a law governing that action, Hobbes says, since a law governing a certain action takes away the right.[2] Liberty, as we have seen, involves an absence of impediments to action. Such impediments include obligations arising out of laws, whether natural or positive. The individual's liberty to do whatever he likes is restricted by the natural law that he *must* survive. We therefore have no right, no liberty, to give up on our own lives.

From Simple to Complex

From the initial condition of natural law and natural liberty that we illustrated from the behaviors of *A*, *B*, and *C*, a certain complexity inevitably emerges, and in the more complex conditions the natural law of survival is expressed in an unexpected way. In our rational reconstruction the experience of individuals in the state of nature inevitably moves to a new level of understanding with the emergence of this greater complexity. Instead of single individuals confronting one another, we have the emergence of groups—individuals combining with one another for purposes that each individual recognizes as in one's best interest. For each to survive, *B* and *C* must combine against the tyranny of *A*. But this means that in their relation to one another they are no longer in the original state of individual independence and separation. The law of self-preservation requires that they combine with one another and give up the state of implicit warfare with respect to their potential allies. The law of nature turns out to be the law of seeking peace.

In the scenario just described a simple relation between *A* and *B* evolves into a complex relation between *A*, on the one hand, and *B* and *C*, on the

other. While there is a state of war between *A* and *B*, and between *A* and *C*, there is peace between *B* and *C*. In the case described earlier, *A* makes use of the right of nature to achieve his desires, but the manner in which he does this leads ultimately to his downfall. He pursues his goals by means of war, and discovers that such means prevent him from attaining his goals. He thus learns, implicitly and perhaps a little late, "the first and fundamental law of nature, which is: to seek peace and follow it."[3] If the primary law is the law of survival, it inevitably takes the form of seeking peace.

This law of nature therefore imposes a more striking limitation on natural freedom than appeared to be the case at first, where it merely seemed to outlaw actions that contradict survival. Out of the natural unfolding of experience, individuals begin to realize that the law of survival tends to outlaw the use of warfare as a means of realizing one's desires. *B* and *C* must give up their right to war against each other, as they combine to make war on *A*. In the actual historical process, what quickly seems clear to us in our rational reconstruction no doubt took much time and pain to dawn in the minds of the actors. *B* and *C* have partially recognized this law of peace, since to attain their own ends they have made peace with each other. They do not follow this law entirely, however, since they make war on *A*. In the state of nature, where individuals maintain the right of nature, a compromise position is inevitable, rational, and right. For *B* and *C* prematurely to give up their right to use violence, while *A* continues to threaten their survival, is to violate the law of nature in their respective cases. As long as some individuals use any means available to achieve their goals, others must take note. To renounce the use of force in relation to such individuals is to violate the basic natural law of survival. Under these circumstances, a compromise rule of action is reached: "that every man ought to endeavor peace, as far as he has hope of obtaining it; and when he cannot obtain it, that he may seek and use all helps and advantages of war."[4]

The Futility of War

To understand why we cannot be content with this compromise position, let us examine some further complications arising, step by step, from the position already achieved. Having succeeded in eliminating *A*, *B* and *C* might go back to square one. The peace pact they made with one another in their war against a third party has served its original narrow purpose and might then be dissolved. There would be a natural inclination to return to this initial state as their unity is not a basic fact of their existence. Contrary to what Aristotle holds, they are not naturally social or cooperative beings, but primarily egotistical and competitive ones.[5] The natural competition between *B* and *C* would, however, threaten once again to result in violence or death.

Suppose that *B* and *C*, correctly using their powers of reason to estimate long-range consequences, recognize the futility of returning to the initial stage. They understand that there are other potentially threatening individuals, and agree to maintain their peaceful cooperation and share the scarce resource (perhaps a waterhole in dry country). As long as others are disunited, *B* and *C* can dominate the desirable object and use their possession of it to gain favors from others. However, by simple reasoning anyone can understand that three is greater than two. *D*, *E*, and *F* therefore decide to join forces against *B* and *C*. The result is that the stable order created by *B* and *C* is violently overthrown and a new cycle begins.

Simple common sense is enough for us, proceeding step-by-step along this reconstructed path of social science, to see that for any particular combination of individuals, a greater force can always be achieved by a larger combination of individuals. The path by which historical recognition of this truth finally consolidated itself in the minds of the actors was no doubt a more circuitous one, with progress taking place slowly and with frequent relapses from attained levels of enlightenment. Because human nature is fundamentally individualistic, because individuals naturally tend to satisfy their desires by any means that appear to be effective, the principles of enlightened or rational self-interest that counsel restraint on these urges often take a back seat to the immediate passions of the moment. The sensory input coming from present pleasure is generally more powerful than the possible pain and suffering arising from long-term consequences as these are evoked in imagination. But as human beings are rational, the recognition of certain basic truths, at least on a theoretical level, must eventually take place. Even where a majority dominates a minority, as in the case of some slave systems, that minority can use sabotage and terror to make the lives of their rulers more than unpleasant.

This is the dismal sense in which human beings are fundamentally equal in the state of nature. In the state of nature itself, such understanding would be more or less natural because the primacy of individual self-interest would not have been concealed by elaborate political ideologies found in state-organized societies, such as the "lie" recommended by Plato regarding the natural inequality of individuals, or Aristotle's self-deception in this regard. Overcoming the illusions connected with complex surface appearances, the scientific reconstruction of this process can easily be followed by ordinary people today once they recognize the correct starting point. Each rationally self-interested individual is sufficiently intelligent to recognize that continuing to resort to war is not in his or her best interests. In fact in this direction lies, not life, but death. The force of the following unhappy conclusion then is inescapable:

> Whatsoever therefore is consequent to a time of war, where every man is enemy to every man, the same is consequent to the time

> wherein men live without other security than what their own strength and their own invention shall furnish them withal. In such condition there is no place for industry, because the fruit thereof is uncertain: and consequently no culture of the earth; no navigation, nor use of the commodities that may be imported by sea; no commodious building; no instruments of moving and removing such things as require much force; no knowledge of the face of the earth; no account of time; no arts; no letters; no society; and which is worst of all, continual fear, and danger of violent death; and the life of man, solitary, poor, nasty, brutish, and short.[6]

Fear and death are therefore the dominant features of a state of existence in which separate individuals pursue their goals independently of one another, or constitute exclusive groupings for the purpose of defending themselves against or dominating others. Even kings with powerful armies cannot enforce such unequal arrangements for an indefinite period. At the time Hobbes was writing his major work (published in 1651) England was plunged in a terrible civil war. This civil war was only the last of a series of wars that raised up and overturned monarchs who tried their hand at being the only individuals who could act as they liked.

The Universal Law of Peace: The Golden Rule

Given the constant insecurity and destructiveness attendant on the state of nature, rational individuals, reflecting on their sad and painful experiences, will eventually come to the conclusion that it is in accord with each person's self-interest or long-range pursuit of happiness to seek to establish *universal* conditions of peace. From experience with the right of war, which is inherent in the state of nature, rational individuals must eventually deduce the necessity of the first natural law, the law of peace. As long as this law is recognized in a partial way, however, the inevitable horrors of the state of nature continue. It follows that when they can enter into an agreement or "covenant" with others to do so individuals are obligated by the law of nature to give up the pursuit of war and to establish peace. But this means that individuals will feel restricted and constrained in their pursuit of their individual interests by any means. Each must renounce his natural birthright, her natural liberty, out of recognition that the law of nature outlaws the use of war when all other individuals do so as well.

Because of the recognition of the fundamental equality of human beings, such universal restrictions on natural liberty must be applied equally to all individuals. The compacts or agreements that self-interest leads some individuals to forge with others should be extended to all members of society. No one should be an exception to the universal rule: *All* self-interested individuals should give

up their natural state of freedom, and accept limits to the realization of their desires—limits that apply equally to everyone. Because the agreement is that of fundamentally equal individuals, no individual or group of individuals is privileged and the limits accepted by one should be the same as those accepted by all. Only by sacrificing their fundamental or natural freedom—in other words, by leaving the state of nature, the state of war—do individuals finally and fully realize the first law of nature, which is to seek peace. Combining this first law of peace-seeking with the fact of fundamental human equality yields the second law of nature, summarized in the Golden Rule of Jesus:

> From this fundamental law of nature, by which men are commanded to endeavour peace, is derived this second law: *that a man be willing, when others are so too, as far forth as for peace and defence of himself he shall think it necessary, to lay down this right to all things; and be contented with so much liberty against other men as he would allow other men against himself.* For as long as every man holdeth this right, of doing anything he liketh; so long are all men in the condition of war. But if other men will not lay down their right, as well as he, then there is no reason for anyone to divest himself of his: for that were to expose himself to prey, which no man is bound to, rather than to dispose himself to peace. This is that law of the gospel: *Whatsoever you require that others should do to you, that do ye to them.* And that law of all men, *quod tibi fieri non vis, alteri ne feceris* [what you do not want done to you, do not do to others].[7]

The voice of long-range rational self-interest therefore concludes from the above theoretical-logical history: Let us *all* combine our forces and exclude violent means for achieving our goals. In order to facilitate the diverse goals each of us is pursuing, let us all live together under a system of rules applicable equally to everyone. Specifically, let us agree to pursue our goals without cheating, without stealing, without using force against persons and property. Were everyone to agree to live according to such rules, there would be no more swindling, no more robbery, no more killing, no enslavement of individuals. Within these restrictions on our original right to do anything that promotes our interests, we can pursue our individual goals without risk to life, limb, and property. Possessions acquired on the basis of such rules would be secure. To sum it all up in a word, all individuals, whether rich or impoverished, would have the right to property.

Four Laws of the Science of Morals

Hobbes deduces a number of derivative "laws of nature" from the fundamental law to seek peace. The second law or Golden Rule essentially says that the

restrictions on original liberty should be equal for all individuals. A third law is "*that men perform their covenants made.*"[8] That is, we should keep our promises or agreements, beginning with this fundamental agreement to the equal restriction of liberty. We should not only not use force against other individuals, but faithfully fulfill all lesser contracts into which we enter. In this way, and in further elaborations of the fundamental law, Hobbes derives the basic laws of a "science of morals." Such a science consists in rational deductions regarding what is necessary for each individual to achieve the maximum happiness possible in a world of other such self-interested individuals.

In all this reasoning whereby he reconstructs the path of human enlightenment, Hobbes reaffirms and elaborates the fundamental premise that individuals are primarily motivated to realize their own personal desires and interests. This is why the fundamental law is to seek peace, for war epitomizes the destruction of those interests. This is a personally meaningful argument for someone who has lived through a terrible civil war. Far from depending on a lawless act of "free will," moral law is only the step-by-step unfolding of the laws and logic implicit in the realization of individual self-interest. Particular moral laws restrict our original and natural liberty, but in doing so allow an even greater real liberty—the liberty to pursue our interests with the least amount of outside interference from other human beings.

The fourth law commands gratitude for gifts that we receive. This law of gratitude is formulated as follows: "that a man which receiveth benefit from another of mere grace endeavour that he which giveth it have no reasonable cause to repent him of his good will." The reasoning behind this law is the following:

> For no man giveth but with intention of good to himself, because gift is voluntary; and of all voluntary acts, the object is to every man his own good; of which if men see they shall be frustrated, there will be no beginning of benevolence or trust, nor consequently of mutual help, nor of reconciliation of one man to another; and therefore they are to remain still in the condition of war, which is contrary to the first and fundamental law of nature which commandeth men to seek peace.[9]

To create social peace, it is not enough negatively to give up acts of war. It is necessary to establish positive ties of mutual help between individuals. Acts of benevolence create bonds of trust between people that strengthen the overall social unity. If those who have more help those who have less, the temptation on the part of needy people to break the law of peace diminishes. While there is no strict duty to help another person in need—otherwise the giving would not be a gift—there is a duty on the part of the person who receives to respond with gratitude at least by refraining from interfering with the interests of the benefactor. By not biting the hand that feeds him, the receiver only

promotes his own interests in receiving what he needs, while the giver's interests are facilitated if the effect of his benefactions is to surround himself with docile and grateful individuals. Out of this mutual recognition of self-interest between the giver and the receiver the bonds of social peace are strengthened.

Behind their interest in benevolent acts and the organization of benevolent societies, the rich must be haunted by the specter of class rebellion and revolution. Contrary to the ordinary way of looking at it, Hobbes insists, benevolence is not a selfless act. The gift-giver, it must be remembered, is fundamentally a self-interested individual, and so, implicitly or explicitly, gives only to further that self-interest. To the needy receiver of the gift, Hobbes adds the burden of duty to those of thankless toil. Implicitly directing the thrust of his argument to the potential rabble, Hobbes argues that the establishment of bonds promoting the social peace is frustrated if the receiver of the gift responds with ingratitude by acting against the interests of the benefactor. Ungrateful acts thereby also frustrate the self-interest of the receiver of the gift, not only to receive goods in time of need but to live in a peaceful society. Thus even benevolence, the desire to help others, is motivated by self-interest. Outside of the natural bonds of family and friendship, individuals help others only because they want to help themselves. Since helping others is voluntary, and all voluntary acts are performed for the giver's own good (this principle was established in chapter 2), the giver intends to create something like what in ancient Rome was called a clientele. Roman clients of rich persons were strictly obligated to promote the interests of the benefactor. Thus benevolence is a virtue which is motivated by the benefactor's desire to establish relations in which others must at least not act in opposition to the giver's interest. For the receiver to do so would discourage the giver, thereby undermining the principle of mutual help. This principle is a necessary feature of the peaceful relations inherent in the social contract.

Reason and Passion

Hobbes insists that moral laws are the results of rational reflection on the causes of human happiness, not the expression of passionate inclinations or feelings:

> Now the science of virtue and vice is moral philosophy; and therefore the true doctrine of the laws of nature is the true moral philosophy. But the writers of moral philosophy, though they acknowledge the same virtues and vices [as in Hobbes's deductions]; yet, not seeing wherein consisted their goodness, nor that they come to be praised as the means of peaceable, sociable, and comfortable living, place them in a mediocrity of passions: as if

> not the cause, but the degree of daring, made fortitude; or not the cause, but the quantity of a gift, made liberality.[10]

Instead of being dazzled by the surface appearances of benevolent acts—how much someone gave, or how little—it is crucial to recognize that the causes of such actions of apparent altruism are rooted in the individual's own interests. The moral laws are rational deductions, tested in long and painful historical experience, regarding the kinds of actions that promote individual human survival. They are the expressions of long-term rational self-interest, not the outpourings of natural human passions or feelings, or short-term desires. While the immediate inclinations, desires or passions inherent in human existence push each of us to seek our own interests ahead of those of everyone else, the rationally comprehended laws of morality command that we treat another person's interests as equal to our own—for this is the best way to achieve our interests!

The proof of this conception of morality is the weakness and unreliability of the moral laws themselves. Were the moral laws the result of natural "passions," the warring situation of the state of nature would not have arisen to begin with. If individuals had a passion to do unto others as they would have done to themselves, there would have been no war of all against all. At the level of the passions, what I want is what is good and what someone else wants, if it conflicts with what I want, is evil. But rational consideration of the disastrous outcome of such a conception of good and evil leads to a radical modification of this initial morality of the passions: in order for me to get what I want, I must tolerate your right to do the same and so limit the short-range promptings of my desire to allow for yours. In the above citation, Hobbes explains the reason why the traditional moral virtues are praised. As aspects of social cooperation, they are means to peace which go against the natural grain of fundamental individualism, and so they must be reinforced by the social pressure of praise and blame. Thus the basic moral commands, described in the previous chapter as determinants of behavior, are not arbitrary impositions of an external society but manifestations of the individual's own (rational) will.

But even with this reinforcement, the individual is still more likely to break the moral laws than to follow them. On the one hand, the heated sensory attractions and repulsions of present reality extend from the brain into the heart, where they commingle with the unconscious drives of the body for pleasure and against pain, to produce all the powerful forces of passion that drive us to act, and, ultimately, to wage war. On the other hand, the weaker phantasms of memory of past harms and imagination of future benefits evoke pallid conceptions of longer-range good and evil, which the cold constructions of reason have orchestrated into a system of rules of peace. Where these two sources of action collide, which is more likely to achieve predominance?

There is a grave danger in failing to understand the real cause of morality in this contest between passion and "enlightened" self-interest. People with

especially docile natures might find it easier than others to follow the moral code. But if they do not know the cause of this code, this natural docility is likely to cause them grief. Someone who abides by the moral code, but fails to recognize that most others will tend to violate it whenever it contradicts their narrow desires or short-term interests, is likely to become the prey of others. And by that very fact of exposing himself to victimization, such a "moral" individual is acting against the deepest foundation of the moral law itself, which is to seek one's own preservation:

> For he that should be modest and tractable, and perform all he promises in such time and place where no man else should do so, should but make himself a prey to others, and procure his own certain ruin, contrary to the ground of all laws of nature which tend to nature's preservation.[11]

The weakness of the laws of nature derive from the fact that they are not the expressions of passions, but merely intellectual understandings of what would be best in the long run. Religion appropriately comes to the aid of such weak reason with its conception of the law of God. Hobbes has reservations about using the term "law" to describe the rules of morality:

> These dictates of reason men used to call by the name of *laws*, but improperly: for they are but conclusions or theorems concerning what conduceth to the conservation and defence of themselves; whereas *law*, properly, is the word of him that by right hath command over others. But yet if we consider the same theorems as delivered in the word of God that by right commandeth all things, then are they properly called laws.[12]

People are not strongly and naturally motivated by such intellectual "theorems," although they may understand them and recognize their wisdom. A person who feels a strong sense of power and security, for example, will be likely to violate the moral "laws" in order to attain his goals, even though in doing so he contributes to a process that may ultimately bring about his ruin. That is the moral of the story of *A* in relation to his early victims. In the short run, he triumphs over a rival. In the long run, he brings about his own downfall. But in the long run, as the saying goes, we are all dead. Our story of *A*'s overthrow is a foreshortening of the actual historical process for the sake of rational edification. Perhaps it is *A*'s great-great grandson who must finally yield the water-hole. Would such a prospect, were an enlightened educator to have presented it to *A* in advance, have caused him to greet *B* as a brother? Can such a prospect, even in light of all the bloodshed of civil war, induce human beings to renounce the force of nature within them? Such force can only be

overcome by an equally strong, opposing force. And reason by itself is no such opponent. Hobbes summarizes the difficulty as follows:

> For the laws of nature, as *justice, equity, modesty, mercy*, and, in sum, *doing to others as we would be done to*, of themselves, without the terror of some power to cause them to be observed, are contrary to our natural passions, that carry us to partiality, pride, revenge, and the like. And covenants, without the sword, are but words and of no strength to secure a man at all.[13]

The Weakness of Reason

Mere rational understanding of the laws of morality is not always enough to get us to behave rationally. In the abstract, as a mental exercise, I would be willing to suppress my natural inclination to get what I want by any means available, and follow the basic moral "laws" of nature, in order to achieve the desirable state of peace. I recognize that such restrictions, were they universally adhered to, would be in my interest. However, I also know that under certain conditions I would be tempted to break such rules if I could do so with impunity. I therefore suspect that the same temptation would occur to anyone else. After all, while we might rationally understand that it is better in general for people to restrict or suppress certain natural desires, that intellectual understanding does not prevent me or others from having those desires. As individuals attempting to satisfy our desires, any of us will be tempted to violate the ideal moral rules mentioned above for the simple reason that it might turn out to be in our personal interests to do so. If we foresee the possibility of long-range negative consequences, we also know that in the long-term, we are all dead. Or, as a marquise once said to King Louis XV, succinctly expressing this conflict between short-term passions and long-term interests: "*Après nous le deluge.*"[14]

This may sound like a contradiction: it is in my interest to accept rules of peace, and yet it is also in my interest to break such rules. On the one hand, I seek to realize my self-interest and recognize that this ultimately consists in establishing peaceful social relations. I recognize that I should give up my natural liberty and restrain the pursuit of my immediate desires and interests for the sake of my long-term interests, which are promoted by social peace. On the other hand, the motivation for such enlightened thoughts remains my own self-interest, which is never itself suppressed. Each of us always puts his or her interests first. Even the motivating force for the Golden Rule, as Hobbes interprets it, is individual self-interest.

People are forever doing things they recognize to be potentially harmful to themselves in the long run. In the tug-of-war between immediate passions and the long-term interests recognized by reason, the former promise certain and immediate pleasures and advantages, while the advantages of the latter are

uncertain and distant. Even if all individuals, being rational, inevitably recognize the desirability of quitting the state of nature, they will differ in the degree to which they will be able to suppress short-term desires for the sake of their long-term interest in social peace. Moreover, is it so certain that by restraining my natural desires in the short term for the sake of a conception of social peace that I personally will in fact be benefited? Suppose everyone else follows the laws of morality, while only I break them? Then I will have both the advantages of social peace and the advantage I am able to attain by breaking the rules.

I can see that it is to my advantage that people generally refrain from killing simply as a means for achieving their goals. In this way, no one will kill me to get whatever desirable object I succeed in acquiring. And yet if I can safely, without detection or recrimination, acquire something of great value to me by killing another person, will this theoretical conception of the kind of general social conditions that are in my long-term interest be strong enough to counter my perception of my short-term interests? This is the free rider problem: individuals may benefit from what others do without contributing themselves. I clearly benefit if people agree not to kill each other to get what they want, but I benefit even more if, while *other* people act in this way, I myself perform an advantageous murder. But then if *I myself* see the advantage to making myself an exception to the very useful rule against killing innocent people, won't everyone else see this same advantage? If I can see that this is so, others will too. In a world of self-seeking individuals, how can I *trust* other people to keep the moral rules, however rational and enlightened the rules may be? If I pass up the advantage I gain by murdering a vulnerable wealthy person—perhaps also someone who is despised and corrupt—won't someone else seize on the same opportunity? Better that it is I who gain the advantage than someone else. This is the kind of reasoning that leads Raskonikov, in Dostoevsky's *Crime and Punishment*, to murder a rich and despicable pawn broker.

For such reasons, the idea of a universal restriction of desires, however fine in theory, seems unworkable in practice, and even dangerous to the docile or gullible who fail to recognize the persistence of human egotism underneath the moral laws—laws that are hardly laws in the strict physical sense. The contradiction between reason, and its rules for a peaceful society, and the continued disruptions of egotistical passions, leads to the next, decisive step in the unfolding of the science of society: the necessity for the creation of the state.

Creation of a Mortal God: The Leviathan

"And covenants, without the sword, are but words and of no strength to secure a man at all." Morality without backing by physical force is therefore only so much intellectual verbiage. It is not enough to recognize that it is in each person's interests to live under a certain set of rules that limit what he or she may

naturally want to do. In addition, it is necessary that there be a power capable of enforcing those rules.

For fundamentally self-centered individuals to refrain from violent acts, it seems necessary that there be something external to them that imposes order. The successive evolution of the original scenario consisted simply in the displacement of the source of power and its strengthening. But as long as rule takes place solely for the advantage of the rulers, the subject population will find ways of subverting and overthrowing that force. What is needed is that force be recognized as rational, as legitimate, not for the narrow interests of those in power, but as a means for attaining social peace and for the sake of the long-term interests of all individuals. What is needed is an agreement or contract between all members of society to *accept* the existence of the power rather than to attempt to destroy it. But this is possible only if we the people recognize that it is, despite its externality and fearsome visage, *our own* power. It is possible only if it is recognized that this power of the state is the supplement and instrument of reason, which is too feeble to achieve its goals by itself. As rational, self-interested individuals, we therefore must recognize the need for the existence of the state.

Social peace does not come from within, from nature, inner desire, or rational morality, but from without, from that source of power, that embodiment of fear and threat of death. Hobbes uses the term "leviathan" for the title of his major work of political philosophy. This is a biblical term for a great sea-beast, presumably a great whale. In the *Book of Job*, God, the almighty Jehovah, answers Job's complaints against the injustice of his suffering by affirming his own absolute power over the universe, a power that in earthly terms is like that of the leviathan: "Canst thou draw out leviathan with an hook? Or his tongue with a cord which thou lettest down? . . . None is so fierce that dare stir him up: who then is able to stand before me?"[15] This terminology reflects the terrifying aspect that the state must assume in order effectively to do its job. And yet we should recognize that it is a god-like or divine terror. Hobbes calls the leviathan "that mortal god, to which we owe, under the immortal God, our peace and defence."[16] The state is the source of power and fear that constrains individuals, in accord with their own reason and covenant, to live in some kind of harmony, under some set of laws. The final result of all these considerations is that human beings should voluntarily give up

> that natural liberty, which only is properly called liberty.
>
> But as men, for the attaining of peace and conservation of themselves thereby, have made an artificial man, which we call a *Commonwealth*; so also have they made artificial chains, called *civil laws*, which they themselves, by mutual covenants, have fastened at one end to the lips of that man, or assembly, to whom they have given the sovereign power, and at the other end to their

> own ears. These bonds, in their own nature but weak, may nevertheless be made to hold, by the danger, though not by the difficulty of breaking them.[17]

The term "leviathan" suggests Hobbes's negative evaluation of the state, with its essential law-enforcement function. The state is a "necessary evil," in the strict sense of the word "evil." It is evil because it contradicts the natural state of human freedom. Our recognition and acceptance of the existence of the state goes directly against human nature. When we accept the chains of civil laws that create civil liberties—the liberties permitted us by the laws of the state—we have to abandon "that natural liberty, which only is properly called liberty." Rousseau later said, in *On the Social Contract*, that "Man is born free and everywhere is in chains." In this Rousseau simply summarizes Hobbes, who argues, in his own theory of the social contract,[18] that although each individual is naturally free, nevertheless as rational, self-interested individuals we must recognize the desirability of living in chains. While other animals are confined or tamed by human beings, human beings are the only animals that see the need to confine, tame, domesticate, enslave or enchain *themselves*.

Hobbes's conception of the state is paradoxical. The state chains our natural liberty with its iron laws, enforced by its legal chambers of justice and penal institutions of punishment and death. But the chains forged by the state are comfortable ones, since their purpose is to achieve our comfort. A great good comes from the existence of a strong state: the good of peace. When left to our own devices, with no power to constrain our self-centered impulses, we free human beings will tend to bring about our own ruin. We should therefore recognize the great good that the state accomplishes. But despite this positive function, the state remains an unnatural engine of terror and a suppressor of human freedom.

Of course, the chains of civil society must be kept to a minimum. Thou shalt not steal, kill, break one's agreements in ways that cost others money, etc. Hobbes stresses certain basic "civil liberties" that must be upheld by the rational state, beginning with the freedom, dear to the merchant, to buy and sell:

> The liberty of a subject lieth therefore only in those things which, in regulating their actions, the sovereign hath pretermitted [permitted]: such as the liberty to buy, and sell, and otherwise contract with one another; to choose their own abode, their own diet, their own trade of life, and institute [instruct] their children as they themselves think fit; and the like.[19]

Since all power is put in the hands of "the sovereign" the people only have those freedoms granted by legal means. The sovereign may be a king but also an assembly or parliament of some kind. But this is not absolute and arbitrary

tyranny. The suppression of natural liberty that creates political society involves the guarantee of certain defined "civil liberties." Thanks to the enforcement of these liberties by swift and severe penalties, each person will be free to engage in certain activities without interference from others. These liberties are the same for all members of society. Each individual has therefore the right to educate one's children, to engage in the occupation of one's choice, to exchange goods with others on a voluntary basis and in accord with mutually agreed upon conditions—that is, on the basis of binding contracts—and other such liberties as permitted by legislation. Unlike the mere reason of the individual, which appeals to individual self-interest but is powerless against the forces of passion, the state severely punishes those who use force to seize property or violate personal integrity and who break their contracts.

A Modern Science of Political Society

Let us recognize the originality, that is, the modernity, of Hobbes's theory of the state.[20] Some ethical philosophers, following Aristotle, say that by not stealing, not killing, etc., we are living in accord with our natures. The science of society that begins with self-interested individuals results in a quite different understanding of the same phenomena. Theoretically, peaceful cooperation with others is based on individual self-interest, not natural sociability. But for that reason it is inherently vulnerable to being undermined by that same self-interest. Consequently, individuals actually follow those rules by and large because these rules have become laws "properly"—i.e., commands backed by force, not only in the commandments of God that buttress political power, but in this-worldly social practice. As the liberty of nature leads to the war of all against all, it is not nature itself, but a second, artificial, nature—external political power and the fear it inspires—that is responsible for peace, or for what little in the way of peace there may be.

Why is there a law against killing innocent people? The answer given by the Aristotelian school of natural law is that such killing goes against what we naturally want. But the fact that there is a *law* (properly speaking, i.e., a commandment of the state) against killing, with powerful sanctions if it is violated, only makes sense because individuals sometimes *naturally* want to kill! It makes much more sense, therefore, to see that laws suppress human desires at least as much as they promote them. Hobbes insists that where there is law, there is necessity, not freedom. The truly effective law is ultimately a power directed against human beings who are doing what they naturally want to do. Society approves, openly or tacitly, such suppressive actions by the state because the suppression of certain desires makes possible the realization of other desires—ultimately, the desire for peace and an end to war. The existing social order may arise out of fundamental human drives, as the Aristotelians say, but it does

so only paradoxically, only by our creating an artificial power capable of suppressing those drives or limiting them.

Just as anyone can understand straight-line motion, so anyone equipped with basic human intelligence can understand the simple logic of the previous argument. This logic simultaneously explains and justifies the natural laws of human life that produce the existence of political organization. If our desires are themselves the result of external causes, reducible to a complex combination of straight-line motions, what is more fitting in a mechanistic universe than to see social life as a whole as governed ultimately by the external machine of the state? If we look within ourselves with the aid of the rational organization of the sensory data, we recognize the main components of the argument. We see our own temptations to take what belongs to others by force or fraud if we can do so successfully. But we also recognize the irrationality of a state of affairs in which everyone is left to their own devices. We look at the highway robbers that threaten safety on the road, Hobbes says to the readers of his time, and wish the state were more powerful than it is. We imagine what would happen were there no state at all, and shudder. If we do not *explicitly* sign a formal social contract, we *mentally* do so when we run through these simple and straightforward arguments in our heads.[21]

As rational individuals we tacitly or implicitly agree to the social contract whenever we think about the conditions of contemporary social life. The state of nature is as much within us as it is behind us.[22] The state of nature makes sense as a permanent underlying possibility or potentiality of human existence. It is seen in the cracks of existing society, in home break-ins, bank robberies, murder and rape in the night. It breaks out into the open when social life collapses into civil war, or when nations go to war with one another. Nations themselves, in their relations with one another, remain in a state of nature, since, still in our own time, there is no world power to impose the simplest rules of morality.

The theory of the social contract puts the existence of society on a truly scientific basis. The central social fact that we observe around us is life in political society. But from this appearance we cannot directly extrapolate to a conception of human nature. Aristotle explains the phenomenon of the state in the same the way he explains the upward movement of fire. Fire moves upward, he says, because it is the nature of fire to move upward. Similarly, people live in political society because it is in the nature of people to do so.

In this traditional view, we are naturally political animals. We naturally desire to live with one another in a cooperative relationship governed by laws that reflect the requirements of social harmony. Aristotle recognizes that originally human beings exist in families or small groups without a state. Such primitive forms of society are not however indications of a "state of nature," reflecting natural human tendencies. They are an immature stage of that natural human existence. The truly natural state is not in the beginning, in the childhood of

the human species, but in the end, in the mature adult form, which he identifies with political society. The movement from more primitive or early forms of existence to the modern state is like the maturation of a horse from colt to stallion. Just as the nature of the horse is evident in the adult horse, so the nature of the human being is evident only in the most developed society, which Aristotle identifies with his own. From observations of the life in his own society, Aristotle feels confident that he can directly extract the essential nature of the human being. The true human being is the active participant in the life of the state, the free male citizen whose leisured political occupations are naturally supported by the semi-human, non-political types—slaves and women.

From the Hobbesean point of view, the idea that the creation of the state stems from the maturation of human nature is nonsensical. If human beings could mature to the point of overcoming their natural egotistical tendencies and develop a social nature that is satisfied only by peaceful cooperation, what need would there be for a state? A state is a machine of power, limiting the free actions of individuals. Such a machine is necessary only because human beings do *not* fundamentally evolve from egotistical to social passions. The socialization of the egotistical individual that is observable in modern civilization is not the unfolding of an inner social nature. It is the effect of the operation of the external force of the state, established to restrain the inner nature itself and channel it against its natural tendencies. And if we are moved by moral or religious rules, let us recognize that behind these rules we see the threat of punishment, in this life or the next, if we fail to obey them. It is not morality *per se* that governs our lives, but the powerful passion of fear that is conjured up by memory or imagination of painful consequences for the violation of the moral rules.

Hobbes and the English Revolution

The new scientific interpretation of the political order requires a radical reinterpretation of the source of the authority of the state. If the state is founded on the rational will of individuals, how can kings continue to rule in the name of divine right? In his own time, his revolutionary theory of society coincided with a social revolution. In the new social order that replaced the traditional feudal one, the sovereign, whether this were a king or a parliament—and both outcomes at the time seemed possible—derived her rule, not directly from God, but, under God, from the consent of the governed.

The first rule of the new order is protection of property and commerce. It is the establishment of the social regime of "possessive individualism." Hobbes argues, strangely it seems to us today, that such a rule goes *against* natural liberty. Today, we are more likely to see this "civil libertarian" rule as the basic expression of natural liberty: as the defense of life, liberty and the pursuit of happiness. Later, as we will see, Adam Smith better reflects our contemporary

understanding by describing the same political and economic order that Hobbes's defends precisely as the "simple system of natural liberty."[23] For Hobbes the concept of liberty undergoes a complicated development, from natural liberty to the chains of civil laws in which civil liberties are created through the suppression of natural liberty. The historical context of the English Civil War illuminates this complexity.

In his critical and negative perspective of life under any kind of state, Hobbes implicitly formulates a solution to the controversy between the radicalized poor soldiers in Oliver Cromwell's army—so-called Levelers—and the more conservative property owners—called Grandees. Both classes had to be united in the same struggle against the absolutist British monarch. The Levelers demanded full liberty in the new revolutionary society, akin to the "natural liberty" that Hobbes ascribes to the human individual. The Leveler Colonel Rainborough argues for such liberty in this way: "For really I think that the poorest he that is in England hath a life to live, as the greatest he; and therefore truly, sir, I think it's clear, that every man that is to live under a government ought first by his own consent to put himself under that government." General Ireton, Cromwell's son-in-law and spokesman for the Grandees, understands "consent," quite naturally, to mean the right to vote. He replies that if every individual had equal political power, a parliament could be elected that had no "local and permanent interest," that is, no significant property to defend. He naturally shudders at what could come of such an arrangement. "Why may not those men vote against all property?" E. P. Thompson writes that Rainborough replies ironically:

> Sir, I see that it is impossible to have liberty but all property must be taken away. If it be laid down for a rule . . . it must be so. But I would fain know what the soldier hath fought for all this while? He hath fought to enslave himself, to give power to men of riches, men of estates, to make himself a perpetual slave.[24]

In arguing that the economic and political rules established by the new state constitute an enslavement and a denial of natural liberty, Hobbes acknowledges the simple truth of the Leveler complaint. And yet despite this fact, such enslavement is necessary if there is to be peace in the land. For there to be peace, which he eloquently and graphically argues is the prime condition of human happiness, property rights must be assured. In order to assure property rights, the Grandees thought it necessary to confine the right to vote to men possessing a certain amount of property. Were the franchise extended to those without property, what is to prevent them from using their political power to redistribute property or abolish it altogether? The result, Hobbes agrees, would be a perpetuation of the state of civil war, which cannot be in the interests of the poor or the rich.

To the propertyless Levelers, Hobbes grants the demand of Colonel Rainborough that "every man that is to live under a government ought first by his own consent to put himself under that government." But in Hobbes's view such consent does not imply or require the right of every individual to vote on the nature of the laws. All that is required is the mental or rational consent of a self-interested individual who recognizes that life under a law-governed state, with all its inevitable restrictions on natural liberty, is preferable to the insecurities of the state of nature or civil war. To the Grandees and property owners, Hobbes therefore grants the right of property, and allows the restriction of the vote to owners of property of a certain magnitude—as decided by the sovereign. In his list of liberties permitted by the sovereign, beginning with the liberty to buy or sell, Hobbes conspicuously omits to mention the liberty to choose that sovereign. This does not rule out the possibility of a representative assembly or parliament, where the selection of the representatives is limited to substantial property owners.

To both the Levelers and the Grandees, who, after all, are united in opposition to the feudal monarchy, Hobbes argues that the rational state is not an arbitrary, lawless one, subject only to the whim of a supposedly divinely appointed ruler. There can be rational consent only to a state that rules according to law and that defends the same liberties or rights for every citizen. While the right to trade is prominent in Hobbes's list, the right to vote demanded by the radical Levelers (and achieved only in the twentieth century) is noticeably absent. Sensitized by the Levelers, Hobbes recognizes that civil laws protecting property constitute a form of slavery for an innately freedom-seeking human being, but argues that such slavery is preferable to the perpetual civil war that would take place were laws of property, and the existing social inequality, not reliably secured. To reconcile the two sides, he urges the rationality of the idea that in establishing governments, individuals "have . . . made artificial chains, called *civil laws*, which they themselves, by mutual covenants, have fastened at one end to the lips of that man, or assembly, to whom they have given the sovereign power, and at the other end to their own ears."[25]

Whatever the form of government, whether monarchical or republican, if it uses force in this way, it is essentially based on the *rational will* of the members of society. With this result, we come back to the existing society with its social inequalities now comprehended from the starting point of free and equal individuals. Logically and historically, the scientific compositive or synthetic reconstruction of society begins with free and equal individuals; Hobbes grants this much to the Levelers—they are naturally equal and free, as they claim to be. We end, however, with sharp differences between rich and poor, a social hierarchy based on property and enforced by the power of the state. This, to be sure, is where we actually begin in our ordinary perception of the world around us. But now we have the reinterpretation of this world that surrounds us, its recognition as something that is inherently rational, and so in the

interests of every thinking individual, however poor. Just as people speak prose without knowing it, so implicitly they consent to a social order that chains them with laws of property. All Hobbes does is spell out in logical-historical terms the steps that demand this consent.

In this formulation, Hobbes is both reflecting and rejecting the ideas of the Levelers, who fought for what they perceived to be their natural freedom and equality. Implicitly, his work acknowledges the Leveler desire for freedom against all externally imposed limitation as a natural desire, as an expression of human nature. But then he argues that the long-term consequences of such freedom are undesirable, in fact destructive of the interests of poor as well as rich. Individuals should therefore recognize that it is rational to suppress their natural liberty and accept the inequalities of property, as long as the rules of this suppression are applied equally to every individual. Hobbes thereby gives expression to the Levelers' position that the state is an alien power, a terrible leviathan. But then he argues that this monster is rationally justified. Even more astonishing, he shows that this monster is the creation of those same free individuals, at least in their moments of rational sanity. Rousseau ironically expresses the thrust of Hobbes's argument when he writes that in this version of the social contract, which Rousseau traces back to the foundation of ancient Greek society, "easily seduced men . . . all ran to chain themselves, in the belief that they secured their liberty. . . ."[26]

It is not advisable, then, to do away with the state and its property laws and thereby plunge oneself into the anarchy of the state of nature. It is the traditional, unlimited feudal absolutist state that must be limited to powers that rational individuals, epitomized by the commercially motivated property-owners who are coming into power, can agree on. When we see the state in the light of our rational interests, we recognize that its power must be limited and subordinated to the interests of the individuals who ultimately, by their consent, create it. A world in which there is unlimited power for the monarch, who is supposed to have by birth a God-given right to govern his subjects as though they are incompetent children, is therefore recognized to be just as illusory as the geocentric conception of the cosmos.[27]

The Rational State of the People vs. the Feudal Common Law

Hobbes recognizes that the mere fact of temporarily keeping the peace by force is not enough to justify government. A tyrant can keep the peace only for so long if he is perceived to be ruling unjustly—that is, ruling in his own interests or the interests of a particular group. Rule must both be and be seen to be in the interest of all; the laws must be applied universally. Equal liberty must be a condition of a potentially successful state, which only by applying its laws

equally can solicit the consent of the governed. The enumeration of the freedoms protected by law must be a sufficiently extensive list to compensate for the capitulation of natural liberty to the rule of law.

That Hobbes was not interested merely in justifying any *de facto* ruler is evident from his expression of hope that his book, with all the qualifications on the nature of sovereign power contained in it, will fare better than Plato's *Republic*, particularly as it makes less demands on the sovereign by eliminating the Platonic requirement of mathematical knowledge, and because of its scientific method. Its "theorems of moral doctrine" are better "put into order, and sufficiently or probably proved" than those of Plato or any other philosopher. Considering this advantage of his book, he has

> some hope that one time or other this writing of mine may fall into the hands of a sovereign who will consider it himself (for it is short, and I think clear) without the help of any interested or envious interpreter; and by the exercise of entire sovereignty, in protecting the public teaching of it, convert this truth of speculation into the utility of practice.[28]

In suggesting that the public teaching of his book will be "protected" by sovereign authority, Hobbes is clearly directing its arguments, not in an effort to persuade the masses to obey the sovereign, but to persuade the sovereign to rule with wisdom. The successful administration of the state, Hobbes says, depends on considerable "depth of moral philosophy."

Both Levellers and Grandees have a common interest in replacing the arbitrary power of the feudal monarchy and other feudal institutions such as the common law and the church with a supreme power based on the reasoned consent of the governed.[29] In *Leviathan* in this way, Hobbes defends the main goal of the English revolution: to replace the arbitrary rule of the feudal system with a system of rule accountable to the people in general, but in particular to the new middle classes, the exemplary individualists of the time. The rules of the rational state leave each person free to live one's own life within the limits established by law and applicable to all subjects equally. It doesn't matter whether there is government by constitutionally limited kings or by a parliament of variable representation. What matters is the basis and framework of rule, not who does the ruling or how the ruler is selected. What is absolute is not the king merely as an individual or the individual members of parliament, if this is the system of government, but the sovereign individual or individuals who understand the law, which is ultimately the law of reason founded on and expressing the will of the people, which is the deepest will of each individual. Essential to the peace and tranquility of subjects are rationally comprehensible and clearly promulgated statute or legislated laws, backed up of course by the threat of force.

But this concept goes against the traditional, feudalist system of the English common law. Hobbes takes aim at the feudal system of the common

law when he writes, in his *Dialogue between a Philosopher and a Student of the Common Laws of England*:

> It is also a Dictate of the Law of Reason, that Statute Laws are a necessary means of the safety and well-being of Man in the present World, and are to be obeyed by all Subjects, as the Law of Reason ought to be obeyed, both by King and Subjects, because it is the Law of God.[30]

But if Hobbes is an absolutist regarding the state,[31] his is the open absolutism of a reason-based and law-based state, appealing to the rational will of the people. His open absolutism of reason is directed at the hidden and arbitrary, irrational and unpublished, absolutisms of the feudal systems of hereditary monarchy, the common law, and the church. In his *Dialogue*, Hobbes defends the Romanist[32] conception "civil law," the clearly pronounced and written public laws of the Commonwealth, against the English system of "common law," with its conception of an implicit or unwritten law that judges ferret out from a vast accumulation of cases assumed to count as precedents whose varying weights are for the individual judge to determine. In the system of common law, statute law or legislated law can be overturned when it is supposed to violate the implicit, unwritten common law as this is interpreted by the judge. An elitist judge thereby replaces the sovereignty of law established by the social contract. With this understanding, the common-law judge thereby usurps the position of the sovereign.[33] The common law builds its conception of law piecemeal, from a mountain of cases, rather than establishes the law in a rational manner as Hobbes attempts to do in *Leviathan* and as he proposes to be done by the sovereign whose legislation is advanced in the name of the people and reason. The system of common law essentially or implicitly gives to judges the power to make law surreptitiously, and on the behalf of particular interests, by unearthing the unwritten or implicit law supposed to have been established in the past and buried in a multitude of legal instances. The common-law judge is therefore a rival to the sovereign, but without responsibility to the social contract that sets up the state.[34]

In *Leviathan*, Hobbes derives his rational conception of "civil law" not from English traditions but from "the ancient law of Rome."[35] In this same chapter, Hobbes asserts the connection between law and "every man's proper method," and then mentions Justinian's *Institutions*. Against the piecemeal, empiricist, and ultimately arbitrary method of the common law, *Leviathan* presents a rationally constructed, scientifically demonstrable system of law which he urges the sovereign to comprehend and adopt as the foundation of the sovereign's legislative program. For the source of Hobbes's conception of scientific method, this suggests the important influence of Romanist method in law.

Hobbesean civil law methodology, which is carried forward in continental rationalism and philosophical Enlightenment, is embodied in the U.S.

Constitution, as this is a reasoned, step-by-step, written, and duly legislated body of law regarding the powers of government and the rights of citizens. In opting for a written constitution, the U.S. constitutional founders solidified the revolutionary break from English neofeudal domination by repudiating the English common law with its cryptic source in an unwritten constitution. The U.S. Constitution incorporates a system of rights set forward in the Bill of Rights or first ten amendments to the original constitution published in Philadelphia. The initial system of divided governmental powers could not by itself gain assent of the sovereign power of the ratifying bodies of the original thirteen states that were to coalesce, through a social contract, into a union. It was necessary to establish clearly a framework of citizen rights, so that potential arbitrariness implicit in the struggle and competition of governmental powers would be overcome by resting ultimate sovereignty in the people whose individual rights are given primacy. No doubt the list of rights in the U.S. Constitution extends beyond those enumerated in *Leviathan*. However, the extension of the rights of citizens remained fundamentally limited and, in relation to its explicit approval of slavery, beneath the level of *Leviathan*. The exclusion of members of society from the original American social contract led with the inevitability of Hobbesean causal law to the upheaval of the American Civil War, after which the Civil War amendments to the U.S. Constitution broke the power of slavery.[36]

The Rational State and the Church

Based on free, rational consent and not on force, the leviathan-state monopolizes the use of force for the enforcement of certain fundamental individual liberties, beginning with the right to own property and to buy and sell without interference. The goal of the state is to secure the conditions whereby rational, self-interested individuals can most securely achieve the accumulation of personal wealth and other conditions of happiness. This authority of the sovereign is therefore not absolute or above the law, understood as the law of nature and the law of God, as "subjects owe to sovereigns simple obedience in all things wherein their obedience is not repugnant to the laws of God," as spelled out by both natural reason and divine revelation.[37]

Thanks to Hobbes's Copernican-like advances in social-political theory, scientific explanation replaces traditional religious and legal doctrines based on alleged revelation and arbitrary judicial authority rather than on reason. Even in matters of divine revelation "we are not to renounce our senses and experience, nor that which is the undoubted word of God, our natural reason."[38] With the development of scientific social theory, there is no longer any need of a theory of the "divine right of kings." This does not necessarily mean that there should no longer be kings, or that kings or parliaments do not *ultimately* derive

their authority from God. But divine sanction in accord with that "undoubted word of God, our natural reason" requires that the state be based on the uncoerced, free consent of self-seeking, self-unfolding individuals. As long as kings rule in accord with basic conditions of the social contract, their rule accords with the will of the people and the deepest will of the individual, which is at the same time, because it expresses the laws of nature, the will of God.

In God's natural kingdom, whose laws as applied to human behavior are investigated and demonstrated by social science, reward and punishment are nothing more than the laws of causality. Such natural punishments extend to both kings and commoners. In this fundamental sense, no king could possibly be above the law. The natural punishment for the violation of that joint will of individuals and divinity is nothing more than the inevitable effect of causal law: "negligent government of princes" is punished by "rebellion; and rebellion, with slaughter."[39] Misrule leads to war, not the peace that we all basically desire. Thus it is essential that the king, or other ruling sovereign whether elected or not, understands how to rule in accord with this essential will of the people.

Within the limits established in the social contract, the power of the sovereign extends to behavior and public speech, including possibly public participation in the religious ceremony. No doubt this concept has earned for Hobbes the reputation of being an archconservative and absolutist. However, during this time in history when wars of religion were plunging societies into the chaos of civil war, Hobbes is at pains to establish that those religious beliefs and religious authorities over which these wars were fought cannot be superior to the laws of the state. Hobbes argues on the basis of Scripture that the mission of the Christian Church, or Churches (during this present dispensation before the Second Coming of Christ) is not one of power and authority, but of persuasion only. For social peace to prevail it must be the state, not the church, that establishes whatever limits of action and speech are necessary to peace and social order.

Thus, as a unified state religion contributes to the social order, the sovereign authority can command the public profession of one or another form of religious faith. But such conformity can only extend to outward behavior and public speech. It cannot and should not pretend to extend to the private thinking of individuals, or even less, to science itself. Hobbes condemns the terror of the Inquisition where he insists that "the power of law . . . is the rule of actions only" and should not be extended "to the very thoughts and consciences of men, by examination and inquisition of what they hold, notwithstanding the conformity of their speech and actions."[40] In this way, Hobbes effectively reduces such state religion to external ceremony, expedient for the welfare of the state, but not thereby binding on the individual's conscience.[41] Arguing that we are obliged to obey the sovereign in matters of religious ceremony and outward profession, Hobbes poses the natural objection of the Christian reader: "But what . . . if a king, or a senate, or other sovereign person

forbid us to believe in Christ? To this I answer that such forbidding is of no effect; because belief and unbelief never follow men's commands."[42] Accepting in principle the maxim, *cujus regio ejus religio* [whatever the region, that's your religion] as the basic solution of the time to the wars of religion, Hobbes consistently applies this principle to all religions. If a Christian sovereign should command a Muslim to participate in an act of Christian worship, the Muslim should obey. But the same goes for a Christian in a Muslim country. If someone thinks the Muslim, out of respect for private conscience, should disobey this command, "then he authorizes all private men to disobey their princes in maintenance of their religion, true or false." If, on the other hand, someone should declare that a Muslim should be obedient, while a Christian should disobey a similar command in a Muslim country,

> then he alloweth to himself that which he denieth to another, contrary to the words of our Saviour, "Whatsoever you would that men do unto you, that do ye unto them"; and contrary to the law of nature (which is the indubitable everlasting law of God), "Do not do to another that which thou wouldst not he should do unto thee."[43]

Plato vs. Aristotle on the Cause of Human Destiny

Hobbes's conception of the foundation of the state by free and equal individuals, while overthrowing the Aristotelian conception, paradoxically returns to certain esoteric conceptions of Plato's theory of the state. According to Plato, the inequalities of the social order require an ignoble lie through which fundamentally free and equal individuals acquiesce in the necessary hierarchy of social life. The traditional, premodern explanation of the orderly character of society is that individuals are born with certain natural inclinations to fulfill certain necessary functions in the existing society. This idea is expressed in a straightforward way by Plato in his *Republic* where he says that the rulers of society need to propound the "shameful," "ignoble" and materialist "lie" that human beings are engendered within their mother earth, and consequently some people are born with souls of iron, others with souls of brass, while a third group has souls of silver and a fourth, gold.[44] This conception would explain and justify the four main classes of society: the farmers, the artisans, the assistants to the rulers, and the rulers themselves. This lie or political myth justifies the requirements of society for individuals to fulfill different and hierarchically ordered functions in the social division of labor. The orderly differentiation of tasks in society is explained by the "lie" that there are natural differences in capacity among the members of society.

Plato calls this a lie because he does not think that human souls really are composed of material substances like brass or gold. Instead, humans are fundamentally spiritual beings who make their own destinies by their free decisions. Contrary to the hierarchical character of the existing social order, he believes in a kind of fundamental equality of individuals on the level of immaterial and immortal spirit. As Socrates shows in the *Meno*, even a slave boy can "remember" basic conceptions of science. Using his dialectical ("Socratic") method of questioning the boy about geometrical figures, the boy deduces a basic law of geometry. Plato explains this capacity of the soul from its preexistence both in previous lives in this world and in the realm to which souls go between lives. "Thus the soul, then, as being immortal, and having been born again many times, and having seen all things that exist, whether in this world or in the world below, has knowledge of them all."[45] Contrary to the theory of material predetermination which it is useful for the state to expound, Plato elsewhere suggests that the boy's soul may have deliberately chosen to live this particular bodily incarnation as a slave. At worst, his lot in life was due to the bad luck of the draw.

Plato's conception of reincarnation is explained in Book X of the *Republic*, where he recounts the near-death experience of the soldier Er. On coming back to life on his funeral pyre, Er describes the procedures of reincarnation, which he learned during his short visit to the Elysian Fields. First, the souls who are about to reincarnate draw lots as to which will be first. Then they choose from the destinies available to them in the order of the draw. When the great adventurer Ulysses comes to take his turn, he surprises everyone by choosing "the life of a private man who had no cares" because "the recollection of former toils had disenchanted him of ambition."[46] Ulysses' next life is therefore the result of free choice in the light of past decisions and experiences. For Plato, then, the "phenomena" of an individual's particular life, including even the material and social conditions of birth that more or less inflexibly determine one's place in society, are the outcome of free choice. This deeper, more complex truth of philosophy is translated into what Plato calls an ignoble lie, more accessible and consoling to non-philosophers and more useful to practical needs of the state, that the individual's lot in life is determined by the specifics of his material nature as expressed mainly in the circumstances of birth.

Rejecting Plato's conception of preexistence and reincarnation, Aristotle reinterprets the Platonic lie about innately different kinds of souls as organic fact by his method of explaining obvious external differences in social position by inner differences in natures. Aristotle holds that human beings have fixed natures that explain fundamentally different kinds of human activity in the social division of labor. Such fixed natures supposedly explain why some are slaves, some are found in the domestic slavery of women, and some are free men. The theory of naturally differentiated members of society justifies a social system in which a privileged minority alone was thought to have the intellectual

capacity to rule themselves, and to rule other people. Through Aristotle, then, Plato's deliberate fabrication came to be accepted as an objective truth dominating social theory until the modern age.

Enlightenment vs. Paternalism

Against the traditional theory that explains the social order by differences in the nature of human souls, Hobbes argues that human beings are essentially free and equal, self-determining beings—as are the souls in the Platonic philosophy. However, in the framework of the new science of motion, Hobbes's individuals are material, not spiritual beings, and their pursuit of freedom is only an expression of the operation of external causes. Nevertheless, he argues that the hierarchical order of society, together with the state and its laws, are the result of the free, rational, uncoerced decisions of fundamentally equal individuals who are simply trying to be happy as they see fit.

One can almost hear the outcry of the conservative defenders of the traditional feudal order: such a society of naturally free individuals will only degenerate into anarchy! With such a perspective, individuals will inevitably be cutting each others throats! In fact, in the English Civil War of his time, individuals were indeed busily cutting each others throats. Doesn't that prove the need to combat the emerging individualism of the time, seen in both science and commerce, and return to a world in which divinely appointed authorities regulate both the pursuit of truth and the pursuit of happiness? If we give individuals the freedom to choose their own occupations, for example, what is to guarantee that all the tasks needed to be performed by society will in fact be performed? The traditional society solves this problem by assigning tasks more or less on the basis of birth. As Plato's ideal *Republic* is translated into empirical fact by Aristotle, the concept is propounded that the social organization with its hierarchical structure is founded on natural differences between people. Because of inferior natural capacity, mere peasants cannot be given responsibility for complicated social tasks. No doubt there are exceptions. But as a general rule, which seems confirmed by common experience, some people are born to rule and others to serve. It is the task of the church to justify and sanctify the task of the state in enforcing such a distribution of social functions.[47]

It is important to recognize that the responsibility of the state in the traditional society goes far beyond the limited negative restrictions of the Hobbesean social contract. The traditional state, together with the church, has a much greater responsibility for maintaining the welfare of its citizens. In the traditional understanding, education, occupation, and trade—the three basic civil liberties of Hobbes's rationally based state—require the supervision of church and state. Theoretically, this encompassing character of the traditional

state is justified by a paternalistic conception of happiness. The political and ecclesiastical authorities are supposed to know best what is in the interests of the members of society—that is, what will make the members of society happy.

According to the Aristotelian theory, happiness consists in the fulfillment of one's natural inclinations or desires. Individuals may not always know, however, what will make them happy. They often mistake the satisfaction of short-term desires for what will bring them true, lasting, or long-term happiness. Because of their expertise in philosophy and religion, the authorities are equipped with knowledge of the true needs and desires of individuals. Hence, they can intervene in the decisions of individuals and, "for their own good," prevent them from attempting to realize certain desires. Like a good father, the state regulates the affairs of its children according to its superior understanding of what is good for them.

While in accord with Aristotle that individuals are motivated by the desire for happiness, the Hobbesian conception of the social contract rejects this paternalism. It is based on the idea that happiness is different for different individuals, and so only the individuals themselves know what is in their own best interests. For individuals with different needs and desires, the role of the state is not to guide them toward happiness but simply to create conditions in which *the individuals themselves* can pursue their own, individual, diverse, and sometimes conflicting conceptions of what will make each of them happy. These conditions consist primarily in the enforcement of certain minimal rules of civic intercourse. The state does not know what will make individuals happy, but it does know that certain things will make them unhappy. In the social contract the public authorizes the state to place some carefully defined limits on what individuals may do in the pursuit of their diverse conceptions of happiness. The fundamental rule is that one individual's pursuit of happiness should not violate another individual's equal right to pursue his or her idea of happiness. This is the negative formulation of the Golden Rule which Hobbes says is "the law of nature (which is the indubitable everlasting law of God), Do not do to another that which thou wouldst not he should do unto thee." The role of the state is primarily negative: prevent individuals from interfering in a violent or fraudulent way with other individuals' equally valid pursuit of happiness. Prevented by the state from using physical violence in their relations with one another, and from breaking important contracts that they freely make with one another, the individuals are free within these limits to pursue what they think best promotes their own happiness in their own way.

The Human Creative "Fiat"

The state is founded on the rational will of the individuals who compose it, who, in their social contract, recognize the need for a power to enforce the laws

of nature, reason, and whatever more particular requirements the sovereign recognizes as conducive to peace and security. Hobbes argues that a "rational will" is not the same as a "free will." A rational will is the will of self-interested individuals who find it in their interests to live according to certain rules governing their collective existence, and to create a power for enforcing those rules. Societies are therefore not purely natural states of affairs, but "artificial" creations of individual self-interested human beings who are trying to satisfy their needs "freely," that is, with the least amount of interference. Some interference is needed—we ourselves recognize that such interference is necessary for our own good. These interfering obstacles to our natural liberty that rational individuals accept are those chains that are called civil laws. The modern state is not a paternalistic one, since the laws permitted by the social contract arise out of the informed consent of the members of society. The state is therefore the creation of the joined wills of free human beings.

The term "creation" should be stressed. Human beings are the architects and creators of their own social order. At the very beginning of his *Leviathan*, Hobbes writes:

> Nature (the art whereby God hath made and governs the world) is by the art of man, as in many other things, so in this also imitated, that it can make an artificial animal. For seeing life is but a motion of limbs, the beginning whereof is in some principle part within, why may we not say that all automata (engines that move themselves by springs and wheels as doth a watch) have an artificial life? For what is the heart, but a spring; and the nerves, but so many springs; and the joints, but so many wheels, giving motion to the whole body, such as was intended by the Artificer? Art goes yet further, imitating that rational and most excellent work of Nature, *man*. For by art is created that great LEVIATHAN called a COMMONWEALTH, OR STATE (in Latin, *civitas*), which is but an artificial man, though of greater stature and strength than the natural, for whose protection and defense it was intended; and in which the sovereignty is an artificial soul, as giving life and motion to the whole body; the magistrates and other officers of judicature and execution, artificial limbs; reward and punishment (by which fastened to the seat of the sovereignty, every joint and member is moved to perform his duty) are the nerves, that do the same in the body natural; the wealth and riches of all the particular members are the strength; *salus populi* (the people's safety) its business; counsellors, by whom all things needful for it to know are suggested unto it, are the memory; equity and laws, an artificial reason and will; concord, health; sedition, sickness; and civil war, death. Lastly, the pacts and covenants, by which the parts of this body politic were at first made, set together, and united, resemble that *fiat*, or *Let us make man*, pronounced by God in the Creation.[48]

This passage, with its watch-like springs and wheels, clearly reflects the mechanistic, deterministic, materialistic conception of both nature and humanity. God creates both nature and human nature. Nature creates nothing on its own, but simply functions according to the laws of its maker, as a clock functions in clockwork fashion according to its original design. Unlike nature, however, human beings are themselves creators of a living social order. If living organisms are nothing more than complex motions of limbs and other parts of the body, then there is no reason for refusing the term "life" to any machine created by a human being. Nature is the great clock created by its clockmaker for purposes of realizing His Will. Human beings, with their mechanically moving parts, including the nerves, brain, and heart—the human "soul" itself—are part of this nature. But human beings are more than the mechanical machines of nature. Like God, and unlike the objects of mere nature, human beings are capable of creating their own machines, to serve their own purposes.

Not only do human beings create ordinary machines, they create "an artificial man," and even a "mortal god," the leviathan state. The mechanism of the state is analogous to the great machine of nature. But this machine is created by the *human* watchmaker. And what is the purpose of this artificial human, the commonwealth? Its purpose is to *contradict* the forces of nature spontaneously operating in the human individual. Like the Divine Mind and Will, human beings therefore are capable of rising above the mechanism of nature in order to direct it according to the purposes determined by themselves. Thanks to the science of nature, including the science of human nature, the human act of will—*fiat, Let there be society, Let there be a state*—seems capable of acting on that original human nature from a God-like position outside it.

Contradiction in the Hobbesian Theory?

But to put the matter in this way is to suggest that a fundamental problem emerges in the heart of the Hobbesian theory. Contrary to the deterministic doctrine that Hobbes originally defends, something like a genuinely free will seems unwittingly to enter the picture of human creativity that he eventually describes. Hobbes insists that his explanation of the origin of the state is consistent with the deterministic laws of modern science. The general constructions of synthetical method extends from the first principles of natural science through increasing complexity to those principles determined by the analysis of contemporary society to be at the basis of the social contract. And yet Hobbes's presentation suggests that our *consciousness* of these laws makes a fundamental difference. Contrary to Aristotle, human behavior does not naturally evolve or mature from a condition of egotism to that of sociability. The evolution from the state of nature to the creation of the state is *not* a natural process. It is rather the result of an unnatural creation by human beings who recognize

the need to suppress their natures—that is, those egotistical passions that inevitably lead to war—and channel them in a radically new way. The original orientation of the laws of nature operating in human beings is radically altered thanks to the intelligent human will that establishes civil order.

On the one hand, consistent with determinism, Hobbes holds that this civil order is merely a continuation in a more complex form of the mechanistic laws of nature. This is just one more step in the unfolding of straight-line motion in its ascent to more and more complicated levels of expression. On the other hand, it is difficult to see how this next step is accomplished in a purely deterministic manner from the preceding one. Of course, in none of the previous stages of evolution, such as from inorganic matter to living organisms, do we see how the seeming leap from one stage to the next is accomplished by a complication of straight-line motion. But then, in these stages of the evolution of nature we human observers and would-be scientific knowers of this process are not in the position of the Creator. Contrary to our standpoint as creators in the constructions of geometry, we cannot propose more than hypothetical explanations of the origins of the stages of nature. We cannot do more than insist on the consistency of our explanations with other scientific theories, and ultimately with the most fundamental of all our hypotheses, the basic laws of physics. Thus we must assume that the transition from one stage to the other is not accomplished by an unexplained and unexplainable insertion of an Aristotelian form, but by a continuance of those laws of motion discerned at the more basic level. However, in the transition from the state of nature to that of civil society, we *are* in the position of creator—exactly as in the constructions of geometry. Therefore, instead of being limited to proposing the most plausible hypotheses, we are in the position of being capable of proposing the most certain knowledge. Hobbes accordingly writes:

> Civil philosophy is demonstrable, because we make the commonwealth ourselves. But because of natural bodies we know not the construction, but seek it from the effects, there lies no demonstration of what the causes be we seek for, but only of what they might be.[49]

Leviathan is therefore like geometry, "the only science it hath pleased God hitherto to bestow on mankind."[50] Hobbes's "hitherto" puts forward his own work as on the same footing as God-given geometry. But this is because the creators of the "construction" of social reality are we human beings ourselves.

Hobbes emphasizes the radical originality of the social contract, likening it to the divine creation. We recall that Hobbes is not a thoroughgoing mechanist. He allows one important exception to the determinism of modern science. He allows that the chain of causality does not regress infinitely into the past. It has a beginning in a *fiat*, the "let it be done," of divine creation. God exercises free will in creating the material universe. Let us not pretend that

"free will" as applied to God is a comprehensible term. Like other terms, such as immaterial spirit, these logically nonsensical expressions may be regarded as terms of honor and as admissions of the inherent limitations of the finite human intellect. And yet Hobbes then extends this conception of divine creativity to the human beings' creation of the state, which is an act that we *can* comprehend because it is our own. There is a second *fiat* whereby human beings create "an artificial man," the state itself. Nature is therefore not the only force in operation. Thanks to human intelligence, nature is imitated in human art. The result is that human beings create a kind of second nature, an artificial humanity that is no longer continuous with natural humanity. In this way, human creativity too is like the divine *fiat*. Human society, with its artificial institutions, is the result of the actions of conscious human beings, of conscious, rational will.

This comparison of human creativity with the free creativity of God seems more than an expression of poetic license. Through the creation of the state, the rational will gains the leverage we need to contradict our natural impulses to realize our separate desires at the expense of others. But how does the causal process extend from the state of nature to the state of politically organized society? How do the causal laws that are manifest at the one level lead, through growing complexity of mechanical determination, to the next level? *Within* both levels it is easy to see the operation of deterministic laws. In the state of nature, individuals are moved by their passions to seek the realization of their desires, but in such a way as ultimately to frustrate those desires because of the state of war their actions inevitably produce. In civil society too, individuals are moved by their passions to seek the realization of their desires, but now within a more complex framework of legal limitation that prevents such war. Moreover, *between* the two levels there seems to be no explanation from reason itself. In the transition from one state of existence to the next reason by itself is a powerless spectator. Reason combined with imagination is capable of extending our desires to future eventualities so that longer-term desires theoretically overshadow shorter-term ones. And yet before the ultimate long-term desire for peace, the passionate desires for one's own short-term advantage prove unconquerable. Reason is capable of recognizing the insanity of this situation but is powerless to do anything about it. Were the long-term desire for peace, discerned and amplified by reason, capable of producing that peace, the state would not be necessary. We would simply move to the next stage of natural evolution in which social harmony grows out of social discord in a process motivated by painful experience combined with rational understanding of its causes. But then there would be no need for a state. The state is necessary only because such rational understanding is powerless to conquer the short-term passions of individuals.

And yet, the transition from the state of nature to the state of civil society is produced only by reason-based consent—the social contract. Moreover, the

causal efficacy of this consent is not just in some distant time in the past, setting up the state once and for all. Were this the case, it might be possible to allow another exception to the rule of causality without terribly upsetting the requirements of science—one exception for the establishment of the laws of nature, and another for the creation of the laws of civil society. But just as the divine causality cannot be limited to a moment in the past, but somehow mysteriously operates as the ground of being (as well as in the providential history of redemption), so the social contract is not confined to a moment in the past but is the present underpinning of the state. Without the *ongoing* consent of the members of society, civil war would inevitably emerge.

If individuals are fundamentally moved by their private passions, then reason is powerless to alter the natural egotism of self-interested individuals even when the folly of this egotism is clearly understood. The state of course, with its instruments of law and law-enforcement, operates on human beings as a great, immensely powerful machine. Fear of punishment moves human beings to act where purely rational moral understanding by itself stands powerless. This conception of the state enforcing the laws of morality with the threat of dire punishments certainly goes along with a deterministic perspective on human behavior. The state has the power to suppress our spontaneous passions by focusing, for the sake of social peace, the most powerful passion of all, the fear of death. And yet this powerful causal influence of the state operates only as the result of *the rational will*. There appears therefore to be a gap in the progression of the logic that goes from the simple starting point of society in egotistical individuals to the complex outcome of a system of social and political organization designed to counteract that egotism and create a considerable degree of social harmony. There is a leap in which reason, acknowledged to be powerless to constrain passion, nevertheless produces a power that is capable of doing so.[51]

The state operates as an external cause. It creates social unity by the threat and use of terrible force. Egotism is tamed and constrained by external power, a machine of Terror. And yet this machine is not really external. It is not a force of nature, but the creation of human beings themselves who both have the ongoing power of creating it and at the same time give their power over to it for their own benefit. The state is therefore not an independent power but the instrument of the rational will of the members of society in their struggle with human nature. By their rational decisions, human individualists succeed, despite the contrary pull of their conflicting passions, in uniting with one another through a power that *appears* to be external to them but in reality is their own power, externalized. Through the instrumentality of the state, we achieve the capacity to constrain and even to transform egotistical human nature in order to initiate a new, peaceful, and prosperous way of life.

The logical gap between the mechanism of egotistical passion and the mechanism of state terror is filled, not by the unfolding of a mechanical process

going from passion to passion, but by a God-like *fiat*, a creative act—a moment of genuine free will—a "moment" which is a permanent requirement of the social order. If Hobbes admits only "freedom from" and "freedom to," we need to ask: Freedom from what? Freedom from ourselves, from the mechanism of our own egotistical natures. But if we can free ourselves from the mechanism of our own natures, what is this but another exception to the rule, like the divine *fiat*—an incomprehensible act of free will as the permanent foundation—the "ground of being"—of social peace? Just as natural science requires an incomprehensible grounding in the divine will which does not contradict the ordinary business of natural science in its pursuit of particular causal laws, so Hobbes implicitly suggests that social science presupposes an equally incomprehensible act of the free human will that makes possible the causal operations of the laws of the state and their comprehension in social science.

Chapter Four

John Locke: Underlaborer of the New Sciences

The Historical Plain Method

Can it be true that everything is material, as Hobbes said—our thoughts and ideas, and even God? What about the Scholastics, with their interpretations of the ideas of Aristotle, who in the seventeenth century continued to dominate the programs of the universities? Is it so sure that they are completely in the dark? Among the new philosophers who criticize the traditional philosophy of the Schoolmen, there are profound divisions. Descartes rejects Hobbesian materialism, arguing that the human being is a unity of both matter and spirit. But how can two so fundamentally different kinds of substances be united? Defenders of these and other philosophical opinions put forward respectable arguments that lead to contradictory conclusions. Recognition of such basic contradictions cannot fail to disturb the minds of thoughtful individuals of the time—individuals such as John Locke (1632–1704) and his friends. In his "Epistle to the Reader" for his major work, *An Essay Concerning Human Understanding*, Locke writes that he and five or six friends, engaged in a discussion on some topic of interest, found themselves brought to a halt by "the difficulties that rose on every side." To resolve "those doubts that perplexed us, it came into my thoughts that we took a wrong course; and that before we set ourselves upon inquiries of that nature, it was necessary to examine our own abilities, and see what *objects* our understandings were, or were not, fitted to deal with."[1]

At the time (around 1671) Locke was deeply involved in medicine, politics, and economics, as well as being well versed and deeply interested in theology and moral philosophy. Whatever the subject matter of the difficulty mentioned in his Epistle, it must have raised the question as to whether it was even solvable. Perhaps the "objects" in question are not among those that our minds are capable of truly understanding. A work in Locke's handwriting at that time, *De Arte Medica* [On the Art of Medicine], raises doubts regarding the various theories of disease current at the time. As a sometime medical practitioner,

however, Locke understood that a medical doctor must act to solve a medical crisis without knowing the fundamental causes of the problems with which he is confronted. The work recommends therefore "a purely empirical approach to medical practice."[2] But in the absence of a fundamental scientific knowledge, an empirical approach does not mean that there is no knowledge at all. If she does not have *scientific* knowledge of the nature of disease, a doctor, to have any kind of success in her profession, must have at least some kind of practically useful knowledge.

For all the pioneering breakthroughs of the time, the new sciences did not provide all the answers. Especially regarding the fundamental nature of reality, opinions were sharply divided. Following his friend Robert Boyle, Locke leaned toward the theory that matter consists of fundamental elements, miniscule bodies or corpuscles, while others, such as Hobbes and the Cartesians, argued that matter is an unbroken continuum, moving in a wave-like manner, without the void required by corpuscularian atomism.[3] But is it really necessary to answer such questions in order to have some kind of effective, practical knowledge? Is it even possible to do so?

Over the next thirty years or so Locke worked off and on to express his evolving thoughts on the nature of the human understanding. How is it that we acquire knowledge in the first place? How reliable and extensive is our capacity for understanding? What makes some ideas true and other spurious? How are the truths of science acquired, and how certain and universal are they? Is certainty possible in morality and politics? Perhaps the limited nature of our understanding is such that we are not meant to have definitive answers to every question. But because we cannot know everything, it doesn't follow, as skeptics conclude, that we cannot know anything.

For the investigation of such perplexing but intriguing questions we do not need the experimental apparatus of the scientist, says Locke, but merely the reflective powers of our own mind, observing and reflecting upon its own operations and the ideas we find in ourselves. Hobbes would have said that such scientific apparatus is indeed necessary. The mind and its phantasms are like anything else—a product of the laws of motion. To study the mind really or scientifically is therefore the same as to study the physical motions taking place in human physiology. As a medical person trained in human physiology, Locke may have been in an excellent position to advance scientific knowledge of the physiology of the human mind. But Locke finds such approaches unconvincing and speculative:

> I shall not at present meddle with the physical consideration of the mind; or trouble myself to examine wherein its essence consists; or by what motions of our spirits or alterations of our bodies we come to have any *sensation* by our organs, or any *ideas* in our understandings; or whether those ideas do in their formation,

> any or all of them, depend on matter or not. These are speculations which, however curious and entertaining, I shall decline, as lying out of my way in the design I am now upon. It shall suffice to my present purpose, to consider the discerning faculties of a man, as they are employed about the objects which they have to do with. And I shall imagine I have not wholly misemployed myself in the thoughts I shall have on this occasion, if, in this historical, plain method, I can give any account of the ways whereby our understandings come to attain those notions of things we have; and can set down any measures of the certainty of our knowledge; or the grounds of those persuasions which are to be found amongst men, so various, different, and wholly contradictory. . . .[4]

What is Locke's "historical, plain method"? The method is plain enough, because the philosopher needs no elaborate laboratory to pursue his studies—nothing more than a perhaps comfortable armchair and the simple equipment needed for writing down one's thoughts. For the "objects" which the philosopher has to treat are simply the sensations, ideas, or notions that he finds within himself. The objects are therefore plain enough. Locke stresses too that his exposition will be in plain language, addressed to the nonspecialist. Locke's approach to these objects of the understanding is an historical one. But the history to be recorded does not depend on ancient documents and deposits, because it is the essentially contemporary history of the "the ways whereby our understandings come to attain those notions of things we have." The task of Locke's "historical, plain method" is to determine "the original, certainty and extent of human knowledge."[5] First of all, where do our ideas come from? After establishing the correct starting point for our powers of understanding, we can then follow the history of our ideas from their simple origin to the complex state of affairs that we find in the disputations of philosophical treatises. Once we have a good idea of this history, verifiable to any introspective mind, we can decide where and why and to what extent our ideas attain any degree of certainty. And so having secured such a basis regarding the simplest elements and processes of knowledge, we can give a better appraisal of the complex and contradictory concepts of the philosophers.

Back to the Appearances Themselves

A comparison with Hobbes helps us understand the distinctiveness of Locke's approach. While Hobbes seeks to derive the complex motions *of matter* from the simple motions, Locke seeks to trace the complexity *of our thoughts* from their simplest moments, while bracketing questions about material motion. Such an approach sharply contrasts with that of his predecessor. In the spirit of Hobbes and the new sciences, an investigation into the nature of the mind

reduces to an examination of the physical processes of motion that produce our perceptions and the thoughts that we think. For Hobbes, all our perceptions and mental experiences are "phantasms" or appearances whose reality must be determined through an understanding of the causal processes of material bodies. When we have a perception, of course, we do not at the same time see the physical motions that constitute its true essence according to such materialism. What we perceive in our minds are phantasmata, appearances—like the apparent motion of the sun across the heavens. To understand their reality, we must trace those appearances back to their causes in the motions of material bodies. But here we face a special difficulty. The motions taking place in the brain are very complex as well as operating on an extremely minute scale and so largely hidden to empirical study—even if we could somehow open up the brain to inspection without killing the subject of investigation. Thus Hobbes must settle for sketching a general outline of the development of material motion from the simplest motions conceivable to the complex patterns of the human organism. The progress of science consists in filling in the gaps or fleshing out the bones of this general framework.

However, if the scientific study of mental phenomena is only a further complication of the physicist's study of the motions of matter observable elsewhere, we can be certain at least that the mind wholly depends on matter. This is hardly speculative in principle for Hobbes, although the precise manner or mechanism in which brain activity takes place, because it involves motions on a very small scale (the "spirits" that operate in the brain and nervous system), leads to a variety of possible hypotheses. Like the supposed existence of free will, the *general* question of the nature of mind can be settled simply by testing the compatibility of one's supposition with the scientific materialist approach. If like free will the proposed doctrine (for example that the mind is composed of a wholly immaterial substance) is simply contrary to the basic tenets of science, it can be dismissed outright. Unless, of course, we are talking about matters that inherently transcend the capacity of the finite mind, such as the properties of God, the infinite source of all that is. But even then it is necessary to say that the cause of the material universe must itself be material since any alternate concept is simply meaningless.

But this materialist orientation of Hobbes's thought begins with something that is not so evidently material—perhaps not material at all. Tracing the phantasms of the mind to their material causes supposes that the phantasms are not themselves material. They are the appearances of something material. The brain mechanisms that constitute the cause of the mental appearance are not evident in those appearances. They must be studied independently of the ideas they produce. Whatever causes and constitutes the green that I see, it is a material brain activity that is quite different from that appearing/apparent green itself. Nevertheless, the fact that Hobbes recognizes that the phantasms of the mind are some kind of object—even if an illusory one—means that it is possible

at least to describe such merely apparent kinds of objects. One can after all describe the motion of the sun across the heavens, and even draw practically useful information from such an investigation. The sundial and other forms of clocks are based on this knowledge—the knowledge of a reality that, when thought of as an independent fact of nature, is not real.

For Locke, perceptions and other mental activities, together with the ideas that are connected to them, deserve such study, if only because of their practical utility. The doctor who only sees the symptoms or appearances of the disease, but is in the dark about its nature, can nevertheless help her patient. Even if we can never grasp their ultimate substance—nor determine whether this substance be material or immaterial—the appearances are reliable enough indicators to serve us for many practical purposes. But Locke goes further than such pragmatism. It's not as though there is a choice about what it is that we know when we have knowledge. It's not as though we could choose between knowing some kind of fundamental reality *or* settling for the secondary appearances of it. There is only one kind of object which is directly proper to our understanding, and that object is the appearance within us that the world outside of us takes when we know it. To use Hobbes's metaphor, it is only in the mirror of the mind—a mirror that, depending on the circumstances, may or may not adequately, or in any way at all give us a picture of the realities outside of it—that we know an externally existing reality. In an age of imperfect mirrors, Locke prefers the metaphor of a blank sheet of paper rather than that of a mirror. We only know the world through its handwriting within us, through the images it imprints upon us.

So when Locke says that the puzzles encountered with his friends pushed him to ask "what *objects* our understandings were, or were not, fitted to deal with," stressing the word "objects," and when he states that his goal is "to consider the discerning faculties of a man, as they are employed about the objects which they have to do with," we are charged to ask and answer this plain question: what really are the objects of our understanding? The proper or fitting objects of the understanding are not the fundamental nature of things themselves. They are not in fact things at all. The objects that our understanding is fitted to deal with are nothing but those phantasms themselves, also known as *ideas*. Locke excuses himself for the frequent use of the term "idea," but insists on its appropriateness as the central object of his investigation, for "idea" is

> that term which, I think, serves best to stand for whatsoever is the *object* of the understanding when a man thinks, [and so] I have used it to express whatever is meant by *phantasm, notion, species*, or *whatever it is which the mind can be employed about in thinking*; and I could not avoid frequently using it.[6]

At the very beginning of his investigation, Locke makes a decision that has profound ramifications regarding the problems of philosophy: the mind knows

reality only through its ideas. The direct or immediate objects of our mental activities are not the material things that exist on their own outside of us but those special objects of our thinking and perceiving activities that are within us. Such ideas, or some of them, *may* be the impressions made on us by things outside of our minds. But what we know directly or immediately are not those more remote causes, but their effects on and within us, as we engage in thinking about them. Whatever we know about things we must derive from these effects, the ideas, the impressions, or images by which they are reflected within our minds. In our mental appreciation of reality we do not go directly to that reality itself but only comprehend it, only understand it, through the ideas we have of it. And our capacity for obtaining such ideas from the world outside of us is not unlimited, not infinite, but constrained by the limited constitution of our own sensory abilities and intellectual faculties. Given this constraint, are we in fact capable of solving all the problems that occur to our metaphysical imagination? Or, perhaps more importantly, are our sciences themselves capable of penetrating to the heart of reality? What in fact are we actually capable of knowing?

So Locke argues that our ideas are the fitting or proper objects of the understanding—directly accessible to us without the apparatus or instruments of experimental sciences. The phantasms of our experience not only can but must be studied independently of their relation to whatever possible underlying physical or non-physical process that produces them. For it is only on the basis of ideas (including sensory images) that we know anything at all about the movements of things outside (or inside, for brain and nervous activity) our heads. It is not that Locke is proposing some strange new object of investigation. He is simply pointing out that the one and only direct or immediate object of understanding are ideas. Ideas may be the result of material processes. And perhaps some ideas exist independently of such processes. But however "curious and entertaining" it may be to speculate on the nature and interrelation of matter and spirit, Locke does not want to be distracted from his primary topic by such speculations.

Let us simply study these phantasms or appearances themselves, for they present themselves as facts to the inquiring mind. They are its immediate or direct objects, even if in our employment of them we are aiming at a knowledge of a different kind of object—things existing independently of them. We already in fact do have some knowledge—ideas that serve us in our ordinary life—although we may be completely in the dark about the ultimate nature of the realities outside of us that they reflect or about the possible kinds of activities that produce this knowledge inside of us. Thus Locke proposes a study of the appearances or the "phantasms" which we normally call ideas, perceptions, sensations, acts of will, etc., independently of any speculations regarding the ultimate nature of the mind itself—that is, whether it be a material or spiritual substance.

It is in this modest spirit that Locke wrote his major work, *An Essay Concerning Human Understanding*. If he distinguishes the object of his investigation from

that of the physical sciences, he does not regard his effort to be completely separate from them either. The new sciences in fact provide the main framework or master plan, and inspiration, for his work. He does not attempt to add to the new sciences directly, but to facilitate their advance by clearing away obstacles created by the mystifications perpetrated by other philosophers. Without directly treading the path of the sciences or claiming to reveal their metaphysical foundations, he proposes to perform a modest service for the master builders of the scientific age:

> The commonwealth of learning is not at this time without master-builders, whose mighty designs, in advancing the sciences, will leave lasting monuments to the admiration of posterity: but every one must not hope to be a Boyle or a Sydenham; and in an age that produces such masters as the great Huygenius and the incomparable Mr. Newton, with some others of that strain, it is ambition enough to be employed as an underlabourer in clearing the ground a little, and removing some of the rubbish that lies in the way to knowledge;—which certainly had been very much more advanced in the world, if the endeavours of ingenious and industrious men had not been much cumbered with the learned but frivolous use of uncouth, affected, or unintelligible terms, introduced into the sciences, and there made an art of, to that degree that Philosophy, which is nothing but the true knowledge of things, was thought unfit or incapable to be brought into well-bred company and polite conversation.[7]

But perhaps this is an overly modest statement of Locke's purpose. Behind the negative focus on removing the obstacles created by other philosophers, Locke has a positive goal in mind. The scientist who studies these material things can do so only through the medium of ideas. Would it not be eminently useful to the scientist to have some clearer conception of this indispensable but too neglected tool of her trade?

Do We Have Innate Ideas?

The first question of Locke's historical approach is: What is the origin of our ideas? Are we born knowing certain truths, or does all knowledge come from experience? Certain philosophers say that without some basic, innately given, and self-evident principles of knowing, imprinted so to speak on the soul from its origin, we could not make sense of the particular instances of knowledge that we acquire from our experience. Locke cites some of these allegedly basic principles: whatever is, is; something cannot both be and not be at the same time; and, the whole is greater than the part.

The answer to this question about innate knowledge does not require scientific knowledge of possible physical causes of thought. The question can be answered simply by inspecting our actual knowing experience—the phenomena of knowing, the history of our thought. Do we in fact begin with some built-in ideas, innate to the constitution of the mind? Or do all our thoughts come from experience? Plain, ordinary experience, however, seems to go against the claim that there are any innate ideas. If these ideas were imprinted on the soul from its origin, how is it that children and the mentally challenged, who nevertheless have souls like everyone else, are unaware of them? If it is said that such ideas are only known when the individual reaches the age of reason, why is it that "a great part of illiterate people and savages"[8] pass their whole lives without knowing about them, although they use reason in many ways? But perhaps they have simply not used their reason in respect to these ideas, which they would grasp if they did? Although we may not notice such ideas, it is said, they are there anyway, and come to be noticed when we apply reason to them. But then, Locke replies, all the truths that we discover with the aid of reason—and "nobody, I think, ever denied that the mind was capable of knowing several truths"[9]—must be declared innate.

If the object of our acts of understanding are ideas, as Locke says, we should not suppose that such ideas might exist somewhere within us without our being conscious of them. The relation between understanding and its objects is one of mutual dependence. We do not think or perceive without thinking or perceiving something, that is, some idea, and no idea exists without an act of awareness of it. If we understand rightly what an idea is, the notion that there can be ideas of which we are not conscious simply doesn't make sense.

> To say a notion is imprinted in the mind, and yet at the same time to say, that the mind is ignorant of it, and never yet took notice of it, is to make this impression nothing. No proposition can be said to be in the mind which I never yet knew, which it was never yet conscious of.[10]

The innativists may respond that innate principles are distinguished from empirically known truths by the fact that they are known as soon as their meaning is understood, while other truths require laborious chains of reasoning. But then they contradict the theory that reason is needed to understand them, for if some idea is known to be true as soon as the terms of the proposition expressing it are understood, then no *reasoning process* is required to grasp it. Such ideas are known by direct intuition, not by reasoning. Locke here repeats Aristotle's distinction between the reasoning processes that move from the premises of an argument to conclusions, and the intuitive understanding that grasps the first principles themselves. But such intuitive grasping of the truth of propositions is not something rare or confined to the philosophical

contemplation of lofty, metaphysical "first principles." To understand that three and four equal seven, a child must first understand what three and four mean, as well as the meaning of "equal." Once these terms are understood, on the basis of such experiences as counting, then the child immediately understands, intuits without any reasoning process whatsoever, that three plus four equal seven. "The truth of it appears to him as soon as he has settled in his mind the clear and distinct ideas that these names stand for."[11]

There is no difference here from the plain truth that wormwood and sugarplums are not the same thing. Once a child knows what wormwood is, and what a sugarplum—again obviously by recourse to experience without the help of innate ideas—it is directly evident that some piece of wormwood is not a sugarplum. To grasp this truth, there is no need to know beforehand that whatever is, is, and that something cannot both be and not be at the same time. This knowledge that the wormwood is not a sugarplum presupposes only that the child has the ability to speak and has learned the names of these things. But even before learning language, an infant directly knows that sweet is not the same as bitter—although it lacks the capacity to express this truth verbally: "For a child knows as certainly before it can speak the difference between the ideas of sweet and bitter (i.e. that that sweet is not bitter), as it knows afterwards (when it comes to speak) that wormwood and sugarplums are not the same thing."[12]

And where does the idea that sweet is not the same as bitter come from? Are sweet and bitter themselves innate ideas? Suppose that the infant lacked the sensation of taste. Would it still have the ideas of sweet and bitter? The idea that red is not blue presupposes the capacity of sight, and no amount of explanation, reasoning, and recourse to alleged innate ideas can convey to an individual blind from birth the ideas of red and blue, and consequently of the comparative idea that red is not blue. What is indispensable is the capacity to have the particular kind of sensation that is involved. Does a knowledge of the difference between sweet and bitter, or red and blue, depend on the innate principle that it is impossible for the same thing to be and not to be? But for any individual with the capacity for sight, the idea that red is red, and not blue, is a directly perceived truth, requiring no reasoning process from such a principle as that whatever is, is. Evidently, this recognition of the difference between red and blue or sweet and bitter is a directly intuited truth in which we perceive the differences between our sensory ideas. The child who learns to speak can express such particular truths in language, while the adult who is interested in philosophical matters can then express them in the form of general *maxims* of thought: that whatever is, is, and something cannot both be and not be at the same time. These are not "principles" that *precede* experience, but "maxims" or summations of experience through the summarizing or generalizing activity of thought. For the child, Locke says, such maxims are not noticed but rather, like "floating visions, they make not deep impressions enough to

leave in their mind clear, distinct, lasting ideas, till the understanding turns inward upon itself, reflects on its own operations, and makes them the objects of its own contemplation."[13]

In the course of the history of the individual's consciousness, clear and distinct ideas are gradually distinguished both on the level of immediate sensory ideas such as sweet and bitter and on the level of abstract ideas. For all the passivity of our sensation that Locke insists upon, he also recognizes that the reception of simple ideas presupposes the discriminative activity of consciousness, which varies in acuity with different individuals. Thus the plain history of human thought always begins with a confused perception of the surrounding world, proceeds by analysis or discrimination to distinguish basic elements or materials of thought, and then constructs a representation of the world on this basis. If this is the analytic/synthetic method of science for Hobbes, Locke shows that it is the method of general human thought from infancy.

Negative Practical Consequences of Innate Ideas and Real Science

Locke examines the use of the concept of innate ideas by philosophers and theologians, as well as by old wives, to put an end to inquiry. Once certain propositions are declared to be innate, and so "written on our mind by the finger of God,"[14] this idea

> eased the lazy from the pains of search, and stopped the inquiry of the doubtful concerning all that was once styled innate. And it was of no small advantage to those who affected to be masters and teachers, to make this the principle of principles—*that principles must not be questioned*. For, having once established this tenet—that there are innate principles, it put their followers upon a necessity of receiving *some* doctrines as such; which was to take them from the use of their own reason and judgment, and put them on believing and taking them upon trust without further examination: in which posture of blind credulity, they might be more easily governed by, and made useful to some sort of men, who had the skill and office to principle and guide them. Nor is it a small power it gives one man over another, to have the authority to be the dictator of principles, and teacher of unquestionable truths; and to make a man swallow that for an innate principle which may serve to his purpose who teacheth them. Whereas had they examined the ways whereby men came to the knowledge of many universal truths, they would have found them to result in the minds of men from the being of things themselves, when duly considered; and that they were discovered by the application of those faculties that were fitted by

> nature to receive and judge of them, when duly employed about them.[15]

Here Locke applies the historical plain method for solving the puzzles and resolving the disputations of philosophers. He examines "the ways whereby men came to the knowledge of many universal truths"—and not only men, but babies as well, to the extent that much of the history of our knowledge has its origin in infancy and childhood. Without any theory about the ultimate structure of reality, only by paying attention to the sensations within her, a child quickly learns to eat sugarplums, but not wormwood. No innate knowledge is required, only an understanding of the sensory ideas that convey to us practically useful information from "the being of things themselves." The genesis of the doctrine of innate ideas likewise starts in infancy, since the fact that certain ideas are acquired early in life lends itself to the theory that they preceded that life's experiences. Since certain truths are understood immediately at the earliest age, without some cautious reflection such as Locke proposes the idea of innate ideas tends to gain a foothold in the minds of people. This theory evolves and becomes widely held and emphatically defended, however, under less innocent conditions. The advantages this idea confers on would-be dictators of the thoughts and actions of others makes this concept a cornerstone of various establishments. The result is a fixed prejudice on its behalf that has served as a major impediment to the advancement of real knowledge. As underlaborer of the sciences, Locke works to remove this obstacle through the application of his plain method of studying the history of our ideas.

Similarly, Locke argues that there are no innate practical or moral truths, but the rules of practical life too derive entirely from the experience of people. Here the danger of the idea of innate principles is quite obvious, for if whatever principles we seem to have within us from birth were really innate truths, then

> doctrines that have been derived from no better original than the superstition of a nurse, or the authority of an old woman, may, by length of time and consent of neighbours, grow up to the dignity of *principles* in religion or morality. For such, who are careful (as they call it) to principle children well, (and few there be who have not a set of those principles for them which they believe in) instill into the unwary, and as yet unprejudiced, understanding, (for white paper receives any characters,) those doctrines they would have them retain and profess. . . .
>
> This is evidently the case of all children and young folk; and custom, a greater power than nature, seldom failing to make them worship for divine what she hath inured them to bow their minds and submit their understandings to, it is no wonder that grown men, either perplexed in the necessary affairs of life, or hot in

> the pursuit of pleasures, should *not* seriously sit down to examine their own tenets; especially when one of their principles is, that principles ought not to be questioned.[16]

But real science does not result from building on such allegedly innate, sacred, and unquestionable foundations. Defenders of innate ideas reject such scrutiny into the ideas they hold to be innate on the grounds that all science depends on them, and so to overthrow them is to overthrow knowledge or science itself. As to whether this is true, Locke takes a plain, historically oriented perspective. Let's just look at the actual sciences themselves, and see whether this claim is true. Locke gives special attention to Newton's brilliant work, the *Mathematical Principles of Natural Philosophy*:

> There is, I know, a great deal of talk, propagated from scholastic men, of sciences and the maxims on which they are built: but it has been my ill-luck never to meet with any such sciences. . . . Mr. Newton, in his never enough to be admired book has demonstrated several propositions, which are so many new truths, before unknown to the world, and are further advances in mathematical knowledge: but, for the discovery of these, it was not the general maxims, "what is, is"; or "the whole is bigger than a part," or the like, that helped him.[17]

By this historical, plain method Locke traces the genesis of the conception of innate ideas from its simple origin in direct sensation—as in the infant's direct perception that sweet is sweet and not bitter—to the complex concept itself and its various uses in intellectual and practical life. Based on such evidence, Locke concludes that the mind does not come equipped with innate truths, but acquires all its ideas from experience—whether from the external world, or from the activity of the mind itself as it reflectively operates on the evidences of sensory perception. Apart from such ideas the mind is like a blank sheet of paper:

> Let us suppose the mind to be, as we say, white paper, void of all characters, without any ideas:—How comes it to be furnished? Whence comes it by that vast store which the busy and boundless fancy of man has painted on it with an almost endless variety? Whence has it all the *materials* of reason and knowledge? To this I answer, in one word, from EXPERIENCE.[18]

How Do We Acquire Ideas From Experience?

In coming to this position that the mind is like white paper (or, as commonly said for Locke's position, a blank slate or *tabula rasa*) Locke repeats the position of Aristotle who compares the mind to a piece of wax on which the objects

of the world are imprinted.[19] According to Aristotle, as for Locke, all knowledge begins in sensation. But Locke does not accept the Aristotelian idea of the way in which the world imprints itself on the mind.

Locke uses the term "idea" for the proper object of the understanding rather than the Aristotelian-Scholastic term "species" to distinguish his concept from theirs. For Aristotle, the essence of a physical thing, its "species" or "form," is conveyed in sense perception from the external object to the perceiver and imprints itself on the mind, like the form of a signet ring on soft wax. This internalized "species" is formally identical with the essence of the object outside of us. The operation of the mind consists in *extracting* the essential form found in the sensory image. From this conception of the nature of our understanding, it follows that to understand the nature of the world outside of us, we can rely on our direct perceptions of it to supply us with its essential nature. The world as it directly appears to us in sensory perception is therefore but the sensuous manifestation of the essential structure of the world as it is in itself. The Copernican revolution in science, however, refutes the Aristotelian empiricist epistemology. Locke's service as underlaborer to the master builders of the new sciences consists in criticizing this epistemological obstacle to the advance of science, and in proposing an alternative conception of the nature of our understanding that more adequately reflects the procedures of the new sciences.

For Locke, what the external object conveys to the consciousness of the observer is, in the first place, a purely unique or "particular" sensory idea rather than a sensuous image that is implicitly general or universal. Our knowledge of external reality involves a history beginning with particular sensations of particular things. This history is best reconstructed in connection with what we can suppose happens in infancy. After tasting various sweet foods, the infant eventually notices that certain individual sensations resemble one another. This perception requires the early development of memory. Through the perception that some sweet taste is like another previously experienced, the infant naturally produces the simple idea of sweetness. The simple idea of sweetness is not the extraction of the essence of the sweet object outside of us, but the result of a mental operation of perceiving one sensation as like another.

For Locke, general essences do not exist in the external world, only individual things. All so-called universals are the products of our own spontaneous and voluntary mental operations. Universals or essences are ideas for the understanding, not things existing in their own right. (And so it follows that an idea should not be thought of as a *thing* existing inside us.)[20] Thus it is the operation of the mind that *produces*, rather than extracts, the general idea of sweetness. Consequently, we cannot suppose that the ideas we derive from sensations are direct reflections of the essential structure or laws of the external world. The connection between our ideas and the structure of the external world is not a direct one. The questions as to whether or not, or to what extent, or in

what way, our ideas convey to us the true nature of the external reality require further critical inquiry. Locke briefly summarizes "the steps by which the mind attains several truths":

> The senses at first let in *particular* ideas, and furnish the yet empty cabinet, and the mind by degrees growing familiar with some of them, they are lodged in the memory, and names got to them. Afterwards, the mind proceeding further, abstracts them, and by degrees learns the use of general names. In this manner the mind comes to be furnished with ideas and language, the *materials* about which to exercise its discursive faculty. And the use of reason becomes daily more visible, as these materials that give it employment increase. But though the having of general ideas and the use of general words and reason usually grow together, yet I see not how this any way proves them innate. The knowledge of some truths, I confess, is very early in the mind but in a way that shows them not to be innate. For, if we will observe, we shall find it still to be about ideas, not innate, but acquired; it being about those first which are imprinted by external things, with which infants have earliest to do, which make the most frequent impressions on their senses. In ideas thus got, the mind discovers that some agree and others differ, probably as soon as it has any use of memory; as soon as it is able to retain and perceive distinct ideas. But whether it be then or no, this is certain, it does so long before it has the use of words; or comes to that which we commonly call "the use of reason." For a child knows as certainly before it can speak the difference between the ideas of sweet and bitter (i.e., that sweet is not bitter), as it knows afterwards (when it comes to speak) that wormwood and sugarplums are not the same thing.[21]

The child may taste the bitter wormwood many times before the individual impressions connected to this taste are recognized as similar. It may take some time before the distinct idea of bitterness crystallizes out of the fog of the child's primitive experiences. A certain capacity for memory enables the growing infant to connect the individual experience of bitterness with past experiences. Focusing on one aspect of a complex experience, she abstracts or separates this aspect from the rest of this complexity. In this way, generalizing from her individual experiences she acquires the simple idea of bitterness—a universal idea because it is capable of being applied to many individuals. The general or universal idea of bitterness is therefore not the extraction of an essence or species contained in the bitter taste, but the product of a mental process in the course of sensuous experiences involving individual instances of individual things tasting like wormwood. Similarly, the infant's experiences of sweet-tasting things produces impressions that when held in memory and abstracted from other sensuous aspects provide the basis for the mental

production of the distinct idea of sweetness. Another step directly follows from the observation of two simple ideas. The child, comparatively observing these two simple, clearly perceived and quite distinct ideas, immediately grasps or intuits, without the need for any reasoning process, the truth that bitter is not the same as sweet.

This process is accentuated with the use of language, as distinctive names are applied to the different ideas. Complex ideas such as that of the wormwood or sugarplum then become possible. In the course of this growth of experiences, the child's ability to engage in reasoning also emerges and grows. Through reasoning it can link its several truths together in some fashion. Encountering the wormwood, it decides not to put it in its mouth, but go in some other direction in search of something more appealing, something sweet-tasting instead. We don't need to appeal to innate ideas to explain this process. All her ideas about the nature of the external world to which the child applies her reasoning powers arise in this manner from her experience with externally existing things, and with the operations of her own understanding in the course of such experiences.

Thus to acquire a simple idea such as bitterness or sweetness, the mind does not passively contemplate the external object and extract its essence from the perceptions we have of it. The infant does not extract the general or the essential from the individual sensory image, but generalizes from its particular experiences and in this way comes to perceive the universal formed within it thanks both to the activity on us of individual external things and the inner generalizing or idealizing, if we can say this, operations of memory and inner perception or attention.

Locke calls such ideas as bitterness and sweetness "simple" because they cannot be broken down or "analyzed" into anything more fundamental. One directly knows what it means to say that something is sweet because one has had the direct experiences on which the idea of sweetness is based. Such ideas as those of bitterness or sweetness are the simple starting points of our knowledge. Simple ideas come to us inevitably with the use of our sensory faculties, for no amount of inventiveness on our part is capable of producing a single simple idea. In this sense, Locke says that in the formation of sensory ideas the mind is "wholly passive." Someone who lacks the capacity for tasting sweetness can never imagine in what this experience consists, just as someone who lacks the capacity to see color does not know what "red" means.[22]

This reflection leads us to draw an important conclusion about the relation between simple ideas and the external reality—that indirect or remote "object" of our understanding. A simple idea is "real," in the sense that it must be supposed to be the result of a reality that is independent of our subjective activities. While we can actively create fanciful or imaginary ideas that have no counterpart in the external world by combining our simple ideas in ways that do not correspond to experience with external things, the fact that we cannot

create any simple ideas is testimony to their "reality"—that is, to the fact that they are the impressions within us of the qualities of real things existing outside of us.

Locke's history of the mind begins therefore with the examination of the simple, immediate ideas of our understanding. The nature of our simple ideas, open directly to inspection, gives evidence of their being the effects in us of things really existing outside us. As we will see in more detail, this is no ground for saying that we know what these things are in themselves, other than that they contain powers to produce these kinds of effects in us. Whether or not, and the extent to which, our simple ideas give us information about the nature of the things in themselves remains an open question at this point.

Complex ideas are developed by compounding the simple ideas. Sometimes these compounds correspond to the things outside of us, and sometimes they are the fanciful creation of our mental activity. The child who sees and feels and tastes wormwood and sugarplums notices that the bitterness of the wormwood regularly combines with other qualities of color, smell, texture, size, shape, etc. As a result of these regularly occurring combinations of simple ideas, and aided by the acquisition of names, the child develops a complex idea of wormwood. If simple ideas must correspond to a reality existing outside of us, simple ideas that regularly occur together and so give rise to complex ideas must similarly be thought of as corresponding to the complex realities existing outside of us, and so are also "real"—that is, effects of realities existing outside of us, as opposed to the imaginary inventions of the mind. But this does not mean that they convey to us the essence or nature of the real objects that produced them.

The Difference Between the Empiricisms of Locke and Aristotle

By comparison with Aristotle, Locke's transformed and attenuated empiricism can be seen in the comparatively much greater role that Locke gives to the activity of the mind in relation to the passivity of sensation. In his reconstructed history of the mind, the infant/child does not extract the essence or essential form or species of some property of wormwood, or even less, of the essence of wormwood itself. She must first engage in acts of memory regarding past similar experiences. She must be able to hold the several memories in mind, recognize their similarity, distinguish them from other accompanying sensations by the power of abstraction. Locke here associates the use of language with the capacity to form complex ideas. With the aid of language, her ideas of the properties of the external object itself, the wormwood or the sugarplum, are produced thanks to the complex activity of compounding simple ideas. The general idea of the external thing is therefore not directly conveyed to the individual in the

perception of it, but is the result of the historical unfolding of ideas from simple to complex as a result of the constructive activity of the mind.

This story, in Locke's telling of it, is still far from completed. For what we know with our complex idea, however much dependent on the external reality, is still not the essence of the reality itself or the nature of its "substance," but only the coexistence of some of its properties. The child's knowledge of the properties of the sugarplum is certainly far from complete, and perhaps only a miniscule proportion of the actual properties that the real thing possesses. And she remains completely in the dark as to the inner "substance" itself of that sweet-tasting fruit. And not only the child, but the scientific biologist as well can hardly be thought to give us that essential knowledge: that is, the knowledge of what it is in the thing that causes the coexistence of a multitude of properties, some of which we are capable of perceiving. Even if we were to know such causes in the thing of the properties we perceive, our knowledge of them would still not be adequate since the properties we can perceive are no doubt only a fraction of those that actually exist. From a confident Aristotelian epistemology assured of being able to read off the essence from the appearance, we move with Locke to a hesitant probing of the powers of the mind in the face of a world that mysteriously conceals its inner secrets from our prying eyes.

But let us give due credit to Aristotle. He was an empiricist in the same general sense as Locke. Aristotle rejected Plato's theory that the educational process is one of recollection or remembrance of ideas that an individual has within him from birth, and even before birth. Plato argues that we exist for multiple lifetimes, forgetting at birth all or most of what we once knew, and then recalling at least some of this forgotten knowledge once more in the course of a particular lifetime. "Our birth," says Wordsworth in Platonic spirit, "is but a sleep and a forgetting. /The soul that rises with us, our life's Star, /Hath elsewhere its setting, /And cometh from afar."[23] The seemingly white paper of our mind is inscribed in invisible ink with innate ideas that our sensory experience, imagination, and reason uncover in the course of profound encounters with the world around us. Against this Platonic form of innate ideas, Aristotle attempts to explain how it is that we know general truths by recourse to experience alone, even in matters of so-called first principles. In his argument against innate ideas, Locke pays his respects to Aristotle while condemning those who call themselves his followers:

> The floating of other men's opinions in our brains, makes us not one jot the more knowing, though they happen to be true. What in them was science, is in us but opiniatrety; whilst we give up our assent only to reverend names, and do not, as they did, employ our own reason to understand those truths which gave them reputation. Aristotle was certainly a knowing man, but nobody ever thought him so because he blindly embraced, and confidently vented the opinions of another.[24]

Ironically, Locke had to direct his critical arguments on behalf of a renewal of empirical science at the "scholastic men," primarily at the followers of the "Peripatetick Philosophy," that is, the empirical philosopher Aristotle who denied innate ideas.[25] Abetted by the concept of innate ideas, these philosophers did nothing for ages but engage in a fruitless "art of wrangling"—the art of winning an argument no matter what the evidence of its truthfulness. Locke's opinion of this "art" is not flattering:

> A strange way to attain truth and knowledge: and that which I think the rational part of mankind, not corrupted by education, could scarce believe should ever be admitted amongst the lovers of truth, and students of religion or nature, or introduced into the seminaries of those who are to propagate the truths of religion or philosophy amongst the ignorant and unconvinced.[26]

Locke made these caustic comments, expressing his own personal experience and practice as a teacher, at a time when the scholastic style of philosophy still dominated the British universities. With the benefit of hindsight and historical perspective, we can give one important reason why it is that the acolytes of a great empiricist, Aristotle, essentially traded the investigation of empirical reality for a method of disputation that pays relatively little attention to empirical experience. If the world is as it appears in direct experience, then it stands to reason that a great mind or two, by surveying its observable spheres and spaces, could basically articulate all there is to say about it. What remains for intelligent men to ponder, then, are mostly abstruse questions such as how many angels can dance on the head of a pin, and similar such issues that fall largely outside the supposedly well-covered areas of empirical observation, where further exploration provides only additional insignificant details without adding to essential truths already uncovered by Aristotle.

Nevertheless, the advance of knowledge owed a great deal to just such a skill of argumentation regarding matters of rarified abstraction and subtle intellectual complexity.[27] The Aristotelian-Ptolemaic conception of the movements of the stars had to face the obvious problem of reconciling the apparent wayward movements of the planets with Aristotle's general conception of their circular revolution around the earth. To save the general theory, the retrograde motion of the planets was explained by the supplementary theory of epicycles—the idea that planets move in smaller circles around larger circles. As the first attempts at formulating such theories failed to correspond to empirical observation, more complex variants were added. The complication of epicycles upon epicycles may have saved the general theory, but at the cost of destroying the elegant simplicity of the original concept. Why should an all-knowing and all-powerful God create such complexity? Thus general ideas of theology and the accumulation of rational intricacy in the scholastic style regarding epicycles reached a point of collision, until Copernicus found a

mathematically more beautiful solution to the problem without providing any new observations to back up the heliocentric theory.

The great cost of this alternative hypothesis was the destruction of the foundation of the ancient world view and of all common sense empiricism: the idea that the world we observe around us is the world as it is in itself, the idea that to understand the world as it is, we need only observe the way it appears to us. From this perspective, Locke's version of empiricism, if it is to serve as underlaborer of the new sciences, must be a significantly diminished empiricism by comparison to that of Aristotle. This can be clearly seen in Locke's rejection of the idea that sense perception conveys to us the essence of the reality we are observing. Whatever it is that we directly observe, it is not the essential reality, the fundamental structure of reality, the substance that underlies and causes those of its properties that directly affect us. But in arguing this way, Locke was reflecting, implicitly and explicitly, theoretical ideas stemming from the new sciences. Locke knew that we could not possibly perceive the essential structure of reality because of what the new science says is the actual nature of that reality. We clearly do not directly observe those minute corpuscles, perhaps, or those geometric and wave-like patterns of matter, that (conflicting) scientific theories postulate. We do not have perceptions of the essential substances or substantial realities of the material world to which the new sciences point.

If we are going to justify or reject such theories, we must build a foundation for such criticism using the historical method of tracing the genesis of the complex mental apparatus of thought from its beginnings. What we directly know, let us repeat, are our ideas. Let us first become clear about the nature of these immediate objects of thought before we take our stand on the nature of the causes of these ideas in the more remote substances that lie at the basis of our experiences. What better expression of the new situation inaugurated by the new post-Copernican sciences, than Locke's idea, to which we will return, that the fundamental substance of things is not something apparent at all?

Two Sources of Human Knowledge

We begin, Locke stresses in his text, with *particular* ideas of sensation. Sensations or sensory impressions coming from individual things are the first direct objects of the understanding. But almost from the very beginning of the history of our thought-process, as memory begins to retain the impressions of sense and the individual begins to notice similarities in the individual sensations, mental activity begins to operate on these sensory impressions by remembering, abstracting, comparing, and contrasting. In the first place this mental activity results in the formation of simple and complex sensory ideas—ideas about the world outside of our head. In the second place, these activities of the

human understanding—memory, abstraction, etc.—are themselves the basis for forming distinctive ideas whose source is internal, within the subject herself. Such ideas whose source is internal are acquired by reflection on our own mental activity. So, there are two sources of the ideas of human understanding, external and internal. The external world is channeled passively (relatively speaking) through the senses, and the internal world is explored through reflecting on the activity of the mind itself as, later in life, it reflects upon and explores its own operations. The greater part of Locke's book is based on this latter sort of experience—experience with our own inner life. Thus the main book of the great empiricist Locke has little in it about empirical reality, in the way this is usually understood. It is a book about the powers of the human mind. Although Locke is insistent, particularly in his critique of innate ideas, that the mind is passive in acquiring its "materials," as the underlaborer for master builders of thought, he insists on that building activity itself. It is the activity of thought that shapes these materials into the intellectual constructions of science. Describing the mental activity of abstraction, Locke says that

> the Mind makes the particular ideas received from particular objects to become general; which is done by considering them as they are in the mind such appearances,—separate from all other existences, and the circumstances of real existence, as time, place, or any other concomitant ideas. This is called ABSTRACTION, whereby ideas taken from particular beings become general representatives of all the same kind; and their names general names, applicable to whatever exists conformable to such abstract ideas. Such precise, naked appearances in the mind, without considering how, whence, or with what others they came there, the understanding lays up (with names commonly annexed to them) as the standards to rank real existences into sorts, as they agree with these patterns, and to denominate them accordingly. Thus the same colour being observed to-day in chalk or snow, which the mind yesterday received from milk, it considers that appearance alone, makes it a representative of all that kind; and having given it the name *whiteness*, it by that sound signifies the same quality wheresoever to be imagined or met with; and thus universals, whether ideas or terms, are made. . . .
>
> And, therefore, I think, we may suppose, that it is in this that the species of brutes are discriminated from man. . . . It seems evident to me, that they do some of them in certain instances reason, as that they have sense; but it is only in particular ideas, just as they received them from their senses. They are the best of them tied up within those narrow bounds, and have not (as I think) the faculty to enlarge them by any kind of abstraction.[28]

Rather than merely extracting essential reality from appearances, as in the traditional empiricism of Aristotle, in the empiricism of the new sciences the mind works with the "naked appearances" themselves—the ideas we have within us—and makes of these standards, models or archetypes in relation to which it sorts out the particularities of its experience. In this way, our experience of the external world is profoundly mind-based. Of course the external world in itself is not mind-based, but our experience of it is, for we create our divisions and classifications on the basis of ideas that we raise into standards of measurement and classification. We perform such operations on our experience, not because our organizing ideas are reflections of the inner essence or constitution of reality, but simply because certain of our ideas preceded others. Once we understand this history, we will be less prone to confuse our picture of reality with reality as it is in itself. The world of our direct experience is therefore a world of appearance. We structure our experience with the aid of such appearances. We assimilate new experiences by filtering them through the abstract ideas formed from prior experience.

Thus, the ideas as we receive them are not representations of the essence of reality, as the traditional empiricism holds. They are appearances, not essences. And yet it is through recognizing these appearances as appearances that a real science is possible that breaks from appearances. Through its power of abstraction, the mind is able to actively organize the information received from the senses into patterns that do not depend on immediate perception. Through abstraction, the mind "enlarges" upon its direct experience, not by directly grasping essences through the appearances, but by actively organizing concepts in ways not dictated by immediate experience. So while animals are dependent on the world as it directly appears to them, and operate within the constraints of those direct appearances, the human being is able, by the power of abstraction, to subject the data of experience to standards that are raised in thought—at first unconsciously, and then, with the development of science, consciously. While the animal may reason from the whiteness and sweet smell of a liquid to the desirability of drinking it, only the human being, by the power of abstraction, is capable of inquiring into the nature of the whiteness itself, or of color in general. Having the abstraction whiteness or color does not by itself give us any direct line to the essence of the reality that these abstract ideas represent. Locke rejects this supposition of the traditional epistemology of the ancient and medieval thinkers. But this is really the epistemology of the brutes, not of the actively thinking human being. The recognition of the fact that there is no such direct line, that the inquiry into nature or cause of the idea depends on the activity of thought in the organization of the material or data of experience, liberates the new sciences from such animal-like imprisonment in the immediate appearances.

This initial diagnosis of the nature of the understanding produces a fundamental shift of focus, by comparison with the Aristotelian conception, from

external to internal—without, however, going over to the position of innate ideas. This shift results in a considerable diminishment of the extent to which sensation is regarded as the source of our understanding of the nature of reality, and a parallel increase in the extent to which this understanding of the essence of things or the laws of the universe depends on our own mental activity. Our knowledge may begin with sensation, but these building blocks that comprise our simple sensory ideas by themselves give no clue as to the way the building of knowledge must be put together.

Whereas for Aristotle the sensory experience conveys to us the essence of the reality, for Locke the general ideas corresponding to Aristotle's essential knowledge are only subjective generalizations and abstractions from purely individual sensory experiences. The relation between these simple ideas, such as bitterness and sweetness, or the language-dependent complex ideas of wormwood and sugarplum, with the essential nature of the external realities designated by those terms is not one of a mental "species" coincident with the essential form or structure of reality. At this stage of the presentation of the "history" of the understanding, we can only say that certain of our ideas are "real," that is, are the product of an existing reality. But this does not even mean that they resemble that reality. We can be sure that the bitterness we experience is produced by something in the wormwood. In this sense, the simple idea of bitterness, and the complex idea of wormwood, are "real." But it doesn't follow when we taste something bitter that this bitter taste "represents" an external bitterness in the wormwood. Whatever it is in the wormwood that causes the bitter taste, we cannot rely on our sensation to give us a picture or idea of that. The world that presents itself in direct experience is not the world as it is in itself. It is an appearance, and only the constructive activity of the mind in science can give us an account—however adequate or inadequate this may be remains to be determined—of what that reality is in itself.

True Ideas That Do Not Resemble Things

With the increased importance of our mental activity comes a more complex relation between our ideas and the reality of the external world. Our knowledge of the external world does not come to us as a gift of direct observation, but requires the labors of thought, with master-builders such as Newton and various kinds of underlaborers such as the modest Locke. We must now turn our attention more closely to the relation between our ideas and the world outside of us that, together with inner reflection, is one of the two sources of our ideas.

Locke distinguishes between the ideas that are the immediate objects of our mental activity and the "qualities" of the external objects that have the "power" to produce those ideas in us. If ideas are the immediate objects of our

knowledge, qualities and the things or substances in which they inhere are the mediate or remote objects. Locke writes:

> Whatsoever the mind perceives *in itself*, or is the immediate object of perception, thought, or understanding, that I call *idea*; and the power to produce any idea in our mind, I call *quality* of the subject wherein that power is. Thus a snowball having the power to produce in us the ideas of white, cold, and round—the power to produce those ideas in us, as they are in the snowball, I call qualities; and as they are sensations or perceptions in our understandings, I call them ideas; which ideas, if I speak of sometimes as in the things themselves, I would be understood to mean those qualities in the objects which produce them in us.[29]

To express this mediate relation, Locke says that our ideas may *represent* certain things. Sometimes we speak loosely of seeing a white, round snowball when what we distinctly see are the simple sensory ideas of whiteness and roundness, which, combined with the feeling of cold, are regularly associated with the complex idea of snowball. Instead of saying that we see a white snowball, then, we should properly say that we directly see ideas that are the effects of qualities of the thing outside of us that produce those ideas. Because the same ideas or set of ideas always appear under the action of a certain complex set of stimuli, these ideas that I directly see indirectly *represent* the snowball—the external thing, whatever it is in itself, that regularly produces the ideas. I do not directly see the thing, but what I directly see is a representation of the thing. However, a relation of representation is not necessarily one of resemblance. Just as the word "snowball" represents a snowball without in any way resembling that thing, so my sensory image of the snowball may not resemble it either.

The repetition and similarities of the infant's experience give it its simple ideas of sweetness and bitterness. Comparison of these ideas produces the comparative idea that sweet is not bitter. This is of course a truth, a basic truth that cannot be doubted. It is immediately evident to the mind as it observes these distinctive sensory ideas. But this is a truth about the nature of our own ideas, not about the nature of the reality outside our heads. About the world outside our heads, all we can say is that whatever it is that produces in us the idea of sweet, it is not the same thing that produces in us the idea of bitter. But from what has just been said, we still have no idea what these qualities are that have the power to produce in us the distinctive sensations.

What is the relation between the sweetness that we experience and the thing outside of us that is at the origin of this idea inside us? It doesn't follow that, because an object produces a certain subjective experience, the subjective experience simply delivers to us the nature of the object. Fire in contact with the hands produces pain—"the most importunate of all sensations"[30]—in the experiencing individual. But such pain could hardly be a property of the fire itself.

The fire in its own inner nature is certainly not painful. The regular connection between subjective experiences of pain and the fiery or hot things causing the pain generally has great practical value for us. Let us be appreciative of this practically useful connection, and see in it an "occasion of admiring the wisdom and goodness of our Maker, who, designing the preservation of our being, has annexed pain to the application of many things to our bodies, to warn us of the harm that they will do, and as advices to withdraw from them."[31] Locke elsewhere puts this idea in terms of the general organization of nature, without reference its Maker. Here he emphasizes the practical, or pragmatic function of the sense of pain: "The great business of the sense being, to make us take notice of what hurts or advantages the body, it is wisely ordered by nature, as has been shown, that pain should accompany the reception of several ideas. . . ."[32]

The regular conjunction of fire with the sensation (or sensory idea) of pain indicates that the pain is "real"—it indicates a reality—but not that it is a resemblance of something in the thing that produces the pain. What then is the subjective idea of pain itself? The reality, we may suppose, is that there is harm or potential harm to the organism—to our bodies. But why should this destruction be experienced subjectively as the sensory idea that we call pain? It is clearly not because this sensory idea somehow resembles destruction in flesh or nerves. The harm to the organism can be distinctly described in graphic ways as the destruction of tissue, nerves, flesh. In all of this description we include nothing of the pain itself. The experience of pain is *an appearance that does not resemble anything*, although it is a mostly reliable indicator of danger to ourselves. Pain is "annexed to" or "accompanies" certain other experiences as a warning to withdraw from the things associated with those ideas. This association of the sensation of pain with these other ideas or experiences has nothing directly to do with the inherent nature of the qualities of the things themselves. The cause of this advantageous connection, Locke says, is a wisely ordering nature or (in other words) the wisdom of our Maker, not some natural property or quality in the things themselves.

But if pain is most obviously a pure appearance of this kind, resembling no reality in the organism or outside of it, the same can be said of other prominent sensory ideas that are normally supposed to be resemblances of the inherent qualities of things. In any experience involving an external object, more than just that object is involved. The nature of the human organism is also a factor in the constitution of the experience. But the most prominent of the sensory ideas produced by the interaction of these realities are no more resemblances of them than pain is. Locke analyzes the experiences of "hard" and "soft":

> And indeed, hard and soft are names that we give to things only in relation to the constitutions of our own bodies; that being generally called hard by us, which will put us to pain sooner than

> change figure by the pressure of any part of our bodies; and that, on the contrary, soft, which changes the situation of its parts upon an easy and unpainful touch.[33]

If hardness and softness are inherently connected to potential pain, they must be as little representations of the qualities of things as pain is. Something is hard only relative to our bodies. What is hard to us may be soft to a rhinoceros. So the hardness we feel does not resemble a quality of the body outside of us. And if hardness and softness have some connection with potential pain, then the relation to the external object is even further removed. Hardness and softness too are sensory ideas regularly connected with certain other ideas so as to provide us with practically useful and motivating information. They therefore are "real" but have no resemblance to the properties of their causes. The ideas of hardness and softness, too, are appearances that fortunately and helpfully accompany physical interactions without resembling them. While pain potentially awaits us as we pursue certain sensory ideas—thus warning us to turn around—the pleasure we derive from soft surfaces entices on, we naturally assume, to our benefit. In the wisdom our Maker, or of nature, pain and pleasure are annexed to and accompany complex ideas designating things for our use, and sometimes comfort and delight. But they in no way describe the properties of those things themselves, much less their inner essence or substance.

But this lack of resemblance between the ideas and the realities that cause them does not mean that these ideas are false. They are true in the way they are meant to be true. They stand for or represent realties existing outside of them, even if we have no idea what these realities are in themselves:

> From what has been said concerning our simple ideas, I think it evident that our simple ideas can none of them be false in respect of things existing without us. For the truth of these appearances or perceptions in our minds consisting, as has been said, only in their being answerable to the powers in external objects to produce by our senses such appearances in us, and each of them being in the mind such as it is, suitable to the power that produced it, and which alone it represents, it cannot upon that account, or as referred to such a pattern, be false.[34]

An Excursion into Natural Philosophy

The experience of cold, similarly, depends on the constitution of our bodies as much as the things we mistakenly call cold in themselves. What is cold to one hand may be warm to another, depending on the condition of our hands. If the same external object is cold to one hand and warm to another it cannot be that our ideas of cold or warmth resemble qualities of that object. Locke makes this

point and then provides an explanation as to why it is that the same water can feel cold to one hand and warm to another:

> we may be able to give an account how the same water, at the same time, may produce the idea of cold by one hand and of heat by the other: whereas it is impossible that the same water, if those ideas were really in it, should at the same time be both hot and cold. For, if we imagine *warmth*, as it is in our hands, to be nothing but a certain sort and degree of motion in the minute particles of our nerves or animal spirits, we may understand how it is possible that the same water may, at the same time, produce the sensations of heat in one hand and cold in the other; which yet *figure* never does, that never producing the idea of a square by one hand which has produced the idea of a globe by another. But if the sensation of heat and cold be nothing but the increase or diminution of the motion of the minute parts of our bodies, caused by the corpuscles of any other body, it is easy to be understood, that if that motion be greater in one hand than in the other; if a body be applied to the two hands, which has in its minute particles a greater motion than in those of one of the hands, and a less than in those of the other, it will increase the motion of the one hand and lessen it in the other; and so cause the different sensations of heat and cold that depend thereon.[35]

Locke immediately apologizes for this explanation:

> I have in what just goes before been engaged in physical inquiries a little further than perhaps I intended. But, it being necessary to make the nature of sensation a little understood; and to make the difference between the *qualities* in bodies, and the *ideas* produced by them in the mind, to be distinctly conceived, without which it were impossible to discourse intelligibly of them;—I hope I shall be pardoned this little excursion into natural philosophy. . . .[36]

At the beginning of this chapter, we cited and emphasized Locke's statement in the beginning of his book that "I shall not at present meddle with the physical consideration of the mind; or trouble myself to examine wherein its essence consists; or by what motions of our spirits [that is, the 'animal spirits' equated with miniscule movements in the nerves] or alterations of our bodies we come to have any *sensation* by our organs, or any *ideas* in our understandings. . . ."[37] It was necessary to distinguish the proper and immediate object of the understanding—those appearances or ideas by which we know externally existing reality—from that reality itself. It was necessary to distinguish the field or proper object of philosophy from that of natural science. But now it is necessary to be more explicit about the nature of that reality that is the object of natural science in order to see more clearly how our ideas, especially some of

them, are distinct from it. Hence, Lockse finds it necessary now to meddle somewhat with these issues—with the question of the nature of the reality itself, of which our ideas are somehow the products. This reality is that described by natural science—what Locke calls "natural philosophy." But the reason for this excursion is just the same as that originally stated—to distinguish the immediate ideas of the understanding from its mediate or remote objects.

The remote objects—the realities described by master builders of the sciences such as Newton—are those motions of matter of which modern physics gives its account. Locke says that the ideas of warmth and cold are "nothing but" movements of imperceptible particles or corpuscules or "animal spirits" in the nervous pathways of the body. In saying that warmth and cold are nothing but the movements of imperceptible bodies, Locke is saying that this in fact is the reality of these appearances. Far from identifying appearance and reality, Locke's "nothing but" indicates an abrupt contrast. From the sensuous world of cold and warm feelings that we naturally project as properties of the things themselves we plunge into the temperature-less movement of particles. Heat and cold, so essential to our experience of the world, are the relative effects of the movements of particles. This is their "reality." They are "real" in having real causes, but there is no *resemblance* whatsoever between the phenomena as we experience them and as they are in themselves. This reality of moving particles is something very far indeed from warmth and cold, that is, the appearances in us by which we understand them.

Locke explains the mechanism for the production of the paradoxical phenomenon that the same thing can appear hot to one hand and cold to another. The same water can produce different movements of the nervous elements in two different hands, depending on differences in the rapidity of their respective particles prior to the emersion of the hands in the water. If I put my right hand in a bucket of ice water for a short while, the movements of the nervous elements in my hand will be slowed down. If I put my left hand in a bucket of hot water, the respective corpuscles will be speeded up. When I plunge the two hands into the same bucket of lukewarm water, the slowly moving corpuscles of the right hand will speed up, while those of the left hand will slow down. What I actually experience, the appearance this reality takes in my mind, is that the same water feels warm to the right hand and cold to the left.

When a paradoxical phenomenon of this sort occurs, this is a sure sign that we are dealing with an illusion. The illusion doesn't end, however, when we move from the unusual situation just described to the more usual one in which the two hands are of similar temperature (that is, have their animal spirits moving at comparable speeds). Once we understand the scientific reality underlying the experiences, we see clearly that we remain in the realm of illusion with respect to heat and cold in either case. That is, what we directly experience is not reality but appearance. While correlating with a reality, and so providing reliable practical indications of that reality (thank God), our sensations of heat

and cold by themselves tell us nothing whatsoever about the intrinsic nature of that reality itself.

The reality producing the two different sensations is therefore the movement of minute particles taking place in the individual organism in its interaction with the environment. These movements are themselves produced according to causal law by the interaction of the material bodies—that of the water and that of the differently constituted hands. When Locke says that warmth and cold are "nothing but" these movements he is obviously not saying that we directly perceive the movements of the corpuscules themselves. But only that this is the reality that produces those appearances, that is, those feelings or sensory ideas that we immediately perceive. When we have a clear idea of the profound difference between the reality itself and the subjective experience we have of it, we will not be in any danger of supposing that our idea of warmth or cold *resembles* any quality of the thing that produces those feelings. We will not be in danger of extrapolating from subjective idea to objective reality, as did the pre-Copernican science that took the appearance of the sun revolving around the earth for the reality. The subjective experience is here *only* an appearance, although with a discernable causal connection to the reality that produces it.

This causal connection is discernable inasmuch as simple ideas immediately impose themselves upon us in ways that the more elaborate constructions of our active thought do not. We must therefore suppose that they are caused by things that exist externally to the mind. A blind person cannot invent an idea of the color red. But the red that I necessarily see is still not the redness of the thing. The "apparent objects" of the understanding are not the independently existing things or qualities we often take them for being, but objects of and for human consciousness. Paradoxically, ideas such as hot or cold must also be dependent on our consciousness even if they are also simultaneously, some of them at least, effects of really existing things outside of our minds. Simple sensory ideas and the complex ideas formed of them have therefore two sources, external and internal. A necessary condition for their existence is the causal impact on the organism of some action of corpuscules that we must suppose have the power to produce those effects. But for these effects to be produced there must also be a mind to receive them with a history and an action of its own.

As the proper or direct objects of the understanding, ideas can be usefully studied in a work that seeks to remove certain roadblocks to the advance of science—particularly those roadblocks created by outmoded philosophical conceptions of how our understanding operates. Locke is here completely in agreement with the Hobbesian idea that our subjective ideas (or some of them at least) are *in reality* nothing but the movements of tiny corpuscles producing them. *In appearance*, of course, they appear to be something quite different from what they are—for example, the feeling of warmth, rather than imperceptible

accelerating corpuscles. However, Locke stresses what Hobbes only implies—that these ideas are distinctive objects in their own right.

Colors in a Colorless World

Locke adds to this list of ideas that in no way resemble their external objects/causes "colours, sounds, smells, tastes, &c."[38] His argument regarding color is similar to his argument regarding hot and cold:

> Let us consider the red and white colours in porphyry. Hinder light from striking on it, and its colours vanish; it no longer produces any such ideas in us: upon the return of light it produces these appearances on us again. Can any one think any real alterations are made in the porphyry by the presence or absence of light; and that those ideas of whiteness and redness are really in porphyry in the light, when it is plain *it has no colour in the dark*? It has, indeed, such a configuration of particles, both night and day, as are apt, by the rays of light rebounding from some parts of that hard stone, to produce in us the idea of redness, and from others the idea of whiteness; but whiteness or redness are not in it at any time, but such a texture that hath the power to produce such a sensation in us.[39]

The same stone appears now colored, now colorless, depending on whether there is enough light. If the same thing can exhibit different colors under different lighting, and change or lose its color when the light dims, color cannot be an intrinsic property of it. Color must be somehow connected with the light since it varies with the changing of the light. The same thing cannot be both colored and not colored. If the object in itself were colored, as is popularly believed, it should have the same color as the light dims. Perhaps, Locke argues, someone will say that a certain normal light itself produces the color in the thing, and so that color disappears when the light does. But it is unlikely that light could produce some kind of reaction in the thing that would cause it to be colored in a certain way, and then, when the light is withdrawn, the thing would suddenly lose the characteristic just produced in it. If something causes a change in something else, that change remains after the agent is withdrawn.

Locke proposes a different explanation. Light consists of a certain kind of movement of imperceptible particles. The light itself is not perceptible. If it were, we could not see anything by means of it. The stone has differing textures that reflect light differently. The rays of light are modified on contact with the various textures of the stone. Light that reflects off one surface has its particles configured differently from that of light reflecting from a different kind of surface. Reflecting off a particular texture of the stone to the eye of the observer, specific configurations of the light particles affect the eye in a specific

way, producing in us the idea of red in relation to one texture, and the idea of white in relation to another. When the light dims, or disappears, of course, these effects change or disappear altogether.

If we were capable of seeing more directly into the nature of the porphyry, if we could see more directly what it is in itself, would we see colors? Experience with a microscope suggests the answer to that question. The more we penetrate from surface appearances to the inner structure of the object, the more we pass from a world of colors to one that is colorless:

> Thus, sand or pounded glass, which is opaque, and white to the naked eye, is pellucid in a microscope; and a hair seen in this way, loses its former colour, and is, in a great measure, pellucid, with a mixture of some bright sparkling colours, such as appear from the refraction of diamonds, and other pellucid bodies. Blood, to the naked eye, appears all red; but by a good microscope, wherein its lesser parts appear, shows only some few globules of red, swimming in a pellucid liquor, and how these red globules would appear, if glasses could be found that could yet magnify them a thousand or ten thousand times more, is uncertain.[40]

Can the thing itself be colored if, as we penetrate more deeply into its nature, the colors change and seem to disappear altogether into some kind of neutral element? Locke would have been comfortable had he been able to peer into an electron microscope to see the world of surface appearances disappear altogether—to see all that is solid vanish into vast empty spaces where pulsating particles flicker whitely in the darkness.

The configuration of particles carried by light reflecting from textures in bodies outside us affect our sensory organs in ways that cause in us the distinctive sensory ideas. The distinctive configuration of the textures of the external things, via the light, produce in us the ideas that we directly see. These ideas represent, without resembling, those qualities. The different colors regularly correspond to different qualities in the things so that we can distinguish them in this way from one another. That the idea termed "red" rather than the one termed "blue" should be the idea we have of a certain quality is not *inherently* necessary. To distinguish one thing from another, it is enough that the same sensory idea be regularly produced by the action of a certain configuration of light on my eyes. The thing itself is responsible for the fact that we perceive a certain appearance, but not for the nature of the bare appearance itself.

Moreover, as an appearance, the idea we see is not itself a thing. Locke carefully distinguishes the causal relation of material particle to our ideas from those qualities in things by which they have the power to alter other things.[41] By sharply contrasting a picture of the things themselves—as the current resources of modern science informs us—from the ideas they are responsible

for producing (in the light, let us not forget, of our understanding), Locke makes sure that we do not make the mistake of putting them on the same plane of causality. We must keep in mind that one is reality and the other appearance. For what intrinsic connection can there be between our ordinary sensory ideas and the altogether *insensible* things that underlie them?

> For, it being manifest that there are bodies and good store of bodies, each whereof are so small, that we cannot by any of our senses discover either their bulk, figure, or motion,—as is evident in the particles of the air and water, and others extremely smaller than those; perhaps as much smaller than the particles of air and water, as the particles of air and water are smaller than peas or hail-stones;—let us suppose at present that the different motions and figures, bulk and number, of such particles, affecting the several organs of our senses, produce in us those different sensations which we have from the colours and smells of bodies; v.g. that a violet, by the impulse of such insensible particles of matter, of peculiar figures and bulks, and in different degrees and modifications of their motions, causes the ideas of the blue colour, and sweet scent of that flower to be produced in our minds. It being no more impossible to conceive that God should annex such ideas to such motions, with which they have no similitude, than that he should annex the idea of pain to the motion of a piece of steel dividing our flesh, with which that idea hath no resemblance.[42]

But if there is no intrinsic connection between the configuration of the material particles coming from the thing and the ideas or appearances of color that I see, how do I know that what I see as red, you do not see as blue? Locke's answer is that it doesn't actually matter. He thinks there are good reasons to believe that under the same light stimulus and with the use of organs of similar construction we all see the same colors, but not because the characteristics of our ideas have an intrinsic connection to the characteristics of the material particles themselves. For the "truth" of the ideas themselves, it does not matter that we all actually see the same colors that we label with the same words. As long as the ideas we have are in constant, regular connection with the other ideas associated with the thing called a rose, which I see as red and you, it may be, see as blue, each of us can correctly identify the same "red rose." We can put the same name to appearances of completely different kinds, but as long as these appearances arise in regular conjunction with the other parts of the complex ideas of which they are a part, they serve the same practical purpose. If where I see a red light you see a blue one, what is the difference if you, on seeing the blue light that you call "red," stop your car when that light signals a stop? Like the idea of pain attached to the tearing of steel on flesh, the idea of red is a useful "marker" for something that it in no way resembles. "For God in

his wisdom [has] set them as marks of distinction in things, whereby we may be able to discern one thing from another . . ."[43]

Primary and Secondary Qualities

Are all our ideas then like hot and cold, soft and hard, red and white—the effects and inner representations of realities outside of them that they in no way resemble? In a previous passage, Locke contrasts the relative experiences of hot and cold with the sense of figure or shape:

> For, if we imagine warmth, as it is in our hands, to be nothing but a certain sort and degree of motion in the minute particles of our nerves or animal spirits, we may understand how it is possible that the same water may, at the same time, produce the sensations of heat in one hand and cold in the other; which yet *figure* never does, that never producing—the idea of a square by one hand which has produced the idea of a globe by another.[44]

The varied conditions of the hands do not result in a significant difference in the feeling or sensory idea of shape that I directly perceive. So when I grasp something that has a square shape, I can be sure that the thing I am touching actually is square.[45] Some of our ideas then do resemble the qualities of the things the ideas represent. Locke calls the qualities of things that our ideas do resemble primary qualities, while calling the qualities of things responsible for producing ideas that do not resemble them, secondary qualities. Figure or shape is an idea that represents a primary quality in things, that is, it resembles the quality it represents. Things outside of us, then, really have figures or shapes, but not colors or smells.

This idea is implicit in the scientific explanation of perception that Locke relies upon. In his explanation that certain configurations of miniscule bodies in the light affect our organs in ways that produce the ideas we directly perceive, Locke is saying that these particles in their relation to one another have a certain shape. He is also saying that they have extension, movement, bulk, shape, number, etc. These are the primary qualities of things. Certain of the configurations of these primary qualities, their internal structural relationships and respective movements, are responsible for producing in us our ideas of color, sound, taste, etc.—that is, those ideas that do not resemble reality but reliably represent real properties of the world sufficiently for much of our practical purposes. The powers to produce such ideas are the secondary qualities of the things. They are nothing but arrangements of the particles in their configurations and motions—that is, powers of the primary qualities of things, powers of their extension, bulk, number, movement, etc.

If we should thank God for annexing to our experiences certain ideas that are practically useful as well as often pleasing, we should also thank God that He has annexed to certain stimuli at least some ideas that do indeed resemble what they represent. For without this connection, how should we ever know what the world outside of us is really like? It seems bad enough to learn that the colors, smells, sounds, tastes by which we picture our world are only appearances, like the apparent movement of the sun around the earth, and not at all resemblances of the things they represent. But were all our ideas only such nonresembling appearances, we would have no direct experiential opening whatsoever to reality, and so no basis for constructing an objective science. Without the ideas of primary qualities, how would science itself be possible? Thanks to these ideas, we can say that under the surface appearances of our immediate experience there are movements, movements of bodies of some kind, however miniscule, bodies that have some degree of extension, however minute, that are distinct and so have number, however enormous. These miniscule elements and their motions that constitute the reality of our world are in themselves colorless, tasteless, odorless, and silent, even as, in their various configurations or secondary qualities, they regularly give rise, by their actions on our organs of sense, to the perceived qualities that, thanks to the wisdom of our Maker, give us the beauty and utility of a colorful, flavorful, sonorous, scented, and sensuous realm of appearance.

In arguing that our ideas of primary qualities resemble those qualities Locke does not argue that our ordinary picture of them is always, or ever, *adequate* to the reality. The square object that I hold in my hand is not in reality what it seems to be, that is, a single thing. The idea that it is a single thing like the representation I have of it has practical truth in a way the redness of the porphyry has. However, our direct representation of the square box does not give us its real nature—that is, its scientifically understood reality. For this we have to go more deeply into the nature of the thing. It is the microstructure of the thing that makes it what it is. And this consists of countless smaller particles, corpuscules in motion, whose size and shape is unknown to us and ultimately perhaps unknowable to our feeble senses, however much extended by microscopes. And so the square object in my hand is as much a mere appearance as the redness of the rose. But there is this major difference. When I go more deeply into the nature of things, their colors fade away. But as I probe the figured object in my hands, I never cease having things with a certain figure. Locke writes:

> Take a grain of wheat, divide it into two parts; each part has still solidity, extension, figure, and mobility: divide it again, and it retains still the same qualities; and so divide it on, till the parts become insensible; they must retain still each of them all those qualities. For division (which is all that a mill, or pestle, or any other body, does upon another, in reducing it to insensible parts)

> can never take away either solidity, extension, figure, or mobility from any body, but only makes two or more distinct separate masses of matter, of that which was but one before; all which distinct masses, reckoned as so many distinct bodies, after division, make a certain number. These I call *original* or *primary qualities* of body, which I think we may observe to produce simple ideas in us, viz. solidity, extension, figure, motion or rest, and number.[46]

It is therefore only the abstract idea of figure, not the particular, concrete, or "empirical" figure that I feel or see, that is a legitimate conceptual foundation for science.

The Mystery of Substance

The idea of figure, but not that of color, remains after the grain has been physically pulverized and even further reduced by mental analysis to its insensible parts. But after this operation has been performed on the grain, does the grain itself remain? Suppose we perform the same operation on a flower, or a living being. Have we not destroyed its living, essential substance? A thing does not consist in its parts alone, but in the unity of its parts. The parts that we are capable of representing cohere in *something* that unifies those parts. Destroy this *something* and we are no longer talking about the grain, or the flower, or the living being. Essential to our conception of reality is the unifying concept of *substance*.

So far we have been discussing the properties or qualities of things. In this presentation the word "thing" has been chosen advisedly for the individual being outside of us. But what is the thing, or the something, that unites its qualities, or supports them? The Latin word for that which supports the various properties that belong to the thing is "*substantia*." The scholastic philosophy speaks then of things as consisting of substance and "accidents" or the properties of the thing. But the previous analysis, resting on the ideas of modern physics with its insensible corpuscules in motion, suggests that we approach this concept of substance far more cautiously than did the Scholastics, who wrangled over definitions as if once the definition is clarified the problem is solved and the reality is essentially known. But for Locke, a proper understanding of the concept of substance points us in the direction of the dark—the unknown and unknowable reality of things outside our limited mental representations. Locke defines substance as "a supposed I know not what, to support those ideas we call accidents."[47]

The qualities that we perceive, whether primary or secondary, are explained by the insensible movements of corpuscles that are somehow united as a whole while being divided into subordinate parts—like the organism of the body. The various subordinate configurations of the corpuscles explain why the

unified thing has the particular powers it has to affect other things, and to be acted upon by other things. It is the movement and configuration of the corpuscles as a whole that is in fact its substance. But there is little chance of our knowing what this is. If we knew the substance of something like a tree we would be able to explain why it has all the properties that it has, for these are but the various aspects of the unifying configuration of corpuscles that make it up. Do we have such knowledge, and is there any chance that we ever will have it? In the case of the secondary qualities like red and blue, soft and hard, we can safely say that these are caused by powers of the thing to affect us in ways that are accompanied by such experiences. Those powers, as they belong to the external thing, are but certain configurations of its corpuscles or basic particles. We speak in general of powers to affect us, but we don't know the particular details of these powers. We don't even know what the ultimate particles in fact are, let alone how in their various motions and configurations they affect us in the way they do.

Let us not then wrangle like the Scholastics about definitions and speculate on how "substance" is related to "accident," as though these terms reflect the essential reality. If we approach the issue from the point of view of scientific knowledge about this unifying substratum for the qualities we perceive, we find ourselves completely in the dark:

> If any one should be asked, what is the subject wherein colour or weight inheres, he would have nothing to say, but the solid extended parts; and if he were demanded, what is it that solidity and extension adhere in, he would not be in a much better case than the Indian before mentioned who, saying that the world was supported by a great elephant, was asked what the elephant rested on; to which his answer was—a great tortoise: but being again pressed to know what gave support to the broad-backed tortoise, replied—*something, he knew not what.* And thus here, as in all other cases where we use words without having clear and distinct ideas, we talk like children: who, being questioned what such a thing is, which they know not, readily give this satisfactory answer, that it is *something*: which in truth signifies no more, when so used, either by children or men, but that they know not what; and that the thing they pretend to know, and talk of, is what they have no distinct idea of at all, and so are perfectly ignorant of it, and in the dark.[48]

Our definitions of substances from the Aristotelian tradition are purely nominal. They consists of names for identifying and classifying or sorting out things in ways that are useful to us. However, such nominal definitions do not give us the essential reality that explains why these things are the way they are and have the powers to influence us and other things that they have. It is scientific study that gives us these essential understandings, but such investigations,

opening up understandings that go beyond the immediate appearances, inevitably fall far short of penetrating the underlying essence of the thing.[49]

From Matter to Spirit

In arguing that the substance of things is unknown, and perhaps ultimately unknowable to beings like ourselves, Locke effectively turns the tables on ordinary materialism. It is common for "people whose thoughts are immersed in matter, and have so subjected their minds to their senses that they seldom reflect on anything beyond them, . . . to say, they cannot comprehend a *thinking* thing, which perhaps is true: but I affirm, when they consider it well, they can no more comprehend an *extended* thing."[50] The idea of material substance is no less mysterious than that of a spiritual one. We cannot escape the idea of substance because we cannot imagine the properties of things that we perceive as existing by themselves. They come together and are somehow united in something. Our science of material bodies gives us a conception of imperceptible corpuscles that come together somehow in ways that give the being powers to affect the mind that perceives them, as well as to affect one another in their interactions. We do not know what it is that configures the particles—the unifying force that gives them distinctive identity and cohesion, and prevents them from flying off into space.

The materialist habit of evoking external causes suggests that what constitutes the unity of things or substance is an outside pressure, such as air pressure weighing down on things to hold them together. But what holds the air together? It too has parts that are configured somehow. In answer to this question, some suppose an even more refined outside force, that of "aether." But what then holds the aether together? If the cohesion of bodies is caused by the pressure of the aether, the very success of this argument leaves unexplained and unexplainable the cohesion of the aether itself.[51] It is better to stop this regress before it begins and (with the Scholastics) recognize that what gives unity to the properties of a being is its "substance."

But with the discoveries of modern science we go beyond the Scholastics in recognizing that this substance is not something that we know at all. It is an "I know not what" that somehow holds together the properties of the thing. With the help of our ideas of primary qualities, modern science shows us that, beneath the appearances that strike the observer, things are composed of configurations of insensible particles. But "insensible" means that they are not accessible to direct sensory experience. In is only by acts of reasoning that we extend our understanding beyond the sensory building blocks of knowledge to the idea of ultimate, indivisible, and imperceptible particles in their configurations and movements that are far finer than the smallest particle we are able to produce through pulverizing something. We reason that we can go farther

in pulverizing, and engage in mental pulverizing to imagine even tinier particles. The discovery of the microscope verifies this mental picture of entities smaller than we are capable of observing, but this only suggests even further diminutions and stimulates our quest to create more powerful microscopes. Perhaps this quest for the ultimate particle is endless. But we also reason that since division kills the living thing, there must be a unifying cause that is not merely the sum of the parts. And here we go completely beyond what we can perceive, for if we perceive the parts or aspects of things, we do not perceive the unity of the parts, although reasoning requires that we suppose it.

A chain of reasoning leads us beyond the immediate objects of sense perception to a conception of that ultimate constitution of reality that we call matter. The path to spirit, on the other hand, seems much more direct, for we are always in direct contact with our ideas. If it weren't for the fact that we have ideas of primary qualities, we would be so completely immersed in an ideal world that we would have no perceptual opening whatsoever to something material. However, thanks to the revolution in physics the path beyond our subjective ideas or the appearances of experience has been beaten to causal processes in the material world. If we reason that primary and secondary qualities are properties of a material substance, does not the same reasoning lead to the conclusion that our ideas too are properties of a material substance? According to Hobbes, the revolution in modern physics requires that we think of our ideas as properties of a physical substance—the mind as the product of the body. Thus modern science has a twofold, paradoxical orientation. We learn, on the one hand, that we are immersed in illusory appearances that we call ideas, and, on the other, that reality wholly consists in the configurations of moving corpuscles that never do appear as they are in themselves.

However, the peculiar nature of our ideas as phantasmata or appearances must give pause to over-fondness for materialist explanations. If reality is entirely as described, why are there appearances at all? How can reality, those material particles in their configurations, produce the appearances that differ from it so greatly? Despite our scientific enlightenment, the appearances have not disappeared. And our only instrument for getting to reality is our thinking process, our ideas and how we put them together through acts of thinking. It is only thanks to the mental activity of scientific physics that we have a produced a complex conception of the material realities that underlie our sensory ideas. We can now reasonably hold that particular configurations of particles in our brain, stemming from interaction with the environment, "cause" the perception of red or blue, soft or hard. However, this causal process is not sufficient for understanding what causes the conscious experience of color. Light rebounding off of a stone does not by itself produce the idea of red. For this causal process actually to produce a perception, there must be a conscious and attentive individual. Acts of the understanding, including memory, attention, discrimination, etc., are required for our perceptions. But given that we are

looking in a certain direction and paying attention, we cannot help but observe that someone has a red shirt and not a blue one. In this way material processes cause our mental states. But how is this kind of causality possible?

Locke distinguishes the powers of material substances to cause in us our ideas, whether of primary and secondary qualities, from the powers in things to cause modifications of the properties of other things or to be modified themselves by other things.[52] Materialist science provides a ready schema for understanding the latter form of causality. Material particles of one thing interact with the material particles of another thing to produce changes in the configurations of particles of the various bodies according to certain laws of motion. The effect of the causal interaction is always another configuration of particles. But ideas are not themselves configurations of particles. They are simply what they appear to be—the experience of red, or of soft, or of warmth, or of the sweetness of the sugarplum. No matter what the color-blind person knows about the movements of corpuscles that accompany the experience of red in a normal seeing person, no matter how graphically and accurately she may be able to picture these corpuscles (using the ideas of primary qualities) she can have absolutely no idea of what redness is. Redness in itself is not a certain configuration and movement of atomic particles although it represents this, although this is the reality of which the redness is the appearance. But how can something that is not in itself a configuration of particles be produced by a configuration of particles? This kind of causality goes beyond the resources of scientific physics. Thus Locke writes:

> Body, as far as we can conceive, being able only to strike and affect body, and motion, according to the utmost reach of our ideas, being able to produce nothing but motion; so that when we allow it to produce pleasure or pain, or the idea of a colour or sound, we are fain to quit our reason, go beyond our ideas, and attribute it wholly to the good pleasure of our Maker.[53]

We are on shaky grounds then if we want to say that our ideas are properties of a material substance. This is not to deny that God could, "if he pleased, give to certain systems of created senseless matter, put together as he thinks fit, some degrees of sense."[54] But such a supposition goes against the natural order of material causality as modern science understands it. This is the same as saying that among the properties of material substances—which, let us not forget, are nothing but configurations of particles—is something that is not a configuration of particles. It is therefore the modern science of matter itself that urges us to seek another kind of foundation for the realm of ideas.

It is more reasonable then to suppose that if configurations of particles are properties of a material substance, our ideas are properties of a spiritual substance—the human mind or soul. Either way, we do not really know what we are talking about, because we do not know what substance itself is, even if

rational considerations lead us to suppose that there are substances. So in postulating a spiritual substance, it is not as though we are inventing something mysterious instead of sticking with matters that are understandable. For the kind of causality by which ideas would be produced by material actions alone (and not supposing something else, a conscious mind of an altogether different metaphysical nature) is simply not understandable. Locke expresses this difficulty when he says, sometimes, that our ideas "accompany" certain material states. The upshot of the motion of a certain configuration of particles in the brain is the experience of red, which accompanies and represents that configuration, and is caused by it in the sense that it is an unavoidable experience for an attentive, conscious individual and cannot be produced by that person's purely inner resources. But why we experience red and not blue, when either appearance would be adequate to the practical function of experience, is not explainable from any possible knowledge of the configurations of the imperceptible material bodies.

Far from giving us certain knowledge of the essence of things, by contrast to the uncertainties or perhaps unintelligibilities pertaining to spiritual matters (as Hobbes says), material science at every step presupposes knowledge of spirit. This is what has been presupposed by this investigation of the understanding all along. For whenever we know the properties of some material thing outside of us (however indirectly, weakly and inadequately) we do so through an idea of it. If these properties belong to a material substance, which is something we know not what, so with equal right can we say that the ideas belong to a spiritual substance, equally unknown and yet equally required by our understanding which demands that the plurality of our ideas and mental activities be somehow unified. The sources of our simple ideas are, let us not forget, twofold. We have the simple ideas of sensation—our ideas of primary and secondary qualities—and the ideas we acquire by reflection on our own mental processes—our ideas of remembering, discriminating, reasoning, willing, etc. For the first set of ideas we are led to postulate a material substance as their cause. For the second set of ideas, those acquired through reflection on our mental activities, we are equally justified in supposing a nonmaterial or spiritual substance as their substantial ground. Locke writes:

> Besides the complex ideas we have of material sensible substances, of which I have last spoken,—by the simple ideas we have taken from those operations of our own minds, which we experiment daily in ourselves, as thinking, understanding, willing, knowing, and power of beginning motion, &c., co-existing in some substance, we are able to frame the *complex idea of an immaterial spirit*. And thus, by putting together the ideas of thinking, perceiving, liberty, and power of moving themselves and other things, we have as clear a perception and notion of immaterial substances as we have of material. . . . Every act of sensation,

> when duly considered, gives us an equal view of both parts of nature, the corporeal and spiritual. For whilst I know, by seeing or hearing, &c., that there is some corporeal being without me, the object of that sensation, I do more certainly know, that there is some spiritual being within me that sees and hears. This, I must be convinced, cannot be the action of bare insensible matter; nor ever could be, without an immaterial thinking being.[55]

In fact, knowledge of the inner substance called spirit is more certain than that of the outer substance called matter because while we know the action of matter through the intermediary of sensory ideas, we know the former through direct intuition. The ideas of bitter and sweet are directly intuited certainties. In the same way the existence of a knowing self, the substance in which those ideas inhere, is directly intuited. Our "sensitive knowledge of the particular existence of finite beings without us"[56] is limited, uncertain, inadequate to the vastness of material reality. But our knowledge of the existence of the self is direct, immediate, intuitive. Locke, the acclaimed empiricist, reiterates for his own purposes the famous arguments of the great rationalist Descartes:

> As for our own existence, we perceive it so plainly and so certainly, that it neither needs nor is capable of any proof. For nothing can be more evident to us than our own existence. I think, I reason, I feel pleasure and pain: can any of these be more evident to me than my own existence? If I doubt of all other things, that very doubt makes me perceive my own existence, and will not suffer me to doubt of that. For if I know I feel pain, it is evident I have as certain perception of my own existence, as of the existence of the pain I feel: or if I know I doubt, I have as certain perception of the existence of the thing doubting, as of that thought which I call *doubt*. Experience then convinces us, that we have an *intuitive knowledge* of our own existence, and an internal infallible perception that we are. In every act of sensation, reasoning, or thinking, we are conscious to ourselves of our own being; and, in this matter, come not short of the highest degree of certainty.[57]

Why There Must Be Eternal, Infinite Spirit

We have intuitively certain knowledge of our own existence, the existence of an immaterial, thinking or cogitative being. What, we then must ask, is the cause of such a reality—the reality of one's own existence? How explain it? This question takes us beyond intuition, and beyond whatever sense-based knowledge we can have of the material world outside of us. It might be thought that from sensory knowledge it is easy enough to answer the question. Because of a well-known biological process, we came into existence some twenty or forty or more years

ago. But in this perspective we are referring to the existence of the physical body, that evolving configuration of corpuscles that we have recognized is not the same as the thinking substance that we directly intuit.

Focusing then on the inner reality of oneself rather than the physical body, there are two possible answers to the question of the cause of self. If I cannot explain my existence as a conscious or spiritual being from material causes, then my existence is either 1) eternal and uncaused, or 2) the creation of an eternal, uncaused Spirit—the eternal, omnipotent, knowing being we call God. Regarding the possibility that each of us has existed eternally, Locke remarks that "the absurdity [of this notion] I need not confute, till I meet with one who is so void of understanding as to own it."[58] It follows then that the only plausible explanation of our existence as conscious, thinking beings is the creative activity of God—that is, creation out of nothing by an eternal, most-powerful, and preeminently knowing being. Therefore Locke essentially reasons that since I exist, and since I am a finite, temporally limited being, an eternal Being must have created me.

The issue of the existence of God is of utmost importance, Locke says, since not only the cause of our own existence is at stake, but the direction and fulfillment of that existence through morality as well as religion depends upon it.[59] So it is important to elaborate on this argument to remove as many uncertainties as possible. There are three basic points that must be granted for the argument to follow. The first point is that being cannot come from nothing. It is inconceivable that if there ever was a time when there was absolutely nothing, there would be nothing whatsoever now. Therefore, *something* must have existed from eternity. Thus, being must be eternal.

Second, if something cannot come from nothing, similarly more cannot come from less. This point is an extension of the first one, since if a power came into existence from conditions where it did not exist before, something would come from nothing. The power of movement cannot come from a being that is incapable of movement. The power of reproducing itself cannot come from a being incapable of reproducing itself. It follows that eternal being must contain from eternity all the powers that are produced in temporal beings. Therefore eternal being, the source of all the powers that have come into being, must be the most powerful being, the being in whom all the powers of life exist in a preeminent form.

The third basic point of this argument, which is but an extension of the second point, is that the power of consciousness cannot come from a being without this power. In other words, matter cannot produce spirit, "it being as impossible that things wholly void of knowledge, and operating blindly, and without any perception, should produce a knowing being, as it is impossible that a triangle should make itself three angles bigger than two right ones."[60] Thus the eternal, most powerful being must also be the most knowing being because it is the cause of beings with the power of consciousness.

The focal point of this argument has to do with this third point—whether eternal being is material or spiritual—that is, whether it is the eternal movement of the ultimate particles of matter, or a spiritual being, a being with consciousness. Elaborating on this point will clarify some doubts possibly arising with the first two points—whether the eternal being is one or many, and whether there are not newly arising powers where before they absolutely did not exist. For if matter is eternal and the cause of every temporal being then we are most likely talking about a multitude of eternal beings—the elementary particles of reality—rather than a single eternal, material being. Moreover we would have to suppose that the more would have to come from the less, since beings with the power of thinking would be produced by beings without such power.

Much of the previous discussion of the connection between matter and spirit in our own experience already implies the answer to third point. For if a configuration of material particles cannot by itself explain the existence of an idea, how can a purely material substance cause the existence of a spiritual one? Locke's argument for the existence of God therefore has a quite different focus from that of Hobbes. While Hobbes wants to explain the chain of material causes, Locke wants to know how a conscious or spiritual self—our own existence as beings capable of understanding—is possible.

Considering this issue in detail, Locke reviews some of the basic ideas of the new physics. Contrary to Hobbes, who bases his argument for a First Cause on the need to give sufficiency to the chains of causality, Locke's argument for the existence of the eternal, most-powerful, and knowing being rests on the *inadequacy* of the laws of physics—that is, on their complete incapacity for explaining the inner experience of consciousness. In the first place, nothing moves itself. Supposing that a pebble exits eternally, what would it be able to do by itself? Nothing. It cannot even move itself. According to the starting point of the new physics—Newton's first law—a thing that is at rest (in relation to what is around it) can only move when something else moves it. The power to change its position or to move itself is not an inherent property of matter. New motion must come to something from the outside, from contact with some other body in motion. But this other body gets its motion, in turn from some third body, and so on. Motion in general is therefore separate from matter.

The purely materialist perspective therefore must hold that not only is matter eternal, but motion is eternal also. But then can matter and motion together produce a conscious being? Can a pebble in motion create consciousness? All it can do is collide with another pebble or another physical being to alter the course of its motion. But perhaps we are focusing on too gross a level in our thought-experiment. What about the ultimate particles, so fine that it seems as if they fade into something almost spiritual—almost like the self-moving beings we conceive conscious beings to be? But no matter how small we imagine the particles of matter and their motions and configurations,

they will always consist of bodies acting on other bodies, without the slightest hint of consciousness:

> Divide matter into as many parts as you will, (which we are apt to imagine a sort of spiritualizing, or making a thinking thing of it,) vary the figure and motion of it as much as you please—a globe, cube, cone, prism, cylinder, &c., whose diameters are but 100,000th part of a *gry*, will operate no otherwise upon other bodies of proportionable bulk, than those of an inch or foot diameter; and you may as rationally expect to produce sense, thought, and knowledge, by putting together, in a certain figure and motion, gross particles of matter, as by those that are the very minutest that do anywhere exist. They knock, impel, and resist one another, just as the greater do; and that is all they can do.[61]

In order to explain consciousness without supposing a Creator, it would be necessary therefore to suppose that the eternal particles of matter, conjoined with eternal motion, would have to have consciousness as an intrinsic property. Only if matter already contains consciousness can we explain how conscious beings could possibly come from matter. But the materialists would hardly want to maintain such a position. "I would ask them, whether they imagine that all matter, every particle of matter, thinks? This, I suppose, they will scarce say; since there would be as many eternal thinking beings as there are particles of matter, and so an infinity of gods."[62]

If all the particles of matter are not cogitative, even less is it imaginable that there should be one such particle by whose power of thought thinking beings have come into existence. For if such a thinking particle produces conscious beings it must do so by its thinking, not by its material properties. But then the creative power of thought would be the cause of the existence of thinking beings, and the result would be a violation of the principle so dear to materialism—that something cannot come out of nothing.

Most likely what proponents of the creative power of matter to produce thinking beings have in mind is not a multitude of separate thinking particles, or one such, but a unified system of particles with the capacity for thought.[63] This idea of God as a material being is an extension of what materialists think they themselves are—a system of particles that, by virtue of the whole rather than of any particular part, have the power of thinking. But if the particles themselves are not conscious, how can some particular arrangement of these particles produce consciousness? "For unthinking particles of matter, however put together, can have nothing thereby added to them, but a new relation of position, which it is impossible should give thought and knowledge to them."[64]

Suppose that it is the *motion* of the particles, and not their mere position, that produces thought. We cannot say in this perspective that the thought of the whole regulates the movement of the parts since such thinking would be

prior to the parts, and not their consequence, as is the materialist's hypothesis. The notion that thought is prior to the material particles and regulates their motion is not a materialist position. So in this conception the thinking that is the property of the whole must be the result of thoughtless movements of the parts. But this would make such thought inherently thoughtless. Such thinking, resulting from unthinking movements, would be no better than the blind movements themselves. Such thoughts produced by the unthinking movements of particles would be purely random thoughts, and so

> freedom, power, choice, and all rational and wise thinking or acting, will be quite taken away: so that such a thinking being will be no better nor wiser than pure blind matter; since to resolve all into the accidental unguided motions of blind matter, or into thought depending on unguided motions of blind matter, is the same thing: not to mention the narrowness of such thoughts and knowledge that must depend on the motion of such parts.[65]

Thus the only possible explanation of thinking beings—other than to suppose that they exist eternally—is that they have been created by an eternal, most-powerful, eminently knowing, spiritual being. If this must be admitted, is it not also necessary to admit that alongside this being there must also be eternal matter? If not, then this eternal thinking being must have created something out of nothing. But if "something cannot be created out of nothing" then matter must exist alongside God so that out of this matter God could create the world. But how then did God create spiritual beings like ourselves? And we have admitted that we did not exist, as spiritual beings, eternally. And we have also seen that spirit cannot be created out of matter. So there is no use supposing eternally existing matter as the material for divine creation of spiritual beings. God must have created spiritual beings, then, out of nothing. And if God is able to do this, why not also grant Her the power to create material beings out of nothing?

Locke begins from the idea that being cannot come from nothing, and then concludes by admitting that this principle does not apply to divine creation. Is there not a contradiction here? But the principle *ex nihilo nil fit* [nothing can come from nothing] is that of his adversaries, the materialists,[66] not his own position. It is the position of materialist and scientific thinking that effects must be explained by their causes. Granted this position of the materialists, as well as of material science, the existence of an eternal, eminently powerful and knowing spiritual being necessarily follows to explain spiritual existence, and, by extension, material existence as well. But such creation must violate the principle from which we began. The idea that something cannot come from nothing is a principle of our own finite understanding of things. Following this principle leads us to admit divine creation as the cause of substances that cannot come from nothing, or from what is a lesser being than themselves. But

when we turn to this creation, we cannot explain it except as a mysterious, incomprehensible creation out of nothing.[67]

The fact that we cannot understand something doesn't mean that it is inherently impossible. In our daily experience we come across, as a matter of fact, something equally as incomprehensible as divine creation. As far as we are able to understand these things from the most advanced science, material bodies are moved only by contact with other material bodies. And yet we daily experience the power we have to move our own bodies by the sheer act of thinking.

> For example: my right hand writes, whilst my left hand is still: What causes rest in one, and motion in the other? Nothing but my will—a thought of my mind; my thought only changing, the right hand rests, and the left hand moves. This is matter of fact, which cannot be denied: explain this and make it intelligible, and then the next step will be to understand creation. . . . If you do not understand the operations of your own finite mind, that thinking thing within you, do not deem it strange that you cannot comprehend the operations of that eternal infinite Mind, who made and governs all things, and whom the heaven of heavens cannot contain.[68]

Locke Looks at the Dark Side

The movement of matter by the activity of thought is analogous to the divine creation, for something here comes from nothing. As a result of our own thought, movements of matter are created with no causal explanation from other movements of matter. The whole of modern physics is set aside and contradicted by the simplest acts of our conscious existence. The materialists, such as Hobbes, argue that such causality from free thought cannot be admitted because it is incomprehensible in terms of the laws of physics. Are then the ideas produced by our limited understanding, including those of the new sciences, to become the bounds of real existence? Against the arrogance of those who think that they know all there is to know, Locke argues that

> it will perhaps give us some light into the present state of our minds if we look a little into the dark side, and take a view of *our ignorance*. . . . He that knows anything, knows this, in the first place, that he need not seek long for instances of his ignorance. The meanest and most obvious things that come in our way have dark sides, that the quickest sight cannot penetrate into. The clearest and most enlarged understandings of thinking men find themselves puzzled and at a loss in every particle of matter.[69]

In the first place, let us be aware of the limitations of our own senses. These basic inlets from the outside world provide us with the material for all

our knowledge of the material universe. But is it likely that these five openings to the external world provide access to all the properties of that world? To say yes is to take the position of the mole who measures the possibility of sight by the length of its whiskers while denying the farsightedness of the eagle. Having reflected on the perfection of the Creator capable of producing a universe of material and spiritual beings out of nothing, and having recognized how limited is our own ability to understand the material universe, we cannot reasonably suppose that the kind of being we are is the pinnacle of creation, and that all its wonders can be encompassed by our sensory powers. There must be other intelligent beings in the universe with far greater and even quite different powers of perception than those we find in ourselves:

> But how much these few and narrow inlets are disproportionate to the vast whole extent of all beings, will not be hard to persuade those who are not so foolish as to think their span the measure of all things. What other simple ideas it is possible the creatures in other parts of the universe may have, by the assistance of senses and faculties more or perfecter than we have, or different from ours, it is not for us to determine. But to say or think there are no such, because we conceive nothing of them, is no better an argument than if a blind man should be positive in it, that there was no such thing as sight and colours, because he had no manner of idea of any such thing, nor could by any means frame to himself any notions about seeing. The ignorance and darkness that is in us no more hinders nor confines the knowledge that is in others, than the blindness of a mole is an argument against the quicksightedness of an eagle. He that will consider the infinite power, wisdom, and goodness of the Creator of all things will find reason to think it was not all laid out upon so inconsiderable, mean, and impotent a creature as he will find man to be; who in all probability is one of the lowest of all intellectual beings. What faculties, therefore, other species of creatures have to penetrate into the nature and inmost constitutions of things; what ideas they may receive of them far different from ours, we know not. This we know and certainly find, that we want several other views of them besides those we have, to make discoveries of them more perfect. And we may be convinced that the ideas we can attain to by our faculties are very disproportionate to things themselves, when a positive, clear, distinct one of substance itself, which is the foundation of all the rest, is concealed from us.[70]

Locke expresses here most emphatically the profound impact of the Copernican revolution in radically overthrowing the ancient prejudice that human beings are the center of the universe. Grounding this estimation of the limited position that human beings hold in the universe are the many facts of our own ignorance already examined. It is obvious that the vast expanses of the universe are far beyond the scope of our understanding by reason of their

remoteness from us. Our own contemporary astronomy with the construction of telescopes of vastly greater power than those known to Locke continually supplies us with evidence of how much of the universe we are ignorant. But we do not have to look so far afield to find areas of reality that are largely or wholly dark to us. Regarding the objects of our proximate experience, we have no idea of their substance or essential constitution. And the result of this ignorance of both macro- and microscopic dimensions is that we cannot have a truly scientific understanding of *any* object of our sensory experience.

Such a scientific understanding would consist in knowledge of the ultimate particles composing that reality. Did we have such knowledge, we would be able to understand why particular things have the powers they have to affect ourselves and other things. As a medical person, Locke understands that certain remedies produce certain results under certain conditions. But as to why this should be the case, or even what all those conditions are, he recognizes his ignorance and the unscientific character of the medical arts. Locke repeats with added emphasis Hobbes's argument that while we can know the things that we produce ourselves, we cannot know the natural world because we do not understand its ultimate constituents:

> I doubt not but if we could discover the figure, size, texture, and motion of the minute constituent parts of any two bodies, we should know without trial several of their operations one upon another; as we do now the properties of a square or a triangle. Did we know the mechanical affections of the particles of rhubarb, hemlock, opium, and a man, as a watchmaker does those of a watch, whereby it performs its operations; and of a file, which by rubbing on them will alter the figure of any of the wheels; we should be able to tell beforehand that rhubarb will purge, hemlock kill, and opium make a man sleep: as well as a watchmaker can, that a little piece of paper laid on the balance will keep the watch from going till it be removed; or that, some small part of it being rubbed by a file, the machine would quite lose its motion, and the watch go no more.[71]

Our knowledge of many of the things in our experience, Locke says, can be clear and distinct, and yet far from adequate. We can clearly distinguish objects from each other and label them with distinctive names. We can recognize their effects when we observe them. But we have no knowledge of their natures—the configurations of the ultimate particles—and so we lack the capacity to understand why they can do what they do. It is remarkable that this underlaborer of modern science performs the service of denying the very possibility of scientific knowledge of the causal forces operating in nature:

> Distinct ideas of the several sorts of bodies that fall under the examination of our senses perhaps we may have: but adequate

> ideas, I suspect, we have not of any one amongst them. And though the former of these will serve us for common use and discourse, yet whilst we want the latter, we are not capable of scientific knowledge; nor shall ever be able to discover general, instructive, unquestionable truths concerning them. *Certainty* and *demonstration* are things we must not, in these matters, pretend to.[72]

The Limitations of Science

Because of this radical inadequacy of our ideas about the essence of things, it follows that no universal, necessary knowledge regarding things in the material world is possible. Locke gives the example of gold. We can identify gold by a certain number of properties that constitute the complex idea of gold, and distinguish it for practical purposes from other kinds of things. Gold can be defined as a "body yellow, fusible, ductile, weighty, and fixed." If we then say that "all gold is yellow" we are merely talking about its "nominal essence"—that is, about the terms used to identify it. The universality in question is about words, not about the real essence—although the Scholastics, thinking that our nominal definitions reflect the real essence of the things denominated, believe they can assert certain and universal truths about the nature of things. But what is the necessary connection between, say, the yellow, the ductility, etc., and some other property outside the nominal definition that we regularly connect with the idea of gold, such as its solubility in *aqua regia*? We understand no necessary connection between these properties. What has yellow to do with solubility? And so we cannot affirm as a universal truth with certainty (that is, necessity) that all gold is soluble in *aqua regia*. Since we do not understand the real essence of gold, i.e. its corpuscular microstructure, we do not know why the thing nominally described as gold *must* dissolve in *aqua regia*.[73] Of course if we make solubility in aqua regia part of the *nominal* definition of gold, we can say that all "gold" is soluble in aqua regia. But then we are talking about our use of words, not about reality. Locke replies to an obvious objection, using the example of another property of gold, its malleability:

> It will, no doubt, be presently objected, Is not this an universal proposition, *All gold is malleable*? To which I answer, It is a very certain proposition, if malleableness be a part of the complex idea the word gold stands for. But then here is nothing affirmed of gold, but that that sound stands for an idea in which malleableness is contained: and such a sort of truth and certainty as this it is, to say a centaur is four-footed. But if malleableness make not a part of the specific essence the name of gold stands for, it is plain, *all gold is malleable*, is not a certain proposition.

> Because, let the complex idea of gold be made up of whichsoever of its other qualities you please, malleableness will not appear to depend on that complex idea, nor follow from any simple one contained in it: the connexion that malleableness has (if it has any) with those other qualities being only by the intervention of the real constitution of its insensible parts; which, since we know not, it is impossible we should perceive that connexion, unless we could discover that which ties them together.[74]

When we turn from the outer world to our very own ideas, we might expect to find a greater degree of certainty. Where our sensitive knowledge of material things is restricted to the identification of outward appearances and the recognition of the regularity of their effects, we have direct intuitive knowledge of our own existence. We have direct intuitive knowledge of truths such as that sweet is not bitter. But when we turn the light of consciousness inward on truths of the utmost certainty, the shadows they cast expose unfathomable depths of darkness. For in respect to most of our ideas, we have no knowledge of the connections that tie them together, and where knowledge of such connections is missing "we are utterly incapable of universal and certain knowledge."[75]

We know enough from physics to be able to say that our ideas of colors, sounds, tastes, and smells, as well as our pleasures and pains, are produced in us thanks to the bulk, figure, and motion of physical bodies. Here then are two sets of ideas—that of a particular color, say red, and that of the configuration of particles in the brain that causes in us this first idea. Not only are we in the dark as to the precise nature of the bulk, figure, and motion of the fundamental particles that produce the experience of red, but "there is no conceivable connection between any sort of body and any perception of a colour or smell which we find in our minds."[76] What is the connection between particles of a certain movement and configuration, even if we knew exactly what they are, and the red that they cause (or that inevitably accompanies them)? Here is a darkness even greater than the ones previously mentioned. It is at least conceivable that with means of transportation so far not available, we will be able to visit the remote parts of the universe and study their properties in detail. It is at least conceivable that with the aid of more powerful microscopes we will be able to plumb the depths of things to their ultimate particles, understand their configurations and movements and from this knowledge be able to explain their powers to affect other bodies—for their effects are simply the rearrangement and change of motion of the particles of the various bodies affected. But as to why such changes will turn, say, a sweet sugarplum into a bitter or sour one, that we will never be able to know—there being no *conceivable* connection between a configuration of particles and the sweetness or the bitterness that we experience. Our most reasonable explanation in this case is that the sweetness and bitterness are "effects produced by the appointment of an infinitely Wise Agent, which perfectly surpass our comprehensions."[77]

As we explore the realm of inner experience, where knowledge is so intuitively certain that it is even available to an infant—who knows that sweet is sweet and not bitter—we nevertheless find further depths of our own ignorance. If it is inconceivable how a material body can produce any idea in us, it is equally inconceivable how our ideas can produce movement in our bodies. And yet we have daily experience of this fact. Had we never had such experience, no amount of rational knowledge, based on the latest ideas of science, could ever have persuaded us that it would be possible to move our bodies by mere thought. For there is no conceivable connection between the ideas of thinking and willing and idea of the movement of bodies. We have the empirical experience of one sort of idea regularly accompanying another, but it is inconceivable how there can be any necessary connection between ideas so fundamentally different. Darkness in the interplay of substances so unlike one another elicits from Locke an appeal to a Higher Cause:

> How any thought should produce a motion in body is as remote from the nature of our ideas, as how any body should produce any thought in the mind. That it is so, if experience did not convince us, the consideration of the things themselves would never be able in the least to discover to us. These, and the like, though they have a constant and regular connexion in the ordinary course of things; yet that connexion being not discoverable in the ideas themselves, which appearing to have no necessary dependence one on another, we can attribute their connexion to nothing else but the arbitrary determination of that All-wise Agent who has made them to be, and to operate as they do, in a way wholly above our weak understandings to conceive.[78]

We do of course know certain things. By sensory knowledge, we know that there are material bodies existing outside of us, and have sufficient knowledge of their properties to satisfy many of our practical purposes. We also have a basic understanding of general physical laws governing the movements of bodies. However, we may never have scientific knowledge of the real essence of any of these things, and we daily confront cases of the violation of those physical laws as a result of our own actions. Along with the causes of the malleability of gold, then, the laws of physics lack certainty or necessity. They are regularities of our experience whose inner necessity escapes us.

By direct intuitive knowledge, we know that we ourselves exist as spiritual beings with ideas and powers of understanding of a nonmaterial nature. However, we cannot understand the nature of our simplest actions, since how thought produces the physical movements necessary for the realization of any of our goals is a mystery. By demonstrative reasoning, we know with certainty the truths of mathematics and geometry—where we are able to recognize the inner connection between the links of an extended chain of ideas, as in the

science of Euclid. However, here where universal and necessary knowledge is available to us, few apply themselves sufficiently to appreciate the force of such reasonings. In the ancient model of science proposed by Aristotle, such mathematical knowledge inspired the notion that our knowledge of the external world could be similarly constituted—through definitions of species and genera arranged in hierarchical order. But modern science has exposed the illusory nature of such an approach to knowledge. Our complex definitions of things fail to penetrate to the underlying essence, the microstructure of things that alone explains their behavior and powers. Consequently, having such universal and necessary knowledge in the realm of the pure ideas of mathematics only serves to expose by contrast the darkness that permeates our knowledge of real existences. By demonstrative reasoning on a par with Euclidean geometry we are able to extend our knowledge of the existence of finite things, especially our own selves, to a recognition of the Infinite Spirit, Creator of all things. But then the very idea of creation is an incomprehensible mystery, although we daily experience something very much like it in our every movement we take.

With a little reflection we can greatly multiply the size of this catalogue of our ignorance. Let us remind ourselves once more that we human beings are not alone in the universe. The vast infinity of creation, reflecting the exalted power and intelligence of a Being capable of creating something from nothing, most probably contains species of beings, nonintelligent and intelligent, that vastly exceed the experiences available in this miniscule corner of creation in which we find ourselves. Let us contemplate for a moment the possibilities of extraterrestrial intelligences far greater than ours and capable of perceiving properties of nature of which we are blind. And then we will adopt the proper tone of humility in appraising the scope of our understanding. Not to be frustrated because of our inadequacy, but to acknowledge with contentment that we no doubt have the powers of knowledge appropriate to beings such as ourselves.

One more step in this salutary review of our ignorance is required. Between embodied spirits such as ourselves and the pure spirit that created all that is there is room for what revelation describes—a realm of disembodied spirits that is vastly superior in beauty and in intelligence to all that we have so far considered. The darkness of our ignorance therefore conceals from us

> in an impenetrable obscurity, almost the whole intellectual world; a greater certainly, and more beautiful world than the material. For, bating some very few, and those, if I may so call them, superficial ideas of spirit, which by reflection we get of our own, and from thence the best we can collect of the Father of all spirits, the eternal independent Author of them, and us, and all things, we have no certain information, so much as of the existence of other spirits, but by revelation. Angels of all sorts are

> naturally beyond our discovery; and all those intelligences, whereof it is likely there are more orders than of corporeal substances, are things whereof our natural faculties give us no certain account at all.[79]

The Divine Programmer

Locke distinguishes two types of causality—causality between material things, and the causality by which material things produce the simple ideas of sensation. The causal interactions of material things take place through direct contact, mechanistically. However, the causality involved when physical motions produce ideas cannot take place through such direct physical contact since ideas are not physical entities. All physical particles can do is move around other physical particles. Locke writes: "you may as rationally expect to produce sense, thought, and knowledge, by putting together, in a certain figure and motion, gross particles of matter, as by those that are the very minutest that do anywhere exist. They knock, impel, and resist one another, just as the greater do; and that is all they can do."[80] It follows that this second type of causality must be explained differently from the first. Unlike the direct causal interaction between physical objects, an *indirect* causal process is required. The action of the physical particles is a necessary but not a sufficient condition for the production of ideas. In addition to the causal action of the physical entities, ultimately those of the brain, there must also be a nonphysical cause that brings forth, in certain physical conditions, those nonphysical objects that Locke calls ideas.

It is tempting to think that this second cause is the human mind. For the idea of cold to be formed, there must be a conscious being. In sleep or in a coma, the individual does not experience cold when the cold-making physical conditions are present. There must be a certain degree of alertness and attention of a conscious being. Still, it is not plausible to suppose that the individual oneself produces the idea of cold in the presence of the physical conditions. If that were the case, why would one not produce some other idea instead—that is, the idea of hot, or of red? Individuals have no control over the production of the simple ideas of sense. It is for this reason that Locke insists that in respect to such ideas one's understanding is passive. In contrast to the potentially mistaken complex constructions and fantasies of the active mind, Locke states that physical reality "causes" the simple sensory idea in order to establish the representative truth of our basic ideas. But this is only a relative passivity, for some activity of the mind, such as attention or discrimination, is required to perceive anything. However, this account is still inadequate to fully account for the experience. If the idea cannot be explained by a material state of the brain, it is also not the product of the mental activity of the individual. A passive, receptive mind is a second necessary component of the causal conditions of the

experience of a simple sensory idea. But even this is not enough to account for the experience of cold, or of red.

Thus a third factor is required, the operation of the Wise Agent who is the ultimate creator of spiritual and material realities. Whenever there is a combination of physical conditions (brain states of a certain kind) and the appropriate degree of mental attention, this Agent gives to our experience of certain physical conditions the experiential feature of cold or of red. The causality of the experience of red, unlike that which takes place between two material things, is therefore an indirect rather than the direct result of a physical cause. Whenever the physical cause is present, and the subject has the necessary level of awareness and attention, a nonphysical signifier of the physical event is produced as a result of divine causality. The indirect causality of the physical world in the production of our ideas is comparable to the kind of causality by which I make a cursor move across the screen of my computer. I move the mouse and the cursor moves accordingly. I cause the cursor to move across the screen in the way the physical action in the brain causes the experience of red. Without that action of moving the mouse, the cursor does not move. But still, other conditions are required for the causal process to be complete. For one thing, the computer must be switched on. But most importantly, there must be a program that connects the movement of the mouse to that of the cursor on the screen, the cursor movement itself being something quite unlike the mechanical movement of the mouse. In the case of human experience, it is the divine programmer, not the conscious arrangement of the individual human being, that creates a rule according to which certain physical conditions will be experienced by an alert and attentive conscious being as cold or as red. It is better to speak of a consistent "program" than of a *particular* action by the Wise Agent because the character of this action must be consistent and regular for it to succeed in its purpose. For the ordinary practical goals of experience, it would not do for God to switch the subjective experience from red to green in the presence of the physical conditions that require someone to stop at a "red" light.

Although Locke does not point this out, this process must be true of the ideas of primary as well as secondary qualities. For ideas of primary qualities, although resembling their physical causes, are nevertheless also ideas. They resemble physical causes ideally or as ideas. Like ideas of secondary qualities, they are not themselves an arrangement of particles—as are their physical causes. Thanks to the programming arrangement of the divine programmer, some of the ideas that occur in the presence of physical causes also resemble those causes—although they always do so incompletely, inadequately.

Chapter Five

Locke on the Freedom of the Human Spirit

I Move My Arm

When I have a certain idea, and exercise a certain conscious activity of willing, I move my arm. When I move my body by an act of the mind, the independent causal processes of nature must necessarily to be disturbed. Newton's first law, that bodies only move themselves through motion derived from other bodies, is violated every time I freely move my body. How can a non-material idea produce changes in a material thing, if material things only move when they are in contact with other material things? For the mind to be able to move the body, new physical movement must be created out of nothing, without transfer of prior movement through direct contact from other physical beings. Locke thinks that such self-motion reminds us of the divine causality in creating something out of nothing.

But doesn't such a conception of human freedom violate the very foundations of modern science and so contradict the guiding spirit of modern philosophy? That would be the case if the fundamental concepts of modern science were as clear and as intelligible as Hobbes believes they are. Then all the mystery and apparent mysticism would be on the side of those who say that the human mind has a creative power of motion. But how material bodies themselves move one another is also a mystery. In fact we have a clearer conception of how we move our own bodies than we have of how inert bodies without the power of spirit are able to move one another. In a section of his *Essay* entitled "Communication of motion by impulse, or by thought, equally unintelligible," Locke writes:

> Another idea we have of body is, *the power of communication of motion by impulse*; and of our souls, *the power of exciting motion by thought*. These ideas, the one of body, the other of our minds, every day's experience clearly furnishes us with: but if here again

> we inquire how this is done, we are equally in the dark. For, in the communication of motion by impulse, wherein as much motion is lost to one body as is got to the other, which is the ordinariest case, we can have no other conception, but of the passing of motion out of one body into another; which, I think, is as obscure and inconceivable as how our minds move or stop our bodies by thought, which we every moment find they do. . . . And if we consider the active power of moving, or, as I may call it, motivity, it is much clearer in spirit than body; since two bodies, placed by one another at rest, will never afford us the idea of a power in the one to move the other, but by a borrowed motion: whereas the mind every day affords us ideas of an active power of moving of bodies; and therefore it is worth our consideration, whether active power be not the proper attribute of spirits, and passive power of matter. Hence may be conjectured that created spirits are not totally separate from matter, because they are both active and passive. Pure spirit, viz. God, is only active; pure matter is only passive; those beings that are both active and passive, we may judge to partake of both. But be that as it will, I think, we have as many and as clear ideas belonging to spirit as we have belonging to body, the substance of each being equally unknown to us; and the idea of thinking in spirit, as clear as of extension in body; and the communication of motion by thought, which we attribute to spirit, is as evident as that by impulse, which we ascribe to body.[1]

How bodies can move each other is an even greater mystery than how the mind moves the body. The chief problem has to do with the relation between matter and motion. "Motion" refers to force or energy, pent up in a body as potential energy or activated in kinetic energy. Newton's first law states that motion always comes to a body from the outside. Physical causality is the *transfer* of motion or energy from one body to another. But the motion by which the cause produces the effect is not its own inherent motion. It has acquired its motion from some other body. And this is true for *all* bodies. So no body has, of itself, any motion with which to make the transfer. All motion is only borrowed motion, and bodies move other bodies only thanks to a motion that they do not have of themselves. The concept of body *in itself* therefore does not give us any clear conception of motion; it doesn't contain the concept of the *origin* of motion, of *beginning* motion.

Of itself, matter is motionless, purely passive. This is the implication or presupposition of the new sciences. The basic law of matter—Newton's first law—implies that motion does not belong to matter *per se*. It comes to matter from outside it. Hence a self-moving source of motion or pure inherent source of energy is logically required, by the very nature of the concept of matter, for a full understanding of all the laws of physics. This is perfectly clear to a thoroughgoing materialist such as Hobbes who insists on an incomprehensible divine

fiat at the origin of the universe. In his own argument for God's existence, Locke puts this notion of the inherent impotence of matter most clearly when he says that the supposition of the eternal existence of matter is not enough to make the materialist's case since by itself matter can do nothing. The eternal existence of motion must also be supposed.

The plain history of the concept of motion is traced by examining the two sources of ideas available to us—our observation of the physical beings outside of us, and our reflective observation of our own activity in the various acts of our mind. The first source of information does not give us a clear concept of motion because we do not observe motion as it is originally, but only in its borrowed or transferred state. It is in our self-observation that we directly experience our own power to move ourselves—to begin or initiate motion. By moving our bodies through the mere act of willing, we do not perceive the transfer or borrowing of motion, but its direct origination by ourselves. In light of the previous argument about the nature of matter, this capacity to initiate motion cannot be ours as material beings. We can initiate the movement of our bodies only because we are spiritual beings. In this power of self-motion, human beings are God-like creators, originating sources of motion out of nothing—that is, out of the inner power of our own spirit.

It follows from examining these two sources of our concept of motion that spirit is intrinsically active while matter is intrinsically passive. The human being taken as a whole, composed of both spirit and matter, is both active and passive—or somewhere between the pure extremes that we can project from our limited experience. If we suppose a continuum from ultra active to supremely passive, from purest of spirits—which we call God—to the most inert form of matter, we find human beings somewhere between the extremes—probably far down the activity scale compared with angels and the more advanced species of embodied spirits in other planets and galaxies.

Contrary to the case for matter, motion (force or energy) is not separate from the nature of God, or Spirit. And as the human mind is a spiritual substance, it too has, to some degree, the power of self-movement as its intrinsic characteristic. This is evident in both theoretical and practical ways. Given the materials of sensory experience, in the reception of which the human being is essentially passive, the human mind actively creates a system of thought, a complex structure of ideas, that enables us to comprehend to some degree the material world as well as ourselves. It is only thanks to this constructive activity of thought in science that we are able to discover the nature of reality in itself, however inadequately. In the old epistemology of Aristotle, it was thought that the guarantee of the objectivity of truth lay in the essential passivity of the mind, given the power merely to extract the essence of things from the sensuous forms in which it is conveyed to us. But for Locke, the passivity of thought is limited to the acquisition of the "materials" or building blocks of knowledge—those simple sensory ideas, most of which have no resemblance whatsoever

with the powers of nature that they regularly represent to us. We passively receive the materials of science, but this does not give us any knowledge of the essential nature of reality. To achieve that we must actively construct a coherent body of scientific thought capable of transcending the potential illusions coming from of the appearances we perceive in virtue of our passivity as bodies.

In this way Locke completely agrees with Hobbes about the need to build up a complex system of thought starting from the simple building blocks—essentially those basic ideas of primary qualities such as shape, bulk, number, motion, etc.—that we find by analyzing our experience and distinguishing between these and the ideas of secondary qualities. But when Hobbes, because of his materialism, reduces mind itself to the passivity of matter, does he not implicitly undermine that very activity of mind which he recognizes is needed to have a science at all?

Human Action: The Operation of Spirit in Matter

Our activity is not only theoretical but also practical. Guided by ideas of our own construction, we actively intervene in the material world in order to create a world of our own making. In practice, we clearly have the ability to move our bodies or to refrain from moving them, and from this power we are able to create social realities, social organization. Locke follows Hobbes in acknowledging the ability of human beings to create our own social order. But unlike Hobbes, his acknowledgment of this creative ability is not in contradiction with a one-sided materialist overview. Only a duality of matter and spirit can ground the human being's creative activity in both theory and practice.

The ability of human beings to move our bodies is the prime example of self-originating motion and the prime basis of our intuitive concept of motion. From the experience of our own limited self-motion, we can argue for the existence of a supreme Mover and Creator who explains the existence within us of this power. As spiritual beings ourselves, we partake of the active power of spirit which is perfectly realized in God. We intuitively recognize in ourselves the *existence* of this power. However, immersed as we are in matter to a greater or lesser extent, we are in the dark as to *how* we move our bodies. We do not understand the divine program that governs this power, though other beings with greater intellectual powers may understand this and so have the ability to use this power far more effectively than we ourselves. The materialists, who are so completely preoccupied with the idea of *matter* that they essentially overlook the *idea* of matter, deny an idea that is as clear as and clearer than any idea we have of matter itself—the idea that we are causes of the motion of our bodies. Thus, Locke directs his exposition, implicitly, to the starting point of Hobbes's materialism—to the notion that, because material bodies do not move themselves,

the power we seem to experience of being able to originate or begin out of nothing the movement of our bodies must be an illusion.

Having established this basic framework for an understanding of human action, it is necessary to reconsider the conception of human freedom that we found in Hobbes. Although in much of his detailed presentation of human practice Locke follows Hobbes, his overarching framework regarding the radical difference between self-moving spirit and other-directed matter gives a unique inflection to much of the thought that he shares with Hobbes. But first we must see the Hobbesean dimension of practical action that is required by the fact that human beings are not pure spirits, but spirits immersed in the passivity of matter.

Following Hobbes, Locke argues that we are free when we have the ability to do something that we set our minds to doing—that is, that we will or decide to do. If we are on the north side of a prison cell of twenty square feet, we are free to move south, but we are not free to move north. Freedom or liberty is the power to do something by contrast to the restraints or obstacles or disabilities that circumscribe our potential actions. However, where Hobbes stresses that such liberty is consistent with or compatible with the strictest necessity, Locke sees freedom and necessity as opposites. While the prisoner is free to move south, necessity prevents his movement north, as well as his leaving his cell. Necessity bounds the limits of freedom. The difference may at first seem to be superficial, for Hobbes also defines freedom in opposition to the obstacles, constraints, etc., that is, necessities, that inhibit action. But while Hobbes distinguishes between such external necessities and the inner necessity (causality) that governs our motives or desires, Locke limits his conception of necessity to this external kind. He therefore stresses that freedom and necessity *do not* "consist" with one another.[2] This insistence sets the tone for his fundamental rejection of Hobbes, but in terms of this initial position there is still no real difference. Everything depends on whether the will or decision to act is deterministically caused by internal forces or motives.

Freedom and necessity should be distinguished from the voluntary and the involuntary. Should the prisoner in fact want to be in prison—the meals are regular and solitude is prized—his presence there is voluntary, although he is not at liberty to leave. It is therefore not our mere preference for one state of affairs or another that establishes our freedom, but our ability to do something, to change a state of affairs, to introduce new motion into the situation. On the other hand, someone may have the ability to perform some action that he would rather not do. Someone may force us "against our will" to perform an action that we do not want to do—such as pay taxes to a government that imprisons and ruins people who do not comply with the law. Although such an action is free in the sense of involving an action that surmounts problems, such as our meager resources, it is nevertheless involuntary—it goes against our real preferences. A truly free action should be both voluntary and realizable.

However, immersed in matter as we are, we strangely find ourselves complaining that we so often do those very things that we do not want to do. And not so much, or only, because someone or something forces us to act against our preferences. Strangely, our own desires to do the better thing seem overpowered by other desires within us that compel us, against our own preferences and better judgments, to do what is worse.

When Locke descends into the murky arena of human motivation for action, he follows Hobbes in recognizing the power of desire. But instead of affirming a simple causality of desire, he finds an individual who is often in conflict with himself. To do that which we truly want to do is not only a matter of surmounting external obstacles. The primary problem of freedom is not with the external necessities that impede our action but with an inner necessity that we must conquer. It is only when we have conquered such inner necessities that we can truly call ourselves free. Hobbes sees freedom in the overcoming of external necessity, but then complacently, "scientifically," allows that freedom to succumb to inner necessity. Locke however extends the primary understanding of freedom as the surmounting of necessity into the inner terrain of human motivation. Just as we strive to surmount external necessities to the realization of our will, so we must also surmount inner necessities.

What Does Free Will Really Mean?

In relation to the great philosophical debate as to whether the will is free, Locke at first seems to sidestep the central issue. If freedom is the power of a person to act in certain circumstances and will is the power to bring a reflective process to a conclusion by determining on a course of action, the question, whether the will is free, is badly formulated. The ability to decide on a course of action, or will, and the ability to realize that course of action in the circumstances, or freedom, are two different issues. The prisoner may decide or will to leave the prison, but be unable to do so. He may be free to walk south (that is, he has the power to do so) but will to sit down instead. The terms willing and freedom refer to two different powers or abilities in the individual. So it makes no sense to ask whether the will is free. Therefore, "it is as insignificant to ask whether man's will be free, as to ask whether his sleep be swift, or his virtue square: liberty being as little applicable to the will as swiftness of motion is to sleep, or squareness to virtue."[3]

The debates (or "wranglings") about freedom of the will are rendered interminable and insoluble because of 1) a failure to define clearly what it is that we are talking about, 2) a tendency to substitute words for things or ideas, and 3) most importantly, a failure to pay careful attention to our own real experience. The previous paragraph addresses the problem of definition of the terms "free" and "will." Compounding the problem of unclear terminology, philosophers

often substitute words for the real thing instead of paying attention to actual experience. The Scholastics use the term "faculty" to mean an ability or power of an individual. So there is the faculty of the will and the faculty of the understanding, the faculty of eating and the faculty of digesting. The use of the term faculty however hypostasizes or reifies what is meant by the ordinary term "ability," casting it as an independent force with powers of its own. Pseudo-explanations are then produced by referring an activity to the faculty in question. How is someone able to digest her food? Because she has the faculty of digestion. But this is just to say that she has the ability to digest food because she has the ability to digest food. A false sense of having understood the essence of reality becomes in this way an obstacle to real scientific progress, which consists in exploring the real processes in the body that take place when digestion occurs—the mechanism behind the activity. In his satire on the scholastic philosophy, *The Imaginary Invalid*, Molière (1622–73) has a scholastically educated candidate in medicine impress his examiners who ask why opium has the power to put people to sleep. He replies in Latin—because it has a *vis dormitiva*, in other words, because it has the power to put people to sleep.

In the same way, the act of willing is explained by the faculty of will. The will is declared to be free because a particular activity of willing is said to be the expression of a faculty of the will that is independent of other faculties, such as the faculty of receiving motion from the outside. If willing is an independent faculty, how then can it be the result of motion from the outside, as the materialists declare? But this is a spurious method of examining the issue through the substitution of a verbal entity for a real investigation, by reflection, of the experience of the individual in the course of willing and acting. To ascribe a particular activity of willing to the faculty of the will is merely to say that people have the ability to decide on a course of action because they have the ability (that is, "faculty") to decide on the course of action. A real investigation into the actual experience, whether in the field of anatomy for digestion or in the reflective study of the understanding for willing, is in this way blocked by the hypostatization of activities as pseudo-entities by the use of mere words. The will is thereby turned into an independent entity that has its own powers, and so is in this way "free." But if we see through this verbal substitution, we recognizes that it is not the will that is free, since the will is only a power or ability of the individual to decide on a course of action—an ability that everyone admits is a characteristic of the human being. The question is not whether the will is free, but whether the *individual*, and not any ability the individual has, is free. Decisions are acts of individuals and it makes sense to ask whether individuals are free or not to make those decisions.

Now it is clear that individuals are *not* free to decide whether or not to exercise their will when once a particular choice is proposed. If the man in prison, for instance, suddenly considers whether to continue standing or to walk south, he cannot now escape having to make a decision. If he was free to

make the choice or not, that would mean that he would have to make another decision as to whether or not to decide. But if it takes a decision to determine whether or not to take a decision, we would have an infinite regress of acts of the will. As I go about my life, I am regularly confronted with *having* to make decisions—to lift my arm or not to lift it in order to signal to a friend, to walk south or remain standing, to eat or not to eat, and then, what to eat, rich foods or nonfat. I am clearly not free not to make these decisions. Exercising my ability to will when confronted with a need to decide is not something I am free to do or not to do. In this way, the will is certainly not free. The individual *must* continually make decisions. As a twentieth century philosopher put this point, with dramatic effect, "I am condemned to be free."[4]

We are therefore compelled to make choices, and must do so often and regularly. We do not choose continually, however, as if the man who is standing by the north wall is always choosing to do so. It is only when the thought occurs to him that he might walk south that a choice has to be made. Before this he is in a state of volitional inactivity, being content with his present activity of standing. The proper question that is behind the issue of free will, when once we are clear about our terms and the experiences they stand for, comes down to asking whether I am free to determine one or the other of the options with which I am confronted. The thought having occurred to the standing man about the possibility of walking south, and the necessity of choosing thereby being imposed, the question is whether he is free to choose walking south rather than standing still, or the reverse. Having the issue before me of dietary advantages and disadvantages, am I free to choose whole milk rather than nonfat?

This question amounts to asking whether, in the determination of my will, I am free from any motive for doing one rather than the other. To answer this question we must pay attention to what really happens when we make a choice. So, for example, as I have been standing against the north wall for a long time, I begin feel the need to exercise my legs. It is because of this feeling that the thought of walking south occurs to me and I am confronted with a choice. If it weren't for the feeling that arouses the thought, I would continue contentedly to stand. As my indulgence in rich, creamy milk has resulted in a bloated belly, and hearing the latest news about cholesterol, I begin to fear for my future happiness. The thought occurs to me that I might switch to nonfat. If we reflect attentively on our decision-making process, we see that there is always a feeling or motive that puts the choice before us. Does this feeling also determine which of the alternatives we will take? Here the matter becomes more complicated. I begin to experience an uneasiness, a restlessness, as a result of standing still for so long. I decide however that the pleasure of my standing is greater than the uneasiness or pain that begins to contradict it. At some point the pain outweighs the pleasure, and I decide to talk a walk.

Decisions themselves—the acts of the will, the exercise of my ability to decide on a course of action—are not unmotivated. In this sense too the willing

of one course of action rather than the other is not free—that is, not free from accompanying motives. What then is the nature of those motives? Materialists say that they are essentially physical forces that move us to act. But from all that has been discussed previously, we know that, like other ideas, a motive is a state of mind of an individual, not a configuration of particles. If there is any determinism, evidence for it must be found by reflecting on the human mind and its activities.

The Greater Good

Many philosophers have argued that individuals are always moved by what they consider to be the greater good of the two possible actions in question. This position appears at first to be inconsistent with the facts. Many people believe that religion promises them eternal bliss if they adhere to the norms of morality and virtue. Why then, if their idea of the greater good is what moves them, do such people generally prefer life on earth for as long as possible, and even the pursuit of pleasures that often contradict the principles of the religion they themselves accept?

Moreover, someone may have a very clear picture of the greater good even in this life—health, reasonable economic security, a happy household—and yet he squanders the greatest part of his life in drunkenness. Locke describes it quite eloquently:

> [L]et a drunkard see that his health decays, his estate wastes; discredit and diseases, and the want of all things, even of his beloved drink, attends him in the course he follows: yet the returns of uneasiness to miss his companions, the habitual thirst after his cups at the usual time, drives him to the tavern, though he has in his view the loss of health and plenty, and perhaps of the joys of another life: the least of which is no inconsiderable good, but such as he confesses is far greater than the tickling of his palate with a glass of wine, or the idle chat of a soaking club. It is not want of viewing the greater good; for he sees and acknowledges it, and, in the intervals of his drinking hours, will take resolutions to pursue the greater good; but when the uneasiness to miss his accustomed delight returns, the great acknowledged good loses its hold, and the present uneasiness determines the will to the accustomed action; which thereby gets stronger footing to prevail against the next occasion, though he at the same time makes secret promises to himself that he will do so no more; this is the last time he will act against the attainment of those greater goods. And thus he is, from time to time, in the state of that unhappy complainer, *Video meliora, proboque, deteriora sequor* [I see and approve better things, but follow worse]:[5] which sentence, allowed for true, and made good by constant experience,

> may in this, and possibly no other way, be easily made intelligible.[6]

On closer inspection, we see that what moves us to act to act is not a positive good at all. What moves us to act is an "uneasiness" in our present state. If all is fine with us, no mere contemplation of something that is better moves us out of our complacency. The great motivator for human beings is always an "uneasiness," that is, the experience of some present pain, not the contemplation of an absent pleasure—that is, not some idea of a positive good in the future. When there is present pain of a sufficient degree, all visions and contemplations of the greater good, or even the greatest good of all, are abandoned. When the thirst comes again upon him, this pain moves the habitual drinker to abandon all his good resolutions and to further thrust himself along his downward spiral. When we experience pain, there immediately arises in us the desire for its cessation. This desire to remove the pain, if sufficiently strong, shuts out all consideration of absent positive goods. As soon as there is pain, there is the desire to remove it, and then all thought of what is better for us, such as a roof over our heads to say nothing of our eternal happiness, goes out the window. Locke stresses this negative feeling of uneasiness, which can evolve to the extremities of great pain, as the prime motivating force governing our decisions or will. While Hobbes stresses the determination of the will by the positive force of desire, Locke goes one step further and explains the determination of desire by the sense of unease, of growing pain, that insistently calls for its own suppression. Desire arises out of a negative that insists on being negated.

With this understanding of the psychology of motivation, we can see why the mere idea of the greater good does not determine us to action. The individual above all seeks happiness, and is powerfully motivated to move toward his happiness, though what the idea of happiness means for each individual differs greatly. For some it is found in sensuous activity. For others it requires the pleasures of intellectual pursuit. Moreover, happiness comes in degrees, with the greatest pleasure or bliss beyond imagination at one extreme and a boundless extent of pain or misery at the other. But the minimum degree of happiness is "so much ease from all pain, and so much present pleasure, as without which any one cannot be content."[7] The individual who is so content, then, is not generally moved to change that activity or pattern of life that produces this contentment. However, as soon as some unease or pain arises, the individual is motivated to eliminate it.

Hence, the first condition of happiness is the absence of pain and suffering. The uneasiness, pain, or suffering that we experience now directly conflict with our higher, more reflective conceptions of happiness. Whatever else it is that makes up our idea of happiness, the first step in the achievement of this state is to remove the pain presently engaging us. Despite all his resolutions regarding the greater good, the unhappy alcoholic must first remove the actual

pain he is now experiencing. There can be no happiness in the presence of such pain and so, striving for happiness as do all human beings, he first desires to rid himself of the uneasiness that tickles his palette with a soothing liquid from his habitual haunt. Locke formulates the balance of present pain and absent good as follows: "All present pain, whatever it be, makes a part of our present misery, but all absent good does not at any time make a necessary part of our present happiness, nor the absence of it make a part of our misery."[8] Our choices then are motivated by the presence of pain and the desire to eliminate it. And if there are more than one of these sources of uneasiness, we naturally turn first to that which is greatest.

If this were a sufficient account of human action, the determinist would be right. The individual would not be free to choose between the courses of action that confront him, but necessitated to follow the one that was oriented to the elimination of the greatest amount of uneasiness or pain. The man standing by the north wall, on experiencing the uneasiness arising from lack of exercise and conflicting with the pleasure of standing, is confronted with a choice of remaining still or walking. At some point in the progress of the sense of uneasiness, when it undermines his sense of contentment with standing, he *necessarily* decides to walk south. The woman facing the choice between the rich taste of dairy and the blandness of nonfat, on experiencing dissatisfaction in the absence of the former, would *necessarily* put off her pursuit of what she thinks to be the greater good until after she enjoys her next meal. The drinker *necessarily* decides that first he must strengthen himself with the longed-for refreshment before making the arduous climb onto the wagon.

The Power of Suspending Action

But this is surely too limited a view of the nature of our motivation. For sure, uneasiness moves us to act in one direction rather than another, but the action doesn't follow automatically from the uneasiness. The motive of uneasiness is not a direct physical force. Pain may be "the most importunate of all sensations"[9] but its causality is not like that of one physical body on another. Like our other simple sensations, uneasiness or pain can be caused in us by physical movements in our brains, arising from other physical movements in the body and from outside. But pains also arise out of our mental activity. The activity of the mind is itself a source of motivating ideas, as listening to good music is a source of pleasure, and bad music a cause of pain. Of course, what one individual finds as pleasurable, another finds to be painful. For good and bad (or evil) are, as Hobbes has argued, just other terms for the ideas of pleasure and pain. The sensuous ideas of pain and pleasure represent, without resembling, certain states of the individual's being, whether these be physical or mental, and in this way they represent or mean different things to different people.

The presence of pain is therefore a fact of experience. But our actions are not mere reactions to such facts, however motivating they may in inclining us in a certain direction rather than another. In the theoretical realm, the passive reception of our simple ideas does not directly result in a scientific theory, but requires the constructive activity of our mind. In the sphere of human practice, the motivating ideas of pleasure and pain do not by themselves constitute a course of action, but in addition require active deliberating among the possible courses of action before actively choosing, and then actively pursuing the goal chosen by taking the steps necessary to achieve it. The decision to act is itself an action and not a mere passion—that is, a merely passive power to be moved by something else. The individual must actively decide what to do in the presence of the motivating representations of pleasure and pain.

Hence, in the presence of a sense of pain, we do not directly act—actually react—but consider our alternatives. A psychological distance is created between ourselves and the feelings that incline us in one direction or another. Action is suspended while we examine our possible choices. It is this ability to suspend our activity, to think it over first, that is the starting point of our true freedom. Thus, says Locke, "we have a power to suspend the prosecution of this or that desire; as every one daily may experiment in himself. This seems to me the source of all liberty; in this seems to consist that which is (as I think improperly) called *free-will*."[10]

Freedom as the Active Pursuit of Happiness

This power to suspend action is the starting point of human liberty; it is not the conclusion of it. The drinker surely suspends his decision for a while, thinking dolefully on the curses of his wife and the sorry state of his bank account, before plunging back into the tavern to experience the solace of his drinking comrades. He may actually have weighed up the pros and the cons and, to justify himself, entertained the argument that life is too short and the future too uncertain to be spent in a constant state of misery. So he suspends action and deliberates, but aren't these deliberations mere rationalizations and isn't his decision preordained by his feeling—the feeling of pain of a body in need of alcohol? Does any merely abstract examination of absent good determine the will to action?

Locke rejects the prevailing theory of the determination of the will by consideration of the greater good in favor of his own theory of the preponderant weight of present pain over absent future good. But in his own development of this theme, the greater good reappears in a new way—not as the object of intellectual contemplation, but as actively incorporated into one's personal, felt desire for happiness. If present pain creates the desire to remove that pain, the converse is also true. A real, personally felt desire for some positive good

creates in us the pain of its absence. Consideration of the greater good, if this is strong in us and is felt to be part of our personal happiness, creates a present, painful sense of its absence. One pain is then confronted with another pain. The pain that urges us to do that which we would rather not do confronts the pain of missing that which we really want to have. Something is therefore missing in a purely contemplative theory of the greater good, and that is its connection to our present state and our general desire for happiness. What is missing in this theory is the notion that our abstract idea of the greater good, to be motivating, must be accompanied by the motivating ideas of pleasure and pain—anticipated pleasure and present pain over its absence. A purely contemplative or abstract consideration of the good does not move us when this good is not incorporated into and made part of our complex personal idea of happiness. But should circumstances arise in which some absent good, previously acknowledged but dismissed as without personal relevance, enters into or becomes a part of our personal conception of happiness, then it elicits the motivating experiences of pleasure and pain. Locke writes with genial humor:

> Now, let one man place his satisfaction in sensual pleasures, another in the delight of knowledge: though each of them cannot but confess, there is great pleasure in what the other pursues; yet, neither of them making the other's delight a part of *his* happiness, their desires are not moved, but each is satisfied without what the other enjoys; and so his will is not determined to the pursuit of it. But yet, as soon as the studious man's hunger and thirst make him uneasy, he, whose will was never determined to any pursuit of good cheer, poignant sauces, delicious wine, by the pleasant taste he has found in them, is, by the uneasiness of hunger and thirst, presently determined to eating and drinking, though possibly with great indifferency, what wholesome food comes in his way. And, on the other side, the epicure buckles to study, when shame, or the desire to recommend himself to his mistress, shall make him uneasy in the want of any sort of knowledge. Thus, how much soever men are in earnest and constant in pursuit of happiness, yet they may have a clear view of good, great and confessed good, without being concerned for it, or moved by it, if they think they can make up their happiness without it. Though as to pain, *that* they are always concerned for; they can feel no uneasiness without being moved. And therefore, being uneasy in the want of whatever is judged necessary to their happiness, as soon as any good appears to make a part of their portion of happiness, they begin to desire it.[11]

To be truly motivating, the idea of the greater good "must make a part of their portion of happiness." The epicure—let us choose him for our example since the reader, no doubt being of the studious sort, may be curious about this sort of person—is aware that certain works of literature must constitute a good,

and perhaps even a greater good than a finely flavored sauce, but as far as moving him to action this recognition of an absent good leaves him quite indifferent. However all of this changes when his latest mistress, an intellectual herself, makes him feel ashamed of his incompetence in this domain, or at least makes him afraid that this incompetence will soon cost him the pleasure of her company. The idea of possessing a certain kind of knowledge now begins to make a part of his personal idea of happiness and he feels pain in its absence. There is nothing for it, but he must buckle down to study. He must subject himself to a certain amount of pain in order to remove a greater one. Only in this way is the paradox solved that prevents us from taking certain painful courses of action in order to achieve a greater good—the paradox that to be happy it is necessary first to be unhappy. For the epicure there is now an even greater unhappiness to counterbalance the pain involved in the path to acquiring the good of intellectual knowledge, the fear of losing his beloved mistress.

The above example argues for a circumstance that produces a change of motivation, disturbing a former contentment with a new uneasiness, and orienting the individual in a new direction. As a result of these circumstances, experience is expanded into realms of the good that were hitherto contemplated with indifference. Do we need to wait for such circumstances to occur? Are we not able to create or seek out such circumstances ourselves? The idea of red inevitably arises when we are looking in a certain direction and in this state we cannot see blue. But we can turn around and then experience the idea of blue. So we have freedom of movement and therefore of exposing ourselves to new causes of pain and pleasure. The studious person must eat, and does so with indifference. However, is it not a shame, even from the studious point of view, to lack knowledge in the area of poignant sauces and fine wines? Let him try out that exquisite sauce recommended by his acquaintance the epicure. Let him think for a while about this other good that he admits is no doubt good. Let him suspend his studies for a time to consider this possible area of neglect, or at least study this for a while. Let him spend some small amount of time in this new endeavor, and soon a desire for the taste of fine wine will grow in him.

The will is inclined in one direction or the other by the motives of pleasure and pain arising out of circumstances. If this were the end of the story, the will would be determined by outside causes. But the individual does not have to be a victim of external circumstances and outside control. She can change her circumstances herself and thereby affect the feelings she will have in the new circumstances. In this way, by creating the conditions that produce her feelings, she is freely determining her own will. Locke sets out his own version of determination by the greater good, where mere contemplation is replaced by an active process of uniting the good with one's own happiness:

> But yet there is a case wherein a man is at liberty in respect of willing; and that is the choosing of a *remote* good as an end to be

> pursued. Here a man may *suspend* the act of his choice from being determined for or against the thing proposed, till he has examined whether it be really of a nature, in itself and consequences, to make him happy or not. For, when he has once chosen it, and thereby it is become a part of his happiness, it raises desire, and that proportionably gives him uneasiness; which determines his will, and sets him at work in pursuit of his choice on all occasions that offer.[12]

Human beings are motivated by their desires, above all by the desire to eliminate pain. The great question is whether we can consciously, purposefully, actively arouse within us new desires, and so new pains that insist on being removed. Let our prisoner dwell for a while on the boredom of walking back and forth in his cell to relieve his legs. A desire for new forms of exercise emerges. Doing knee-bends may at first be more painful than standing still, but the outcome, once the habit is created, may be far more energizing, interesting and fulfilling than merely walking up and down. The woman concerned with her diet can no longer enjoy her rich foods with the same pleasure, and so must contemplate the dreary alternative. But why not work on making the alternative course of action, the one in accord with the greater good, more interesting, attractive, pleasurable? In the suspension of activity that allows for deliberation, let her dwell more intently on the dangers of her old diet, let her read cookbooks with savory images of low-fat meals, and then, sparked by newly rising desires, give this new course of action a try. Old habits die slowly and in the process there is pain. However, if the counter pain of aesthetic and health considerations is equally strong and has truly made a portion of her idea of happiness, she will have the energy she needs—the pain of absence giving rise to the desire to absent this absence—to persist on her path. The new course of action, initially painful but also suppressing a counterbalancing pain, becomes more and more pleasurable. Locke writes:

> Men may and should correct their palates, and give relish to what either has, or they suppose has none. The relish of the mind is as various as that of the body, and like that too may be altered; and it is a mistake to think that men cannot change the displeasingness or indifferency that is in actions into pleasure and desire, if they will do but what is in their power.[13]

Why Are We Content with So Little?

Is the alcoholic a hopeless case? If so, it is only because of a bad habit begun in the past that has become more and more difficult to break. Why was this habit begun in the first place? Surely because of a mistaken judgment regarding the future consequences of his actions. If we had to deal only with present experiences, Locke

argues, it would be impossible to make mistakes. What is pleasurable is pleasurable, that is, good, and what is painful is painful, that is, bad. There can be no mistake about this. Just as red represents a certain power in things to produce that experience, so pain represents a certain power in our encounter with things, or in the pursuit of certain activities, that signals us to avoid them. Such representations are in themselves inherently truthful. If our actions were limited to present experiences then, we could do no wrong by following up on our direct feelings of pleasure and pain, of good and bad.

However, present feelings of pleasure and pain ought not to be the sole grounds for making a decision. Present actions have future consequences, and so future pleasures and pains must be anticipated. And in this complexity we see the downfall of our tavern companion. Future experiences of pain cannot be judged with the same accuracy and force as in our present experience. The abstract idea of a future pain is not itself a present pain. Pains and pleasures are only experiences in the present, and so the abstract idea of a future pain does not move us in the way an actual pain does. This inability to experience the full extent of our action by bringing the future into the present is another great limitation of the human mind. Should the drinker be able to actually experience, while drinking, the pain he will feel the next morning, is there any doubt that he would quickly abandon his drink?

No doubt in the very beginning of the drinker's downward descent, alcohol had a repulsive taste. But the negative feeling of shame over the teasing of his drinking pals kept him at it until he acquired a taste for it. If he was able to change his taste once, he can do it again. Only now he needs to feel another kind of shame and experience another kind of pain—a mentally produced pain at the loss of all that makes this life meaningful, and so, as a natural consequence, the loss of his eternal happiness. Let him think long and hard on this, his real happiness, and for the first time in his life, make his true happiness a part of his personal idea of happiness. And then, let him take the steps, one at a time, that are necessary to turn himself around.

The moral of this story is available for all of us. We are all moved to pursue our happiness, but our view of it is narrow, limited to partial experiences, and ill considered. Let us use the freedom we have to suspend those habitual courses of action with which we are content in order to think seriously about the future consequences of our actions and so the true determinants of our own happiness. If we believe that something is truly a greater good, let us create those circumstances that give us relish in its pursuit. This applies to the pursuit of eternal happiness which is promised to us by revealed religion, and which is implied in our idea of God as creator of spirits like Himself who are not merely physical beings destined to perish.

There is no essential gap between our present happiness and that to come in the hereafter. The latter is only an extension of the former and the former is a participation in the latter. Our limited personal idea of happiness is only

a part of what we ourselves recognize to be good—of our idea of the *summum bonum* or greatest good. Why are we content with so little when we ourselves believe that there is so much more that is available to us even in this life? We should make ourselves feel discontent with mere modest contentment, with limiting ourselves to the minimum degree of happiness. We can experience and enjoy life more fully, and are capable of actively motivating ourselves to desire this greater happiness. As a result we will begin to feel the pain of our mediocrity. This greater pain in the absence of greater pleasure would be the guarantee against squandering our lives in the trivial pursuits of ridding ourselves of the endless round of trivial pains and inconveniences.

There are those who say that being determined in this way by the greater good takes away our freedom. They want freedom of the will to involve complete indifference regarding all consideration of what is best for us, so that our choices are determined by nothing but arbitrary decision. But such liberty is only the freedom "to ramble in perfect darkness"; such a person would be "driven up and down as a bubble by the force of the wind."[14] Whether we are determined by things outside us, or by the arbitrary movement of our own will, makes no difference; we are still unfree.

The true freedom and the true choice for us consists then in really choosing to follow our own happiness, for no one would "be *free* if his will were determined by anything but his own desire, guided by his own judgment."[15] This is the greatest paradox and the greatest stupidity—that being moved as we are by our own happiness, we do not do that which will make us even happier. We let ourselves be content with so little, and then squander our lives in trivial pursuits. Let us then make the ultimate free choice—to pursue our own happiness as we ourselves see it, to make ourselves unhappy with the absence of more and the presence of so little, and then determine how to add relish, real enjoyment, to the steps necessary to become ever happier.

Foundations of the Moral Law

What is morality but the pursuit of happiness so understood—the pursuit of pleasure and the avoidance of pain not only in the present action, but with due consideration for the future consequences of our actions? It is necessary to add to this understanding only the idea that morality involves a relation to law. When we talk about the morality of an action, as opposed to the mere pursuit of our different views of happiness, we refer our action to law, the moral law. Locke distinguishes three basic forms of law: the divine law, the law of public opinion and the customs of a society, and the positive laws of the state. The primary law is the divine law. The divine law taken as the basic norm that should govern human action is the moral law. But what is this law other than those

prescriptions and prohibitions that guide us toward our happiness as we ourselves determine this from consideration of the natural course of life?

The key elements of this idea have been explained earlier. Pleasure and pain, like bitter and sweet, are signs within us that accompany our experiences of outer circumstances and inner activity. They are not arbitrarily determined by human fancy. The Divine Agent arranges that certain powers of nature will be experienced as bitter or sweet, and that certain circumstances and actions of ours will be felt as pleasurable or painful. Our feelings are generally reliable indicators in the decisions we make, so that in following our own inner feelings we are doing both our own will and the will of God.[16] The divine law is therefore simply the natural law of our own happiness as guided by those divinely programmed signals within us of right and wrong action, namely, the experience of pleasure and pain—broadly understood to mean not only physical pleasures and pains but the pleasures and pains of the mind as well.

However, as has been shown above, human behavior is not governed solely by feelings as such. Although infallible in the moment, present feelings are not adequate indicators of the over-all or long-term consequences of an action. We are not governed directly by feelings of pleasure and pain that come to us unwillingly from our circumstances, but are capable of suspending action, considering alternatives, and making judgments regarding which alternative will produce the greater good. We estimate which action will produce the greater good, and even formulate an idea of the greatest good, or *summum bonum*. Such ideas are capable of motivating us when we incorporate them into our personal idea of happiness. And then, such ideas themselves produce feelings that move us to action. There are therefore two sources of feelings—those coming to us in the spontaneous course of our experience, and those that we ourselves produce within us through personal incorporation of the goals of our actions. Our goals are not simply feelings of attraction and repulsion but are formulated in terms of universal ideas or general thoughts. The fact that we act on the basis of abstract ideas is where the idea of law properly speaking comes into play in human action. Our actions are not passive effects governed by law as an external causal force. Rather, we actively give laws to ourselves in the formulation of the goals of our actions.

In estimating the consequences of action, individuals try to calculate where the greater good for them is to be found. If the pleasure or pain of the moment is infallible, the estimate of future pleasures and pains is fraught with the possibility of error. No strictly moral law can be based on such fallible estimations. Moreover, individuals have different ideas of happiness. Where there is such scope for inaccuracy and variation how is it possible to speak of the universality and necessity proper to a *law*? However, in formulating goals of action, we do more than estimate the possible consequences of our actions. We bring into play universal ideas that have been previously formed on the basis of empirical experience. Thus, we act on the basis of universal ideas such as those

of pleasure and pain, good and evil, property, the universe as a whole, humanity in general, and God. As rational beings, we inevitably formulate our goals in terms of such universal ideas. It is in the reflective examination of our goals, formulated in terms of universal ideas, that we find norms of action, norms for evaluating the morality or lawfulness of the proposed action. In this way, a science of morality can be established that is as rigorous as that of mathematics. Locke makes the following defense of a scientific approach to the laws of morality:

> The idea of a supreme Being, infinite in power, goodness, and wisdom, whose workmanship we are, and on whom we depend; and the idea of ourselves, as understanding, rational creatures, being such as are clear in us, would, I suppose, if duly considered and pursued, afford such foundations of our duty and rules of action as might place *morality* amongst the *sciences capable of demonstration*: wherein I doubt not but from self-evident propositions, by necessary consequences, as incontestable as those in mathematics, the measures of right and wrong might be made out, to any one that will apply himself with the same indifferency and attention to the one as he does to the other of these sciences. . . .
>
> "Where there is no property there is no injustice," is a proposition as certain as any demonstration in Euclid: for the idea of property being a right to anything, and the idea to which the name "injustice" is given being the invasion or violation of that right, it is evident that these ideas, being thus established, and these names annexed to them, I can as certainly know this proposition to be true, as that a triangle has three angles equal to two right ones. Again: "No government allows absolute liberty." The idea of government being the establishment of society upon certain rules or laws which require conformity to them; and the idea of absolute liberty being for any one to do whatever he pleases; I am as capable of being certain of the truth of this proposition as of any in the mathematics.[17]

Thus in the formulation of goals individuals not only estimate the consequences of their actions but consider the rationality of the goals themselves. Formulated in terms of universal propositions, the goals of action contain within themselves implicit paradigms or universal norms of action. This appears paradoxical if one takes universal concepts in the theoretical mode where they represent generalizations from limited experience, and where, as we have seen, no strictly scientific knowledge of natural laws is accessible to us. How then can we speak of knowledge of a law of nature governing our actions? In the above citation, Locke suggests two answers to this question.

In the first place, there is the knowledge of God as the creator of nature and humanity, as well as of ourselves as creatures with the capacity for thought

and freedom of action. From such knowledge certain practical truths follow, such as the idea that in the beginning of creation all of nature belongs to humanity as a whole. Unless it can somehow be proven that the Creator has expressly appointed some individual such as Adam (and by inheritance a limited number of his successors) to be absolute ruler and disposer of the earth, no one can claim exclusive property rights over nature or parts of it by divine right. From this it follows that the claim of kings to absolute rule over their lands is a violation of moral law. It also follows that individuals may claim a right over land only when their claims are in accord with the original and natural right of humanity. Some defenders of absolute monarchy claim that individuals other than Adam and his descendents commit an injustice by claiming land for themselves that belongs by divine right to the king. It is self-evident, however, that where there is no property and the earth belongs originally to all there can be no injustice in claiming a portion of the earth's land as one's own property—as long as this claim is based on a legitimate ground that is in accord with the original right of humanity. Where there is no property to begin with, there is no injustice in someone's claiming a right to unoccupied and unused land.

Second, there are the laws we ourselves propose in formulating the goals of our actions. This second kind of law is discovered by reflective examination of the rationality of our goals. The meaning of Locke's second example, "No government allows absolute liberty," presupposes the free surrendering of the right individuals have in pre-political societies to solve disputes by resort to force—that is, by taking the law into their own hands. Legitimate government is based on the free consent of the governed to live under laws that restrict our liberty as private individuals in the state of nature to punish injustice. As all government is based on the idea that the settlement of disputes should be in accord with established legislation and enforced by agents of the community as a whole, it is evident that any resort to force to settle disputes in civil societies violates our own standard of action on agreeing to enter civil society.

Let us consider one more example of how universal moral laws may be determined. "Humanity" is a universal concept, and in applying this concept as we inevitably must to the goals of our actions, certain implications are inherently necessary by the meaning of that concept. Thus if we propose to treat another human being as inferior to ourselves in their humanity, we are in effect contradicting ourselves. If we reflect on the meaning of our concepts, instead of employing them thoughtlessly, we see that we are essentially saying that a human being is not a human being. For what do we mean by humanity but a certain species of individuals with certain abilities, and so insofar as anyone is considered simply as a human being he or she is equal to every other member of the same species. Mere birth in a feudal hierarchy is therefore no moral ground for attributing worth to human beings. Locke accordingly argues for the natural birthright of human beings—freedom and equality:

> To understand political power right, and derive it from its original, we must consider what estate all men are naturally in, and that is, a state of perfect freedom to order their actions, and dispose of their possessions and persons as they think fit, within the bounds of the law of nature, without asking leave or depending upon the will of any other man.
>
> A state also of equality, wherein all the power and jurisdiction is reciprocal, no one having more than another, there being nothing more evident, than that creatures of the same species and rank, promiscuously born to all the same advantages of Nature, and the use of the same faculties, should also be equal one amongst another, without subordination or subjection, unless the lord and master of them all should, by any manifest declaration of his will, set one above another, and confer on him, by an evident and clear appointment, an undoubted right to dominion and sovereignty.[18]

Locke's argument for universal and necessary truths of reason, equal to those of geometry, is adopted by Thomas Jefferson as the foundation for the Declaration of Independence of the United States of America: "We hold these truths to be self evident, that all men are created equal; that they are endowed by their Creator with certain unalienable rights; that among these are the life, liberty and the pursuit of happiness."[19] In this way, Locke argues that in terms of nature and the state of nature—that is, the pre-political state of society—human beings are intrinsically free and equal. These considerations of natural law provide a rational foundation for legislating a system of laws respecting the rights of citizens in political societies, as well as the limits of government and its duty to defend those rights. In the following passage, Locke summarizes the divine or natural or moral law in terms of the state of nature, the condition of mankind before the positive laws of organized state societies have been established. When human beings establish laws for themselves, they do not replace natural liberty with distinct civil liberties, as Hobbes says. They give up only that natural right that pertain directly to life in civil society—the right, namely, to take the law into their own hands by settling disputes by private force. Thus the natural law and the rights it founds, with this central limitation, remains the basic framework within which positive laws are to be formed.

> The state of Nature has a law of Nature to govern it, which obliges every one, and reason, which is that law, teaches all mankind who will but consult it, that being all equal and independent, no one ought to harm another in his life, health, liberty, or possessions; for men being all the workmanship of one omnipotent, and infinitely wise Maker; all the servants of one sovereign Master, sent into the world by His order, and about His

> business; they are His property, whose workmanship they are made to last during His, not one another's pleasure. And being furnished with like faculties, sharing all in one community of Nature, there cannot be supposed any such subordination among us that may authorize us to destroy one another, as if we were made for one another's uses, as the inferior ranks of creatures are for ours. Every one as he is bound to preserve himself, and not to quit his station wilfully, so by the like reason, when his own preservation comes not in competition, ought he as much as he can to preserve the rest of mankind, and may not, unless it be to do justice on an offender, take away or impair the life, or what tends to the preservation of the life, the liberty, health, limb, or goods of another.[20]

This conception of the state of nature differs markedly from that of Hobbes, whose conception of human beings in pre-political societies admits no moral restrictions other than those implicit in the individual's own survival and flourishing. This difference in practical social and political theory follows from the basic metaphysical differences between the two thinkers. For Hobbes human beings are material beings, subject to the laws of cause and effect, and so governed by their passions. Reason is merely the individual's instrument for estimating how to achieve the greatest personal happiness in the future. The Golden Rule that follows from this does not require respect for individuals who, as human beings, are equal to oneself, but rather is a consequence of what is required for one's own individual happiness. It can be translated: if you scratch my back, I will scratch yours; or, to encourage you to scratch my back, I will scratch yours. Since what is real for the individual, in this materialist account, is one's own physical existence, it doesn't make sense to be inherently concerned with the interests of other individuals and to regard them as of equal importance to one's own.

Locke's spiritualist conception of the individual, however, opens up just such a possibility and requirement. Ideas too are real, and ideas are not individual material entities. The human understanding is the arena of inherently universal ideas that, when put into practice, are paradigms or laws for the creation of social life. Thanks to spiritual independence from material causality, the individual is free from direct determination by physical desires and capable of actively creating desires that transcend physical pleasure and pain—desires connected to the realization of universal truths and the promotion of humanity in general. This framework of the reality of spirit opens up to a communal or social conception of the individual and of a moral law that requires respect for all human beings and a regard for the general good as superior to one's petty individual pleasures and pains. If I am a human being, my humanity obligates me to do unto others as I would have them do unto me. For we share a common humanity, not only as biological members of the same species, but as

agents legislating in our own lives in the name of "humanity," and, with the establishment of civil society, seeing our inherently rational legislation enacted as the law of the land.

All human beings are one as creatures of the one Creator whose image they bear as conscious, spiritual beings, and so become creators in turn. Thus, in the suspension of judgment that constitutes the privilege of the human being there is scope for transforming the desire for self-preservation into the desire for the preservation of humanity as a whole—for the elevation of the entire human species into a state of security and prosperity. If all this is true even in the state of nature, then it is also and even more true in civil societies, where the obligation of the state is not only the security of the individual, but the promotion of the common welfare of all.

Laws of Social and Political Life

So much, for the time being, for the divine law. But what about other laws? In deciding on the lawfulness of our actions, we must take into account not only this divinely established natural law and its expression in morality and religion, but also the humanly established law of public opinion. Who doubts that public opinion is a powerful law governing human behavior, and that before performing some action we ignore it to our peril? The censure of our neighbors is a terrible punishment, while their praise is uplifting. Only individuals who would live a solitary life can escape it. But human beings are meant to live in society. Whole societies can be found in which this is the only law other than the law of nature. The law of public opinion does not contradict the primary law of human action but generally reinforces it. What is public opinion but an informal law arising out of the combination of the private experiences of many individuals and so a rough sort of guide to action based on the past experiences of our ancestors and our neighbors? This law of custom no doubt falls short of what it could be as it reflects individuals' contentment with much less than they should settle for. As we have seen, the divine promise of infinite and eternal bliss ought to remind us to establish higher standards of happiness than we are inclined to settle for and that would satisfy the too modest requirements of most of our neighbors.

What then remains for the third sort of law—the positive laws of the state? In establishing and maintaining social arrangements we ourselves establish laws, and when we live by the laws of society we are living by laws we create for ourselves. Of course, the laws set up by human beings remain subject to the natural or moral law, with the exception that members of political society are no longer free to be—themselves, as private persons—judge, jury, and executioner in matters of conflict with others. There should be no discrepancy, then, between the laws of the state and the law of nature, or the divine law. This

follows from the purpose of establishing political societies. The institutions of civil society are set up by free and equal human beings to provide greater assurance that the basic rights of the natural/divine law will in fact be respected by the all too fallible members of the human community. Thus Locke writes that "the municipal laws of countries . . . are only so far right, as they are founded on the law of Nature, by which they are to be regulated and interpreted."[21]

As long as individuals are content with the laws of nature, they live in a state of nature. This does not mean that they live solitary lives as Hobbes says, since human nature is such that individuals are drawn to enjoy the pleasures and possibilities of social life. Locke's state of nature is not that of separate, solitary individuals, but constitutes a "community of Nature."[22] But there are also the pains and hazards of such life, since individuals who pursue their diverse conceptions of personal happiness, generally without adequate consideration of future consequences, inevitably come in conflict with one another. In the resolution of such conflicts, the ideas of morality and religion, as well as the opinions of custom, are insufficient to produce just results. Individuals regularly fail to live up to their own ideas about what is right and best. Religion supplements human error to be sure, as well as supplying an incentive to follow its laws—supplying the motive forces of reward and punishment in the next life. But as we have seen, people generally fail seriously to incorporate into their personal idea of happiness such remote considerations. This-worldly pains, deliberately inflicted by other human beings, are often necessary to defend the rights of individuals from the ill-considered actions of others.

However, the step from the state of nature to the foundation of the state is not the result of such abstract considerations. There was a long period of human evolution in which people lived relatively peaceful and cooperative lives without the need for the elaborate structures of political society. During this time, human society evolves in steps, comparable to those of a logical argument, going from simple to complex. Like Hobbes, Locke employs the analytic/synthetic method to explain the creation of the state. Following the logic of human evolution, Locke's argument proceeds in steps, beginning with the simplest and most natural form of society, the family. He then broadens the framework of his analysis from the inner structure of families to that of the simplest societies within which families interact with one another. He follows the evolution of human history from tribal societies that appropriate the spontaneous product of nature to simple agricultural societies in which nature is transformed and permeated by human labor, and then to complex commercial societies. Locke proceeds step by step in his theoretical reconstruction of the stages of human evolution, until he arrives at a point at which the desirability and rationality of creating organized political societies, and so of abandoning the state of nature, becomes evident.

Obligations and Authority in Natural Societies

Locke begins *An Essay Concerning the True Original Extent and End of Civil Government* by summarizing his criticisms of Sir Robert Filmer's defense of absolute monarchy. Filmer argues that according to the Bible, Adam, the first human being and father of mankind, was absolute ruler over the earth. His title to rule was inherited by his offspring, who divided the earth between them and passed down their right to rule to the kings of the present day. The underlying force of this theory is a pragmatic one. For Filmer, the alternative to basing governmental rule on some such divinely sanctioned prerogative is the despicable theory that "government . . . is the product only of force and violence, and that men live together by no other rules but that of beasts, where the strongest carries it. . . ."[23] The conception that government is the result of force legitimates sedition and revolution, for if force is the only ground of political rule, there can be no morally legitimate ground for condemning those who would overthrow government by imposing a greater force.

The terrible experience of the English civil war continues to haunt the time of Locke as it did that of Hobbes. Writing during the war, Hobbes rejects the feudal theory of absolute rule based on birth and inheritance. He argues that political sovereignty, whether by monarch or parliament, is justified by the social contract—by the agreement of the people who authorize the power of the sovereign, leviathan, as the essential means of achieving social peace. Locke similarly justifies the establishment of constitutional monarchy in which a parliamentary government combines with an executive based on hereditary monarchy. He argues that the social contract is incompatible with absolute rule. The social contract requires that government be responsible to the people, not just at the time of the original establishment of the state, but on a continuing basis. The institutional arrangement of England's constitutional monarchy, where powers are shared between the parliamentary legislative and the monarchy, provide, he thinks, institutional barriers against tyranny and assure that government that is originally instituted by the people, according to the concept of the social contract, continues to remain the instrument of the people.

In his argument Locke examines the human family and other natural social relationships in order to show that they do not provide grounds for the claims of proponents of the absolute rule of king. The argument that descent of rulers from Adam justifies absolute rule supposes that as the father of the first family Adam was naturally an absolute ruler. However, no father of a family, including Adam, can claim to be an absolute ruler because of the very nature of the family itself. The rule of the father, if this is justifiable, is only temporary, not absolute, for children naturally become independent of their parents and grow up to establish families of their own. The first society is to be sure that of the family, for,

> God, having made man such a creature that, in His own judgment, it was not good for him to be alone, put him under strong obligations of necessity, convenience, and inclination, to drive him into society, as well as fitted him with understanding and language to continue and enjoy it. The first society was between man and wife, which gave beginning to that between parents and children, to which, in time, that between master and servant came to be added. . . .[24]

Human society is rooted in nature. Natural desire motivates men and women to unite with one another in the sexual act, whose function is to reproduce the species. This does not mean that sexual desire is a deterministic cause in establishing this first form of society, the family. With the ability to suspend action and freedom to choose the partner who seems best, both the man and woman enter into their relationship voluntarily. In the state of nature, the initial relationship is a free and voluntary one, with all the implications of our previous discussion of that topic applicable to this special case. Human beings, we have seen, are essentially or naturally free, and so the earliest state of mankind and the first forms of community must reflect this basic freedom. The man is therefore not naturally a monarch ruling over a woman. Their relationship is a free contractual one. As we have seen, freedom does not mean license. The terms of the contract are not based on arbitrary whim and the pleasure of the moment, but must take into account the longer-range consequences of sexual union, that is, the procreation of children. More subtly motivating pleasures arise out of the extended relationship—the satisfactions of companionship, mutual help, love. Locke expands his definition of the marital relationship from objectifying legalistic terms to a more encompassing perspective of shared intimacy and mutual concern:

> Conjugal society is made up by a voluntary compact between man and woman, and though it consist chiefly in such a communion and right in one another's bodies as is necessary to its chief end, procreation, yet it draws with it mutual support and assistance, and a communion of interests too, as necessary not only to unite their care and affection, but also necessary to their common offspring, who have a right to be nourished and maintained by them till they are able to provide for themselves.[25]

The moral duties involved in the establishment of marriage result from a consideration of the natural requirements of the human family. Comparison and contrast with different forms of procreative relations in the animal world help to identify just what is required to ensure the well-being of the human family. In animals that feed on grass, the mother is able easily to feed both herself and her offspring without help from the father. The offspring obtain their nourishment directly from the mother until, after a relatively short time, they

are able to feed themselves. In such conditions of nature there is no need for the male to maintain any durable relation to the female. Among predator animals, however, the male must assist in the support of the family by hunting for prey until the offspring are able to hunt for themselves. A longer period of time is required for this to occur, and so the father, mother, and offspring maintain a family relationship for the length of this time. As this natural need terminates during the first year of the offspring's life, "the conjugal bond dissolves of itself, and they are at liberty till Hymen, at his usual anniversary season, summons them again to choose new mates."[26]

Hymen, however, does not fix his appointments with humans by such a regular clock. The time of dependence of the human offspring extends for years, and the mother brings forth new children before the first are able to fend for themselves. The time of obligation for human families to care for the young extends therefore far longer than that found in the animal world and so the marriage bond and its duties must be, and are, extended accordingly. But as this natural requirement is not for the entire lifetime of the parents, there is nothing in the nature of marriage that requires a lifetime commitment. Hence, whatever authority structure is required in the family arrangement, it cannot be taken as a justification for absolute monarchy. Locke argues that

> it would give one reason to inquire why this compact, where procreation and education are secured and inheritance taken care for, may not be made determinable [that is, terminable], either by consent, or at a certain time, or upon certain conditions, as well as any other voluntary compacts, there being no necessity, in the nature of the thing, nor to the ends of it, that it should always be for life. . . .[27]

A relationship of practical partnership and mutual affection provides a durable and supportive framework for raising and educating children. However, differences of opinion inevitably arise between the partners. The husband and wife being separate individuals with different ideas and desires, not only regarding their respective personal affairs, but also about matters of common concern, the question necessarily arises as to how these latter differences will be resolved. In the state of nature, where there are no law courts to give impartial judgment, one of the two individuals must resolve the dispute, ultimately by threat of or resort to force. Locke writes that in matters of mutual concern, ultimate decision-making power or rule "naturally falls to the man's share as the abler and the stronger."[28] He legitimates the harshness of this appeal to force by reference to an assumed greater ability on the part of the husband, but does not justify this judgment, appealing no doubt to the settled opinion of his contemporary readers on this score. Where opinions differ over truth, resort to force is the ultimate decider, as is consistent with the general conditions of the state of nature.

This ground for the man's rule in the family is limited, extending only to the settlement of disputes regarding matters of common concern (such as the manner of educating the children). As it does not extend to the whole of the woman's life, and as the duty of raising their children is inherently limited, there are no natural law grounds here for the absolute rule that is claimed by monarchs as supposed paternalistic rulers over their people. Nature instead requires that the woman remain essentially free and in control of her own life and property. While customs and laws of countries differ regarding the right of separation, the temporary duties of parenthood provide the sole natural basis of the wife's, as well as the husband's, responsibilities and obligations to the marriage.

The relation between husband and wife providing no natural basis for absolute monarchy, even less does the relation between parents and children, for the authority of the father and mother ends when the children are able to shift for themselves. Nor is the relation of master and servant grounds for absolute rule. The servant is an employee who contracts to work for a limited period of time. The authority of the employer is decided by voluntary contract and limited to the specified time of labor, not to other matters outside the time and place of work. The relation of master and slave is different, however. Slaves, "being captives taken in a just war are, by the right of Nature, subjected to the absolute dominion and arbitrary power of their masters."[29] However, those who argue that absolute monarchy is based on natural law cannot appeal to this natural right as a ground for their theory. By engaging in an unjust war, individuals forfeit their right to property. But such a relationship of rule over propertyless individuals cannot be the basis for rule in civil society, "the chief end of which is the preservation of property."[30]

So, far from the absolute monarchy being the natural form of government for civil society, the reverse is rather the case. Where there is absolute monarchy, all the people are effectively in the condition of slaves. This is no government of civil society, but rather a condition of the state of nature in which the power of one individual has succeeded in imposing itself on all others. There can be no defense in such a case from the rights of victors in war who defeat and enslave unjust aggressors (a right that does not extend, Locke argues, to the enslavement of noncombatant wives and children). The argument of the defenders of absolute monarchy has thus been turned on its head. They have tried to argue from grounds of natural law that the only legitimate form of government is absolute monarchy, and that to deny this is to invite sedition and rebellion, the invocation of force against force. But there are no natural grounds for absolute rule in the state of nature with the sole exception of the right of victors in a just war over combatant aggressors. Absolute monarchy can therefore be nothing more than the imposition of force against the rights of naturally free peoples to their own freedom and property.

The Earliest Stage of the State of Nature

The method in which individuals privately settle disputes among themselves, ultimately by resorting to force, was the universal method during the earliest stages of human history, which Locke calls the state of nature. But such a method is not reducible to the triumph of the stronger over the weaker. There must be a justification beyond mere self-interest for using force against criminals. Contrary to Hobbes, Locke does not found the right of individuals to use force against others either on self-interest or individual right but on responsibility to humanity. In justifying the private use of force, Locke does not evoke the right of self-preservation but the individual's duty to preserve humanity. In his own individual case, as well as that in which a neighbor has been attacked, the individual in the state of nature recognizes an injustice not just against one man, but against humanity in general:

> In transgressing the law of Nature, the offender declares himself to live by another rule than that of reason and common equity, which is that measure God has set to the actions of men for their mutual security, and so he becomes dangerous to mankind; the tie which is to secure them from injury and violence being slighted and broken by him, which being a trespass against the whole species, and the peace and safety of it, provided for by the law of Nature, every man upon this score, by the right he hath to preserve mankind in general, may restrain, or where it is necessary, destroy things noxious to them, and so may bring such evil on any one who hath transgressed that law, as may make him repent the doing of it, and thereby deter him, and, by his example, others from doing the like mischief. And in this case, and upon this ground, every man hath a right to punish the offender, and be executioner of the law of Nature.[31]

During the first period of human history, which continues, says Locke, in certain parts of the world, such as among the native peoples of America, individuals are not free to do whatever they please to advance their interests. Contrary to what Hobbes supposes, the law of individual survival is not the only law governing pre-state societies. And individuals are not motivated solely by their own individual interests and desires. This assumption follows from the materialistic metaphysics of Hobbes. The individual being nothing other than a physical body, it follows that the survival and flourishing of that individual body is all that can really matter for an individual. But where an individual is more than a body, as Locke argues, more than bodily survival is of concern to the individual. The human understanding is capable of forming ideas of universality, of searching for the universal essence of things, as well as of being motivated by universal concerns. Even if we can never attain such essences in

our scientific pursuits, we inevitably formulate our practical actions in their light. The abstract ideas of existence as a whole and humanity in general are more than generalizations from individual experiences. They become in turn paradigms governing practical action. We consider ourselves human beings and therefore we act in the name of humanity—and not just for our particular interests.

But resort to force must have been most infrequent in the original state when nature was plentiful, people were few, and their simple desires were easily satisfied. "Men at first, for the most part, contented themselves with what unassisted Nature offered to their necessities. . . ."[32] Property therefore merely extends to the possessions directly used by individuals and the goods that nourish and protect them. Land itself remains in common. Revelation (which for Locke often means the historical records found in the Old Testament) confirms what philosophy can demonstrate—that the earth and mankind are originally the property of the Creator alone, to be shared in common by humanity as a whole. The earth is therefore originally the common property of humanity. As the psalmist, David, himself a king, says, God "has given the earth to the children of men."[33] And this remains true to the present day, says Locke, in places where "fruit, or venison . . . nourishes the wild Indian, who knows no enclosure, and is still a tenant in common. . . ."[34] In this simplest of the stages of human history, individuals depend on a nature that is independent of them, and appropriate what is necessary for their own subsistence. There is a moment, therefore, when the common property of mankind necessarily becomes the property of the individual who appropriates it with his own hand from the tree or vine, or by the skill of the hunt from the roaming herds. Certainly, the food becomes her own when she incorporates it into her own body. By extension, it must be supposed hers from the time she takes it from the spontaneous offerings of nature.

This right of the individual to the fruits of labor is necessarily qualified, however, by the common rights of mankind. To take more than is necessary for subsistence, to hoard goods that will never be used and so will be wasted, is to commit a crime against humanity. But as long as there is sufficient for the subsistence of all, and nothing that is taken by the individual is wasted, how can there be any difficult disputes? If someone takes an apple out of the hand of the one who picked it from the tree, while there are plenty of other apples to go around, his action is not only self-evidently an injustice but also quite irrational. There is no need of law courts to settle such disputes. If the force of the individual is inadequate to right the injustice, the opinion of the community is normally sufficiently powerful to punish the offender and to deter the repetition of the offence. The law of nature is therefore sufficiently clear not only to us now in our theoretical reconstruction, but even more so to the tenants of the earth living everyday under these simple and natural conditions.

In the following passage where Locke argues that the right of property is founded on labor, it is important to note that he qualifies this right by indicating that there is a prior right of humanity that must always be respected:

> Though the earth and all inferior creatures be common to all men, yet every man has a "property" in his own "person": this nobody has any right to but himself. The "labour" of his body, and the "work" of his hands, we may say, are properly his. Whatsoever then he removes out of the state that Nature hath provided and left it in, he hath mixed his labour with it, and joined to it something that is his own, and thereby makes it his property. It being by him removed from the common state Nature placed it in, it hath by this labour something annexed to it that excludes the common right of other men. For this "labour" being the unquestionable property of the labourer, no man but he can have a right to what that is once joined to, at least where there is enough, and as good left in common for others.[35]

Rather than give control over nature to one individual, God gave the earth to mankind in common, "sharing all in one community of nature." How could there be a continual state of war, as Hobbes argues, when nature was abundant, people few, and desires both simple and easily satisfied? There could be no contest over property when it was evident to early peoples that the property of the earth was God's, and Nature's own independent offering, to be used in common by human beings to satisfy their own daily needs.

Second Stage of the State of Nature: The Agricultural Revolution

The situation of common use of nature begins to change, however, when individuals begin to appropriate more than the fruits of the earth—that is, when they put the earth itself to the plow, and thereby appropriate the land itself. Simple subsistence agriculture begins a new stage of the state of nature. The same law however applies as in the previous stage. If an individual puts land under cultivation, it is evident that the land tilled by his own labor belongs to him. There can be no difficult dispute as long as there is plenty of land for further cultivation. The appropriation and cultivation of land should not be regarded as robbing mankind of common property, but rather as effectively adding to it. Thanks to the appropriation and cultivation of land, the produce of the earth increases and so the benefit to humanity grows rather than diminishes. It is human labor, not nature by itself, that is the great source of value.

> An acre of land that bears here twenty bushels of wheat, and another in America, which, with the same husbandry, would do the like, are, without doubt, of the same natural intrinsic value. But yet the benefit mankind receives from the one in a year is worth 5 pounds, and the other possibly not worth a penny; if all the profit an Indian received from it were to be valued and sold here, at least I may truly say, not one thousandth. It is labour then which puts the greatest part of value upon land, without which it would scarcely be worth any thing; it is to that we owe the greatest part of all its useful products; for all that the straw, bran, bread, of that acre of wheat, is more worth than the product of an acre of as good land which lies waste is all the effect of labour.[36]

Locke continues this general argument with an astonishing inspection of all that lies hidden in the labor involved in the production of the simplest loaf of bread. The bread is not only the product of one individual, but that individual labor is a kind of funnel through which flows the labor of a great many individuals engaged in a surprising variety of different kinds of work.

> For it is not barely the ploughman's pains, the reaper's and thresher's toil, and the baker's sweat, is to be counted into the bread we eat; the labour of those who broke the oxen, who digged and wrought the iron and stones, who felled and framed the timber employed about the plough, mill, oven, or any other utensils, which are a vast number, requisite to this corn, from its sowing to its being made bread, must all be charged on the account of labour, and received as an effect of that; Nature and the earth furnished only the almost worthless materials as in themselves. It would be a strange catalogue of things that industry provided and made use of about every loaf of bread before it came to our use if we could trace them; iron, wood, leather, bark, timber, stone, bricks, coals, lime, cloth, dying drugs, pitch, tar, masts, ropes, and all the materials made use of in the ship, that brought any of the commodities made use of by any of the workmen, to any part of the work, all which it would be almost impossible, at least too long, to reckon up.[37]

Despite this complexity, the same natural limitations, or, in other words, the same natural law applies throughout this web of events to the simple farmer who multiplies the produce of nature by the sweat of his brow. If someone puts more land under the plow than he and his family are able to consume, what good would that do him? And should he nevertheless behave in such an irrational way, would it not be evident that he was taking for himself what belongs to humanity? It follows that

> there could then be no reason of quarrelling about title, nor any doubt about the largeness of possession it gave. Right and

> conveniency went together. For as a man had a right to all he could employ his labour upon, so he had no temptation to labour for more than he could make use of. This left no room for controversy about the title, nor for encroachment on the right of others. What portion a man carved to himself was easily seen; and it was useless, as well as dishonest, to carve himself too much, or take more than he needed.[38]

These first two stages of human existence therefore can give no incentive to the formation of states with their systems of law courts and methods of penalizing. The sanctions of public opinion, resting upon the obvious requirements of life (the law of nature), are normally sufficient to regulate the affairs of life, and where violations of these clear rights require more, resort to force by rightly indignant private individuals was a sufficient form of justice.

Money and the Origin of Inequality

The second, impersonal method of settling disputes only becomes meaningful and attractive after human evolution reached the third stage. At some point in human evolution, the simple methods of gaining a living either directly from nature or by subsistence agriculture are replaced by the pursuit of wealth in the form of money. The transition to more complex commercial societies happened in steps. Perhaps an individual has produced a surplus of plums that would decay in a week. He might then barter them for nuts, which will last a year, and in this way makes good use of his labor and its product. Perhaps then he finds some durable metal or crystal whose golden or silvery or sparkling light is pleasing to him and exchanges his perishable goods for something that lasts for years. Some individuals begin to acquire gold, silver, and diamonds, imperishable things that strike their fancy. He can acquire as much of these as possible and so nothing is wasted. In this kind of accumulation he does not violate the law of nature, "the exceeding of the bounds of his just property not lying in the largeness of his possession, but the perishing of anything uselessly in it."[39]

A new stage of human history was in this way born with the use of money, "some lasting thing that men might keep without spoiling, and that, by mutual consent, men would take in exchange for the truly useful but perishable supports of life."[40] With the exchange of perishable goods for money it becomes possible and useful for individuals to produce far more of any particular good than they could directly consume, since they can exchange the surplus of their production for money. In this way, although production is expanded beyond the needs of the producer, there is no waste of the goods of nature and so no violation of its law.

"Thus, in the beginning, all the world was America,"[41] Locke says, until the invention of money fully unleashed the potential value that labor is capable of

adding to nature in its original state. Thanks to money, it becomes possible for some individuals to accumulate wealth at a faster rate than others. Inequality in wealth now grows between individuals. Individuals who are equal as members of the human species now become unequal in the extent of their property. But such inequality is not a violation of natural law since it is based on voluntary consent. Money depends on the common agreement of individuals to use useless bits of metal as a medium of exchange for useful goods. It follows that the inequality of wealth that money inevitably produces is by extension a part of this agreement. This contract that legitimates economic and social inequality precedes the contract that sets up political society:

> But, since gold and silver, being little useful to the life of man, in proportion to food, raiment, and carriage, has its value only from the consent of men—whereof labour yet makes in great part the measure—it is plain, that men have agreed to a disproportionate and unequal possession of the earth—I mean out of the bounds of society and compact; for in governments the laws regulate it, they having, by consent, found out and agreed in a way how a man may, rightfully and without injury, possess more than he himself can make use of by receiving gold and silver, which continue long in a man's possession without decaying for the overplus, and agreeing those metals should have a value.[42]

With the use of money new conditions are created that make it impossible to continue in the old way, which depended on the fact that nature was abundant and land was free for the taking. The use of money now motivates men to put land to use in the production of goods that exceed his ability to consume in order to exchange these goods for money. As a result of this motivating factor, land itself soon becomes scarce. Only now do serious conflicts involving life and death arise, both among individuals and whole societies. Regulation of land use as well as the defense of property rights now go beyond the self-evident norms of simpler societies when land was free for the taking and its use limited to meeting the survival needs of the laborer. As a result, organized states become necessary in order to regulate conflicts among enterprising landowners and merchants, and to settle borders between states themselves. Locke writes that

> in some parts of the world, where the increase of people and stock, with the use of money, had made land scarce, and so of some value, the several communities settled the bounds of their distinct territories, and, by laws, within themselves, regulated the properties of the private men of their society, and so, by compact and agreement, settled the property which labour and industry began. And the leagues that have been made between several states and kingdoms, either expressly or tacitly disowning all

> claim and right to the land in the other's possession, have, by common consent, given up their pretences to their natural common right, which originally they had to those countries; and so have, by positive agreement, settled a property amongst themselves, in distinct parts of the world. . . .[43]

Locke is therefore very clear that the origin of states takes place at a time in history marked by growing inequality between rich and poor, between property owners and the propertyless individuals who must work for them in order to survive. But this does not mean that states are created merely to reflect the interests of property owners.[44] The social contract must be the result of the agreement of all those individuals who remain, despite differences in their outward circumstances, free and equal as human beings. If states are created to regulate and defend property rights, including the right of the heirs to the property of their fathers, they are also obligated to work for the common good. The benefits of the state cannot therefore be only for the security of large property owners.

Of course the poor person also wants security in the little he possesses, and benefits from a condition of law and order. Nevertheless, Locke more explicitly and directly than Hobbes points to social inequality as a precondition for the rise of states. It is the insecurity of large and ever-growing property-holdings that requires the protection of armies and the enforced rulings of courts, based on laws whose main content is the regulation and defense of property. In the state of nature, the natural birthright of free and equal human beings is the foundation of social life. In the state of civil society, a second birthright is added to this first: the right of the sons to an equal share in the property of their father: "Every man," Locke argues, "is born with a double right: first, a right of freedom to his person, which no other man has a power over, but the free disposal of it lies in himself. Secondly, a right, before any other man, to inherit with his brethren his father's goods."[45]

We have thus moved from an original condition in which the earth belongs to all to one in which it has been divided up among a fortunate few. And this inequality, by reason of free agreements implicit in the use of money, arises with the consent of the excluded majority. But the law of nature that declares that the earth is for the benefit of all human beings does not cease to have continuing relevance with the appropriation of the earth in the hands of the rich, and the defense of their possessions by the founding of political societies. The promotion of humanity and the fundamental equality of individuals remains the abiding practical standard of the moral law. And so, if before there was abundance in land, now, in countries where free land is no longer available, a pressing moral problem necessarily arises. Some hints as to what to do about this glaring problem must be gleaned from the scanty texts that touch on it. In his discussion of conquered peoples, Locke argues that the property rights of

the conqueror are limited by the subsistence rights of the wives and children of the conquered soldiers, for

> The fundamental law of Nature being that all, as much as may be, should be preserved, it follows that if there be not enough fully to satisfy both—viz, for the conqueror's losses and children's maintenance, he that hath and to spare must remit something of his full satisfaction, and give way to the pressing and preferable title of those who are in danger to perish without it.[46]

Presumably such rights persist in civil societies, but it is not clear how Locke believes they are to be respected. Should a poverty-stricken reader have the opportunity to read his *Essay*, he would surely be impressed with Locke's repeated assertion that plenty of land lies waste in America.[47]

Creation of the State: From Plato and Aristotle to Hobbes and Locke

In the state of nature, where there are no legal institutions of justice, and as public opinion is often an insufficiently effective sanction, it is left to individuals themselves in the last instance to resolve their conflicts by punishing the supposed injustice. As both parties in the conflict may believe in the justice of their claims, the result is determined by the strongest force—whether individually or in groups such as clans engaged in feuding and fighting. If I consider myself unjustly wronged by you, and you consider yourself unjustly wronged by me, how can we by ourselves justly resolve our conflict? What is needed is the judgment of an impartial individual backed up by the power of the agents of the community to enforce the decision. To obtain such an arrangement of society, individuals give up their natural right to resort to force to solve their conflicts. Each individual seeking his own happiness in his own way, existence in the state of nature, without the power of civil law, is, on occasion, uncertain and dangerous. However, this uncertainty is multiplied geometrically at a time when the unlimited pursuit of money leads to conflicts between large property owners and between land-hungry states.

Thus in such parts of the world, people abandon this precarious state of nature and enter into civil arrangements where there are legislatures that promulgate detailed laws and impersonal judges authorized to resolve disputes—all of which being backed up by a power of strict enforcement. The fundamental purpose of such a civil society is the protection of the individual's fundamental rights to life, liberty, and property from unjust interference by others. The individual's natural right to the pursuit of her happiness is in this way made more secure and more certain.

Life in organized civil societies with their law courts, legislatures, and police power requires that the individual members of society give over to the representatives of the state their natural right to be judge, jury, and executioner of the natural law. Such confidence in the fairness of government in turn supposes that there are some individuals capable of rising above the trivial pursuits of purely personal advantages to consider or promote the common good. Locke's theory legitimates this postulate. The legal system and legislature of civil societies must perform the function of Plato's philosopher king. In his *Republic* Plato argues that the only alternative to the absolute rule of the strongest is the absolute rule of the philosopher king. Only a philosopher can rule justly because, having access to the higher happiness available to those who know and love truth, goodness, and beauty, he can be trusted to rule wisely and not to abuse power for selfish motives. In the absence of a philosopher king, Plato devises institutional barriers to tyranny—rules for agents of government that lessen the possibility that they will use their positions of power for private gain. One such rule is that forbidding the "guardians" to have access to the corrupting influences of gold and silver. It is precisely such disrupting influences to the balance of natural societies, in Locke's view, that make states necessary in the first place, to provide impersonal methods of resolving and enforcing the disputes inevitably caused to the accumulation of gold and silver.

Like Plato, Locke has a vision of the pursuit of the highest good, the *summum bonum*, which he believes can motivate some individuals. Individuals who genuinely pursue the highest good transcend narrow egotistical goals and find their happiness in working for the well-being of humanity. However, many will fall far short of this exalted ambition, settling instead for trivial pursuits devoted to the elimination of petty personal irritants and pains and the achievement of a minimal level of comfort for themselves. Because ideas of happiness differ significantly between such individuals and because their social natures compel them to live in society, conflicts between them inevitably arise. Although this is true in the simplest family, the natural conditions of life in the earliest societies mitigate such conflicts. The introduction of money however eliminates these restraints of nature. As the accumulation of wealth in the durable form of money becomes possible, production of goods is no longer limited by the simple natural needs of the individual. The pursuit of wealth soon far exceeds the obvious natural limitations that were evident in simpler times. How much land is it legitimate to own? The rule of the state of nature not to waste produce quickly becomes useless to guide the individual as the demands of new wealth overthrows the former traditions of public opinion. Power struggles naturally intensify over lands that have become increasingly valuable and increasingly scarce.

While Hobbes roots this looming state of war of all against all in the simplest, most natural conditions of human life, Locke shows that the time and cause of great insecurity and danger is that of the unnatural economy in which

the unfettered pursuit of wealth in the form of money invades and inspires the nation. From the vantage point of Locke, it becomes clear that Hobbes projects the conditions of much later times into the remote past and equates mercantile self-interest with human nature. Locke explicitly recognizes that the origin of the state lies not in human nature *per se*, but in those particular motivations that are elicited by the historically specific pursuit of happiness that takes the form of money-making. In this way, Locke links up with Plato's and Aristotle's argument that the merchants know no natural barriers to the accumulation of wealth. However, instead of seeing such motivation as inimical to the state, as do the Greek philosophers, Locke, like Hobbes, argues that it is its very foundation and *raison d'etre*.

However, the fact that mercantile self-interest is not equated with human nature means that for Locke there is an independent standard of human nature that should regulate monetary accumulation and exchange—the standard of morality. Moral behavior is not, as it is for Hobbes, the reflection of individual self-interest, but such self-interest must be submitted to the standard of universal humanity. This radical difference in moral theory coincides with an equally radical difference in metaphysics. We have seen that there is an implicit contradiction between Hobbes's materialist, deterministic metaphysics and his account of the establishment of the state as the means by which individuals free themselves from the rule of their passions. Individuals free themselves from the rule of their passions during that creative moment when they imitate the divine *fiat*—let it be done—by which they create the state. And then, like the Creator who rested on the seventh day, they seem to want to rest from their work, sink back into the rule of their passions, and let their creation, the great leviathan, rule them through fear. For Locke, who establishes the individual's spiritual freedom to determine her own will and desires, no such contradiction arises between human nature and its social creations.

On the Nature of Representative Government

For Locke, not only do citizens freely originate the social contract, but they must have the power to regulate its continuing operations through elected representatives in government. Locke's stand on this matter sharply differentiates his position from that of Hobbes. Hobbes, of course, previously argued that the state, even if it be a monarchy, rests on the free, unforced consent of the governed. Moreover, the rule of this sovereign, whether monarch or parliament, must respect the basic civil rights of the citizen to life, liberty, and property, including the rights of families to determine the education of children. And yet, by the very nature of the sovereignty that Hobbes wants to defend, the citizen has no legal power to ensure that the ruler abides by these requirements. According to Hobbes, setting up such ongoing limitations on power seriously

undermines the authority that a state must have to rule effectively. Why should the people obey laws from one government if they can be changed the next day should the people choose some other government?

On the other hand, why should the sovereign respect the basic rights of citizens if all power is in the hands of one man or a small group of men, and there is no power to check them? Anticipating this argument, Hobbes implicitly appeals to Plato's idea of the philosopher king in urging the monarch to read his book and study the reasons for, and the requirements of, the social contract. Unless the state rules in consciousness of the fundamental civil rights of the citizens, there will inevitably be a descent from social peace to civil war—a war whose outcome is mathematically certain given the inherent weakness of a group in power when it has alienated the vast majority of society. Thus for Hobbes the great check that the people keep on the power of the sovereign is the threat of civil war. For a ruler who rules justly by respecting the basic rights of citizens there will be no threat of rebellion. The citizens will have all that they desire to achieve by their compact with government: that is, they will be able to pursue their individual interests with that minimum of restrictions required by mutual legal enforcement of everyone's civil rights. A ruler who rules unjustly, on the other hand, will only push the members of his state to rebel against him, and in a contest between the power of one man or a small group of men and that of the vast majority of society the outcome should be evident to an intelligent ruler.

We saw that for Hobbes, a basic condition of just rule is the establishment of laws based on the ideas of justice that are systematically laid out in *Leviathan*. The sovereign must therefore rule according to a system of laws that respects the life, liberty, and property of its citizens. In opposition to the feudal institutions of the past, including the elite power of the judges of the common law, Hobbes defends the sovereignty of law itself. Such law is not buried in the piecemeal decisions of previous judges, but is clearly spelled out in a system or code of law organized and arranged in a rational order, founded on rational principles, and so accessible to rational individuals. In such a system, the individual citizen has knowledge of where he stands in regard to the law. Arbitrary decisions by local authorities based on secretive knowledge is thereby overthrown by the publicly announced and comprehensible body of the laws of the citizens whose civil liberties are entrenched therein. In his conception of the sovereignty of such rational or natural law that has been legislated as positive law, Locke follows Hobbes's theory of the rule of law in the form of a legislated legal code.

In the uncertain times of the 1640s as defenders of the parliamentary republic waged war against defenders of the absolute monarchy, Hobbes allows for either outcome by applying his defense of sovereignty to both monarchies and parliaments. Even a parliament cannot be based on universal suffrage. Once the propertyless masses have control over the state, what will prevent

them from using their power to redistribute property in their favor, or according to an egalitarian scheme? The result of such an attempt will inevitably be civil war, and descent back into the uncertainties and miseries of the state of nature. A viable parliament must therefore rule independently of the legal control of the citizens, with suffrage limited to significant property owners, and even then the members of parliament may be more in the position of a permanent oligarchy, in the manner of the Roman Senate or the British House of Lords, than competitors for the favor of an electorate, however restricted to the grander citizens. Let the Levelers and the majority of the members of civil society who are without significant property understand and consent to a state of inequality in which suffrage, if there is to be any at all, is limited to major property owners.

In turning definitively from absolute monarchy to constitutional monarchy with the collaboration of a parliament elected by well-to-do property owners, Locke's position reflects the new circumstances that emerged in England in the later part of the century. His position eventually became the new norm, but it wasn't so when he first formulated it in the midst of political turmoil and militant combat. His opposition to absolute monarchy caused him to flee England for his life. But when, after the Glorious Revolution of 1688, the movement of history finally and definitively turned in favor of limited monarchy alongside an elected parliament, Locke's unqualified defense of constitutional monarchy achieved philosophical preeminence over the earlier position of Hobbes.

The question of how to guarantee that the sovereign respect the rights of the citizens in the name of which the state is created was an issue that Locke attempted to resolve. For Locke, the social contract is not confined to a time in history when state governments were originally set-up. Nor should its defense be based on purely intellectual considerations regarding the rationality of accepting a system of laws and law enforcement. The social contract must be an ongoing, institutionally supported agreement of all members of civil society. The members of society who established the social contract must be regarded as continually maintaining it. They who created the state cannot be regarded, once the state is created, as passive objects of state power. The creators of the state do not then become its creations. The threat of punishment is an effective motivator for human behavior, but human beings are not mere passive products of their fears and desires. To the extent that individuals are governed primarily by such short-term motives, to that extent do they fall short of their own potential as free human beings. Thus government must be based on the continuing and institutionally facilitated support of the free individuals whose agreement to live in society is acknowledged to be its foundation. The freedom of citizens is not founded on a supposed capacity for arbitrary decisions but on living according to laws they create themselves through their representatives in parliament.

A major check on the arbitrary power of government is the law itself, for rulers cannot be seen as breaking their own publicly proclaimed and rationally justified laws. The principles of such laws are established by reason and based on natural law. They are therefore not the property of the common-law judges who interpret the law based on the precedent of the opinions of previous judges. Such rational laws should be spelled out in a coherent system or code of law that is enacted by a representative parliament and to the execution of which the monarch is publicly bound. The law of the land thus acquires the status of a public document of the duties of government and the rights of citizens. By referring the establishment of such a code of law to a representative legislature, Locke strengthens the principle of reason-based law previously defended by Hobbes. However, the English revolution of 1688 failed to take the step of establishing the rational code of law, and in the compromising situation of that revolution not only did the feudal institution of the monarchy survive, but so did the common law. It remained for the eighteenth-century Enlightenment to give force to the conception of law originally defended by both Hobbes and Locke, but abandoned in England, by establishing the great codes of the civil law, beginning in France and spreading from there by means of the Napoleonic wars throughout the European continent. However, the first embodiment of this requirement of a rationally formulated code of law, limited as it was to the public law of the state, was the U.S. Constitution, including its Bill of Rights.[48]

A further check on arbitrary rule, besides the rationality of the laws and appeal to the enlightenment of the ruler, is a system of division of governmental powers and elective representation in parliament. In defending representative government, does Locke then take the Leveler position that all citizens have an equal say in the election of their representatives? Like Hobbes, Locke ultimately relies on philosophical arguments to restrain government, and in the last instance raises the specter of civil war. Everywhere Locke insists that government is founded on the consent of the governed, but nowhere does he say how the governed effectively exercise that consent. For today's readers the answer to that question is evident—the danger of government abuse of power is held in check by the periodic exercise of the ballot by all adult members of the society. In view of this "self-evident" understanding, the absence of any discussion of this in Locke's work is striking. Instead, Locke makes a feeble effort to explain how constitutional government imposes internal checks on power. He lists four such "bounds which the trust that is put in them by the society and the law of God and Nature have set to the legislative power of every commonwealth, in all forms of government."[49] The first is what might be called the equal protection of the laws, which are "not to be varied in particular cases, but to have one rule for rich and poor, for the favourite at Court, and the country man at plough."[50] The second is that laws "ought to be" for the common good. The fourth is that legislatures should not delegate their powers to some

other body. The third bound to the power of the legislature clearly brings out the vagueness of Locke's argument:

> They must not raise taxes on the property of the people without the consent of the people given by themselves, or their deputies. And this properly concerns only such governments where the legislative is always in being, or at least where the people have not reserved any part of the legislative to deputies, to be from time to time chosen by themselves.

The ringing demand of the American colonists that there should be "no taxation without representation" is here affirmed. But what exactly constitutes representation? Locke here allows for a variety of possibilities of which one is that a part of the legislative is chosen by the people. In England, with its hereditary House of Lords, only one part of the legislature, the House of Commons, was chosen by the people—and then not by all the people but only by individuals above a certain property threshold. The leeway of Locke's position allowed for the complex "checks and balances" of the original U.S. Constitution in which the popular branch of government elected by universal male suffrage (excluding slaves and Indians) would be checked by a Senate appointed by the House. The fact that there were two senators from each state regardless of the size of the population insured, and continues still today to insure, that no simple concept of "one person one vote" be the basis of representation. Despite these limitations, the early U.S. Constitution went much further than the "unwritten constitution" of England with its hereditary House of Lords and a House of Commons elected by the wealthy—to say nothing of the persistence of the hereditary monarchy that was responsible for the execution of the laws.

The absence of effective consent as the basis of government is evident where Locke discusses the possibility of a conflict between the people and the ruler. The recourse of the citizens, in such a case, is not recourse to the ballot box but to the arbitration of a Higher Power, and then, presumably with the approval of this Judge, to take up arms in civil war:

> If a controversy arise betwixt a prince and some of the people in a matter where the law is silent or doubtful, and the thing be of great consequence, I should think the proper umpire in such a case should be the body of the people. For in cases where the prince hath a trust reposed in him, and is dispensed from the common ordinary rules of the law, there, if any men find themselves aggrieved, and think the prince acts contrary to, or beyond that trust, who so proper to judge as the body of the people (who at first lodged that trust in him) how far they meant it should extend? But if the prince, or whoever they be in the administration, decline that way of determination, the appeal then lies no where but to Heaven. Force between either persons who have no

> known superior on earth or, which permits no appeal to a judge on earth, being properly a state of war, wherein the appeal lies only to Heaven; and in that state the injured party must judge for himself when he will think fit to make use of that appeal and put himself upon it.[51]

Thus, while endorsing the idea of limited government, Locke implicitly affirms its ultimately unlimited nature. Without the possibility of recourse to democratic elections to solve important disputes, the only recourse of the citizenry is to armed rebellion. Locke's position, despite attempts to distance himself from it, therefore converges with that of Hobbes. The main point for Locke is that government exists for the protection of property, and if this condition is preserved, there is no absolute government. Government is then said to be based on the consent of the governed. This is implicit in Locke's attempt to illustrate the limited character of government, as opposed to what is supposed for absolute monarchy, by referring to the practices of the British navy:

> [W]e see, that neither the sergeant that could command a soldier to march up to the mouth of a cannon, or stand in a breach where he is almost sure to perish, can command that soldier to give him one penny of his money; nor the general that can condemn him to death for deserting his post, or for not obeying the most desperate orders, can yet with all his absolute power of life and death dispose of one farthing of that soldier's estate, or seize one jot of his goods; whom yet he can command anything, and hang for the least disobedience. Because such a blind obedience is necessary to that end for which the commander has his power—viz., the preservation of the rest, but the disposing of his goods has nothing to do with it.[52]

It seems then that the military operates within the terms of the social contract, not because it is elected—quite the contrary—nor even because it respects the lives of the soldiers—armies and the governments that create them must wage war—but because it does not violate their property rights. The special problem of consent, mentioned in Locke's third bound to the power of parliament, arises because the necessity of taxation is a governmental incursion into the property rights of the citizens. There must then be a special form of consent in this circumstance, since the general consent on which government is based has to do with the protection of property.

Locke is famous for his defense of majority rule (raising the problem of how to defend minority rights) which suggests to the contemporary reader that he defends democracy or the rule of the majority of the citizens through universal suffrage. But what he means by majority rule is not that the majority of the citizens should select the members of parliament, but that the majority of the members of parliament, *however they are selected*, should decide on legislation.

Since parliament is deemed in principle and however selected to represent the citizens, a majority of the members of parliament constitutes the operational meaning of the idea of majority rule by the citizens as a whole. What seems to follow from his general arguments that legitimate government rules by consent of the people is that the representatives of the people should be elected by majority vote of all citizens. However, Locke avoids the issue of how the members of parliament should be selected. In the following passage, he slides from the general idea that the body politic is constituted by all the members of society and must operate as a single unit by majority rule to the practical conclusion ("And therefore we see . . .") that the majority of the members of parliament should determine legislation:

> For, when any number of men have, by the consent of every individual, made a community, they have thereby made that community one body, with a power to act as one body, which is only by the will and determination of the majority. For that which acts any community, being only the consent of the individuals of it, and it being necessary to that which is one body, to move one way, it is necessary the body should move that way whither the greater force carries it, which is the consent of the majority, or else it is impossible it should act or continue one body, one community, which the consent of every individual that united into it, agreed that it should; and so every one is bound by that consent to be concluded by the majority. And therefore we see that in assemblies empowered to act by positive laws where no number is set by that positive law which empowers them, the act of the majority passes for the act of the whole, and of course determines as having, by the law of Nature and reason, the power of the whole.[53]

The English government that emerged from the Glorious Revolution was not a democracy. The representatives in parliament were selected by propertied individuals only, while the executive branch of government remained in the possession of an hereditary monarchy. Locke provides justification for this compromising system, with the exception of its preservation of the common law and the independent judiciary, which Locke wanted to be subordinate to a rationally formulated body of law legislated and enforced by the state. It is in this regard that Locke's thought remained in advance of the system of government of his time, as well as an inspiration for the advances in law of the American and French revolutions. It remains for Hume, as we will see, to adjust theory more completely to practice and so give justification to the actually existing English form of government, and, in this process of readjustment, to radically transform the revolutionary philosophical theories of his predecessors.

Thus with the English revolution of 1688, the people as a whole, however eloquently referred to as the ultimate authors of government, were not given

practical control over the government that is alleged to represent them and rule by their consent. Without property and dependent on others for their employment, and poorly educated because poor, the actual majority could not be trusted with the right to determine the laws that govern them by selecting their representatives. Locke entrusts government to those whom he regards as the abler, if not stronger, members of society to govern beneficently in the interests of the whole—despite the claim that all citizens are fundamentally equal, and all are participants of the social contract. Arguing hopefully for human freedom and the limited state, Locke effectively defends the absolute Hobbesean state of the propertied minority. In the next century Rousseau would use a strong word to describe such a position—hypocrisy.

Chapter Six

From Berkeley to Hume: The Radicalization of Empiricism

All the Objects of Understanding Are Only Ideas

In 1710, the twenty-five year old George Berkeley (1685–1753) was ordained a priest of the Church of England; he would eventually be appointed Bishop of Cloyne in 1734. And in that same twenty-fifth year he published his landmark philosophical work, the *Treatise Concerning the Principles of Human Knowledge*. At the head of this work, Berkeley declares the purpose of his book to be the philosophical defense of the fundamental concepts of religion:

> WHAT I here make public has, after a long and scrupulous inquiry, seemed to me evidently true and not unuseful to be known—particularly to those who are tainted with Scepticism, or want a demonstration of the existence and immateriality of God, or the natural immortality of the soul.[1]

Berkeley had in the previous year established his credentials in the modern sciences with the publication of his book, *A New Theory of Vision*. His defense of religion therefore would be in the spirit of the new sciences. When a certain philosophical prejudice has been removed, he argued, it will be clear that the new sciences are completely consistent with the fundamental principles of religion and spirituality. All that is needed is to eliminate an illusory philosophical concept that has been the mainstay of atheists of all stripes—the concept that all reality is based on unconscious, inert matter. All that is needed to staunch the growth of skepticism and put down the threat of atheism is to show that, contrary to certain appearances, not only does the sun not revolve around the earth, but that neither the sun nor the earth have any existence at all outside of their being objects of human consciousness.

On the Berkeleyan grounds that *to be is to be perceived*, there are no independently existing sun and earth, or any of the planets and galaxies, except as objects of perception. If this can be demonstrated, the atheist's claim that the

world is a blindly evolving result of interactions of unconscious material particles, and that the human mind is but an unreal phantasm floating absurdly on its surface, will have been utterly demolished. But isn't the claim itself patently absurd? Berkeley quickly cautions his reader that certain passages of his work, if taken out of context and if the work is not read in its entirety, will be subject to "gross misinterpretations" and regarded as suggesting the most "absurd consequences," such as that the sun and the earth do not really exist. To say that they exist only in connection with our experience of them is not to deny their existence but to affirm the reality of human experience. Berkeley wishes to defend all the claims of common sense, such as that "snow is white, and fire hot."[2] The philosophers who claim that independent matter exists are driven by this very belief to deny such evident propositions of common sense.

Berkeley does not claim that his argument rests on any original principle of his own. It is the logical consequence of the basic principle of the scientific philosophy of Locke. Only Locke's inconsistencies are removed. The irrationality of the prejudice in favor of an unconscious material substance becomes obvious when we reflect on Locke's basic principle and starting point. We will then see that the persistence of a belief in matter reflects only his failure to follow through with his own fundamental ideas. The starting point of Locke's philosophy, we know, is the recognition that the proper objects of our understanding are ideas—not independently existing material things. Berkeley begins the exposition of his argument with these "evident" principles, clearly derived from Locke's philosophy:

> It is evident to any one who takes a survey of the *objects* of human knowledge, that they are either ideas actually imprinted on the senses; or else such as are perceived by attending to the passions and operations of the mind; or lastly, ideas formed by help of memory and imagination—either compounding, dividing, or barely representing those originally perceived in the aforesaid ways.[3]

Locke himself often says that the *immediate* or *direct* objects of knowledge are ideas, whether they be ideas of sensation or of reflection. The addition of the terms "direct" or "immediate" suggests that there are other objects besides these, objects that we never perceive, but are indirect causes of the ideas we do perceive. These other objects to which we must accede somehow indirectly are those supposedly independently existing material substances that are alleged to produce our sensory ideas. Thus Locke affirms clearly that all the evidence of empirical experience consists solely of ideas, and yet we are to imagine that in addition to these there is something quite different from them—non-ideal entities of an imperceptible kind which our ideas supposedly represent. Let us simply be consistent with this beginning principle, says Berkeley—that we *never* perceive external objects, but only ideas in the mind. There are three kinds of

ideas—passively received sensory ones, ideas of reflection on the activities of our own mind, and the ideas actively produced by our mind through remembering or imagining. For Locke to say that we perceive these ideas directly misleadingly suggests that we somehow indirectly perceive other, material objects. But the world "direct" here simply means that what we actually perceive are ideas and only ideas, so that we never perceive anything else. However, supposedly there is something else that exists which these ideas represent—the independently existing material substances that allegedly cause them. What these material substances are in themselves, and how they cause ideas in us, Locke himself admits, it is impossible to say.

The Relativity of Perception vs. Ideas of Primary Qualities

Let us follow Locke's plain historical method and ask what evidence there is, if all we actually perceive are ideas, for any material reality beyond these ideas. Locke argues that the impossibility of not perceiving a certain idea under a given circumstance is evidence of the fact that something outside ourselves is causing that idea. That's a reasonable inference from experience. But why should this external cause be an independent material thing, and not, say, God? Locke himself must resort to the Divine Agent to explain how matter and ideas correlate with one another. To explain how the supposed ideas of secondary qualities, such as colors or pain and pleasure, are produced by physical causes that are radically different from them, Locke argues that God correlates imperceptible material reality and perceptual representation. But why is an intervening, imperceptible matter needed at all in this arrangement? Why not simply suppose that God produces in us the idea of heat in conjunction with our perception of a nearby or great fire? If there is no material reality to complicate matters, we can simply say that fire is hot. If we must accommodate an imperceptible material fire along with our perceptions, we will have to bewilder the philosophically uninstructed with such paradoxical statements as that the fire itself is not hot, that hot represents but does not resemble it, and that hot is merely an immaterial idea in us—produced nevertheless by God Himself. Why not simply say that God produces in us the experience of a hot fire? Everyone with common sense knows that fire is hot—except the philosophers who have to reconcile actual experience with the supposition of a material substance that is outside of and over and above and beyond that experience.

Thus the activity of unconscious material things is not the only possible explanation of the fact that when I look in a certain direction I cannot help but to see the white snow falling from the grey sky. However, before we agree with this alternative explanation, which is suggested by Locke's own argument, it is necessary to address more directly the notion of a material thing that exists

outside of our perception. If this idea can be shown to be in itself inconceivable and absurd, Berkeley reasons, then we will look more favorably on the alternative one.

Locke does not completely enclose our experience in a realm of appearances cut off from the reality of material substances, but argues that there are some clues for the existence of this alleged reality found in the ideas themselves. These clues are the so-called ideas of primary qualities—our perceptions of shapes and figures, motions and sizes. Such ideas not only represent, but also resemble material things, we are told. They are unlike the nonresembling ideas, such as of hot and cold, which are completely unlike their material objects and causes. Locke argues: if you put one hand in a certain water it will feel hot; if you put another in that same water, you will feel cold. How then can hot and cold be in the water itself? Such ideas of hot and cold are then said to be mere representations without resemblance. They are to be distinguished from the resembling perceptions, such as that of shape. When we feel a square object with one hand and then with the other, we can imagine no circumstance in which the same object will not feel square.

This argument unnecessarily supposes that there is some independently existing water out there that is separate from my perceptions of it, which cannot be both hot and cold at the same time. But if hot and cold are relative to our experience, and there is no independently existing water in itself, then there will simply be the water experienced as hot by the one hand and water experienced as cold by the other. These two experiences follow in a regular sequence according to a law that is discovered by scientific observation. Thus if there are two buckets of water, one of which feels cold and the other feels lukewarm, and I place one hand for a time in the cold (cold-feeling) water and then plunge it in the next bucket, the water that previously felt lukewarm will now feel hot. And that is simply what it is. If we repeat this experience using water that feels hot (i.e., that *is* hot) and water that feels/is lukewarm, the water that previously felt lukewarm will now feel colder—and that's what it will be: warm to the one hand and cold to the other. If we say that the water in itself, independently of how we experience it, cannot be both hot and cold, we are artificially creating a problem for ourselves. In both cases, a regular sequence of experiences is observed.

This is all that is meant by causal law. The laws of science, understood as regularities of experience, are only rendered paradoxical by the invention of imperceptible powers for independently existing and imperceptible substances. From a position on earth, we see the sun moving around us. However, from another position, according to modern astronomy, we will see the earth moving around the sun. Does the fact that the latter experience is possible require that we deny the reality of the former one—stating that one is the reality and the other a mere appearance? By eliminating the idea of material substance, we can say that *both* experiences or appearances are realities. Science simply describes

the succession of experiences that we have in our observations. This is all that is meant by the laws of nature that science discovers by observation.

And as to the impossibility of varying the shape of something depending on our perception of it, Locke's argument depends on the perception of shape by means of touch. However, if we look at the supposedly same shape as a visible phenomenon, the variation depending on perceptual perspective is evident. The perception of squareness depends on the angle from which you see an object. For from one side the angle appears different than from another. Where then are those unvarying ideas of primary qualities that Locke contends are evidence of material substances?

In Berkeley's popular exposition of his argument in *Three Dialogues Between Hylas and Philonous*, Hylas (from the Greek word for matter) clearly fails to defend the Lockean position regarding the objectivity of figure and extension against the withering replies of Philonous (from the Greek for lover of mind):

Phil. Is it your opinion the very figure and extension which you perceive by sense exist in the outward object or material substance?
Hyl. It is.
Phil. Have all other animals as good grounds to think the same of the figure and extension which they see and feel?
Hyl. Without doubt, if they have any thought at all.
Phil. Answer me, *Hylas*. Think you the senses were bestowed upon all animals for their preservation and well-being in life? or were they given to men alone for this end?
Hyl. I make no question but they have the same use in all other animals.
Phil. If so, is it not necessary they should be enabled by them to perceive their own limbs, and those bodies which are capable of harming them?
Hyl. Certainly.
Phil. A mite therefore must be supposed to see his own foot, and things equal or even less than it, as bodies of some considerable dimension; though at the same time they appear to you scarce discernible, or at best as so many visible points?
Hyl. I cannot deny it.
Phil. And to creatures less than the mite they will seem yet larger?
Hyl. They will.
Phil. Insomuch that what you can hardly discern will to another extremely minute animal appear as some huge mountain?
Hyl. All this I grant.
Phil. Can one and the same thing be at the same time in itself of different dimensions?
Hyl. That were absurd to imagine.
Phil. But, from what you have laid down it follows that both the extension by you perceived, and that perceived by the mite itself, as likewise all those perceived by lesser animals, are each of them the true extension of the mite's foot; that is to say, by your own principles you are led into an absurdity.
Hyl. There seems to be some difficulty in the point.

Phil. Again, have you not acknowledged that no real inherent property of any object can be changed without some change in the thing itself?
Hyl. I have.
Phil. But, as we approach to or recede from an object, the visible extension varies, being at one distance ten or a hundred times greater than another. Doth it not therefore follow from hence likewise that it is not really inherent in the object?
Hyl. I own I am at a loss what to think.[4]

Berkeley's argument here does not completely refute Locke's conception of ideas of primary qualities. The relativity of the perception of shape described here is not by itself incompatible with Locke's conception of ideas of primary qualities. Locke does not say that the shape that we at first perceive must be the real shape, but rather that the material reality has some kind of shape. As we go more deeply into observation of the object using a microscope, we discover new shapes. For Locke, this means that the first shape that we perceived was not the true shape, while the second brings us closer to the truth. However, this second perception is itself inadequate, for we have still not reached the ultimate configuration of particles, which may forever be hidden from us. The perceived shapes and motions are therefore quite different from the real ones. But whatever the level at which we perceive the shape of things, they continue to have shape. Locke does not argue that the shapes or the extensions that we see are the real ones. His argument is that the ideas we have of shapes and extensions and motions can be meaningfully used in a study of the material world, whereas our ideas of color and smell, pain and pleasure, cannot. It remains the case that for Locke, we do not, and perhaps in principle cannot, know the ultimate shapes, extensions, motions of things. But if, because of the limitations of our sensory capacities, we do not know what the ultimate shapes and motions are, how do we know that ultimately there in fact are shapes and motions? Is this a logical extension from what we do know, as Locke argues, or a leap of faith in what Locke himself calls the dark side of our understanding?

A more powerful argument against the objectivity or independence of our idea of shape is implied in Berkeley's *New Science of Vision*. There Berkeley seems to be grappling with Locke's argument that the shape of an object to our touch does not vary from hand to hand. Even a mite, if it had some geometric knowledge, would know that it turned a ninety-degree angle when it crawled around the corner of a square object. This implies that shape is in the object, not a purely subjective phenomenon relative to the perceiver. Locke's argument thus presents a special difficulty for Berkeley's position that all sensory objects are relative to the perceiver. Presumably, it was this Lockean example that stimulated Berkeley to make what has been regarded as an important discovery in the science of perception.[5] The fact is, as the argument of Philonous shows, that this apparent intransigence of tangible shape is nowhere evident for visible shape, where the relativity of the angle to the point of view of the

observer is evident. Hence, visible shape is relative to the perspective of the viewer, while tangible shape is not. But this suggests a deeper sort of relativity for shape—a shape-for-touch and a shape-for-vision. There are two different kinds of shape or figure, depending on the mode of perception. This duality of perceptions of shape makes Berkeley's case that shape too is relative to our perception and cannot be regarded as applying to things in themselves. If shape is so dependent on the mode in which it is perceived, how then can there be any such thing as shape in itself that supposedly belongs to material things existing outside us?

Matter: The "I Know Not What"

Let us next consider more directly what is implied by Locke's notion that some of our ideas in fact resemble materially existing things, rather than only representing them. How can something that is nonmaterial resemble something that is material? If matter has extension, for example, ideas obviously and admittedly do not. How then can a nonextended idea resemble an extended thing? If there is resemblance it must go in both directions, that of matter to idea, but also that of idea to matter. When I have the sensation of roundness, supposedly coming from a materially independent round ball, I am saying that my idea of round is a sensation. But how can the sensation of roundness be a quality of the ball itself, unless the ball too is capable of having sensations? But according to the defenders of the existence of matter, a ball is supposed to be a material object without any capacity for having sensations. It is impossible then that there should be in the ball anything resembling my sensation or idea of it.

Finally, let us examine the ultimate basis of all this speculation about a material substance. Locke says that a material substance is "a supposed I know not what, to support those ideas we call accidents."[6] This formulation states that the ideas we have in us also exist outside us in some material substance—whether as primary or secondary qualities. We cannot help but think that these qualities that we perceive in ourselves must, when regarded as existing outside of us, also exist in something—not in another thinking being like ourselves, but in a nonthinking material substance. But let us try to imagine what this might be. Are we to say that this material "substratum" is *spread out* under the accidents or qualities that make up the perceivable aspects of the thing? But when we say spread out, we are attributing to the material substance the aspect of extension. But this is supposed to be the support of extension. It is not itself extended, and so how can it be spread out? Philonous asks sarcastically whether we should imagine the substratum as having legs to hold up the qualities. However we try to imagine this material substance, we inevitably refer to some definite perceivable quality, some idea of which it is supposed to be the support. If we remove all those qualities that the material substance is supposed to

support, or be a kind of container for, we are left with a perfect emptiness, or, as Locke himself says, an "I know not what."

We see how far Locke has departed from the plain historical method that rejects notions if there is no "idea" on which they can be based. If we have no idea what it is that underlies the perceivable qualities, how, in the name of any respectable plain historical method, can we suppose that such unthinkable matter actually exists? The idea of an immaterial substance is an abstraction that remains after we take away all the particular qualities that belong to our complex idea of any particular thing. Locke, we know, argues that the primary distinction between the understanding of humans and that of brutes is the humans' ability to abstract. Animals "are the best of them tied up within those narrow bounds [of particular ideas], and have not (as I think) the faculty to enlarge them by any kind of abstraction."[7] The concept of a material substance is an abstraction from all particular ideas that we have of particular things. This concept therefore supposes the legitimacy of what Locke calls the power of abstraction. But if there is no such power, if all there are are words describing an activity for which there can be no distinct idea, no image in our minds, then there is no humanity in general as there is no materiality in general.

Berkeley says he finds himself incapable of such abstractions. He can imagine a head separate from a body and a body separate from a head, and by combining the head of a man with the body of a horse he can produce the image of a centaur. But when he tries to imagine a man in general, who must have some color but no particular color, he finds that he is incapable of doing this. According to Locke, we produce the abstract concept of "humanity" by mentally abstracting the qualities of particular human beings, such as having brown or white skin, while leaving those attributes that that all humans have in common, such as having skin of some color or other. However, Berkeley finds that he is unable to imagine any human being in general, without picturing some particular color of skin, some particular size and shape.

This criticism of abstraction brings us to what is probably the most fundamental criticism that Berkeley makes of Locke: that Locke does not consistently follow his own plain historical method. For the original purpose of that method is to solve metaphysical disputes by referring to the evidences of our experience. Thus if there we are to examine any complex idea, such as that of having innate ideas, we should see if we can trace this notion back to experience. This brings us to Locke's doctrine of simple and complex ideas. Simple ideas necessarily have truth, and some complex ideas must be regarded as being true if they recur in a regular pattern. But there are many complex ideas, such as that of a centaur, that are clearly made up by the imagination. The doctrine of innate ideas is shown by Locke to be such a one. There just is no evidence for it. We therefore test the ideas of philosophy and speculation by bringing them back to our direct experience. How then in this way can we justify the idea of matter—an independently existing substrate or container or

something "I know not what" in which the qualities we actually experience are supposed to inhere? But there can be no evidence in experience for something that presupposes abstracting completely from experience. Berkeley therefore shows that Locke is an inconsistent or half-hearted empiricist. Strict adherence to the empirical method results in the recognition that there is no evidence for the existence of any reality outside our minds.

Common Sense and Science

Berkeley recognizes that some will consider such an inference to be absurd, and is at pains to reconcile what he says with ordinary common sense as well as with the most sophisticated sciences of the modern times. It is his conception, and not that of Locke, he says, that corresponds to the common sense realism of the man in the street. By eliminating the philosophical invention of a material reality, we can affirm what all people who haven't been misguided by the arguments of philosophers regard as self-evident—that snow is white and fire hot. With his impossible notion of independently existing matter, Locke has failed consistently to follow the logic of his basic principle—namely that all objects of the understanding are ideas. This failure leads him to take positions that egregiously conflict with common sense. For according to Locke, snow is not white, nor is fire hot. Supposedly, snow is some impossible to perceive configuration of matter that is neither white nor any other color. And whatever fire is in its true nature, which we may never know, we do know one thing for sure: that it is not hot. For white and hot, being ideas of secondary qualities, are not in the supposedly externally existing material substance but dwell only in our mere perception separate from the real thing. They are "representations" of material powers existing outside of our experience that we will never be able to discover because of the limitation of our faculties.

But all this obscurity about the nature of things as they are in themselves, existing separately from our experience of them, vanishes when we deny that there are such things. Snow just is that combination of sensory qualities that we perceive it to be—white, cold, moist, etc. There is nothing over and above these qualities which is the supposedly real snow that is neither white nor cold nor wet. If all that we can ever know are the objects of our experience, why should we hold on to the philosophical invention of something more than this? Why should we belittle our own experience by saying that it is *merely* an idea, and far removed from reality? Once we eliminate the idea of matter, we will be able to affirm the reality of our own experience, for the real being of things is just what we perceive them to be—"their *esse* is *percepi*."[8]

Dr. Johnson says he can prove the existence of the external world by kicking a stone. Berkeley does not disagree. We do kick stones. But we must be careful that under these common-sense affirmations we do not smuggle in the idea,

invented by philosophers and threatening to religion, of an independent material substance. What does it mean to say that we kick stones? It means that we have the experience of swinging a leg, the sensation of a slight pain in the foot, the visual perception of the leg simultaneously making contact with a stone, etc. But these are all recognized to be ideas, and among these ideas there is no experience of any such thing as matter.

In the *Dialogues*, Hylas objects that these arguments can be turned around against the notions that are dear to Philonous. If we can't talk about a material substance, neither can we know anything about a spiritual substance, such as God, or even the individual's very self. From the rejection of material substance, "it should follow that you are only a system of floating ideas, without any substance to support them."[9] Philonous replies that:

> I have no immediate intuition [of a material substance]: neither can I immediately from my sensations, ideas, notions, actions, or passions, infer an unthinking, unperceiving, inactive Substance—either by probable deduction, or necessary consequence. Whereas the being of my Self, that is, my own soul, mind, or thinking principle, I evidently know by reflexion.[10]

In his *Principles*, in dealing with how we know spirit, Berkeley writes that "Such is the nature of *spirit*, or that which acts, that it cannot be of itself perceived, but only by the effects which it produceth."[11] We don't perceive spirit for whatever we perceive is an idea, and ideas are inherently passive, or the effects of some spiritual cause. But perceiving itself is an activity of spirit. A spiritual substance that produces ideas cannot be equated with an idea, which is a passive product of an activity and not an activity itself.

Ideas themselves are not active forces. The ideas that succeed one another in our experience are not causes or powers, nor are they linked by necessary connections to one another, since it is always possible that they be otherwise than they are. Through the power of our thinking and imagining, free acts of the willing spirit, we create them and make them vanish. Although the order of ideas that make up the natural world follow one another with great regularity, it is not because the ideas produce one another or have some necessary connection to one another, but because the will of God who produces them has so decided. The concept of independent matter sidetracks us from recognizing this truth. The succession of nature is always an experience within us, a succession of ideas. Ideas are nothing other than the effects or passive results of spiritual activities—either of ourselves or of an Infinite Spirit.

Because some of our ideas, those relating to the course of nature, do so with regularity, we mistakenly attribute independent powers to them. If we grasp clearly the fact that what we experience as succeeding one another are simply ideas, we won't make the mistake of supposing them to have any independent power over each other or to form any necessary connection with one

another. Because we do not clearly rid ourselves of the idea of an independently existing material substance we are confused by the regularity found in the experience we have of the workings of nature. In the following passage Berkeley describes how we naturally slip from the truth that the objects of perception are only ideas succeeding one another within us into the erroneous belief that they are powers existing independently of us:

> And yet this consistent uniform working, which so evidently displays the goodness and wisdom of that Governing Spirit whose Will constitutes the laws of nature, is so far from leading our thoughts to Him, that it rather sends them wandering after second causes. For, when we perceive certain ideas of Sense constantly followed by other ideas and we know this is not of our own doing, we forthwith attribute power and agency to the ideas themselves, and make one the cause of another, than which nothing can be more absurd and unintelligible. Thus, for example, having observed that when we perceive by sight a certain round luminous figure we at the same time perceive by touch the idea or sensation called heat, we do from thence conclude the sun to be the cause of heat.[12]

The objects of understanding therefore are ideas, but the acts of understanding that produce them are not ideas. The activities themselves, grasped intuitively in reflection, form the basis for our notions of finite and infinite spirit. Berkeley recommends using "notion" to refer approximately to what Locke calls ideas of reflection—those distinctive sorts of ideas that we have when we reflect on our own acts of understanding—thinking, imagining, remembering, desiring, willing, etc. But he adds to Locke an insistence on the activity as such, which can only be apprehended reflectively in the act itself. Objectified as an idea it ceases to be the activity it is. Unlike the inferences from our ideas used to support the notion of material substances, we reflectively intuit these activities as stemming from a spiritual substance. We don't need to infer them from something quite different, as we do when we attempt impossibly to infer the existence of unthinking matter from nonmaterial ideas. It is one thing to try to extend the ideas we have in our minds to supposed material entities outside the mind. It is another thing to affirm the ideas in our mind to begin with. The former consists in impossible and unjustifiable speculation. The latter is the evidence itself, implied in the principle from which the argument begins in the first place—that all the objects of the understanding are ideas. This principle refers implicitly to acts of the understanding that either produce ideas or receive them from some other spiritual source capable of producing them. Some of our ideas are actively produced by ourselves, as when we create an image of a centaur. However, as Locke pointed out, some of our ideas are not actively produced by us. And since we have now shown that such ideas

could not possibly be produced by a material substance, it follows that they must be produced in us by a being capable of producing ideas—hence a spiritual being like ourselves, but infinitely greater:

> But, though there be some things which convince us human agents are concerned in producing them; yet it is evident to every one that those things which are called the Works of Nature, that is, the far greater part of the ideas or sensations perceived by us, are not produced by, or dependent on, the wills of men. There is therefore some other Spirit that causes them; since it is repugnant that they should subsist by themselves. . . . But, if we attentively consider the constant regularity, order, and concatenation of natural things, the surprising magnificence, beauty, and perfection of the larger, and the exquisite contrivance of the smaller parts of creation, together with the exact harmony and correspondence of the whole, but above all the never-enough-admired laws of pain and pleasure, and the instincts or natural inclinations, appetites, and passions of animals; I say if we consider all these things, and at the same time attend to the meaning and import of the attributes One, Eternal, Infinitely Wise, Good, and Perfect, we shall clearly perceive that they belong to the aforesaid Spirit, "who works all in all," and "by whom all things consist."[13]

The change of perspective from Locke's materialist conception of nature to Berkeley's idealist one results in a shift in the balance of appearance and reality. As we probe ever more deeply into the magnificence of the heavens with our telescopes or into the intricate order on the microscopic level with our microscopes we discover reality after reality instead of illusion after illusion. For all our experiences are real, not just the last one at the bottom of our descent into the immanent order of nature. If there is reason to believe that the ultimate substructure of reality consists in certain basic configurations of particles, as the corpuscularian theory of physics maintains, then someday we may find ourselves, with the help of powerful microscopes, face to face with these particles. But this final moment should not be privileged above all the others. Snow is still white and cold and moist, and if a microscope shows us something different, that is just another layer of reality—the reality of the ideas that fascinatingly unfold before us in their divinely ordered display.

Therefore there must be an infinite spiritual substance that is the cause not only of the order of nature unfolding in our experience, but also of our very being. Berkeley in effect follows Locke in basing his argument for the existence of God on the spiritual reality that is directly intuited by us within ourselves. This is the part of Locke's argument that is consistent with his own basic principle that all of our experience is never anything but that of spirit experiencing ideas, which, thanks to Berkeley, we now see leaves no place for some

radically different material substance. Once the shadow of matter has been replaced by the light of consistent philosophical thinking, Locke's argument for God's existence shines forth brighter than ever.

Hume Proposes a New Science of the Human Being

The radical contrast between the philosophical objectives of George Berkeley and David Hume (1711–76) is evident in the respective prefaces to their major works. Whereas Berkeley asserts as his central purpose the defense of religion through the overthrow of belief in an independent, externally existing material world, Hume aims to develop "a compleat system of the sciences, built on a foundation almost entirely new, and the only one upon which they can stand with any security."[14] This is the science of the human understanding, with which we are already familiar in the works of Locke. Hume's conception, however, suggests that his function is to be more than a mere underlaborer of the natural sciences (what Hume calls "natural philosophy"):

> Even *Mathematics, Natural Philosophy, and Natural Religion*, are in some measure dependent on the science of MAN; since they lie under the cognizance of men, and are judged of by their powers and faculties. 'Tis impossible to tell what changes and improvements we might make in these sciences were we thoroughly acquainted with the extent and force of human understanding, and cou'd explain the nature of the ideas we employ, and of the operations we perform in our reasonings.[15]

This science of the human being or the human understanding has special application to the field of "natural religion," for this branch of knowledge

> is not content with instructing us in the nature of superior powers, but carries its views farther, to their disposition towards us, and our duties towards them; and consequently we ourselves are not only the beings, that reason, but also one of the objects, concerning which we reason.[16]

Implicitly opposing Berkeley, Hume takes special aim at philosophers who consider the role of philosophy that of subordinating human beings to "superior powers." Human beings are the beings who reason, but the exponents of natural religion would pretend to stand outside of human reasoning, adopt the standpoint of higher powers, and from this vantage point treat the human being as an object of a superior, superhuman form of reasoning. Although Hume explicitly directs his remarks against "natural religion," that is, independent philosophical reasoning about the existence and nature of God, he implies

criticism too of the revealed religion of Christianity, which would especially instruct us about God's attitudes toward humans and the duties of human beings towards God. One of the central thrusts of Hume's philosophy is the critical examination of religion in all of its aspects, including claims made for a rational foundation for Christianity in the testimony of witnesses to its miraculous origins.

In stressing the importance of a new science of man, Hume recognizes that he will draw the ire of philosophers, scientists, and theologians—all of whom would propose systems of thought without first examining the connection of their systems to the dynamics of the human understanding that must be employed in any science. All such system makers would reason about human beings from some external standpoint while forgetting that behind all objects of thought are the human beings themselves who are actively reasoning. In this way, Hume deepens the philosophical appraisal of the Copernican revolution in science, which consists in recognizing that human beings perceive and think about the universe from within a limited standpoint. Awareness of this standpoint leads to a recognition that what we view from this standpoint is appearance, not reality as it is in itself. We do not have a privileged place from which we perceive and understand the world as it exists in itself.

Thus Hume radicalizes Locke's focus on the inner dynamics of the human understanding. For Locke, human understanding is situated between the natural world on the one hand and divine creative and coordinating actions on the other. Locke is concerned about ideas as the results of forces outside those ideas, whether these be the movements of the particles of matter or the creative inventions of the deity relating those movements to our inner representations of them. But if our ideas are the only objects that are "directly" accessible to us, why is so much thought given to those external realities that are supposed to cause our ideas? And how can such questions regarding these transcendent entities possibly be answered? Berkeley has shown that from the standpoint of ideas, knowledge of the very existence of an external world is unintelligible. But then he thinks that he can instruct us on the nature of "superior powers," and as a Bishop even tells us what that Higher Being thinks of us and what our duties are to It.

The difference between Hume's focus on the human understanding and that of his predecessors is evident from his emphasis on its "extent and force"—on examining more thoroughly the nature of our ideas and their dynamics. We will see that our ideas in their combinations exert a vital force on the human bearer of them. Once we decide to focus on the human understanding, instead of being concerned primarily with realities outside that central focus, a new field of investigation opens up that others before Hume had only explored half-heartedly.

Hume accepts Berkeley's arguments demonstrating the irrationality of belief in the existence of an external material world. As long as we stick strictly

to experience, we have no evidence for, nor can there be any, of a world outside of our own perceptions (our sense impressions, our thoughts, our feelings and desires). But the same reasoning, Hume then adds, applies to our belief in God. Berkeley's critique of Locke's dualism is inconsistent and incomplete in criticizing only one part of the problematic—the side of matter. Spirit too requires criticism. The fact that we direct our investigation to human ideas does not automatically land us in a realm of spirit. For we do not even know the nature of our ideas. The reasoning, if not matter then spirit, is faulty—as if we had some special knowledge of the substance of the mind as an independent reality, which then needs to be explained from some higher being of the same type. But what we find in our investigations are only the movement and dynamics of our ideas, of our thoughts and impressions. If we look for a self or spiritual substance that persists independently of the movement of our definite experiences we will always be disappointed.

There is another side to Berkeley's thought with which Hume disagrees. Berkeley is at pains to reconcile his apparently "absurd" conclusions about the non-existence of the external world with common sense. It is only abstract philosophy, he states, that supposes some independently existing material world beyond our experiences. But here Berkeley is clearly being disingenuous. Certainly only philosophers, in moments of heightened reflective lucidity, could seriously doubt that there is a world that stays out there when they turn their backs on it, or who could suppose that there is no tree in the forest except when they are thinking about it. But when that philosopher tries to rest his weary mind by taking a stroll along a busy street, and enters into conversation with the local barber about the latest turn in the adventures of the royal family, he then, like everyone else, has no doubt that there is a world outside of his mind, one that consists not only of the movements of his own thoughts but of people, things, the operations of gravity, and the movements of the stars.

Nevertheless, the philosophical recognition of the primacy of ideas and the science of man that rests on this recognition shows us that we have no real knowledge of an external world. Since all experiential evidence is of the movement of ideas in our minds, it follows that what we are dealing with in these nonphilosophical moments of ordinary life is *belief*, not knowledge. No matter how skeptical we become as reflective thinkers about the external world, we are all subject to powerful forces that produce in us the belief in its reality. Despite all our reflective understandings about the nature of color as a subjective creation of the mind, in our nonreflective, practical activities we naturally believe that the apple we are eating not only seems to be red, but really is so. And no doubt, in the early moments of the day as we stretch and gaze out our windows, forgetting for a moment about philosophy and modern science, we also believe that the sun is rising above the horizon. We check the operation of such beliefs in our moments of theoretical clarity, but our natures are such that beliefs are naturally formed in us that contradict our most considered

theoretical conclusions. And if this is so regarding our belief in an external world, is it not also so regarding our tendency to believe that the events of our lives are governed by "superior powers"? Thus, in exploring the duality involved, not only between philosophers and practical man in the street, but within the philosopher herself, Hume shows that theoretical consciousness and practical consciousness are radically opposed to one another.

For all his skeptical doubts, Hume does not deny that there is an external world, nor does he argue that there is no immortal soul or Creator of the world and of those souls. To argue that such exterior or superior realities do *not* exist is to suppose that we can have some knowledge that extends beyond the evidences of our experience—that is, that we can have knowledge of what lies beyond the movements of our own ideas and impressions. What we do have and can talk about are our beliefs in such external and superior realities. We can investigate scientifically the causes of these beliefs—understanding by causes, not the movements of matter or the effects of the will of God but the inner dynamics of our own experiences leading to the production of forceful beliefs that largely govern our thoughts despite the skeptical conclusions entertained in moments of considered reflection.

Two Kinds of Truth—Rational and Factual

Hume's science of man is thus the study of the movements of ideas and impressions that take place in the human understanding, a study that parallels that of the natural sciences in discovering and formulating laws governing those movements. "Parallels" is too weak a word for this foundational science of the human understanding, for all the laws of the natural sciences rest on the thoughts of the scientists. If we understand the nature of those thoughts, and the laws governing their relationships, important implications are surely there for those natural sciences as well. The modern scientist should not pretend to go beyond experience in the manner of ancient speculative philosophy. The truly modern empirical philosopher understands that experience is only the movement of our ideas and impressions. The natural scientist investigates the causal laws governing the movement of nature, and sometimes formulates ideas about the inner workings of things. But such ideas and formulations must be verified by actual experience. There must be sensory evidence for these ideas. We cannot say more than what the evidence warrants us to claim. And the evidence of such experience does not support any claim to knowledge of the inner workings or essential natures of things outside of us.

Hume continues the "way of ideas" begun by Locke and Berkeley, but adopts his own terminology. He finds Locke's term "ideas" to be misleading in relation to those basic "impressions" such as we experience in the perception of a red apple. The term "ideas" suggests those paler copies of impressions such

as we find in our ideas *about* the color red and our *conception* of what an apple is. Such ideas pale before the vividness and force of the *impressions* we receive when actually faced with an apple. Hence Hume reserves the term "idea" for the products of imagination, memory, thinking, and reasoning that build on our direct impressions. Hence, all "ideas" about actual facts in the world rest on our "impressions," and we test the empirical validity of our ideas by referring to the impressions on which they are based. There are three main kinds of impressions—sensory impressions, impressions of reflection on the various kinds of operations of the mind, and impressions of pain and pleasure (which give rise to the passions or desires). The more general term that he uses for *all* the inhabitants of the mind is "perceptions."

All the perceptions of the mind are therefore of two kinds, viz. impressions and ideas. They differ from each other only in the fact that ideas are less forceful and vivid than are impressions. In this light, let us consider the following types of ideas: the ideas of geometry, the idea of a centaur, the laws of physics, and philosophical notions such as the idea of an externally existing world, or the relation of cause and effect. Of special importance is the idea we have of our own personal identity—the idea that behind all our experiences is a continuous self, the ego or the "I think," to which they all refer and that is somehow responsible for them. What, we ask, is the truth of these ideas? There are two ways to determine the truth of an idea: 1) by reasoning alone, through the consideration of the relation of ideas among themselves, we can demonstrate, without any regard to empirical experience, the laws of logic, mathematics, and geometry; 2) by referring an idea to impressions of actual experience, we can determine whether some idea represents a fact. Hume writes in his *Enquiry Concerning the Human Understanding*:

> All the objects of human reason or enquiry may naturally be divided into two kinds, to wit, *Relations of Ideas*, and *Matters of Fact*. Of the first kind are the sciences of Geometry, Algebra, and Arithmetic; and in short, every affirmation which is either intuitively or demonstratively certain. That *the square of the hypothenuse is equal to the square of the two sides*, is a proposition which expresses a relation between these figures. *That three times five is equal to the half of thirty*, expresses a relation between these numbers. Propositions of this kind are discoverable by the mere operation of thought, without dependence on what is anywhere existent in the universe. Though there never were a circle or triangle in nature, the truths demonstrated by Euclid would for ever retain their certainty and evidence.[17]

So much for the ideas of mathematics. What about centaurs? We have an idea of a centaur and some imaginary representation of it, but to determine whether such beings exist we must turn to the impressions of sensory experience. And there we find (as yet) no evidence of such creatures outside of literature

and mythology. As for the laws of science, the same procedure is required. Regarding the make-up of the world, there are no truths of pure, *a priori* reasoning such as we find in the theorem of Pythagoras:

> If we would satisfy ourselves, therefore, concerning the nature of that evidence, which assures us of matters of fact, we must enquire how we arrive at the knowledge of cause and effect.
>
> I shall venture to affirm, as a general proposition, which admits of no exception, that the knowledge of this relation is not, in any instance, attained by reasonings *a priori*; but arises entirely from experience, when we find that any particular objects are constantly conjoined with each other. Let an object be presented to a man of ever so strong natural reason and abilities; if that object be entirely new to him, he will not be able, by the most accurate examination of its sensible qualities, to discover any of its causes or effects. Adam, though his rational faculties be supposed, at the very first, entirely perfect, could not have inferred from the fluidity and transparency of water that it would suffocate him, or from the light and warmth of fire that it would consume him. No object ever discovers, by the qualities which appear to the senses, either the causes which produced it, or the effects which will arise from it; nor can our reason, unassisted by experience, ever draw any inference concerning real existence and matter of fact.[18]

In this passage Hume makes two related points. The main point here is that no scientific knowledge is the result of pure reasoning from the objects that we perceive by sensation. Our knowledge of the effects and causes of the objects of experience is not the result of rational deduction from the properties of the objects in themselves but from further experience with that object. The second point is about the nature of cause and effect in general. Causal laws do not inform us of the connections between things due to their inner natures, but consist only in a "constant conjunction" of impressions and ideas in our experience. Hume here departs in a fundamental way from both Hobbes and Locke.

Hobbes, we recall, establishes his conception of science by extending the model of Euclidian geometry to an evolutionary process in which simple movements of matter become increasingly complex until we reach the most complex level of the movement of matter—the social and political life of conscious and reasoning human beings. Locke keeps the same conception of knowledge as an ideal to which we should strive, but denies that, in matters of scientific knowledge of the world, we will ever reach the end of it. Locke argues that were we to know the basic configuration of the particles we would be able to deduce the effects of the interactions of material objects. However, the limitation of our senses is such that we will probably never be able to reach this fundamental level of being. Hence we must content ourselves with empirical generalizations

from external appearances, without ever knowing the fundamental causes at work. We know that gold dissolves in *aqua regia*, but not, in the science of Locke's time, why it does so. Let us grant that we can indeed explain why gold dissolves in *aqua regia* as a result of our present-day knowledge of the chemical composition of these bodies. This only pushes the problem to another level, because we do not know why those chemical elements behave as they do without an investigation of their components. And since we have not as yet reached the fundamental constituents of things in twenty-first-century physics, we still do not know why anything happens as it does.

Skepticism toward the Material World, the Self and God

Incorporating Berkeley's arguments, Hume turns Locke's moderate skepticism into a radical skepticism. Since we only know the movements of our own ideas, we can never pretend to investigate the inner structures of external objects. We can only observe the patterns of the impressions and ideas within *ourselves*. Through his notion of ideas of primary qualities, Locke argues that although indeed we only know our ideas, directly, those ideas represent, inadequately of course, the real properties of things. Hume, scornfully, calls this the doctrine of the double existence of perceptions—existing once in our minds and another time outside our minds in the external world. But there is no such exit from our minds inasmuch as so-called ideas of primary qualities remain irrevocably ideas, and ideas, as Berkeley correctly reasons, cannot possibly resemble what is not an idea. Ideas can only resemble or relate to or associate with other ideas. A causal law is thus only the constant conjunction of our impressions and related ideas.

In applying Hume's "experimental" method of investigation to the idea of an independent material world, we must look for the experiential impression on which this idea is based. But however carefully we look, we can find nothing beyond these very impressions. It seems at first that in our perception of distance we do perceive the external world directly. We see one thing in front of another, and so outside of and at a distance from each other, as well as from our own bodies. But a closer inspection of the evidence shows that this perception is an illusion:

> The paper, on which I write at present, is beyond my hand. The table is beyond the paper. The walls of the chamber beyond the table. And in casting my eye towards the window, I perceive a great extent of fields and buildings beyond my chamber. From all this it may be infer'd, that no other faculty is requir'd, beside the senses, to convince us of the external existence of body. But

> to prevent this inference, we need only weigh the three following considerations. First, That, properly speaking, 'tis not our body we perceive, when we regard our limbs and members, but certain impressions, which enter by the senses; so that the ascribing a real and corporeal existence to these impressions, or to their objects, is an act of the mind as difficult to explain, as that which we examine at present. Secondly, Sounds, and tastes, and smells, tho' commonly regarded by the mind as continu'd independent qualities [that is, as continuously existing independently of our discontinuous perceptions], appear not to have any existence in extension, and consequently cannot appear to the senses as situated externally to the body. The reason, why we ascribe a place to them, shall be considered afterwards. Thirdly, Even our sight informs us not of distance or outness (so to speak) immediately and without a certain reasoning and experience, as is acknowledged by the most rational philosophers.[19]

Here Hume examines what appears to be direct evidence of a world outside our heads. We see objects at a distance from ourselves and from one another. Surely if we directly see this, there is evidence of an external reality in which things exist at a distance from one another and from ourselves, the perceivers. There is clearly no such distance in our minds. Hume then proceeds to show, following Berkeley, that this reasoning is false. 1) We do not see bodies but only impressions of bodies. 2) Colors do not characterize spatial extension, the central characteristic of bodies according to modern science, and so must be products of the mind. 3) We do not really see objects at a distance, but only appear to do so. This last point is complex and requires a special examination.

Following Berkeley, Hume examines the mechanism that produces this powerful belief that we directly experience things outside of our minds. Hume suggests Berkeley's *New Science of Vision* when he speaks of the ideas of "the most rational philosophers" about our perception of distance. The mechanism for producing the complex perception of distance lies entirely within the realm of perception itself. In his examination of vision, Berkeley shows that there is no direct distance perception but only a kind of perceptual inference from visual clues found on the flat screen of visual perception. (As we will see in the next chapter, Hume argues similarly in relation to the psychological "distance" involved in moral experience.) The teacher does not immediately see a person at the back of the room and one in front, but only a very small person standing next to a large person. Because of our (habitual) judgment that people are roughly the same size, we form a kind of perceptual inference of distance between them to explain the great differences in the perceptions we have of them. Thus, under certain circumstances, we may at first see one person behind another, until we recognize that the first really is the very small person that we directly see. Then we see them along side one another, as we can verify by touching them. Because of this mechanism of perception we strongly, but

falsely, believe that we directly see some individuals behind others and so necessarily outside of our minds in an external reality.

Berkeley uses this argument against belief in the existence of the external world and proposes the unlikely theory that belief in the external existence of bodies is the invention of philosophers. While agreeing with Berkeley's argument against the direct perception of an external world, Hume recognizes in this mechanism the cause of our common sense belief that we directly perceive an external world. Berkeley is only interested in the refutation of the belief, as if it were an arbitrary invention of philosophers, while Hume is interested in the mechanism that produces this belief in the lives of all people—non-philosophers as well as philosophers when they are not philosophizing—and in exploring the role such beliefs have in our lives.

Despite Berkeley, Hume does not reject the standard materialist explanation of perception. It could be true, just as it could be the case that God creates our perceptions. We just can't know which hypothesis is correct because verification of one hypothesis or another requires going beyond the facts of experience. However, Hume's general goal of creating a science of the human being, together with his explanations of the mechanisms that naturally produce belief in the material world, lead him often to ignore his theoretical skepticism in regard to the scientific explanation of the material causes of perception, as in the following citation:

> Now 'tis evident, that, whatever may be our philosophical opinion, colours, sounds, heat and cold, as far as appears to the senses, exist after the same manner with motion and solidity, and that the difference we make betwixt them in this respect, arises not from the mere perception. So strong the prejudice for the distinct continu'd existence of the former qualities, that when the contrary opinion is advanc'd by modern philosophers, people imagine they can almost refute it from their feeling and experience, and that their very senses contradict this philosophy. 'Tis also evident, that colours, sounds, &c. are originally on the same footing with the pain that arises from steel, and pleasure that proceeds from a fire; and that the difference betwixt them is founded neither on perception nor reason, but on the imagination. For as they are confest to be, both of them, nothing but perceptions arising from the particular configurations and motions of the parts of body, wherein possibly can their difference consist? Upon the whole, then, we may conclude, that as far as the senses are judges, all perceptions are the same in the manner of their existence.[20]

Hume here supports Berkeley's argument against Locke that ideas of primary qualities are not different from those of secondary qualities inasmuch as both are simply ideas and as such they cannot resemble the physical bodies of

the scientists. Despite all of this, he casually repeats Locke's position that all our perceptions arise from configurations of particles in the body, as the physicist says they do. He uses this scientific explanation, in fact, to support the very philosophical skepticism that undermines the objectivity of scientific explanations. For if it is true, as the scientists say it is, that our perceptions arise from imperceptible configurations of particles, then it is clear that all of our perceptions are of the same type—the perceptions of motion and solidity being essentially no different from those of pleasure and pain—and none of them in any way resembles their causes. But this belief on the part of the scientists in the causal origin of perception in imperceptible particles, "as they are confest to be," must be recognized for what it is—a belief and not knowledge, an idea that must be justified by evidence and not merely assumed. And the evidence for it is, and can only be, null. We perceive nothing but the perceptions themselves. So while even Berkeley thinks that corpuscularian physics may one day be verified by empirical experience, Hume denies this possibility.

"Modern philosophers," such as Berkeley, argue against the "continued existence" of motion and solidity—their continuous existence outside of our discontinuous perceptions of them. These perceptions are no different from the perceptions of colors, sounds, heat and cold, inasmuch as they are simply perceptions, dependent on the experiences of the perceiver and existing only in those experiences. The ordinary nonphilosopher, Samuel Johnson (the subject of James Boswell's classic work, *The Life of Samuel Johnson LL.D.*), thinks he can refute Berkeley by kicking a stone, and it seems that we directly see objects in space outside one another and at a distance from our bodies. Hume is not so dismissive as Berkeley regarding such beliefs, as he is not only interested in refuting materialism but also wants to explain materialist, as well as spiritualist, beliefs from the mechanisms of our perceptions themselves.

Consequently, as to the three main contenders as ultimate causes of our perceptions—the material world, a spiritual self, and a divine creator—the existence of no one of them can be demonstrated with certainty:

> As to those *impressions*, which arise from the *senses*, their ultimate cause is, in my opinion, perfectly inexplicable by human reason, and 'twill always be impossible to decide with certainty, whether they arise immediately from the object, or are produc'd by the creative power of the mind, or are deriv'd from the author of our being. Nor is such a question any way material to our present purpose. We may draw inferences from the coherence of our perceptions, whether they be true or false; whether they represent nature justly, or be mere illusions of the senses.[21]

And yet, as this passage shows, Hume is concerned to establish that we can draw correct inferences about *nature*, not the mind of God or the human spirit, if such there be. Hume proposes to establish a science comparable to the

sciences of nature. Without Locke's confidence in reason to establish a direct connection to the external world through the resemblances of certain features of our perceptions, Hume nevertheless finds in our perceptions coherences or regularities that provide evidence both for the laws of nature and for the new science of man.

Philosophical reason, beginning with the premise of Locke that all we know are our ideas, we must conclude with a complete skepticism regarding any other object, whether it be a material substance or a spiritual one. All that we truly *know* are the movements of those phenomena within us—the succession of sensory impressions, ideas, feelings of pain and pleasure, the desires or passions that drive us. In whom? Drive whom? We suppose that we ourselves are some sort of persistent entity in all the movements of our impressions and ideas. But what is the evidence of this belief? Scrutinize our inner experience every which way as we might, all we find are the movements of our various impressions, but no impression on which our idea of the self can be based:

> Unluckily all these positive assertions are contrary to that very experience, which is pleaded for them, nor have we any idea of *self*, after the manner it is here explain'd. For from what impression cou'd this idea be deriv'd? This question 'tis impossible to answer without a manifest contradiction and absurdity; and yet 'tis a question, which must necessarily be answer'd, if we wou'd have the idea of self pass for clear and intelligible. It must be some one impression, that gives rise to every real idea. But self or person is not any one impression, but that to which our several impressions and ideas are suppos'd to have a reference. If any impression gives rise to the idea of self, that impression must continue invariably the same, thro' the whole course of our lives; since self is suppos'd to exist after that manner. But there is no impression constant and invariable. Pain and pleasure, grief and joy, passions and sensations succeed each other, and never all exist at the same time. It cannot, therefore, be from any of these impressions, or from any other, that the idea of self is deriv'd; and consequently there is no such idea.[22]

Hume's Argument: Why We Must Believe in God

Nevertheless, as we will consider in relation to moral experience, there are mechanisms of experience that produce a strong *belief* in the existence of the self. Just as there are perceptual mechanisms that produce our belief in the existence of an independent material world and a self, so there are perceptual mechanisms that produce the belief in a Higher Being. In his *Natural History of Religion* Hume argues that there are natural grounds for the belief in God. In circumstances in which individuals feel that they are not in control of their

lives, whether for better or for worse, individuals naturally tend to turn to a higher power.

But doesn't the fact that there are atheists refute any notion that Hume regards the belief in God to be a natural one, like belief in an external world?[23] Yet just as Hume holds that philosophers can resist the tendency to believe in an external world as long as they maintain their philosophical frame of mind, so it is possible for individuals to reason that there is no God. However, in both cases, practical life generates inclinations to believe in what theoretical intelligence (unjustifiably) rejects. To determine whether individuals are atheists, it is not enough to ask their opinion on the matter, for the question itself puts them in a state of theoretical reflection. It is necessary to observe their spontaneous beliefs in those conditions of practical life that have traditionally generated the belief in a higher power. The belief in the higher power of the gods or God did not arise for theoretical reasons, but for practical ones. No doubt, such a belief can be partly held in check by another (also theoretically unfounded, Hume argues) belief that there is no God. But while the latter is usually the result of the feeble efforts of human reason, the former is grounded in powerful practical experience. Hume would no doubt agree, in this nuanced way, that "There are no atheists in the foxholes."[24] And he would have understood why, in happier circumstances, people are ready to believe that "Marriages are made in heaven."[25] As the horses race neck-and-neck to the finish line, what determined atheist doesn't yield to the temptation to send up a secret prayer to whatever Powers may be, for the success of his own?

But of course the tendency in human nature for forming such beliefs is not a theoretical argument that God exists. None of the purely theoretical arguments for God's existence, Hume is at pains to show, are convincing. The teleological argument for God's existence maintains that the intricate and awesome order of the world could hardly come about by the chance interactions of blindly moving particles. Anticipating Darwin's theory of natural selection,[26] Hume argues that in a universe consisting of a finite number of particles, blind interactions would inevitably produce some successful combinations. These in turn would provide the basis for further developments, adding to the first and, over a long period of time, producing a very complex order. The notion of a spontaneously evolving order in nature is therefore by no means unintelligible. In our own experience, we in fact observe a spontaneously evolving order of impressions and ideas resulting from a simple law of association.

And even if it is necessary to infer a higher power from the order of the universe, is it not also necessary to explain its evident disorder? There are catastrophes in the physical order with earthquakes and hurricanes, and catastrophes in the moral order with wars and murders. The facts of experience are hardly compatible with the idea of an all-wise and infinitely good creator. There are more plausible explanations, such as that our world was created by

an infant god, who has since grown up and put his creation behind him out of shame. Such a conception would be better fit the facts of human experience than the orthodox Christian one of an all-knowing, all-beneficent, all-powerful creator.

The Laws of Human Experience

And yet, despite our inability to demonstrate the causal origin of our experience from the material world, the self or God, when we turn our reflective gaze on the inner theater of the mind we find the same kind of regularities that the scientists of the physical world find in their domain. If Newton sees the great connecting force of nature in the operation of gravity, Hume announces a similar connecting force in the workings of the human mind—the force of *association*. It is the operation of this force that produces in us our readiness to believe in an external world, in a self, or in a divine power governing our lives.

Let us consider Berkeley's example regarding the relation between the sun and heat. With the appearance of the sun or of a flame there also regularly comes the experience of heat. There is a "coherence" of these impressions, and the ideas based on them, that indicates a truth about nature. The usual inference from the conjunction of these two experiences is that the sun, an externally existing material entity, causes the heat that we feel. We then suppose that we have the direct experience of causality, understood as a necessary connection between cause (sun) and effect (the feeling of heat). But all we actually experience is a constant conjunction of two sensory impressions, one following the other. Philosophical observation and reflection therefore establishes that our usual materialist idea of cause and effect, understood as some kind of necessary connection between two kinds of events, is an illegitimate extrapolation from the regular or habitual experience of two kinds of impressions—the perception of the sun or a flame and the perception of heat.

If matter doesn't exist, argues Berkeley, then it must be God who explains the regularity in our experience. For it cannot be the self, because, as Locke argues, the self is passive in relation to its sensuous impressions. It cannot be the "self," says Hume, because there is no evidence for this idea of a permanent identity behind all our experiences. But the only remaining alternative is not God. The regularities found in experience can be explained by the dynamical interactions of the perceptions themselves. When two perceptions are repeatedly combined in our experience an association builds up between them, and on this basis we acquire a habit of expectation. On perceiving the sun to rise, we naturally expect to experience heat. We *believe* that heat will follow. An association has been created between the idea of the sun and the idea of heat. A habit of expectation or a particular belief arises out of this association that is due to the regularity with which we perceive the same type of impressions.

Thus, without any need to postulate causal entities such as the material world, the self, or God, we can understand why our inner experience is one of order. The physicists argue that a force of gravity binds together the planets and stars and governs the connection of our bodies and the earth. Association, Hume argues, binds the impressions and ideas of the inner world, giving rise to expectations, beliefs, and desires.

Philosophical reflection clearly establishes that there is no evidence of any necessary connection between the sun and heat. All that we know is a regularity of our perceptions, and so, theoretically speaking, perhaps Berkeley is right that a supreme being is at the bottom of this. However, not only can Berkeley's hypothesis not be demonstrated, but our own inner experience creates a powerful belief, through the mechanisms of perception and the formation of habitual expectation due to association, that there is a sun existing independently of us that actually causes us to feel warm. It is in relation to quite different kinds of experiences, as we have seen, that resorting to the idea of God or gods tends to come naturally.

The Balance of Theoretical Knowledge and Practical Belief

As long as we engage in purely rational reflection regarding the central metaphysical notions of the world, the self, and God, our experience can only be one of doubt, and even personal anxiety, as all rational foundations for our standard beliefs in something beyond our experience are systematically and irrevocably undermined. Pascal said that he was frightened by the great empty spaces of the universe. Hume is frightened by the great empty spaces of the inner world of the mind. Modern philosophy reveals that the ancient belief in a solid, reliable, and orderly world is the sheer invention of human habit. Hume is not happy with such a conclusion. The demolition work of the philosopher is a lonely and depressing one:

> I am first affrighted and confounded with that forelorn solitude, in which I am plac'd in my philosophy, and fancy myself some strange uncouth monster, who not being able to mingle and unite in society, has been expell'd all human commerce, and left utterly abandon'd and disconsolate. Fain wou'd I run into the crowd for shelter and warmth; but cannot prevail with myself to mix with such deformity. I call upon others to join me, in order to make a company apart; but no one will hearken to me. Every one keeps at a distance, and dreads that storm, which beats upon me from every side. I have expos'd myself to the enmity of all metaphysicians, logicians, mathematicians, and even theologians; and can I wonder at the insults I must suffer? I have

> declar'd my disapprobation of their systems; and can I be surpriz'd, if they shou'd express a hatred of mine and of my person? When I look abroad, I foresee on every side, dispute, contradiction, anger, calumny and detraction. When I turn my eye inward, I find nothing but doubt and ignorance. All the world conspires to oppose and contradict me; tho' such is my weakness, that I feel all my opinions loosen and fall of themselves, when unsupported by the approbation of others. Every step I take is with hesitation, and every new reflection makes me dread an error and absurdity in my reasoning.[27]

This passage implicitly suggests the mechanism by which the belief in the self is generated. Hume experiences a profound sense of "hatred of mine and my person" and feels that all his "opinions loosen and fall of themselves, when unsupported by the approbation of others." He is describing here the feeling of shame or "humility" which he discusses in connection with the passions. Just as pride in his achievements is an emotion or passion arising out of the opinion of others, shame too intensifies the feeling of *self*. The belief in self is the result of an "indirect passion" arising, not out of one's immediate desires for things outside of us, but out of our great sensitivity to the opinions of others—the great power of public opinion not only to move us to actions but to generate our powerful belief in the self. Paradoxically, the very theoretical effort that disproves the existence of the self, produces, in its practical social outcome where Hume's work is examined and discussed by others, a profound belief in that very existence.

Fortunately, such often thankless intellectual labor is not all encompassing. When we return from our lonely philosophical labors to the concerns of our personal and social lives, our business, political, or religious interests, we find that the depressing effects of this exercise of philosophical reason quickly fade. Despite our philosophical convictions, we soon find ourselves once more believing that there are things going on outside of us in a material world, that we ourselves are independent agents or selves capable of affecting that world, and that there is a Higher Providence that arranges the affairs of mankind, however sometimes clumsily. And we find ourselves at the end of the day looking forward to sitting by a warming fire. Despite the skepticism of the most advanced philosophy, we instinctively believe that this fire exists outside of us in an independently existing world, and that it is the source of heat, and that comfort for which our tired and tried selves yearn.

For the most part then, fleeing our philosophical musings, we happily put aside our intellectual convictions that there is nothing inherently necessary about beliefs in the inner connections of things, and that such connections are simply habits of mind. And a good thing too, for were the convictions fostered by reason to stay with us during our day-to-day affairs we would find ourselves paralyzed, incapable of any firm action. The path of philosophical introspection

is not one of tranquil and peaceful detachment, as the Stoics supposed, but a path of despair from which we awaken, when we turn to practical affairs, as from a dream:

> Those, who take a pleasure in declaiming against human nature, have observ'd, that man is altogether insufficient to support himself; and that when you loosen all the holds, which he has of external objects, he immediately drops down into the deepest melancholy and despair. From this, say they, proceeds that continual search after amusement in gaming, in hunting, in business; by which we endeavour to forget ourselves, and excite our spirits from the languid state, into which they fall, when not sustain'd by some brisk and lively emotion. To this method of thinking I so far agree, that I own the mind to be insufficient, of itself, to its own entertainment, and that it naturally seeks after foreign objects, which may produce a lively sensation, and agitate the spirits. On the appearance of such an object it awakes, as it were, from a dream: The blood flows with a new tide: The heart is elevated: And the whole man acquires a vigour, which he cannot command in his solitary and calm moments.[28]

The weakness of purely mental activity to suffice for the individual is countered by the power of the passions that pull us out of ourselves and into the world around us—a world for which, reason tells us when we listen to it, we have no evidence at all. In this way, Hume disagrees profoundly with Berkeley's attempt to reconcile his position with that of common sense. Common sense tells us that there is a world existing independently of us and outside of our minds or heads, and that we perceive and act in that world. Philosophy instructs us otherwise, and haunts our thinking with nightmarish doubts about the nature of reality. However, if we take care not to overphilosophize, and to participate in the affairs of society, we soon revert to the opinions and beliefs of common sense. The philosopher can therefore enjoy a certain sense of inner peace, not by withdrawing from the world as the Stoics recommend, but by enjoying its distractions from the onslaughts of skeptical thought.

In this, the philosopher is aided by a skepticism about skepticism. He does not deny the existence of the material world. He is no atheist. And he does not deny the existence of the soul. He can neither deny nor affirm these things, but he can explain why he inevitably tends to believe in them in his nonphilosophical life. And if one must nevertheless do some thinking at this time, let him think that, however fundamentally unfounded are his beliefs, they are natural and arise inevitably through psychological mechanisms about as strong as those physical ones that hold the planets in place. Whatever we as philosophers may think to be the case, no one remains a philosopher at all times or even much of the time. Hume does not insist that his readers dwell in the cave of philosophical ignorance but therapeutically recommends the light of common

life in the community. He recommends a balance between the somber moments of philosophical reflection and the lively affairs of personal and social action, for otherwise the philosopher would despair. On the other hand, it is necessary to balance our beliefs with philosophical reflection, for otherwise we will find ourselves immersed in the worst superstitions and fanaticisms. To keep such extreme delusions at bay, we need the work of philosophy.[29]

Chapter Seven

Hume's Science of the Dynamics of the Passions

Reason: Slave of the Passions

What relationship of impressions and ideas explains the strange inconsistency between the futile efforts of pure reason and what we actually believe to be the case in our practical life pursuits? Hume's answer to this question is implicit in his affirmation that "Reason is, and ought only to be, the slave of the passions, and can never pretend to any other office than to serve and obey them."[1] As Hobbes makes clear and Hume reiterates and elaborates, it is desire or passion, not detached reason, that drives human behavior. Through their passions, human beings are part of a natural world governed by laws. The scientific study of the human being uncovers the laws operating *within* human individuals, in the associations of ideas and the formation of beliefs that adapt him or her to the world as natural and social beings. Pretending to rise above the natural world, traditional philosophical reason attempts to substantiate beliefs about the independence of the self or the soul and its relation to God. In this quest for a higher reality, such philosophy has denied our intimate participation in nature. The reason of that passionate being that we are must finally discover, in its pure reflections on itself, the emptiness of such pretensions, and—thus admonished by recognition of its incapacity—turn back to fulfill a humbler task.

All the modern, scientifically based skeptical arguments, therefore, lead us back to nature, back to instinct, back to passion and desire, as the real force in human life, and overthrow the alleged rule of a supernatural reason that pretends to distance itself from actual reasoning. Actual reasoning, when it becomes fully reflective in the observation of its own operations, and so ceases to be the handmaid of some prior dogma of theology or metaphysics, destroys its former pretenses to independence and god-like objectivity. The self-destruction of autonomous reason is the gateway to real science, which rests on the observation of the inner facts of experience and formulates generalities regarding the

regularities or laws operating among those facts. Lonely and often thankless effort is required for this debunking of the pretensions of reason to rise above and penetrate beyond its true sphere, but the rewards, in coming to a real understanding of human life, are great. In his later work, *Enquiry Concerning Human Understanding* (published in 1748), Hume suggests that the time of his early despair, expressed in the *Treatise of Human Nature* (published in 1737 when Hume was twenty-six), has passed:

> The only method of freeing learning, at once, from these abstruse questions, is to enquire seriously into the nature of human understanding, and show, from an exact analysis of its powers and capacity, that it is by no means fitted for such remote and abstruse subjects. We must submit to this fatigue, in order to live at ease ever after: And must cultivate true metaphysics with some care, in order to destroy the false and adulterate. Indolence, which, to some persons, affords a safeguard against this deceitful philosophy, is, with others, overbalanced by curiosity; and despair, which, at some moments, prevails, may give place afterwards to sanguine hopes and expectations.[2]

In the first Book of his *Treatise*, Hume clears the terrain for his science of the human being by exposing the deceits of abstruse philosophy that pretends to know how the External World, God, and/or the Self explain human experience. Laziness regarding the labors of metaphysical thought is no safeguard against the power of false metaphysics. Only the hard work of careful observation and cautious generalization can explain the beliefs that nourish this metaphysics. Only the theoretical strength of a true metaphysics of the human being can free us from the grip of unfounded beliefs. If such beliefs inevitably continue to operate in practical life, our moments of skeptical enlightenment prevent their being turned into dangerous exaggerations. Thus skeptical critique in a paradoxical way results in moderate common sense beliefs that avoid both fanatical enthusiasm and despairing nihilism.

It follows that there are three standpoints in Hume's work. 1) As a reflective philosopher he can show the lack of any scientific grounds for our central beliefs, including our moral beliefs in the objectivity of right and wrong, good and evil. This is the standpoint of skeptical agnosticism and the argument of Book One of the *Treatise* (as discussed in chapter 6). 2) As a scientist who examines the empirical evidence, Hume then constructs a science of human nature that describes our beliefs and the mechanisms of their formation from out of the passions. Objectivity here is possible through careful observation of the dynamics of the passions that operate within us as moving forces. If there is skepticism about God, the self, and the material world, there is no skepticism about the possibility of observing these inhabitants of the mind. For our "ideas" alone, as Locke originally affirmed before straying from his great insight, are

the proper objects of our understanding. This is the standpoint of Book Two of the *Treatise*. 3) In a roundabout way, then, Hume can return to our commonsense beliefs. Entering within the standpoint of practical life in which our beliefs operate, he can record the operations of our moral beliefs. This is the standpoint of Book Three of the *Treatise*.[3]

Book Two then begins with an investigation of the human passions. It is not some supposedly autonomous reason, but the passions or drives of life that move us to act as well as to think. Passions move us to act independently of any rational understanding of their causes. But this does not mean that they are blind forces without goals or objects. Our desires have ends in view; they are *for* something, such as hunger for food or love of praise from others. Nor does this independence from reason mean that the passions are unintelligible. Reason can investigate their intelligible causes, arising out of nature and circumstance. But this is an intelligibility for an external, third-person perspective. My theoretical understanding of why I have a desire for food or love of praise, or why I love a beautiful face, does not affect or guide, or possibly override, the desire itself or make it any the less the moving cause of my action.

Nevertheless, the instrumental function of reason should not be underestimated. If we strongly desire some object or goal, we need to know *how* to obtain it. Rational understanding of the means to achieve our goals is indispensable to the satisfaction of desire. Moreover, knowledge of fact is central to the evolution of the passions. Othello's jealousy of Desdemona is based on factual error. Had he discovered her innocence in time, through the rational recognition of fact, his rage against her would have vanished and her life would have been spared. It is because he mistakenly believes her guilty of betraying him that his passion is inflamed against her. But it is the passion of jealousy itself that moves him to action. Were he not jealous, were human nature composed differently and without this passion, the same external facts and the same understandings would not have led to the same actions.

Hume's Compatibilism: Back to Hobbes

In Hume's Newtonian science of the mind, passions deterministically move us to action. There is compatibility with freedom here as long as freedom is understood as "liberty of spontaneity" rather than "liberty of indifferency." In the problematic of freedom and determinism, Hume takes issue with Locke while siding with Hobbes. There is compatibility of determination by the passions with what Locke and Hume, both following Hobbes, call freedom of spontaneity. This refers to the conditions and circumstances that permit or prevent our realizing the goals to which our passions direct us. If we desire to acquire some property, we must be free to pursue it. If we are in chains at the time, we are unfree, or lacking the liberty of spontaneity. However, for Hobbes

and Hume, but not for Locke, if we desire some property we are not free to choose some other goal—such as not to pursue this property—unless there is a more powerful passion over which we have no control that directs us to this other goal. Thus there is no liberty of indifference towards the goals we pursue that permits a free choice—a choice that is free of the dominant force of the passions.

According to Locke, when the dominant motivating passion directs us to some goal, we have the ability to pause and to suspend the act of willing this goal, while we consider whether or not to pursue it. This is the liberty of indifference that others call freedom of the will and that Locke prefers to call freedom of the person. Such freedom of the person, of course, supposes that there is such a being as the person, or the self, which is capable of autonomous judgment and control regarding the goals to which our passions direct us. Hume denies this metaphysical presupposition of Locke's autonomous freedom. If here is no self, the self or person evidently cannot be free.

Locke, we know, does not argue simplistically that reason simply overcomes passion. Reason gives us a larger view of our happiness and this understanding, if we truly take it to heart, gives rise to passions that may counteract those that originally motivate us. Our willingness to expand our horizons by attentively considering what we understand to be the greater good is the real choice we have to make. So if, because of some uneasiness about my current state, I want some property, and I recognize that the means to getting it will call down on me some future negative consequence, the reflective pause made possible by the liberty of indifference can be the occasion for soliciting a negative sense of discomfort with the goal I was initially moved to pursue. I now fear some disapprobation on the part of others if, say, the means to getting what I want involves harming others by stealing from them or cheating them in some way. I can then deliberately, freely, turn my attention more and more to this negative outcome, thereby stimulating the fear of negative consequences, and so overcome my original desire. In this way the rational intention is ultimately capable of directing or redirecting the passions that move us to action.

Hume too argues that one passion may be checked by another, but for him, as we will see, it is not the autonomous reason of the individual that ultimately directs this process but the dynamics of social evolution. Against Locke, who attempts to provide a foundation for social and political life in the independence of the human spirit over the passions, Hume effectively returns to Hobbes's materialist argument that we are solely moved by our desires or passions, and that reason is merely an instrument for their realization. He does this, however, without Hobbes's metaphysical assumptions about the causal role and nature of matter. As Hume is not a materialist, the vaguer term of "naturalism" is more appropriate to his position. Naturalism suggests materialism while shying away from openly affirming its metaphysical assumptions.

Dynamics of the Passions

Hume distinguishes three basic types in his analysis of the passions: 1) the direct passions—desire and aversion, joy and grief, hope and fear; 2) the indirect passions—pride and "humility" (shame) in relation to self, and love and hate in relation to others; 3) the passion for justice. There is a genetic relationship among the passions. The historically first and primitive order of the direct passions takes us out of ourselves and into the activities of life. We love to hunt, or to play the violin. At first the more intense passions are for the activities themselves that can liberate us from the oppressive dream-state of solitary mental existence. The indirect passions arising out of what others think of us and what we think of them seem pale and remote by comparison. However, there is a reversal of this order of intensity as the indirect passions acquire greater force with evolution. What eventually becomes more important for us is not what we want to do directly but the passions provoked by what others think of our achievements and failures, and what we think of theirs. We want not only to catch the fox, but more importantly to impress our peers with our achievement. Without such zest coming from our hopes and fears regarding others, the hunt would no longer excite. The desire to win and excel and the hatred of failure operates both for ourselves and for others. Thus we admire and love the heroes of sport and the stars of cinema. There is no narrow egotism but, especially where our own personal interests are not contradicted, a sympathetic identification with others as well as a desire to be appreciated by them. However, at some later point of maturity, the joy of victory, either personal or vicarious, loses its savor if the game is not played fairly, if the rules of justice are violated. If the immature person thinks that winning is all no matter what the means, for the mature person the passion of justice becomes preeminent. In the political sphere the strict judgments of justice, arising out of a natural passion to maintain the basic rules of society, determine the very life and death of individuals.

In this framework of the passions, Hume revises Locke's threefold division of practical life into the moral or natural law, the laws of custom and tradition, and the positive laws of the state. But where for Locke the ultimate level is the first, the natural law of our desires and the morality of their maximum fulfillment, for Hume the ultimate level is the third—the laws of the state, which subsume and consolidate the others. In this respect Hume again follows Hobbes, for whom the science of the human being culminates in the laws of the state.

Empiricist Defense of Determinism in Human Behavior

From the methodological standpoint of his radical empiricism, Hume subjects Hobbes's theory of morality and the state to a kind of corrective criticism.

Following Hobbes, Hume agrees with the general thrust of deterministic philosophy stemming from modern science and the implications of this outlook for understanding human beings. Human beings act to realize their desires or passions, and reason is merely an instrument in the unfolding of this process. In this regard Hume is a Hobbesian, but one who, while avoiding the metaphysical presumptions of materialism, wants nevertheless to be a more consistent determinist even than Hobbes. Hobbes, Hume argues, has been led too far astray from the scientific approach to the human being by his rationalistic method. He ascribes too much power to the rational intellect.

Ideas, Hume argues, are only pale copies of immediate "impressions"—direct sensations, perceptions, desires, and feelings. We can remember a time when we were very angry with someone with whom we are presently on good relations. We have the idea of this anger and can distinguish it from the idea of affable concord. But this is quite different from the "impression" itself of being angry. Our idea of anger is therefore a pale copy of the original impression, or direct experience of, anger. Instead of building constructions of ideas as if these had independent powers of attaining truth, we should pay strict attention to the sources of all our ideas in impressions or direct experience. This focus on the empirical givens of experience, especially our own inner experience of the passions, will safeguard us from many metaphysical fallacies. Similarly, in practical matters, let us not ascribe false powers of governing our lives to pale thought. To repeat: "Reason is, and ought only to be the slave of the passions, and can never pretend to any other office than to serve and obey them."[4] Hume directs a basic axiom of Hobbes against Hobbes himself.

We recall that Hobbes bases his deduction of the moral laws on a rational inquiry into the long-term interests of individuals, that is, the notion that individuals primarily seek to realize their respective and varying self-interests. Hobbes's moral science recapitulates what rational human beings in their experiences with life in the state of nature must eventually conclude. Moral science is therefore a product of reasoning. But if people are moved by their passions, what practical good is this science? Rational self-interest turns out to be powerless, by itself, to regulate the behavior of narrowly egotistical individuals. Despite this implication of his doctrine and his own, at times, lucid elaboration of it, Hobbes nevertheless argues that people overcome their narrow passions and, on the basis of a rational understanding of their long term interest, create the state as a means of realizing their self-centered goals.

But pale reason, Hume insists, is powerless to act against the far more vivid impressions of the human passions. Morality, however, is not powerless, but a real force in determining people's behavior. It follows that morality cannot be the result of purely rational considerations, and must therefore be a special kind of feeling or passion. Morality is not a product of a rational deduction from supposedly first principles regarding human nature. In the large division of our inner life, morality is closer to the "impressions" than to their remoter

copies, the "ideas." It is a phenomenon of direct human experience. Moral science consists merely in describing the special phenomena of moral experiences as they present themselves to our observation of human behavior. It is descriptive, not prescriptive. Morality itself, as a special kind of passion, operates as a real force independently of our ethical ideas or scientific account of morality.

This empiricist conception of thought as a remote copy of direct sensory experience leads to a radically different conception of causality. In his *Enquiry Concerning Human Understanding*, in the chapter on "Of Liberty and Necessity," Hume writes that "the conjunction between motives and voluntary actions is as regular and uniform as that between cause and effect in any part of nature. . . ."[5] He follows Hobbesean theory that voluntary actions are the result of causally determining motivations, our desires or passions, which themselves result from external causes in nature, circumstance, and education. The term "conjunction," however, introduces a crucial methodological disagreement with Hobbes's rationalistic derivation of effects from causes. The empiricist method of Hume admits only the constant conjunction of our impressions of direct phenomena, some going before, which we call the causes, and some coming after, which we call the effects. There is no deducing of effects from the knowledge of remote causes. We cannot know from our conception of a prior event what must necessarily follow. By contrast with the purely ideal deductions of geometry, from ideas by themselves we can not derive any new information about reality, about facts. Our empirically valid ideas about the natural world are simply recordings of and generalizations from direct experiences or impressions. Instead of attempting to discern the effect as somehow arising by inner necessity out of the cause, as the rationalist Hobbes pretends to do, we should recognize that both "cause" and "effect" are conceptions arising out of direct empirical experience. In the direct empirical experience itself (which, we must remember, is the inner perception of impressions and not of external existences) there is no such inner connection of necessity as is found in the deductive constructions of mathematical or logical thought. There is only a succession of impressions, some occurring randomly and others in a regular way. It is the latter group that we classify under the heading of causal relations.

On the face of it, this conception of causality seems to weaken considerably the deterministic point of view. For all we know, the next time a so-called cause comes around, the subsequent event may be quite different from what it has been in the past. But far from wanting to weaken the doctrine of determinism by this empiricist modesty, Hume in fact wants to strengthen it. Rationalist methodology, when applied to the study of human behavior, promotes an excessive opinion of the importance of reason in human behavior and in this way breaks from the naturalistic (for Hume it is no longer "materialistic") determinism of human action by passions or desires.

Against the Rational State of Hobbes and Locke

In his construction of a science of morals Hobbes criticizes those who would place the origin of morality in a "mediocrity of passions." Instead, he argues that morality consists in the *rational* pursuit of what is in the individual's best interests. In the end, our reason tells us to give up our natural egotism and act cooperatively. This is the moral law that commands us to seek peace on earth, and, as a means to doing so, to treat other people as we would want to be treated ourselves. Moral science therefore prescribes overcoming narrow egotism by considering what someone besides ourselves would want to do. Reason is our salvation from ourselves.

At the same time, this struggle against ourselves, this turning of one's cheek to the other person, is only a strategy, Hobbes declares, for the ultimate triumph of the ego. The individual's desire for his own personal happiness is still, theoretically, the force that underlies reason's conclusions. Theoretically, it seems, but not practically. In practice, a narrower set of egotistical motives continues to move us. Reason commands the Golden Rule, but "our natural passions carry us to partiality, pride, revenge, and the like."[6] Hence we need a powerful state to impose by force what reason fails to achieve by persuasion and by appeal to those very passions. If human beings by nature are self-interested egotists, only a powerful outside force can constrain them to cooperate with one another on a stable basis. Thus, the state is needed because reason is powerless to direct the passions. And yet, in one more twist in the logic of Hobbesian rationalism, the state, for all its terrifying externality, is our own creation—the creation of that same reason whose powerlessness the state must remedy. If human beings are fundamentally egotists, it requires an unnatural act of intellect to make a sociable species out of them. Hobbes suggests just such an unnatural act when he likens the creation of the state to the divine *fiat*. Reason is here a great power—the power of creating human society itself.

Locke further develops this line of thought by attempting to ensure that the rational will of the people remains at the basis of the legislative decisions of the state. An elected parliament must therefore balance and check the rule of the monarch, and both sectors of government should ultimately rule as agents of the free, self-determining people. The judiciary, in this view of government, is not an independent force, but is subordinate to the rationally based code of laws passed by the legislature. Thus the traditional law of custom is replaced by rational laws passed by a government whose foundation is the self-determination of the people—the social contract. The fact that not all the people directly participate in electing their representatives shows that implicitly the people who actually make the decisions are the significant property owners. The chief role of government and the reason for its creation in the first place, is, after all, the protection of major property rights which become

historically significant only after the development of commerce. In this way, Locke falls back to the reasoning of Hobbes, and to the reason why Hobbes places no check at all on the sovereign—appealing instead to the sovereign's own self-subordination to the rights of the people. Locke's checks are therefore quite limited. Nevertheless, it is to Locke, and the continuation of Locke's rationalist conception of law in the continental enlightenment, that the American revolutionaries looked when they set up their written and rationally formulated Constitution in despite of the unwritten constitution of England. They did not look to the current English conception of the foundations of government in custom and tradition, rather than reason. They did not import the English common law, with its labyrinth of judicial decisions stretching into the remote past, but created a rationally constructed body of constitutional law that was given legitimacy by the representatives of the peoples of the various states in the ratifying conventions of 1792. The United States thus emerges as the embodiment of the social contract, fulfilling all the deepest requirements of the philosophy of Locke. The American Revolution, begun in 1776, the year of Hume's death, was thus a repudiation of the radical empiricism of Hume and a vindication of the earlier rationalism.[7] This will become clearer when we treat of Hume's theory of justice, law, and the state.

Unlike Hobbes, Locke has no metaphysical problem with the idea of a sovereign people ruling themselves because he believes in the sovereignty of the human spirit over its passions. He does not pretend to hold a monistic metaphysical materialism, and simply acknowledges the mysteries of the relation of matter and spirit. But how reconcile this dualism with modern science? For a consistent scientific materialist such as Hobbes, the surmounting of the passions implied by the social contract creates a serious theoretical difficulty. Hume's empiricist naturalism continues to maintain a deterministic orientation, but without relying the materialist postulate of an externally operating and causally determining material world. On the basis of such naturalism, Hume corrects the theoretical inconsistencies of Hobbes's theory of the state. In the process he eliminates the need for a social contract. Hume does not explain the state by the decision of a rationally self-governing people, but by historical tradition and the accumulated force of custom over the years. It is appropriate therefore that Hume justifies the English state by a *History*[8] rather than by any appeal to rational principle.

Empiricist vs. Rationalist Methodology

The key criticism that Hume makes of Hobbes has to do with Hobbes's assumption that all human action is motivated, not simply by passions, but by certain kinds of passions: egotistical ones. The twists and turns, paradoxes, and contradictions of the Hobbesian construction of the state presuppose that the

social harmony created by the social contract is the product of two premises. In the first premise, individuals seek to realize their desires, passions, or feelings, with intellect as a mere tool. Here Hume agrees with Hobbes's conception of how deterministic science impacts human psychology. The second premise is that the desires that move us to act in moral and social life are exclusively selfish desires—desires of the individual exclusively for his or her own benefit. It is this premise that requires accounting for human sociability in civil society by a revolutionary act of reason against the egotistical passions. This second premise, moreover, is the one that is so typically modern—setting the modern world apart from the ancient and medieval ones with their assumptions of inherent, stratified sociability. If we are fundamentally individuals, as the materialist Hobbes argues, what other *reason* would we have to act than to promote our individualistic desires and interests? Why would we sacrifice ourselves for someone else? What would we get out of that? Hence the founding of the state must be explained as the outcome of individual self-interest fully comprehended by the far-seeing and practically motivating power of reason.

And yet in fact people do sacrifice themselves for all sorts of reasons having little to do with any obvious self-advancement. To explain this let us remember our first premise, that people are not rational beings, but passionate ones. There is no need, says Hume, to try to twist apparently altruistic behavior around in order to discover behind it a form of rational self-interest. People are fundamentally moved by irrational passions. They may be moved by selfish desires, but they may also be moved by selfless ones. Why should we hold to the exclusively egotistical premise in the first place, and assume that only selfish interests motivate human beings? Let us therefore simply look at the facts, rather than construct a system based on some *a priori* dogma, however plausible may be its derivation from materialist theory.

Hume argues against the notion that all human behavior can be explained in selfish terms—by self-love or self-interest. He describes Hobbes's argument as follows:

> An epicurean or a Hobbist readily allows, that there is such a thing as friendship in the world, without hypocrisy or disguise; though he may attempt, by a philosophical chymistry, to resolve the elements of this passion, if I may so speak, into those of another, and explain every affection to be self-love, twisted and moulded, by a particular turn of imagination, into a variety of appearances.[9]

Philosophical chemistry consists in analyzing appearances into simple components, and then synthetically combining those components in such a way as to explain the original phenomenon in often surprising ways. Hume here directly criticizes this rationalist methodology of Hobbes that analyzes appearances into underlying principles and then synthetically reconstructs the surface appearances

from allegedly simple elements. This rational reconstruction purports to explain the more complex appearances in a way that twists the surface or apparent meaning into something quite different from the common sense understanding of it. Thus Hobbes explains the moral virtue of benevolence from a chain of inferences beginning with a fundamental "liberty each man hath to use his own power as he will himself for the preservation of his own nature."[10] It turns out, according to this approach, that benevolent actions apparently for the sake of others are really, underneath it all, matters of selfish interest.

Hume recognizes that the method of synthetical chains of reasoning applies in the natural sciences, but denies that the same method is applicable regarding moral philosophy:

> The case is not the same in this species of philosophy as in physics. Many an hypothesis in nature, contrary to first appearances, has been found, on more accurate scrutiny, solid and satisfactory. Instances of this kind are so frequent that a judicious, as well as witty philosopher [Fontenelle], has ventured to affirm, if there be more than one way in which any phenomenon may be produced, that there is general presumption for its arising from the causes which are the least obvious and familiar. But the presumption always lies on the other side, in all enquiries concerning the origin of our passions, and of the internal operations of the human mind.[11]

Hume recognizes the peculiar nature of the modern physical sciences that consists in distinguishing sharply between the appearance and the underlying reality. Hume's criticisms of traditional metaphysics in fact radicalizes this distinction. Not only must we recognize that our first-level ordinary knowledge is of appearances only, but we must understand that we can never really get beyond appearances to a knowledge of how reality is in itself. Hume is therefore quite comfortable in discussing ordinary appearances, such as the rising of the sun, not because he supposes that the sun really rises, but because he knows that it is all only appearance anyway. What it means to say that the earth "really" goes around the sun is therefore not a statement of what really is the case outside of our heads, but a statement of another possible appearance that we should have in different circumstances (as Berkeley argues).

All of this leads to a radical shift in the methodology of science from that which prevailed in the past. Aristotle takes geometry as the model science, and Hobbes and Locke, in their modern way, agree, while taking a genetic rather than a hierarchical classificatory approach to the relation of simple principles to complex conclusions. Both nevertheless recognize the difficulties involved in applying this model to the sciences of nature as long as we lack knowledge of the fundamental constituents of particular beings. After all, we do not create trees, so how can we know how their basic constituents come together to

produce a complex totality? But in social science, where we ourselves are the makers of social reality, we can confidently apply the rationalist method of geometry. Hence both Hobbes and Locke envisage the evolution of human societies from the simplest elements of individuals in families, and the creation of state societies after a long series of complicating developments.

As Hume himself admits, modern physics applies the geometrical or mathematical method of constructing complex theories from simple starting points. While we lack knowledge of the particulars of this construction in the natural world, physics develops a general account of the movement of matter starting from simple elements of matter and motion and building up complex unities. Locke does not know the particular constituents of gold and *aqua regia*, but he does reason, in accord with a basic notion of physics, that there are such simple constituents, and had we knowledge of them we would be able to deduce, with the same certainty of Euclid in geometry, the causal consequences of the interactions of these two substances. Both Hobbes and Locke support the rationalist model of geometry because this is the model also of modern physics.

Hume radically differentiates between knowledge of the relations of ideas in mathematics and logic, and in the knowledge of empirical fact. If this is the case, how valid can be the methodology of physics where contrary-to-appearance hypotheses, from which effects are rationally deduced, frequently turn out to be valid? But Hume does not object to the rationalist methodology of physics, despite his contrary, empiricist, theory of how facts are derived. He objects rather to the application of rationalist methodology in social science. The reason for this, and for the great difference of Hume's position from those of Hobbes and Locke, is clear. Hume rejects the basic reason why both Hobbes and Locke believe that social science can be built on a rationalist model: the idea that human beings deliberately, rationally, and, for Locke especially, freely construct their societies.

Despite both the deterministic implications of modern science and the hierarchical structure of their contemporary societies, both Hobbes and Locke argue that fundamentally equal human beings autonomously create their personal and social lives. This is the core meaning of the social contract. As a consistent determinist as well as a proponent of the hierarchical social and political arrangements of his time, Hume rejects the idea that human beings autonomously create their personal and social lives. In the knowledge of human life, we should take the appearances at face value. In matters dealing with the passions, what *appears* to be the case probably *is* the case. Hume's empiricist philosophy insists on the primacy of direct "impressions" received from sensation and from inner experience. Ideas, especially perhaps supposedly "rational" ones, are often obstacles to recognizing the truth that is found in direct experience. Our habitual ideas are more likely to disguise the original truth contained in our direct impressions than enable us to probe beneath the surface in order to uncover a deeper meaning. Philosophers should therefore return to immediate experience to test the validity of their generalized ideas.

To clarify this difference between empiricist and rationalist methods, let us go back to Hobbes's conception of the nature of benevolence. On the face of it, people seem to be directly moved to acts of benevolence towards others. Frequently, in helping others they are not consciously trying to improve their personal interests. Also, there is usually no concern for how beneficent actions might affect the social order. These apparent facts go contrary to Hobbes's argument that we engage in charitable actions because they have a social utility that benefits the individual in the long run. Hume challenges these convoluted arguments. There is no good reason to doubt that the apparent truth is the real truth of the matter. Benevolence should therefore be regarded as a primary human passion, not reducible to anything else. Hume writes:

> To the most careless observer there appear to be such dispositions as benevolence and generosity; such affections as love, friendship, compassion, gratitude. These sentiments have their causes, effects, objects, and operations, marked by common language and observation, and plainly distinguished from the selfish passions. And as this is the obvious appearance of things, it must be admitted, till some hypothesis be discovered, which by penetrating deeper into human nature, may prove the former affections to be nothing but modifications of the latter.[12]

We directly experience distinctly different kinds of passions or feelings. There are not only self-directed ones, but other-directed or altruistic ones as well. Why must the second be explained, by a convoluted rationalistic argument, on the basis of the first? Hume suspects that the cause is a "love of *simplicity* which has been the source of much false reasoning in philosophy."[13] Here he refers to Hobbes's synthetic or "compositive" method of beginning with *simple* elements and moving on from these to explain the more complex appearances. This "love of simplicity" misleads us in our social science into attempting to derive complex realities from simpler starting points.

A "Hobbist" might reply: If the movement of the planets can be explained from some simple starting point, why should it be any different with those exceedingly complex beings we call humans? In admitting that the physical sciences use such a methodology, despite the fact that they are dealing with matters of fact and not simply relations of ideas, Hume opens up a profound dichotomy between the methods and procedures of the physical sciences and those involved in the study of the human being.

Empiricist Method in Morality: The Case of Ingratitude

Hume alleges a radical difference between the procedure of the natural sciences and the procedure of that is involved in the study of moral behavior.

In dealing with triangles or circles, for example, it is possible to deduce from certain known properties certain other properties that are unknown. If we know the length of the sides of a right triangle, for instance, we can deduce the length of the hypotenuse. But how do we proceed in our moral experience? From the knowledge of certain known aspects of a situation, can we deduce the moral quality of the action itself? Can reason, from the knowledge of certain actual features of a situation, deduce that one ought to do such and such, or that one ought to approve morally of a certain course of action?

Let us consider the example of the moral virtue of gratitude. If we follow Hobbes, it seems that by a chain of reasoning, beginning with the desire to preserve one's life, one can conclude that it is immoral or against "natural law" for an individual to be ungrateful to a benefactor. But if we carefully examine a situation involving ingratitude, what factual characteristic of it constitutes its morally objectionable quality? The facts are the following: one person behaves generously to another, and the second person repays that generosity, let's say, with indifference. Where in these two facts is the immorality? There is nothing inherently immoral about indifference by itself. If there were, we would all be blamed for our indifference to the people we pass on a crowded street. So, if morality stems from knowledge of certain objective realities, it is not to be found in any isolated fact, such as the indifference of the second person.

Perhaps then it is to be found in the *relation* between the two actions. This relation, Hume thinks, is one of "contrariety." The indifference of the second person seems *contrary* to the generosity of the first. Are then all relationships of the contrary type to be judged immoral? But suppose one person behaves badly to another, and the second person responds generously. Here the same relation of contrariety exists, but instead of saying that the second person acted immorally, we praise his action as highly moral. So the immorality cannot be in the relationship of contrariety. If it is not from some factual aspect of the situation, nor from some relational aspect, why is ingratitude considered to be immoral? Is there any other feature of the *objective* situation that constitutes its morality? If not, Hume concludes, we cannot say that moral philosophy is like the rationality of geometry in our being able to use reason alone to infer moral conclusions—I ought to be grateful—from a certain objective facts and relations.

Factual knowledge is of course important to the generation of a moral attitude. Before we can make moral judgments it is necessary to have all the relevant facts and relations at hand. If someone kills another, but we don't know whether the dead man was an aggressor or not, we suspend our moral judgment until we have this knowledge. It is only after we have knowledge of *all* the relevant facts and relationships that the moral evaluation takes place. But this feature of moral judgment only shows that the "moral aspect" is not itself a particular fact or relation or one that can be logically derived from facts or relations. But if it is not a matter of the objective features of a situation, morality must be a matter of our *subjective* attitude.

Subjective attitudes can be divided into two kinds: acts of reason and acts of feeling or passion. However, rational understanding has completely fulfilled its necessary role by supplying all the relevant facts and relationships. It follows that the moral judgment is not a judgment of reason. If morality is not a matter of rational judgment or inference, then it must be an expression of *feeling*. It is not the work of the head, but of the heart. Thus Hume writes:

> The [moral] approbation or blame which then ensues, cannot be the work of the [rational] judgement, but of the heart; and is not a speculative proposition of affirmation, but an active feeling or sentiment. In the disquisitions of the understanding, from known circumstances and relations, we infer some new and unknown. In moral decisions, all the circumstances and relations must be previously known; and the mind, from the contemplation of the whole, feels some new impression of affection or disgust, esteem or contempt, approbation or blame.[14]

Hume believes he has thereby refuted "that philosophy, which ascribes the discernment of all moral distinctions to reason alone, without the concurrence of sentiment."[15]

An ancient proverb says that there is no arguing about taste. Someone likes vanilla ice cream, and someone else prefers chocolate. There can be no rational argument that will persuade the first person that he "ought" to prefer chocolate. Morality is more a matter of taste than of reason. Its explanation is rooted in us, rather than in the object by itself. Morality is a subjective reaction of sentiment rather than a rational reflection on an objective reality. In observing a certain "complication of circumstances," a sentiment of praise or blame arises from within the observer, as a result of "the particular structure and fabric of his mind."[16]

The moral sentiments have their causes. Hume does not doubt this basic conception of modern science. But *knowledge* of the underlying nature and operation of these causes, if that is possible, is not relevant to moral science. Just as a person with a beautiful complexion delights us, so we experience a positive sense of pleasure when we observe an act of happy generosity. How could knowledge of underlying causes alter these reactions? Our knowledge of the cause of a beautiful complexion has to do with minute differences in the skin, affecting the absorption of light on its surface, but this knowledge does not make the resulting appearance less or more delightful. Moral experience is similar to aesthetic experience. In the presence of certain works of art, or a certain natural landscape, we experience the sentiment of beauty. Just as no amount of reasoning that such and such qualities constitute the beautiful can produce in us the experience of beauty, so no merely rational argument can create within us a moral feeling of approval or disapproval capable of moving us to act.

If morality is a matter of feelings of a certain kind rather than of knowledge, moral science is the study *of* such feelings. Moral science merely involves the study of the various types of circumstances, and a recording of the way people react morally to them, whether approvingly or disapprovingly. While interesting in itself, such empirical moral knowledge is useless in guiding our actions. Abstract knowledge does not move us to act.

Morality is nothing if it is not practical. Moral experience moves people to act in certain ways. If morality were simply a matter of knowledge regarding what one should do, it would no more move us to act than does our knowledge that the play of light on skin surfaces produces a beautiful complexion. Such knowledge does not cause a feeling of delight; only the sight itself of a beautiful person does so. If I merely know that I ought to be grateful to a certain benefactor, but I do not *feel* grateful, my knowledge is powerless to move me to act in a grateful manner. There is accordingly a profound difference between the active, moving, and practical character of moral considerations and the merely contemplative nature of knowledge. Hume writes:

> What is honourable, what is fair, what is becoming, what is noble, what is generous, takes possession of the heart, and animates us to embrace and maintain it. What is intelligible, what is evident, what is probable, what is true, procures only the cool assent of the understanding; and gratifying a speculative curiosity, puts an end to our researches.[17]

Metaphysics and Morality

Certain features of Hume's arguments may seem abstract and unconvincing. His criticism of the rationalist theory of morality depends on a rather special theory of knowledge, in which there can only be knowledge of facts and relations. Relations, moreover, are said to consist of only four types. Hume himself recognizes this problem, when he remarks:

> All this is metaphysics, you cry. That is enough; there needs nothing more to give a strong presumption of falsehood. Yes, reply I, here are metaphysics surely; but they are all on your side, who advance an abstruse hypothesis, which can never be made intelligible, nor quadrate with any particular instance or illustration. The hypothesis which we embrace is plain. It maintains that morality is determined by sentiment. It defines virtue to be *whatever mental action or quality gives to a spectator the pleasing sentiment of approbation*; and vice the contrary. We then proceed to examine a plain matter of fact, to wit, what actions have this influence.[18]

In the atmosphere of British empiricist philosophy, the charge of metaphysics is damning. Hume's negative refutation of the arguments of the

"rationalist" theory of morality of Hobbes and others may seem "metaphysical" because he is trying to refute a "metaphysical" claim: namely, that there is some concealed property in things underneath the apparent facts and relations that makes them moral. However one turns over various facts and different kinds of relations, he argues, one will not find anything inherently moral or immoral about them. Hume's own theory does not appeal to such hidden "metaphysical" qualities, but to the simple fact of experience that people express a particular feeling of approval or disapproval, which we call moral, when they witness certain actions or characters. Thanks to the theory of moral sentiment, the study of morality becomes a purely empirical one. Let us simply observe and describe the kinds of situations in which people in fact express sentiments of moral praise or blame.

Disinterested Feeling

And yet Hume himself advances something like a "metaphysical" theory of the underlying core of these moral feelings, for morality consists in a particular kind of detached or impersonal feeling.[19] Not every feeling of approval arising out of circumstances is a *moral* feeling. I may have a very strong feeling of approval of my friend, but still recognize that an ancient Roman patriot, for whom my feelings are far less strong, is a morally superior individual. Although our actual feelings toward a faithful servant are much stronger than our feelings toward the Roman hero Marcus Brutus, "We know, that were we to approach equally near to that renown'd patriot, he wou'd command a much higher degree of affection and admiration."[20]

It seems then that expressions of moral approval or disapproval do not depend simply on the strength or weakness of our direct personal feelings, but on a kind of ideal or general or rationally mediated sort of feeling. We recognize that our personal interests often bias our feelings of moral approval or disapproval. Personal interest interferes with our having the kind of feelings that we would have were there no such interests. Feelings arising out of selfish interests similarly interfere in our sense of beauty. It is difficult to listen with pleasure to a wonderful singer when that person is a personal enemy. By an effort of detachment from personal interests, we can nevertheless recognize that the person is a wonderful singer. In doing so, we overcome the interfering feelings of a personal nature due to other qualities of the individual, and focus on the feeling evoked by the singing voice itself. Similarly, we can acknowledge that someone who has become our personal enemy may still have positive moral qualities. In the midst of strong feelings of disapproval of that person, we can distinguish or separate out from the complex of feelings, the distinctly moral aspect. We engage in a kind of analysis of our feelings to discriminate the effects of personal emotions from those disinterested feelings that we call

moral ones. We recognize our personal bias, rise above it, and experience a detached, impersonal sort of moral approval. Far from being a deduction from self-interest, moral judgment consists precisely in such an act of overcoming self-interested bias.

Morality therefore refers to a special kind of *disinterested feeling* in the presence of certain actions or personal characteristics. Hume's rejection of the Hobbesean notion that all motivation stems from self-interest is therefore crucial to his moral theory. The empirical experiences that we call moral would seem to involve *disinterested* responses, on the level of feeling, to particular people or actions. We rise to such a standard of detached disinterest by means of a reflective understanding, criticism, and analysis of our actual feelings. In this way, intellectual or rational judgment is an element of Hume's theory of moral sentiment. It is part of the complex "chemistry" of moral consciousness in which we detach ourselves from our personal feelings, whether these are self-interested or benevolent ones. Hume does not argue that reason plays no role in the moral experience. He only argues against "that philosophy, which ascribes the discernment of all moral distinctions to reason alone, without the concurrence of sentiment."[21] Later we will see that Hume has a complex conception of the "passion" of justice as involving both feeling and rational reflection. Justice is a complex sentiment arising out of "passions and reflections combined."[22] The opposite position would be one in which sentiment operates without any rational component whatsoever. As Pascal said, the heart has its reasons of which reason by itself knows nothing. Moral sentiment, like the passion of justice, is a sentiment of a second, or perhaps third, order, which incorporates an intellectual judgment or belief about the object of experience.

The disinterestedness of the moral evaluation doesn't make it a matter of intellectual or rational judgment alone. Thanks to rational consciousness we are able to discern the moral feeling and to distinguish it from other feelings, just as the chemist separates out the elements of a chemical complex. It is still the feeling itself, not the rational discrimination of it, that is the moral force impelling and constraining action. In the case of a personal enemy who is nevertheless in all respects an honorable person, we find ourselves unable to behave toward that person in the same way we might if we perceived him as dishonorable. The recognition of his honorable character limits our possibilities of action, counteracting our purely selfish desires. This limitation is something we directly feel, and not a mere intellectual judgment. Hence, clearly disinterested moral judgments must still primarily express sentiment, or sentiment combined with reason, rather than reason alone.

In this way, Hume holds that our sentiments must be in some sense "corrected" by understanding. Such correction is similar to the corrections we make in ordinary perception when we perceive an object to be of the same size whether we are near to it or far away. Our conscious understanding or belief that an object is at a certain distance enters into the production of our

immediate perceptions. In the perception of distance, we recall, a belief about the nature of the objects perceived results in the perception that someone who directly appears much smaller is actually at a greater distance from us than someone who directly appears much larger. Thanks to this corrective belief, we perceive a person of normal size but at a greater distance from us than someone else. Similarly in the moral perception, Marcus Brutus directly produces a relatively small feeling on our moral radar compared with the feeling produced by a faithful servant. But because we recognize or believe in the temporal distance between ourselves and the noble Roman, the small effect is expanded by this recognition to a great one—to the moral equivalent of size were we as close to Marcus Brutus as we are to our servant. As a result of this combination of feeling and belief, we have a distinctive feeling for the moral greatness of Marcus Brutus—a feeling from which the distorting effects of personal relations have been eliminated.

Analogously, we may feel more pleasure in the close presence of a beautiful person, but we do not feel that the person becomes less beautiful when she moves away. She still appears as beautiful across the room. However, if for some reason we do not know or believe that she is far from us, she will appear unappealingly tiny and her beauty would be lost.

Our beliefs regarding the effect of temporal and spatial as well as personal-psychological distance give to our moral sentiments a certain relative stability despite the increase or decrease of the feelings directly connected to proximity. Our admiration of certain moral virtues, such as honesty or courage, tends to remain steady, even when, for example, the individual becomes our opponent in a bridge game, or, worse, our competitor in a rival business. In a similar fashion, our understanding that our feelings of approval toward a faithful servant rest in part on our selfish interests enters into the feeling of approval that we have, reducing its moral intensity. In this way an element of intellectual judgment or belief can be seen as entering into the "chemistry" of the moral experience, which remains nevertheless predominantly a matter of feeling.

Thanks to such Humean philosophical analysis, we become aware that moral sentiments are the result of a complex psychological process rather than the elaboration of some simple truth. In morality, as in other dimensions of our experience, philosophical understanding results in a skepticism regarding supposed absolutes or objective foundations—whether this be God, the material world, the self, or some sort of absolute goodness or beauty or justice. In moments of philosophical reflection the ordinary beliefs in such supposedly primary and objective realities are dissected and reduced to their psychic or mental causes. Whether such inner combinations of sentiment and belief correspond to any external reality is beyond our intellectual capacity to ascertain. This is not to deny the existence of such independent truths, but it does check any tendency to extremes of enthusiasm or fanaticism regarding them. And here Hume sounds a note of caution: do not dwell too long in the rarified

realm in which philosophical alchemy persistently fails to turn the base metals of mental life into the gold of objective truth. For otherwise we soon slip into the void of despair. In this as in other areas of philosophical interest, everything depends on the correct balance between the skeptical results of theoretical reason and the irrepressible beliefs arising out of engagement in the practical affairs of life.

Origin of Self-Interested Actions

Hume's thought therefore has more "metaphysical" complexity than his conception of a purely descriptive empirical approach at first suggests. Similarly, while criticizing the rationalist "love of simplicity," Hume provides a constructive, semi-rationalistic explanation of the experience of self-interest. Having argued against the method of moving from the simple to the complex in which benevolence is presented as developing out of self-interest, he himself reverses this explanation, following the genesis of *self*-interest from a starting point in object-centered or benevolent interest-in-the-other. In an argument in which he turns Hobbes inside out, Hume writes:

> But farther, if we consider rightly the matter, we shall find that the hypothesis which allows of a disinterested benevolence, distinct from self-love, has really more *simplicity* in it, and is more conformable to the analogy of nature than that which pretends to resolve all friendship and humanity into this latter principle.[23]

Hume argues that his notion of a natural passion of benevolence is actually more in accord with a natural scientific approach—more "conformable to the analogy of nature"—than the conception that makes self-love or self-interest the primary motivating force. If we begin with self-interest we falsify the experience of benevolence. However, if we begin with benevolence, as a first-order phenomenon, we may be able to derive self-interest from it. Normally, desires are first of all focused on an object outside of the desiring individual. Our desire or passion is first focused on the pizza that satisfies our hunger. At this primary level, we cannot say that our desire or love is *self*-directed. The passion for pizza that satisfies our hunger is quite simply a love of the pizza, not of ourselves. On the basis of this desire for or love of an object other than ourselves a secondary passion arises, which consists of loving the pleasures that arise out of acquiring or consuming this object. It is only this secondary or derivative motive, in which the focus is not on the object but on our pleasure in the object, that can be called self-love: "Thus, hunger and thirst have eating and drinking for their end; and from the gratification of these primary appetites arises a pleasure, which may become the object of another species of desire or inclination that is secondary and interested."[24]

Careful analysis of complex experiential phenomena therefore shows a reflexive relation of awareness back to oneself, producing "self-interest." Rather than being primary, "self-love" seems to be a secondary psychological phenomenon arising after a more immediate or simple movement of desire or passion for something other than the self. Just as there is a love and desire for the pizza itself, why not also admit as a simple fact that people have natural desires for the happiness other people? Such natural benevolence is a feeling, sentiment, desire, or passion that exists in individuals, although, as the various terms we use to describe this feeling suggest, in different degrees of intensity. It is only on a secondary level that the satisfaction of a natural desire to make another person happy is recognized to be pleasurable to oneself, and so can be pursued "selfishly." The idea that self-interest is the primary and fundamental drive of individuals rests on the fact that the benefactor may derive pleasure from his generosity, and then pursue the occupation of philanthropy for his own gratification. But the fact that people get pleasure out of helping others does not mean that they are *only* motivated by such "selfish" pleasures. From the fact that one can often discern the element of self-oriented desire or interest in the "chemistry" of benevolent gestures, it doesn't follow that there is not at the same time, and more fundamentally, a simple selfless desire to help another person. Hume justifies beneficent passion by evoking its dark contrary:

> Now where is the difficulty in conceiving, that . . . from the original frame of our temper, we may feel a desire of another's happiness or good, which, by means of that affection, becomes our own good, and is afterwards pursued, from the combined motives of benevolence and self-enjoyments? Who sees not that vengeance, from the force alone of passion, may be so eagerly pursued, so as to make us knowingly neglect every consideration of ease, interest, or safety; and, like some vindictive animals, infuse our very souls into the wounds we give an enemy; and what malignant philosophy must it be, that will not allow to humanity and friendship the same privileges which are indisputably granted to the darker passions of enmity and resentment.[25]

In a theoretical framework in which no such entity as the self can be accorded any fundamental status, an individual self can hardly be a primary source of explanation. The first-order, direct passions take us out of ourselves into activities or objects external to ourselves—if we can even speak of a "self" at this level. It is only when we begin sympathetically to incorporate the perspectives of others in those passions of pride and shame, or love and hate, that we become "self"-interested. We become aware of ourselves as a "self" largely through incorporation of the opinions of others. Philosophical observation shows that in the flux of impressions and combinations of impressions, there is no simple impression of a "self." When we return back to ourselves as distinct

objects of interest it is thanks to sympathetic identification with others and the resulting incorporation of the viewpoint of others on our "self." The distinctive feeling for self in the idea of self-interest, implicit in the pleasures of successful first-order pursuits, emerges forcefully from second-order passions in which we take up the viewpoint of others who judge us as we judge them. Pride and shame, the sense of honor or dishonor, become mighty passions driving us to take revenge on insult and to devote ourselves passionately to those who inspire and honor us. Paradoxically, a sense of injured self-love can become so powerful that the individual abandons ordinary concerns for self-interest. But this is only because the viewpoint of the Other looms so large in our concerns. Behind the power of hatred stands the more fundamental power of love. Why should this not equally propel our actions to heights of devotion and heroism in which the ordinary, paltry measures of self-interest are similarly disregarded?

The Dark, Irrational Passions and the Problem of Social Order

The quotation above clearly shows that Hume's admission of a primary passion of benevolence does not mean that human beings are primarily benevolent! It suggests that the dark passions are more obvious than the bright ones. The "malignant philosophy" (of Hobbes) must be countered by hopeful belief in the existence of counter-examples to the well-known cases of hatred and vengeance. Granted that there are people who pursue benevolence with a real passion, it seems clear from this admission of self-destructive passions that we cannot depend on whatever natural sentiments of benevolence there may be to counteract destructive desires and to regulate the relationships in society. The problem of social order seems even more difficult if we accept Hume's vision of dark, irrational passions (that is, those contrary to self-interest). Hobbes at least assumes that the original sin of murder seemed at the time to be a rational means of pursuing someone's perceived interest. Such rational self-interested individuals eventually learn, through bitter experience, that their true interest is in peace, and with this conclusion they take time out from the pursuit of short-term desires to create, or at least mentally to approve the existence of, a state. But if individuals are not in any primary sense rationally self-interested beings, if they are always moved by passions rather than reason, if these passions are both light and dark ones, and if the dark ones are more obvious than the light ones, then the problem of social order does seem more difficult to solve. By comparison with Hume, the malignant Hobbes turns out to be an optimist.

The Hobbesean conception of the social contract nevertheless fails on several grounds. It rests on a simplified conception of human motivation in which self-interest or self-love is a primary motivator. It overlooks the extent to which

human beings act irrationally and destructively in ways contrary to the individual's self-interest. It exaggerates the power of pure reason, suggesting that the origin of civil society consists in purely rational considerations, unmotivated by desire or passion. Such an approach, finally, undermines the deterministic causal theory of human behavior. It situates the creation of society in a pure rational will, unmoved by passion, as if by a quasi-divine *fiat*. And as Locke explicitly places the rational, self-determining individual at the foundation of the state, the anti-scientific, anti-naturalistic, anti-deterministic problems with the social contract, implicit in Hobbes, simply come into the open.

Justice over Benevolence

To understand the origin of the systematic arrangements of civil society, with its complex legal and political machinery, Hume appeals neither to detached, disinterested sentiments of morality nor to selfless feelings of benevolence, but to a uniquely interested passion for justice. Unlike benevolence, justice is not a simple passion. It is a complex phenomenon whose main ingredient involves the awareness of self-interest on the part of the various parties. However, justice is not reducible to *individual* self-interest. It arises out of a feeling that the achievement of individual interests is best served by devotion to the *common* interest.

If a particular goal requires the cooperation of many individuals, a new passion arises in the heart of these individuals, the passion of justice. Suppose someone fails to do his or her part to achieve the desired result, but pretends to a share in the results. That's not fair! say the others, with a view to depriving him of undeserved benefit. Suppose someone actively sabotages the collective goal. The justified wrath of the community demands punishment! The political and legal organization of force to promote and to protect the common interest does not arise out of rational considerations of individual self-interest, but out of a passion for the common good which is justice. If individual self-interest is an element in the chemistry of this passion, it is not the primary element. The ingredients of many individual self-interests combine and merge to produce the explosive power of a new force for action, the social passion for justice. For the application of this sentiment, society over an extended period of history has evolved the peculiar system of the law and the legal profession. For the enforcement of the legal decrees of the courts there is the law's strong arm, the police and the prisons.

The topic of justice brings us back to the territory covered by Hobbes in *Leviathan*. The practical differences between Hume and Hobbes are not as great as the previous discussion of theoretical differences would suggest. Hobbes, after all, does not deny the existence of benevolent love of family and friend. In our exposition of Hobbes's position, we set aside the internal relations

among members of families. But if such tender feelings come forcefully into play in our relations with those near to us, their power to govern behavior diminishes considerably in our relations with strangers—with the far greater part of the human species.

Despite his criticisms of Hobbesean methodology and analysis, Hume tends to concur with these conclusions. While admitting the existence of benevolent feelings, Hume limits their scope. With benevolence, we have to do with a passion directed toward a single object. There is no ulterior motive regarding the benefit such an action might have for the larger social order. Benevolence is therefore a virtue of private life:

> A parent flies to the relief of his child; transported by the natural sympathy which actuates him, and which affords no leisure to reflect on the sentiments or conduct of the rest of mankind in like circumstances. A generous man cheerfully embraces an opportunity of serving his friend; because he then feels himself under the dominion of the beneficent affections, nor is he concerned whether any other person in the universe were ever before actuated by such noble motives, or will ever afterwards prove their influence. In all these cases the social passions have in view a single individual object, and pursue the safety or happiness alone of the person loved and esteemed.[26]

The virtue of justice, however, is something very different, and even, in many instances, contradictory to benevolence. While sympathetic feelings of benevolence relate to an individual case, justice has to do with the requirements of the encompassing multitude—the larger social totality with which the individual identifies. Sounding very much like Hobbes, Hume asserts that "General peace and order are the attendants of justice or the general abstinence from the possessions of others. . . ."[27] Justice must be built around a general recognition of how to establish social peace. Like Hobbes and Locke, Hume considers the main condition of this peace to be the security of private property.

There is a hierarchy of the passions. In many instances in which the social passion of justice is called upon, the social feeling of benevolence must be repulsed. Justice is a more complex passion aimed at general social utility, in which negative consequences, from the point of view of benevolence and having to do with particular individuals, are outweighed by over-all social benefit. Hume sharply opposes the individual case of benevolence to the superior imperatives of the social order:

> The result of the individual acts is here [that is, in the individual case, where benevolent feelings may be present], in many instances, directly opposite to that of the whole system of actions;

> and the former may be extremely hurtful, while the latter is, to the highest degree, advantageous. . . .
>
> [The laws regulating property] deprive, without scruple, a beneficent man of all his possessions, if acquired by mistake, without a good title; and in order to bestow them on a selfish miser, who has already heaped up immense stores of superfluous riches. Public utility requires that property should be regulated by general inflexible rules; . . . It is sufficient, if the whole plan or scheme be necessary to the support of civil society, and if the balance of good, in the main, do thereby preponderate much above that of evil. Even the general laws of the universe, though planned by infinite wisdom, cannot exclude all evil or inconvenience in every particular operation.[28]

For Hume, not only does the social order not rely on the passions of benevolent individuals, it sometimes requires that the urgings of benevolence be suppressed in view of the superior requirements of the impersonal and inflexible laws of justice. But why would individuals accept such rules or laws that contradict their benevolent feelings at the level of individual cases? Hume explain why the passion of justice takes precedence over that of benevolence:

> Men's inclination, their necessities, lead them to combine; their understanding and experience tell them that this combination is impossible where each governs himself by no rule, and pays no regard to the possessions of others: and from these passions and reflections combined, as soon as we observe like passions and reflections in others, the sentiment of justice, throughout all ages, has infallibly and certainly had place to some degree or other in every individual in the human species. In so sagacious an animal, what necessarily arises from the exertion of his intellectual faculties may justly be esteemed natural.[29]

The desire for social peace is not merely for the purpose of preventing war and avoiding the negative harms of violence and fraud, as Hobbes suggests. There is a positive side to the social order: the advantages individuals acquire when they combine their efforts with the efforts of others. In holding that such combinations arise in all conditions of human existence, Hume does not require a unique moment for the emergence of the state, the moment of the social contract. While institutions for determining and enforcing justice evolve throughout history, they are not unnatural means for contravening naturally egotistical drives, but natural outcomes of the combinations of impressions and ideas, of "passions and reflections combined." The English system of the common law, built up over the ages through judicial decisions based on precedent, accords therefore with the course of human nature. There is no break with the past, no moment of decision, no *fiat*, no quasi-creative act of free will in imitation

of the godhead. Hume's science of human nature, contrary to that of Hobbes, does not therefore deviate from the law-governed determinism of the physical sciences.

In the earlier example, Hume writes of justly depriving "a beneficent man of all his possessions, if acquired by mistake, without a good title . . . in order to bestow them on a selfish miser, who has already heaped up immense stores of superfluous riches." The conflict between benevolence or beneficence and justice is at the core of Diderot's novelistic essay, *Conversation of a Father with His Children or The Danger of Setting Oneself above the Law* (1770–72). In Diderot's story, the discovery of a hidden or lost will means that morally worthy and materially needy people would be deprived of a much needed inheritance that they would otherwise receive. If the new will is revealed, they will lose their inheritance in favor of a wealthy and morally unsympathetic individual. The person who privately discovers the will has to choose whether to reveal it, on behalf of the impersonal dictates of justice, or secretly destroy it, following the requirements of the heart and the virtue of benevolence. After much deliberation, with advice from a priest, the father takes side of impersonal justice, warning, like Hume, against the danger of setting oneself above the law. The son, who represents the position of Diderot himself, insists on the primacy of "equity" over impersonal legal justice. The urgings of the moral law as determined by individual conscience, which is equity or the natural law, supercede the heartless workings of impersonal legal machinery. For the Enlightenment philosopher Diderot, as for Locke, the force of the positive law ought to be based on laws of nature that respect both reason and the heart, both benevolence and justice, without contradiction. Individual conscience, where reason and the heart are one, is the supreme judge of both morality and legality. The son therefore rejects the opinion of the father:

> Nature from all eternity has made good laws. It is a legitimate force that ensures their execution, and such force, all-powerful against the wicked man, can do nothing against the good man. I am that good man; and in these circumstances, and in many others I could discuss in detail, I summon that force before the tribunal of my own heart, of my reason, of my conscience—before the tribunal of natural equity. I question it, I submit to it, and I annul it.[30]

For Diderot, the natural law, speaking to the heart but also equally apparent to reason, supercedes the inequitable dictates of the legal system and annuls its illegitimate force, and, in a society that is rightly organized, becomes its fundamental law. Evoking the natural law against the legal system was a favorite method by which the rationalist philosophers of the continental Enlightenment, such as Diderot and Rousseau—whose conception of natural law essentially follows Locke—denounced the legal systems of their repudiated

feudal societies. In this debate, Hume, in the earlier citations, clearly sides rather with the positive legal system, which embodies, as it seems to him, the superior dictates of justice.

Such a difference can be explained by the different situations confronting philosophers on the two sides of the English channel. Diderot and Rousseau confront the absolute monarchies of France and elsewhere that derive their legitimacy from long inequitable tradition. They appeal therefore to equity or morality against the traditional laws. Ultimately, they seek to replace those laws with others based on natural law, the law of reason and the heart. The U.S. Constitution and the Civil Code of France represent the outcome of this tendency. Hume's position however reflects the postrevolutionary situation of England. The legal system already embodies what for Hume expresses the pinnacle of historical evolution, the revolution of 1688, and so Hume does not sanction any appeal to morality (as in sympathetic feelings of benevolence) against the existing law. However, as the English bourgeois revolution compromised with feudal landownership (an unelected House of Lords based on the ancient aristocracy as well as the hereditary monarchy check and supposedly balance the partially representative chamber of parliament), it did not replace the feudal common law with a deliberately and rationally organized system of laws or constitution, as Hobbes's and Locke's reason-based philosophy essentially requires. Instead, England's ancient system of the common law, adapted to the new situation, continues to prevail.[31] Hume, as we will see below, justifies the traditional system of the common law, despite his recognition of its irrationalities.

The Irrationalities of the Common Law

Justice, Hume writes, is a complex sentiment arising out of "passions and reflections combined." Understanding and feeling combined—not understanding or reason by itself—impel us to desire a system of enforceable laws. This is not simply because of the predictably nasty and short life that would ensue were each person free to loot the possessions of others. Hume adds a more positive incentive for establishing civil order: benefits to the individual that come directly from cooperation itself.

Justice is not a blind. The complex passion of justice includes or depends on reflections, so that thought enters into the formation of the sentiment itself. Previously, we learned from Hume that all moral evaluations require that thought first establish the facts and relations of the situation. But rational considerations by themselves are powerless to provide us with a moral evaluation and to move us. Thought is, however, able to enter into the moral passions, and constitute an ingredient or element in their complex chemistry. On recognizing intellectually that there are in fact beneficial results from combining our

efforts, a powerful feeling arises within the parties that moves them to act—the passion of justice.

If justice involves a combination of passion and reflection, this takes place not only within an individual, but among individuals. Justice is therefore a combination of combinations. Two or more people must recognize that each of them benefits more by combining with one another than by pursuing their desires and interests separately. The result is a new sentiment on behalf of the combination itself—a love of the group. It is not purely individual self-interest that motivates isolated individuals to combine, and thereby paradoxically accept rules that inhibit both self-interest and the satisfaction of benevolent feelings, but a perception of the common interest, the recognition that the whole is greater than the sum of its parts. There is no paradox or contradiction involved when the individual accepts legal limitations on individual self-interest since it is not individual, but common or collective interest that gives rise to the feelings that support justice above all personal motivations. As the motivation of justice is not reducible to the motive of self-interest, it suggests the disinterestedness of morality. But morality is a sentiment of the individual, while justice is the expression of a social chemistry that finds its outlet in a merciless legal machinery. Before the operation of this legal machine, the inclinations of ordinary moral sentiment, like the feelings of benevolence, are silenced and overawed, as before an omnipotent Higher Power.

Hume recognizes that the operation of the law involves a considerable degree of arbitrariness. On the one hand, it is imperative that there be inflexible rules that are applied equally to every citizen without partiality to the individuals before the court. This application of the rules of justice is a matter of equality or fairness: "Among all civilized nations it has been the constant endeavour to remove everything arbitrary and partial from the decision of property, and to fix the sentence of judges by such general views and considerations as may be equal to every member of society."[32] And yet, such an effort to be fair inevitably involves a great deal of unfairness. In the system of the common law, court decisions are based on legal precedent in interpreting an unwritten law. Hume identifies the law with the system of judicial precedents for which "a former decision, though given itself without any sufficient reason, justly becomes a sufficient reason for a new decision."[33] Such precedents are then applied

> by analogical reasonings and comparisons, and similitudes, and correspondencies, which are often more fanciful than real. . . . If one pleader bring the case under any former law or precedent, by a refined analogy or comparison; the opposite pleader is not at a loss to find an opposite analogy or comparison: and the preference given by the judge is often founded more on taste and imagination than on any solid argumentation.[34]

Social feelings of fairness, however complex and incorporating calculations of individual self-interest, remain matters of feeling rather than of abstract reflection. In the proceedings of the common law described earlier, reason is minimized, as the decision of the judge is moved by "taste and imagination" more than by "solid argumentation." The English system of common law claims to be determined by past legal precedent. And yet as Hume notes, the common-law method of inventively selecting among the variety and complexity of the precedents frees the judge from determination by the past and gives rise to considerable legal arbitrariness.

The common law contrasts with the civil law, as embodied in the great Civil Code of France that issued from the French Revolution and in the more limited code of public or governmental law that resulted from the American Revolution, that is, the U.S. Constitution. The great model of the civil law is the Code of Justinian (Eastern Roman Emperor from 527–565 C.E.), which systematizes the achievements of Roman law. The influence of this method of codified law persisted in medieval Europe through the canon law of the Roman Catholic Church. In the civil law, legal texts are systematically organized in relation to principles, following the method of going from simple principles to complex elaborations and applications. Such systematic formulation of the law acquires the force of law through legislation by the appropriate authority, democratic or otherwise. Rationalist philosophical methodology therefore parallels the approach of civil law.

Similarly, Hume's empiricist method parallels that of the common law. While recognizing the force of systematic thought in natural science, Hume rejects the system-building approach in philosophy, as exemplified by Hobbes and Locke, as well as the rationalist philosophies of the Continent stemming from Descartes. Instead, he insists on examining the complexity of phenomena given in immediate experience and, like the common-law lawyer when faced with a mountain of cases, judiciously and inventively selects from the tangle of experiences without appeal to any systematic principle or starting point. Hume nevertheless agrees with Hobbes in denying the concept of free will and in defending the deterministic character of science, but, characteristically, without deducing this determinism from any principles of materiality. He criticizes Hobbes's rationalism for inconsistently introducing an undetermined freedom in connection with the alleged capacity of reason to move people to act independently of the forces of the passions. Consequently, empiricism, seen here as harmonizing with and legitimizing the methodology of the common law, sanctions admittedly *irrational* arbitrariness.[35] Hume's radical empiricism in this way reconciles philosophical theory with the existing social, political, and legal system of England. Against the nihilistic skeptical conclusions of theoretical reason, the Humean philosopher seeks consolation in the irrational beliefs, including beliefs in the *de facto* systems of law and government, that determine practical life.

Against the Artifice of the Social Contract

Hume asks whether justice is natural or arises from "human conventions." He rejects the idea of the artificiality of the social order implied by the conception of a social contract. Stemming from Hobbes and Locke, this conception of the foundation of society in a rational agreement among individuals suggests deviation from Hobbes's own materialism, as well as from Hume's naturalism. Hume considers two possibilities regarding the question of whether justice is natural or conventional. In the one, we mean by convention a promise that people make to follow certain rules. But keeping promises (or contracts) is itself part of the meaning of justice, and "we are certainly not bound to keep our word because we have given our word to keep it."[36] There must be another basis to promises or contracts than the establishment of a promise or a (social) contract.

But it is also possible to understand by convention the expression of a certain sense or feeling of common interest. Rather than being the outcome of an agreement or social contract based on rational self-interested calculation by individuals, as Hobbes argues, or by higher insight into the natural law, as Locke holds, the conventions of justice, Hume says, arise piecemeal from "a sense of common interest, which sense each man feels in his own breast, and which carries him, in concurrence with others, into a general plan or system of actions, which tends to public utility. . . ."[37] Before there can be formal contracts—and the complex apparatus of the law with its insufficiently explained precedents and unfounded imaginings of judges—there must arise in the human heart a sense of the common interest. It is this "natural" sentiment that Hume descries at the foundation of that towering and teetering edifice of law that Hobbes regarded as artificial and even unnatural. Hume instead wants us to see behind the complexities of the vast and ruthless legal machine, with its admittedly arbitrary powers to unfairly coerce in the name of fairness, a more bucolic and reassuring picture of human relations:

> Thus, two men pull the oars of a boat by common convention for common interest, without any promise or contract: thus gold and silver are made the measures of exchange; thus speech and words and language are fixed by human convention and agreement. Whatever is advantageous to two or more persons, if all perform their part; but what loses all advantage if only one perform, can arise from no other principle. There would otherwise be no motive for any one of them to enter into that scheme of conduct.[38]

Rational calculations of individual self-interest play a role in the establishment of society and the state, or other social arrangements such as in the use of gold and silver as means of exchange. However, the combination of individuals, like a river that gathers up the multitude of individual drops of rain,

produces a larger force of determinism that leaves individual feelings and reasonings spinning in its wake. Where the self-interest of two parties calls for their cooperation, a new sentiment emerges as if from a chemical reaction that incorporates and supercedes prior rational considerations of self-interest on the part of the individuals. As the numbers of individuals multiply and form a much larger unity, the feeling itself swells and gathers momentum until the flood tide of the national interest sweeps individuals along with beliefs and imperatives that are powerfully resistant to the criticisms of either the heart or of reason that they might otherwise entertain in reflective isolation. On the one hand, Hume exposes the unfoundedness of the common law, where lawyers orchestrate opposing rationalizations, insufficient arguments acquire a spurious and unquestioned sufficiency by virtue of their being repeated, and resolutions depend on the imaginative and arbitrary decision of the judge. On the other hand, in an empiricist framework in which the mind is incapable of finding any rational foundation, Hume advises that we find our happiness in the fact that at least there is an irrational one.

Towards a More Consistent Determinism

Hume's insistence on the presence of feeling or passion as a motivating force can be understood as an improvement on Hobbes's own theory, within a common framework of establishing a scientific-deterministic explanation of human behavior. Hobbes clearly insists that human beings are moved only by passion. He wants to maintain that the passion for peace, arising out of the self-interested desire for life, is the driving force for constructing an artificial, unnatural, and even anti-natural leviathan. But without the corrections supplied by Hume, Hobbes's theory of justice and the state as an artificial construction suggests that the motivating force for this creation consists of purely rational considerations overcoming the deterministic force of desire. It seems that a rational calculation of long-term self-interest—an interest they may never live to see—leads individuals to overcome their own natural desires and interests. Locke, defending the creation of the state by free, self-determining individuals, explicitly espouses such a position.

Something fundamental is missing on the level of motivation in Hobbes's account of the origin of the state. When *B* and *C* combine to fight against the power of *A*, they must overcome their own original individualism in order to cooperate with each other. If they do not suspend their individualistic orientation in their relations with each other, how can they effectively cooperate? They can overcome this individualism in one of two ways. 1) They can exercise a power of reason, which informs them that they are individually better off by combining. But then they are moved by reason and not by desire, which undermines the causal determinism required of the mechanistic laws of natural

science. If they are moved by reason *against* their natural desires, they are no longer determined by their desires. This is the direction essentially taken by Locke. 2) Or, they are moved by a nonindividualistic desire, a specific desire to cooperate or combine which aims at the group or common interest. This is the direction taken by Hume. Locke had previously stressed the social nature of the human being, in the sense that individuals, raising standards of universality, tend to seek the well-being of humanity as a whole. But such sociability remains subject to the free choice of individuals who may or may not elevate themselves beyond their narrow concerns with personal comfort to attain such a level. Locke's sociability is not a determining force operating within individuals. And yet, implausibly, a sufficient number of individuals manage to rise to the level of humanity required by the social contract. Hence Hume, more consistently following the deterministic orientation of Newtonian science, insists in forceful language that "Reason is, and ought only to be the slave of the passions, and can never pretend to any other office than to serve and obey them."[39] The social passion of justice, rising above the indirect passions that bind individuals to one another, subjects all to its power—except for those moments of reflective thought in which the philosopher exposes the lack of any objective foundation to the subjective mechanisms underlying this potent belief.

What may be ambiguous in Hobbes is therefore clearly stated in Hume. It is passion that motivates people to act, and not reason—even the rational calculation of self-interest. Rational calculation is not effective by itself. Nor is it a defining feature of human motivation. Hence we have cases in which individuals who are moved by the passion of revenge throw all calculation of self-interest to the wind. Only a rationalistic "love of simplicity" and metaphysics would require that we try to derive such clearly irrational passions from their opposite. If considerations of rational advantage alone were a moving power, we would not see such and so many irrational actions. Certainly individuals make rational calculations that result in action, but such rationality and rationalization is always under the spell of some passion or desire.

If the spell of desire works solely for individual gain, it is hard to understand why individuals who seek to realize their desires would rush headlong into the shackles of organized states that sanction systematic inequalities of wealth. In Hobbes's picture, the contrary-to-nature and so implicitly free—in the sense of free will—power of reason, calculating promised advantages, is momentarily able to break the spell of such natural passion. In order to give a consistently deterministic explanation of the origin of social arrangements, therefore, we must give a positive emotional or passionate incentive for people to combine. Why would supposedly self-interested individuals be moved to enter into arrangements in which they must to some extent put aside their individual interests? How can individuals agree, on the basis of rational self-interest, to the possibility of capital punishment even when it is directed against them personally? For this is the implication of the theory of the social contract.

Hume's answer is that an all-powerful state is possible only if there is a passion for the public good itself, one that supercedes and potentially contradicts individual desires and interests. This passion is then embodied in the inflexible machinery of the law—which is all the more inflexible, against the losing side of a dispute, because it is so readily manipulated by flexible lawyers and judges. Where it is a mystery how rationally motivated individuals not only could but would create an all-powerful leviathan, Hume shows how a super-individual collective interest can create just such a power.

Chapter Eight

Adam Smith Deciphers the Invisible Hand of the Market

The System of Natural Liberty

In his pioneering work of economic science, *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776), Adam Smith writes that "All systems either of preference or of restraint, therefore, being thus completely taken away, the obvious and simple system of natural liberty establishes itself of its own accord."[1] Here we see that Smith incorporates Hobbes's position of 1651 together with the adjustments of Hume's moral theory a century later. Natural liberty, for all three, operates when artificial interferences and constraints are removed. As this is the case for the individual in the Hobbesean tradition, from the position of Hume it is true of society as a whole, which functions as a freely evolving *system* that governs the lives of individual human beings. Smith takes up the vantage point of the society of Hume, in which the true subject of the science of the human being is not any individual, supposedly self-determining being, but the evolving society as a whole. At the same time, Smith brings the modern scientific approach to the understanding of human behavior to a new stage of specificity. The central aspiration of early modern philosophers, of Hobbes as well as of Hume, was to create a deterministic science of distinctly human behavior. Such a science is based on the principle that individuals act primarily for the purpose of satisfying their desires and interests. This is the principle of human motivation that accords with the mechanistic materialism of the new physics. In the work of Adam Smith, this general principle leads to predictable empirical results in the discovery of definite laws governing the behavior of modern societies.

In his earlier work on morality, *The Theory of Moral Sentiments* (1759), Smith defends Hume's theory that morality is a matter of disinterested sentiment.[2] He also agrees with Hume that "the laws of justice" rest on a distinct sentiment or feeling. Smith stresses the distinctiveness of the "rules" of justice. In contrast to the private, personal "precepts" of friendship, charity, or generosity

> we feel ourselves in a peculiar manner tied, bound, and obliged to the observation of justice. We feel, that is to say, that force may, with the utmost propriety, and with the approbation of all mankind, be made use of to constrain us to observe the rules of the one, but not to follow the precepts of the other.[3]

Following Hume, Smith argues that the social passion of justice supercedes and, when necessary, contradicts the private or individual feelings of benevolence. Furthermore, he incorporates Hume's position that the leviathan-state has a "natural" foundation in feeling, and not in dispassionate considerations of autonomous reason. Such a conception, which situates the locus of investigation in the social totality rather than in any supposedly independent individuals, provides philosophical background for Smith's own unique contribution to the science of human behavior. In his *Wealth of Nations*, Smith puts both moral and political frameworks behind him. We are to accept the existence of a state and its "laws of justice." We also put aside the sphere of relationships in which the private virtues, such as benevolence and gratitude, operate. In the sphere of economic life, we do not appeal to Humean feelings of either benevolence or justice, but return once more to ordinary Hobbesean self-interest:

> It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity but to their self-love, and never talk to them of our own necessities but of their advantages. Nobody but a beggar chooses to depend chiefly upon the benevolence of his fellow-citizens.[4]

Economic life consists essentially of individuals seeking to realize their interests, each in his or her own way, by producing and exchanging goods. "All systems either of preference or of restraint" are assumed to be taken away in the free pursuit of individual self-interest. Following Hobbes's deterministic conception of freedom, Smith asserts that economic freedom consists in the absence of restraint or interference in the realization of an individual's desires. However, the focus of analysis is not on the individual, but on the totality of individuals. A "system" of natural liberty emerges from the multitude of individuals, each of whom freely pursues individual interests—a system operating on the basis of underlying laws that are independent of the intentions and desires of the individuals themselves. While Hume sees the reason of individuals submerged in the social passions that ultimately govern their behavior, Smith uncovers distinctive laws giving rise to and articulating these passions, laws that are accessible to the dispassionate reason of the scientific observer.

Because desires often bring individuals into conflict, this law-governed order is not one of organic harmony, but of competitive conflict and struggle.

But this competitive struggle is also a cooperative one, governed by rules of peaceful exchange. Free, self-interested individuals come into competitive economic relations of production and trade. This competitive struggle is not the violent struggle to the death of Hobbes's state of nature. It is assumed to be the struggle that is limited or restrained by "laws of justice"—rules (and not mere precepts as in the benevolent acts of private life) that are enforced with an even but firm hand by the state.

We can see a significant shift from the position of Hobbes to that of Smith. This is a shift from the primacy of the political, in Hobbes, to the primacy of the economic, in Smith. From the standpoint of Hobbes, the laws of justice constitute limitations or restraints on natural liberty. From Smith's perspective, however, such laws correspond to natural liberty itself. For Hobbes, the laws of the state bring an orderly society into existence from a prior state of chaos. The state is that "artificial man" whose source is the quasi-divine *fiat* of the social contract. This great machine of the state then proceeds, as a creative power in its own right, to bring order out of the chaos of naturally egotistical human life. But for Smith society evolves naturally out of the inherently cooperative inclinations of individuals. In this respect Smith reflects Hume's position that individuals naturally cooperate when their interests require that they do so, prior to or independent of any formal system of contractual rules. "Thus," Hume says, "two men pull the oars of a boat by common convention for common interest, without any promise or contract: thus gold and silver are made the measures of exchange. . . ."[5]

The need to eliminate "systems either of preference or of restraint" does not refer to the "restraint" of positive laws in general, but to the violence and fraud that such laws are created to repulse. For Smith, the apparent restraint of actions due to laws of justice is not really a restraint at all, but only a method that makes the "system of natural liberty" more effective. The true state of nature, according to Smith, is the state of voluntary and peaceful production and exchange of goods taking place within an evolving system of either customary or positive laws. If individuals attempt to impose their will by force, this is not something "natural" but an unnatural violation of the natural state of affairs. Restraint of such unnatural actions therefore does not interfere with natural liberty but consolidates or reinforces it. To borrow a later terminology (from Marx), Smith essentially argues that the actions of the state in enforcing laws of justice are "superstructural" rather than basic or primary to social life. To understand the real foundations of the social order, we need to look at the underlying natural laws of the economy, not the positive laws of the state.

It will be necessary therefore to retrace the ground covered by Hobbes, and see the relation between economic life and the state in a different light. Such a revision does not reject the Hobbesean analysis completely. A revised view shows that the naturally evolving apparatus of the state (not, as Hume argues, required to be created in some moment, historical or otherwise, of free

rational insight and agreement) has for its goal the cementing or solidifying of underlying economic relations and their protection from interfering acts of violence. This view is suggested by Hobbes himself, who sees the protection of market relations as the first objective of the state.

Need for a New Foundation of the Social Order

With Smith's conception we return once again to the methodology of rational construction from simple to complex. Just as modern physics explains the multitude of different kinds of movement from one basic movement, so in social science we should try to explain complicated surface differences in human affairs from a simple principle or starting point. Despite Hume's doubts in this regard, Smith clearly adopts for his economic work the "compositive" or synthetic method of natural science described by Hobbes. In the spirit of the modern sciences of nature, social science must try to explain all the different activities of individuals in society from some simple starting point. This, for Smith as for Hobbes, is the human individual striving to satisfy desires and using rationality as an instrument for this purpose.

Smith takes for granted that the need for a system of laws, enforced by the state, has already been established in previous social science. The existence of the state is of only secondary or marginal interest to him. Contrary to Hobbes, Smith argues that the state cannot be the main explanation of social order. Let us grant that there is a naturally evolving system of positive law of whatever degree of sophistication that allows individuals to pursue their desires and interests with a minimum amount of violent or fraudulent interference, from others as well as from the state itself. But then what? Why should the forceful limitation by the state of certain acts of violence and fraud produce a social order? Earlier, we supposed that conservative defenders of feudalism would pose just such a challenging objection to Hobbes's conception of a limited state based on the will of the people. The state and its "laws of justice" may be a *necessary* condition for social organization, but is this *sufficient*? The question remains: how does a social order emerge from a situation in which individuals, such as the brewer or the baker, are concerned only for their individual interests?

Individual Self-Interest and the Invisible Hand

Smith's celebrated answer to this question is contained in the following passage from the *Wealth of Nations*:

> As every individual, therefore, endeavors as much as he can both to employ his capital in the support of domestic industry, and so

> to direct that industry that its produce may be of the greatest value; every individual necessarily labors to render the annual revenue of the society as great as he can. He generally, indeed, neither intends to promote the public interest, nor knows how much he is promoting it. By preferring the support of domestic to that of foreign industry, he intends only his own security; and by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. Nor is it always the worse for society that it was no part of it. By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it. I have never known much good done by those who affected to trade for the public good. It is an affectation, indeed, not very common among merchants, and very few words need be employed in dissuading them from it.
>
> What is the species of domestic industry which his capital can employ, and of which the produce is likely to be of the greatest value, every individual, it is evident can, in his local situation, judge much better than any statesman or lawgiver can do for him. The statesman who should attempt to direct private people in what manner they ought to employ their capitals would not only load himself with a most unnecessary attention, but assume an authority which could safely be trusted, not only to no single person, but to no council or senate whatever, and which would nowhere be so dangerous as in the hands of a man who had folly and presumption enough to fancy himself fit to exercise it.[6]

The outcome of the unhindered pursuit of individual self-interest is clearly not chaos, but a relatively prosperous social order. By using the expression, "invisible hand," Smith suggests a mysterious paradox. On the one hand, there is what seems like rampant individualism; on the other hand, there is social order and growing well-being. The happy coincidence of individual interest and public good gives the impression that the Invisible Hand of God arranges such an outcome. Smith may have been thinking about the theory of Leibniz, who agrees with Smith that the free actions of individuals coincide with a harmonious social order. Leibniz, as we will see, explains this fortunate occurrence by the idea that each individual's free development is coordinated with that of every other free individual by a divine "preestablished harmony." Leibniz thought that only God could work such a miracle. Smith attempts to explain this coincidence of individual freedom and social harmony and well-being by the operation of empirically verifiable, deterministic, socioeconomic laws. In the framework of metaphysical skepticism and naturalism, this approach does not preclude the Leibnizian, or more generally, the providential perspective. There

is more than a hint of reverence in the recognition that the this-worldly power of the market operates as if guided by the other-worldly power of God.

In the earlier passage, Smith mentions certain reasons for preferring a system of individual freedom to one of paternalistic government regulation. Above all, he holds that the individual is in a better position to understand how best to invest his capital. As the individual citizen will naturally invest in his own country, the nation as a whole can only benefit from allowing individuals to make such decisions.[7] And yet, decisions that benefit the public good are not made *for the sake of* the public good. Moral motivation for the good of the society as a whole plays no significant role in the economic decisions of the individual. Whatever motivating role morality plays in private life, it does not instigate economic activity. Here egotistical, Hobbesean, "self-love," not benevolence or even justice, is the dominant passion.

There is, nevertheless, a strong moral note to Smith's presentation. The disinterested spectator of the larger picture cannot but experience a feeling of approval, with all its Humean moral connotations, at the sight of the continually growing prosperity of the nation. Such an approving moral perspective is not directed to the performance of any particular actions distinctly motivated by such moral feeling. We approve here of "selfish" actions, actions performed for self-interested, and not morally disinterested, reasons. For we see, from the vantage point of the social totality, that such actions produce a great social good. The direct motivations of economic enterprise are not themselves moral ones. But the outcome is such that a morally disposed observer feels that distinct sense of disinterested pleasure that Hume and Smith call the moral sentiment. Such a moral sentiment at the observation of the system of natural liberty is therefore essentially passive or contemplative, but not entirely so. When a system of self-interest produces more good than any other real or conceivable system, including morally motivated systems of paternalistic governments, we feel a strong revulsion against interfering with that system. This feeling of disapproval may inspire the political actions of a member of parliament, as well as the theoretical treatises of a social scientist, directed against such interference with the spontaneously evolving system of self-interest. Smith criticizes such interference whether it be motivated by benevolent feelings of regulating trade for the public good, or by the selfish interests of would-be monopolies that use the power of the state to stifle free competition.

Hence, a recognizable social order does not follow merely by limiting the violence and fraud of individuals. But neither can a flourishing social order arise from paternalistic state actions. In the spirit of Enlightenment, Smith affirms the capacity of the individual to know what he or she can do best. It is the individual, not the state, who best knows how to occupy herself in ways that will promote the social good. The individual does this, however, not by affecting a moral posture regarding what will produce the social good, but by thinking primarily about what will produce her own personal good. Smith does

more, however, than affirm confidence in the intelligence of the individual. He attempts to show in detail how individual self-interest, when given free rein throughout the society, generates the greatest possible social good. And yet it remains the case that these freely producing and exchanging individuals are governed by laws that are independent of their purposes and wills, laws that determine their choices as if directed by an Invisible Hand.

The Natural Disposition to Truck, Barter, and Exchange

To understand Smith's detailed argument, we have to go back to the state of nature, that is, to the simplest imaginable representation of human life, before all the complexities of later developments have obscured fundamental principles. We return, as with Hobbes, to the individual freely acting to satisfy desires, using his head to calculate such realization on a long-term basis. Hobbes emphasizes the natural inclination of individuals in such a state to achieve their goals through the exercise of force. He recognizes, however, that individuals will combine or cooperate when it is to their advantage to do so. It is social cooperation not aggressive individualism, says Locke, that is the natural basis of society. Hume adds that individuals will naturally cooperate when they see that it is in their interests to do so, and that peaceful relations between cooperating individuals are enforced by naturally evolving feelings for justice. Smith follows this more peaceful path in his theoretical construction of the economy. The chief form by which individuals cooperate with one another is through mutually beneficial exchange of goods and services. The simple starting point for Smith's construction of human history is the natural tendency of individuals to exchange the products of their labor. It is out of the natural inclination to engage in such exchanges that there arises a socially beneficial division of labor, a kind of organic differentiation of individuals into different, interdependent, socially useful functions. This movement of society from simple to complex is a naturally or instinctively evolving, not a consciously intended, process:

> This division of labour, from which so many advantages are derived, is not originally the effect of any human wisdom, which foresees and intends that general opulence to which it gives occasion. It is the necessary, though very slow and gradual consequence of a certain propensity in human nature which has in view no such extensive utility; the propensity to truck, barter, and exchange one thing for another.[8]

The agents of economic life are not endowed with any far-reaching knowledge of, or interest in, what would be best for society. Their motivation is not

that of social welfare, but of private interest. Thus we return to the idea of self-interested individuals interacting with one another. We return, in other words, to our friends from the beginning of this book, *A* and *B*, who, in the Hobbesean scenario, each desire to possess or consume a certain relatively scarce object. *A* and *B* here represent consumers of some naturally occurring scarce economic object, such as water in the desert. However, most objects of consumption for human beings have in some way first to be produced. Before there can be consumers there must be producers. According to Locke, it is human labor, not nature by itself, that is the main source of the valuable goods that satisfy our desires.

Let us suppose that *A* happens to prefer hunting deer, while *B* is drawn to hunting rabbits. Surfeited with deer, *A* develops a yearning for *B*'s rabbits. What is the best, most rational way for *A* to get what he wants? If he uses Hobbesean violence and takes the rabbits forcefully, this may satisfy his appetite for rabbit in the short run. But if *B* is killed, wounded, or simply demoralized because of *A*'s interference, where will the rabbits come from in the long run?

Brutal force cannot therefore attain the desired objective, in the long run, of *A*. Of course, some individuals will behave in this brutal and stupid manner. However as this kind of behavior is self-defeating, it will tend to disappear or be minimized in the behavioral repertory of a rational individual seeking to realize his best interests. As Locke has shown, violent actions by individuals will inevitably be minimal where nature is abundant and people are few, and will be further minimized by the evolving enforcing practices of early societies. Such irrational actions may therefore be ignored for the sake of the basic examination. We can begin, then, with a situation in which, in the words of Hume, something is "advantageous to two or more persons, if all perform their part; but . . . loses all advantage if only one perform." No formal system of positive laws is required for the individuals in question to recognize the advantage of exchanging their produce.

Let us therefore take for granted, as Smith does, the existence of "laws of justice" and turn our attention to the exercise of what Hobbes himself describes as a central liberty that must be guaranteed by any viable state. This is, as Hobbes says, "the liberty to buy, and sell, and otherwise contract with one another; to choose . . . their own trade of life. . . ."[9] Clearly, for Hobbes economic relations of exchange do not come into existence only with the state. The system of civil liberties issuing from the social contract merely stabilizes and facilitates their operation. But no distinctive contract is in fact needed, since, as Hume argues, all contracts presuppose something more basic: the recognition that advantages are to be gained by individuals through some form of cooperation. Hence, no formal contract is required in the beginning, although a passion for justice spontaneously springs up in the heart of cooperating individuals demanding fairness in the distribution of efforts and rewards.

Search for Economic Value: From Aristotle to Adam Smith

Thanks to the natural propensity of rational human beings to engage in trade, *A* proposes to exchange some of his deer for some of *B*'s rabbits. The crucial question then arises: how many rabbits equal one deer? What is the just or fair rate of exchange? Again, Aristotle's position on this topic, so influential for premodern thought in this respect as well, supplies the illuminating contrast. Aristotle pondered the issue of how two qualitatively different objects could be regarded as equal for the purposes of exchange. In his discussion of justice in the *Nichomachean Ethics*, he considers what would constitute justice in societies based on the exchange of goods.

> Let *A* be a builder, *B* a shoemaker, *C* a house, and *D* a shoe. The builder, then, must get from the shoemaker the latter's work, and must himself give him in return his own. If, then, first there is proportionate equality of goods, and then reciprocal action takes place, the result we mention will be effected. If not, the bargain is not equal, and does not hold; for there is nothing to prevent the work of the one being better than that of the other; they must therefore be equated.[10]

The fact that Aristotle does not begin with primitive hunters, but with the skilled craftworkers of his own society is reflective of his contemplative method, combined with his theory that it is the advanced economy of Greece that represents human nature or essential truths, not the immature societies of hunters and herders. But Smith, as a modern, post-Copernican scientist does not begin with the appearances of the existing society. He seeks to explain the complex appearances that stand before us from the simplest possible elements. Thus the key to the sophisticated present is found in the primitive past—or, at least, those primitive elements that continue largely unnoticed in the present. Hence Smith begins with simple acts of barter rather than exchange involving the use of money.

The problem of the fair rate of exchange can nevertheless be posed in terms of any act of exchange. Aristotle states that two different or qualitatively incommensurable goods must be equalized in some way. This is necessary at all stages of economic evolution. But how is that possible if their natural qualities are different? What natural property of the object could provide a basis of comparison? How can the incommensurable be rendered commensurable? To answer these questions, Aristotle first distinguishes between strict and proportionate equality. Strict equality cannot be the basis of exchange since that would mean that the builder should give the shoemaker a shoe in return for his shoe. The shoemaker clearly doesn't need shoes. He needs a house. Justice in exchange should therefore not be strict but "proportionate" equality. But

how is this proportion to be established? Aristotle writes that "It is for this end that money has been introduced, and it becomes in a sense an intermediate; for it measures all things. . . ."[11] This is clearly how mercantile exchanges are viewed when objects come to be equated to money. The monetary value of the shoe is in a certain proportion to the monetary value of the house. What then is the basis of the proportionate relation represented by money? Why is so much money equal to a shoe, and such a percentage of the value of a house? Because Aristotle begins with a developed society, and one in which monetary exchange has been established, he is unable to explain what lies behind the value of money itself.

Perhaps the basis of exchange is in the need or demand. For there to be exchange, *A* and *B* must have a *need* for the products of the other. But proportionate need cannot be the basis of the exchange, it seems, since *A* needs a pair of shoes just as much as *B* needs a house. Their needs are in this regard more or less equal. Perhaps there is a greater need for some things, such as water or food. As homelessness attests, one can survive without a house, but not without food or water. But that doesn't seem to make water or food "worth" more in exchange than a house.

Exchange supposes a certain equality or commensurability between the different, seemingly incommensurable objects. Neither strict equality nor equal need can provide this commensurability. Aristotle reasons that need impels individuals to exchange goods and that the existence of monetary equivalents for goods enables them to exchange their goods in a certain proportion. Moreover, the fixing of these monetary equivalents or prices is not based on any natural property of the goods. Not based on the nature of the goods, it must be the result of artificial social custom or convention. Following his general theory of causality, if the cause of prices is not a natural one, based on the nature of the goods themselves, it must be "violent," unnatural, or artificial.

> All goods must be measured by some one thing, as we said before. Now this unit is in truth demand, which holds all things together (for if men did not need one another's goods at all, or did not need them equally, there would be either no exchange or not the same exchange); but money has become by convention a sort of representative of demand; and this is why it has the name "money" (*nomisma*)—because it exists not by nature but by laws (*nomos*) and it is in our power to change it and make it useless.[12]

Since the Greek word for money is rooted to the word for law or convention, Aristotle concludes that monetary equivalence comes about through conventional agreement rather than by representing some natural property of the things whose exchange it mediates. In other words, the commensurability of needed or demanded objects comes about through an arbitrary or conventional

determination of their prices. Thus, in his reply that prices are fixed by arbitrary convention, Aristotle admits that he has no answer from the nature of the things as to why one commodity can be exchanged for another.

Labor as the Measure of Exchange Value

Adam Smith, however, finds an answer by looking behind the act of exchange to that of production itself. Is the ratio of exchange to be determined by weighing up the two commodities, the deer and the rabbit? *A*, the deer hunter, would like that, but *B* protests. It would take her several weeks to catch the number of rabbits that equal the weight of one deer. Every day she checks her carefully set traps, but the rabbits are clever. On average, she gets one rabbit a day for all her efforts. *A*, on the other hand, kills on the average one deer a week. The solution to the problem of how to exchange the two quite different commodities is therefore quite clear to the agents whose hard work has gone into them. The basis of equivalency must be: how much time, on average, does it take the producers to produce or acquire their respective commodities. As working individuals endowed with reason, *A* and *B* recognize that seven equals seven. Translated into relations of exchange, seven days of labor to kill one deer equals seven days of labor to kill seven rabbits. One deer has the same "value," in this sense, as seven rabbits. Value is therefore a term referring to the amount of labor normally required to produce a commodity.

Smith argues that labor, regarded from the perspective of average time and effort, creates the kind of value that equalizes naturally different objects and so permits their exchange. Water, Smith writes, is extremely valuable in this sense of having vital utility. That does not however make it expensive, because anyone can walk to the nearby stream and take as much as he or she likes with little effort. The value-in-exchange therefore must be something separate from the value-in-use. Since what gives an object its exchange value is not its inner, natural property, exchange value must come to the object from the outside, from the work involved in its acquisition or creation.

Deer and rabbit have quite different natural properties, different utilities or "values-in-use." For the exchange to make sense, the use-values involved must be different. There must be different needs for different kinds of goods. But because they are qualitatively different, the basis of exchange cannot be some intrinsic natural feature of the objects themselves. That is, the use values of the products cannot be the basis for exchange. Exchange requires a relation of equality between objects with different uses. What we are looking for is something that is the same in the products, so that they can be compared or equated. Aristotle's proposal that the exchange takes place because of monetary prices only postpones the problem: Why are prices fixed at such and such a rate? Can prices be varied arbitrarily, as Aristotle suggests. Hume hardly

advances beyond Aristotle. Evoking a passion for justice, as Hume does, says little about the standard of the fairness or equality that makes an exchange a just one. Hume's reply, in line with the common-law conception of justice, is to refer to past tradition and the arbitrary decisions of individuals interpreting that tradition. Hume rejects the position of Hobbes and Locke that there can be independent standards of justice discerned by reason. Adam Smith however returns to this conception that there is an objective, rationally discernable basis of economic justice in exchange. Such a standard is reflected in the sentiment of injustice of the outraged rabbit hunter who says, upon hearing the deer hunter's biased proposal to weigh their catches, "It's not fair! I've worked too hard to catch all those rabbits, while you have done next to nothing."

Smith argues that exchange values are not at all arbitrary matters of social convention or tradition. The basis of proportionate equality of different use values results originally from their common source in labor: "Labor . . . is the real measure of the exchangeable value of all commodities."[13] The exchange value of gold or silver is itself proportionate to the amount of labor required to extract these precious metals from the earth and bring them to the market. Hume repeats Aristotle's explanation when he explains the passion for justice by convention based on interest or need: since "two men pull the oars of a boat by common convention for common interest, without any promise or contract: thus gold and silver are made the measures of exchange. . . ."[14] The example of two men rowing conveniently takes individuals doing the same work, where an equality of effort is obviously required. But suppose they are doing quite different things and one complains that the other has not lived up to the terms of an exchange. Hume refers such complexities to the common law, where lawyers produce a tangle of opposing arguments, the Gordian knot of which is to be cut by the judge's own imaginatively arbitrary decision. Where Hume finds only unfounded *belief* at the basis of the passions that determine our lives, Smith, building on Locke's previous location of economic value primarily in human labor, establishes an objective, scientifically decipherable measure of value in human purposeful activity itself.

What about the measures of exchange themselves? Why is something worth so much gold or silver? Can convention answer this question? Hume has great faith in the values established by a tradition which operate irrationally through the passion of individuals. Such a conception is appropriately linked to a common-law procedure that finds sufficiency in the mere repetition of insufficiently justified past decisions.[15] Smith however sees the proportion of labor as underlying the changing equivalencies between other commodities and gold or silver. Gold and silver are themselves goods produced by so much labor. And so the gold miner is on the same footing as the rabbit hunter in protesting against an unfair exchange rate between his product and that of others. Smith notes that the exchange value of gold and silver dropped by a third with the use of slaves to work the silver and gold mines in the new world.

> As it cost less labour to bring those metals from the mine to the market, so when they were brought thither they could purchase or command less labour, and this revolution in their value, though perhaps the greatest, is by no means the only one of which history gives some account. But as a measure of quantity, such as the natural foot, fathom, or handful, which is continually varying in its own quantity, can never be an accurate measure of the quantity of other things; so a commodity which is itself continually varying in its own value, can never be an accurate measure of the value of other commodities. Equal quantities of labour, at all times and places, may be said to be of equal value to the labourer. In his ordinary state of health, strength and spirits; in the ordinary degree of his skill and dexterity, he must always lay down the same portion of his ease, his liberty, and his happiness. The price he pays must always be the same, whatever may be the quantity of goods which he receives in return for it. . . . Labour alone, therefore, never varying in its own value, is alone the ultimate and real standard by which the value of all commodities can at all times and places be estimated and compared. It is their real price; money is their nominal price only.[16]

Smith's discovery of a single principle for the measurement of the exchange value of different use values parallels Galileo's discovery of a single form of motion at the heart of the vast diversity of forms of motion. Smith breaks through the appearances of economic exchange to discover the reality underlying them. In the course of exchange, the illusion persists that labor itself is just one more variable commodity. The truth of the matter depends on the standpoint in which the transaction is perceived: that of the laborer who does the work, or that of the employer who buys the worker's labor:

> But though equal quantities of labour are always of equal value to the labourer, yet to the person who employs him they appear sometimes to be of greater and sometimes of smaller value. He purchases them sometimes with a greater and sometimes with a smaller quantity of goods, and to him the price of labour seems to vary like that of all other things. It *appears* to him dear in the one case, and cheap in the other. *In reality*, however, it is the goods which are cheap in the one case, and dear in the other.[17]

Just as, in the interaction between physical bodies, motion is transferred from one moving body to another, so labor transfers to the product something over and above its material properties. In his physics, Aristotle does not go beyond the phenomenal differences between the apparent "natural motions" to uncover a universal principle of motion. Similarly, in his economic theory he does not discover a single principle at the basis of the mysterious commensurability of the incommensurable things that are exchanged. Aristotle's social

theory may be seen at the bottom of both of these failures. Aristotle's notion that there are fundamentally different kinds of human beings justifies the hierarchically divided city-states of ancient Greece. Particularly in a slave society, but also in the peasant hierarchical societies of medieval feudalism, it is unlikely that common labor, including that of slaves, would be recognized to be a universal measure of value and justice. When Smith explains the falling value of gold and silver by the introduction of slave labor in the Americas, he takes a giant step beyond the surface appearances. At the basis of the power and palaces of the age is the labor of the abjectly impoverished and apparently powerless human being.[18]

The Power of the Market

In relation to Hobbes, too, Smith's conception constitutes a major development. Smith finds another principle in addition to personal desire/interest as a regulator of human relationships—the transforming power of purposeful human activity itself. The battle of desiring egos struggling over inherently scarce consumer goods can only be regulated by an external political force. But, as Locke first recognizes, nature is for the most part abundant, not scarce. Moreover, Locke points out that by exploiting the vast resources of Mother Earth with the aid of ever-improving technological means, human labor can produce consumer goods in ever-increasing amounts. The expanding productivity of labor resolves as it precludes the Hobbesean struggle based on a supposition of natural scarcity. But this solution introduces a new reality that generates new problems: the artificial, humanly created problems connected with the competitive struggle between economically oriented individuals. It is in this more advanced stage of complexity that Hobbesean struggle reflects the surface appearances of society.

The purposeful human activity of individuals transforming nature in social relations to others, or labor, introduces an objective unifying dimension to human relationships. Smith shows that the commodity one desires has two aspects. It is a use object that satisfies a need or desire. But it is also a product of laboring activity of a certain duration and intensity, as measured by the average sacrifice of time and the average skill it takes to produce something. This common characteristic of all productive activity allows comparison of one product with another quite different one. The fact that one product is the result of a certain quantity of labor confers on it a value that is proportionally commensurable to the economic (exchange) values of all other products of labor. Smith discovers in this way that economic relationships have a lawful dynamic of their own with an objective foundation in purposeful human activity.

A complex social order comes into existence through the establishment of exchange relationships between practically acting, creative individuals. But

because each individual is narrowly focused on his or her individual interests, the *interaction* of individuals takes the apparent form of an external totality governed by an Invisible Hand. Behind the appearances of the market and its determination of prices, the social scientist finds the reality to be the labor of the individuals themselves. Whereas for the scientist such labor is the cause, while the market is the effect, for the individuals themselves, the relationship appears in reverse. Each sees the market, like the all-powerful and judgmental God of religion, as the cause of his or her labor. As in the pre-Copernican understanding as well as in ordinary perception where the system of the planets appears to revolve independently of the observer, so in the ordinary perceptions of common sense the market seems to have its own movement independent of the individuals who participate in it and must adapt to it. But just as the truth in astronomy is that it is the movement of the observer on the earth that determines the appearances of the heavenly bodies, so in the social science of Adam Smith it is the activity of the individual producers that underlies the movement of the market itself.

Development of the Market

To understand this market-centered determinism more fully, let us follow some complications that evolve out of our simple model of exchange between two individuals, *A* and *B*. Suppose that *C* discovers that by cupping his hands in a certain way and blowing through them so as to make sound resembling a mating call, deer will running come to him. Thanks to this labor-enhancing technological improvement, the average amount of time it takes to kill a deer drops from seven to four days. *C* too is interested in tasting rabbit, despite (or perhaps because of) its greater cost in terms of labor-time in relation to its weight and food-value. Because of his more efficient hunting methods, he can happily offer to give *B* one of his deer in exchange for only six rabbits. As the cost of the deer for *C* is now only the equivalent in labor time of four rabbits, he sells his deer at a price that is above what Smith calls its "natural" value (that is, the prevailing average amount of time necessary to kill a deer). Eventually, of course, *C*'s method will be discovered by someone else, who may trade her deer for five rabbits. In this way, the price of deer as measured by rabbits will eventually drop to the natural or true value. If too many people, motivated by the initial prospects of high returns, take up the new technology, the price will fall below the value as the supply of deer runs ahead of the demand.

Let us stay for the moment with the simpler scenario and consider what happens to *B*. He of course jumps at *C*'s offer. Thanks to the saving, he will be able to exchange his additional rabbits, eventually, for wine from a nearby wine-maker, *D*. On the other hand, *A* is not good at deer calling. Although stronger and faster than *C*, he loses out in the economic competition to his

talented and innovative rival. He must either adopt the new labor-saving technique himself, or continue hunting in his usual manner and be cut out of the market altogether. If he takes the latter course, he will have to return to a monotonous deer-eating diet. Eventually, however, market-involved deer hunters, with greater technological capacity, will capture all the game. Thanks to the laws of the market, the rule of the physically stronger comes to an end. The once triumphant *A* faces the threat of starvation. It is therefore clear what a rational individual, seeking to realize long-term interests, *must* do. He must comply with the economic imperatives of the market.

The pressure to create technological improvements leads in the direction of increasing specialization—to a more highly differentiated division of labor. *E*, a clever individual who fashions an effective deer-calling horn, finds a ready market from individuals such as *A* who do not have the talent of a *C* for calling deer. By means of the new technology, *A* kills a deer on the average of every two days. *A* soon reenters the market and offers his former trading partner *B* a deer for only three rabbits. Despite this apparent fall in the relative value of deer, *A* has made a profitable exchange, while *B* is wondering about his ever-growing luck. But this situation is only temporary. As word gets out about the fine returns of hunting rabbit, more rabbit hunters begin to set up traps, including improved models that double the number of rabbits caught in a day. With such fluctuation in the relations of exchange, it is no wonder that justice may have seemed an matter of convention and arbitrary feeling.

It is important to note that *E*, the horn-maker, has become *completely* dependent on the market for his livelihood. *A* may be able to fall back on his exclusive deer diet when market conditions turn against him, but *E* does not have this option. He will starve to death if a change in the relevant hunting technology consigns his product to the economic dustbin. Being a clever, adaptable individual, he will therefore try to keep one step ahead of the market by looking for new ways of meeting the demands of the hunting market. The market in this way stimulates the development of new talents and technology, undreamed of in simpler times.

The March of Civilization

Thanks to pressures from the market, whose hidden source Smith finds in the evolving activities of other individuals, individuals are both motivated to introduce new technology and forced, under pain of economic and even biological extinction, to keep up with technological improvements. The outcome of this process—begun in the simplest exchanges between individuals—is an incredibly complex network of dependencies that extends over the entire globe. Smith in effect continues the rationalist line of thinking of Locke, who earlier measured the progress of civilization, not by the swelling power of passion, but

by the objectively measurable complexity of the ever-growing division of labor. Locke gives as an example the immense complexity of implicitly cooperating labor of many kinds that stands behind the baking of a loaf of bread. Taking a coarse peasant's coat, Smith shows, by detailed enumeration of the multitude of different forms of labor entering therein, that "without the assistance and co-operation of many thousands, the very meanest person in a civilized country could not be provided."[19] True, he says, there is considerable inequality between the common peasant and the European prince, but such inequality is relative. A European prince has greater wealth than the ordinary free peasant farmer producing for the market. However, thanks to such involvement in market production, the peasant is in fact better off than many an African king, "the absolute master of the lives and liberties of ten thousand naked savages."[20]

Thanks therefore to this "system of natural liberty" individuals in "civilized," that is, market-oriented nations, have greater wealth and so greater capacity to satisfy their desires, than in any other kind of social arrangement. This material abundance is the result of the labor of a vast number of individuals, each of whom is acting only in his or her self-interest, although in the very demanding conditions set for them by an independently evolving market. Of all possible systems of social organization, the system of natural liberty is the best. In this way, Smith, substantiating the theory of Leibniz, establishes that we who live in a free market economy live in the best of all possible worlds.

Unconscious Cooperation, Morality, and Determinism

Objectively speaking, individuals cooperate with one another in a complex, ever-changing system of division of labor. However, this cooperation is an unconscious phenomenon, not something consciously intended. Each is only pursuing the satisfaction of his or her desires or interests. Thanks to the simulating and coordinating features of the market, however, the consequence of this individualism is not anarchy but order. Individuals are "led by an invisible hand" to do what promotes the general wealth of nations.

There is no need to suppose that individuals have or ought to have a "moral" intention of working for the common good. So-called moral concerns, especially when indulged in by people with power, are generally damaging to the functioning of a system in which no one knows better than the individual "on the ground" what is the best way for him or her to proceed. The theory of paternalistic government for the sake of the common good, still hanging on in the form of eighteenth-century mercantilism, is clearly demonstrated by scientific arguments to be simply bad government. And yet, although morality is (or ought to be) largely banished from the political and economic order, "the system of natural liberty" leads to results that any moralist might want. Materially,

wealth is growing at an unprecedented pace, allowing for the greater satisfaction of desires, as well as promoting ever newer desires, of a larger and larger number of people. In terms of subjective human abilities, unimagined talents in science and art never cease to multiply. What more could a morally disposed individual, wanting the best for humanity, ask for? The new economic science reinforces the Hobbesean conception of freedom. In a properly functioning economic order, each person has a maximum amount of freedom. But such freedom is completely compatible with an entirely deterministic conception of causality. There is no place in economic science for a conception of freedom in the sense of "free will." Even if there were such a thing, on some metaphysical level, it would be a useless appendage of human consciousness. And perhaps it would be a dangerous intrusion in lives that must align themselves by the most demanding necessity to the requirements of the market. Individuals who chose to opt out of this necessity would, in the long run at least, perish.

Consequently, the determinism of this social order is not merely a supposition, as it was in the writings of Hobbes where it is based a supposed continuity of the actions of desiring individuals with the laws of mechanical physics. Adam Smith uncovers distinctive laws of economic life that permit empirical predictions. Rational individuals are not free to create or not to create these laws, but are strictly subject to them. On pain of extinction, they must learn how to adapt their behavior to the ambient socioeconomic environment. Scientific thought thereby uncovers the underlying nature or larger meaning of the individual's interest. We are motivated to win, or at least to survive, in an unconsciously evolving competitive process that has encompassed the entire globe. At the same time, without consciously intending to do so, we are the creators of powerful new instruments of material transformation and a global network of implicitly cooperative relationships that engages all of humanity.

Chapter Nine

Contradictions of Economic Life

The Protestant Ethic and the Spirit of Capitalism

Implicitly reflecting Adam Smith's conception of economic value, Smith's contemporary the American Benjamin Franklin (1706–90) writes that "time is money."[1] In his classic study, *The Protestant Ethic and the Spirit of Capitalism*, Max Weber summarizes this "philosophy of avarice" as "the ideal of the honest man of recognized credit, and above all the idea of a duty of the individual toward the increase of his capital, which is assumed as an end in itself. Truly what is here preached is not simply a means of making one's way in the world, but a peculiar ethic."[2] Weber traces the "ethic" of Franklin to the religious philosophy founded by the French-Swiss theologian John Calvin (1509–64) two hundred years earlier. According to Calvinist beliefs, the individual is predestined by God either to eternal happiness or to damnation. Economic prosperity through worldly activity is regarded as a practical sign that one is chosen by God for eternal happiness. Calvinism and related Protestant theologies, such as Puritanism, provided a set of militant beliefs for practical people who, among other things, founded the American colonies.

It seems paradoxical that a theory claiming that the individual's course of life is thoroughly predestined by God could be the basis of a powerful activism. If my fate has already been determined, why should I *try* to achieve anything rather than simply let events unfold? But strict theoretical implications are not always the same as the force of practical beliefs. If we believe that our actions have an all-powerful God as their source, our personal motives are strengthened both by the faith that we are carrying out an irresistible divine calling, as well as by the fear that any faltering in personal resolve is an indication that we have been eternally damned. In practical material terms, this outlook was a powerful stimulant for the tide of capitalist expansion sweeping post-feudal Europe and crashing on the shores of all other continents of the world.

Paralleling the new Protestant belief that God speaks directly to the individual, the rising economic and social movement confronted the entrenched power of feudal lords, absolute monarchy, and the hierarchically structured Church of Rome. Despite its stress on the individual, the progress of the new forces could not readily be explained by individual will, and so the belief in divine predestination for the triumph of those adhering to the new outlook seemed quite plausible.

However, by the eighteenth century, the once new revolutionary order had become the established order in England, and the revolutionary philosophies of Hobbes and Locke gave way to Hume's reliance on established tradition. In the utilitarian rationalism of Benjamin Franklin, much of the earlier otherworldly framework had receded into the background. Capitalism in America no longer seemed to be an underdog movement struggling to assert itself against a dominant feudal order. The American colonists were nevertheless threatened with the imposition of a new colonial feudalism by a no-longer-revolutionary England, complacent in its compromises with the past. Hence the Americans saw themselves in the same struggle as the proponents of continental Enlightenment whose societies had yet to overcome the old order. But by this time, the new order built on commercial enterprise was regarded by educated people to be the natural and normal way of things, the obviously rational ordering of human life. Divine predestination had given way to "laws of nature" or, in Adam Smith's words, "the system of natural liberty," whose workings seemed guided by "an invisible hand."

The Rational Pursuit of Happiness

Although Smith had written a work on ethics, *Theory of Moral Sentiments* (1759), his most significant impact on ethics came indirectly from his major work on economics, *The Wealth of Nations*, published in 1776, the year of the American Declaration of Independence as well as of Hume's death, and a time when Kant was writing his *Critique of Pure Reason*. Jefferson's Declaration declares the securing of "life, liberty and the pursuit of happiness" as the main goals of government. Such responsibilities of government, stemming from Locke via continental European Enlightenment thinkers who influenced the American revolutionaries, are seen to be natural principles of the socioeconomic order in the work of Adam Smith. The purpose of the new revolutionary American government is that of securing this natural system of liberty and prosperity against unnatural interference from the throwback forces of the past, now paradoxically enthroned in England. The pursuit of happiness is understood by Smith as well as by Franklin to mean primarily the free or unfettered pursuit of rationally understood self-interest. In this understanding, the satisfaction of immediate sensual desires needs to be deferred, in the long-term rational

pursuit of self-interest, to the increase of one's capital. Don't waste your time in idle pleasures like the unproductive aristocracy still running archaic societies, Franklin essentially advises. Use it to build for tomorrow. Governments should promote the pursuit of happiness of its citizens, Smith argues, by allowing full freedom to the individual to pursue his or her own desires and interests. To achieve such freedom it is necessary to alter radically the old mercantilist economic system in which governmental interference in the economy creates and protects legally privileged economic monopolies. Hence, Smith writes:

> All systems either of preference or of restraint, therefore, being thus completely taken away, the obvious and simple system of natural liberty establishes itself of its own accord. Every man, as long as he does not violate the laws of justice, is left perfectly free to pursue his own interest in his own way, and to bring both his industry and capital into competition with those of any other man, or order of men.[3]

These ideas were advanced against the mercantilist system in England, in which government played a major role in directing economic life by supporting special corporations. As a result, powerful economic companies enjoyed the special privileges of monopoly. Smith proposes instead a more limited form of government which has come to be called the "laissez-faire" state. The primary limitations that governments should put on economic freedom are those that follow from "the laws of justice"—those laws of citizenship, familiar to the readers of Hobbes and Locke, according to which the freedom of one person should not negate, by violence or fraud, the equal freedom of the other. The existence of just laws is not really a limitation on freedom or self-interest, contrary to what Hobbes had told the impassioned Levelers, nor is it an "interference" of government in the market place; it is simply an expression of the "system of natural liberty" itself. A system of liberty governed by just laws that are enforced by state power is a system of freedom. More, it is the system that rational people would want to exist if they could choose between it and other possible rivals. Implicitly Smith applies to his own system both the methodology of rational system construction from simple to complex, as well as the rationalism of the social contract.

This system, though natural, can be violated by arbitrary acts of individuals, groups, and states themselves. Serious violations by individuals should be punished by the law and prevented by fear of the law. Rational governments should punish such violations of life and liberty as theft and murder, and the breaking of contracts, since in such actions the freedom of one person precludes the equal freedom of the other. The parties of the exchange should part with their goods voluntarily, freely, not because of force or fraud, but for the sake of the personal advantage that each sees in the exchange. Pursuit of rational self-interest should be distinguished from a narrow selfishness that fails

to respect the equal rights of others. Because of such narrow selfishness, explicit laws must be enacted to ensure that individuals are free to work for their own rational self-interest. The economic person, for Smith, is therefore not a Hobbesean egotist who is naturally inclined to pursue his interests by any means possible and who sees all others as merely means for achieving his own goals. Rather, she lives in a Lockean spirit of mutual tolerance and respect for others as equals and as equally free to forge their own unique destinies.

It is a fundamentally modern idea that everyone should enjoy the same basic freedoms to pursue different individual interests. The self-interest of the employee should take into account the self-interest of the employer, and vice versa. The freedom of the one must be exercised within bounds, so as not to conflict with the freedom of the other. Moral consciousness may condemn one kind of selfishness, one sort of egotism, when the selfish person does not leave room for equal "selfishness" in others. But a kind of *universalized egotism* is not affected by this criticism. The pursuit of self-interest is a universal principle of social life that is acknowledged by each individual, rather than an exclusive concern of one individual (selfishness). In concrete social terms, what is here recommended for moral evaluation is the free pursuit of self-interest by each and every individual in a framework of voluntary interchange of goods and services—that is, a free-market society, operating within the framework of just laws.

Morality condemns the pursuit of private pleasure when this conflicts with the satisfaction of the needs and desires of others. But in the system of natural liberty the pursuit of personal happiness not only does not conflict with the happiness of others, but implicitly promotes it. When we approach the butcher, the brewer, or the baker, we obtain vitally needed goods by appealing to their self-interest, not to altruistic benevolence towards ourselves. But a certain higher benevolence nevertheless permeates this entire arrangement, a Lockean "humanity." A disinterested observer experiences a moral feeling of approval for an economic order that encourages individuals to pursue their own unique conceptions of happiness, because in doing so they indirectly promote the happiness of others. In describing such a system as promoting an individualistic "philosophy of avarice," Max Weber may therefore be missing the larger moral picture.

Division of Labor and the General Opulence

There are fortunate arrangements in society in which self-interest and the interest of others coincide. This is generally the case, Adam Smith argues, with the free market arrangement of economic life. In "civil society" (that is, market society, under the rule of law) the well-being of the members of society as a whole is best served when each individual member is free to pursue his or her self-interest. This does not mean that individuals live entirely for themselves.

Certainly that is not the case in economic terms. If individuals at one time lived completely for themselves, producing all the goods needed for themselves and their families, people eventually discovered that such self-sufficiency is not to their advantage. An implicitly cooperative division of labor is more advantageous. By concentrating on activities they are good at, while taking advantage of the products other people excel at producing, their over-all well-being is enhanced. It is in the interest of individuals therefore to specialize in producing large quantities of certain goods, and exchange the surplus of their specialty for other goods produced by other specialists. Thus, without supposing that they are motivated by good will toward others, people motivated by rational self-interest engage in what is in fact a system of cooperation with one another according to an elaborate division of labor. The social system of cooperation involving a division of labor is not consciously intended by anyone. Each intends only the satisfaction of his or her own needs. But rational individuals recognize that what others do can be useful to satisfying those needs. There is a basic human tendency to truck, barter, and exchange one thing for another, that is, to engage in relations of commerce or trade, not for the sake of helping the other person, but simply to satisfy one's own desires and interests.

This is a competitive system of "cooperation" since others are free to compete in the same field, stimulating an ever-superior productivity of labor, connected with ever-greater development of the division of labor. By the end of the eighteenth century the division of labor had resulted in a vast interconnected web of mutually dependent producers and traders from all continents of the globe, each seeking only to promote her or his own interests, and no one worrying over the unconsciously evolving totality of interconnected labors, that objectively cooperative/competitive system that constitutes the source of their satisfactions. Division of labor developed so far that eventually not only did individuals confine themselves to producing one specialized product, but the activity of producing that single product was itself broken down into parts or fractions so that one person would specialize in only a part of the work needed to produce a particular product. Division of labor within the production of a single product produced the system of "manufacturing." Smith graphically demonstrates the great productive potentiality of this division of labor in the case of pin manufacturing:

> [A] workman not educated to this business (which the division of labour has rendered a distinct trade), nor acquainted with the use of the machinery employed in it (to the invention of which the same division of labour has probably given occasion), could scarce, perhaps, with his utmost industry, make one pin in a day, and certainly could not make twenty. But in the way in which this business is now carried on, not only the whole work is a peculiar trade, but it is divided into a number of branches, of which the greater part are likewise peculiar trades. One man draws out the

> wire, another straights it, a third cuts it, a fourth points it, a fifth grinds it at the top for receiving the head; to make the head requires two or three distinct operations; to put it on is a peculiar business, to whiten the pins is another; it is even a trade by itself to put them into the paper; and the important business of making a pin is, in this manner, divided into about eighteen distinct operations, which, in some manufactories, are all performed by distinct hands, though in others the same man will sometimes perform two or three of them. I have seen a small manufactory of this kind where ten men only were employed, and where some of them consequently performed two or three distinct operations. But though they were very poor, and therefore but indifferently accommodated with the necessary machinery, they could, when they exerted themselves, make among them about twelve pounds of pins in a day. There are in a pound upwards of four thousand pins of a middling size. Those ten persons, therefore, could make among them upwards of forty-eight thousand pins in a day. Each person, therefore, making a tenth part of forty-eight thousand pins, might be considered as making four thousand eight hundred pins in a day. But if they had all wrought separately and independently, and without any of them having been educated to this peculiar business, they certainly could not each of them have made twenty, perhaps not one pin in a day; that is, certainly, not the two hundred and fortieth, perhaps not the four thousand eight hundredth part of what they are at present capable of performing, in consequence of a proper division and combination of their different operations.[4]

Division of labor has therefore tremendously expanded the productivity of human labor, in this case perhaps as much as five thousand times! An incredible increase in social wealth has been brought about through a spontaneously unfolding system of division of labor. It is not necessary that anyone directly, consciously, seek to promote the social welfare. We must leave this result to the invisible hand operating within the market itself. To interfere with personal self-interest in the name of the common good or "morality" generally impedes the long-term happiness of others and frustrates the general well-being of society. If morality has to do with concern for creating and maintaining a good society, a society in which wealth is created in abundance and the needs of its members are increasingly met, then morality should *defend* self-interest, rather than criticize it. What should be defended is not of course the irrational self-interest of assassins and bandits, but the rational self-interest of entrepreneurs and merchants, as well as of hardworking men and women whose desire for happiness for themselves and their families leaves room for the same desires in their neighbors.

Smith's doctrine of self-interest implies therefore a peculiar theory of morality. It is a morality without morally motivated individuals. A world that any

moralist would presumably want—one with the greatest possible wealth and therefore the greatest possible satisfaction of human needs—is accomplished without benefit of any distinctly moral endeavor. This does not mean that individuals should do entirely without morality. On the level of private life, in their personal relations with one another, more recognizably moral considerations should play an important role. Parents lovingly fulfill their duties to their children, friends are loyal to one another, etc. But in public life, in terms of the promotion of the good of society as a whole, such moral motivation is not only unnecessary but even harmful. Moral relations in private life undoubtedly have an indirect effect on the quality or fiber of the society as a whole. But there need not be any distinctly moral approach to that social whole. Paradoxically, however, this nonmoral approach to society leads to what a morally motivated, humane individual would want, a society of ever-growing abundance.

The Worker as a Commodity

Despite this general picture of the morality of the system of natural liberty, Smith's work nevertheless shows an acute awareness of afflictions arising out of the spontaneous operation of economic forces. He did not paint the unfolding capitalist society in uniquely rosy colors. Consider the following portrayal of contrasting poverty and wealth in Smith's Scottish homeland:

> Poverty, though it no doubt discourages, does not always prevent marriage. It seems even to be favourable to generation. A half-starved Highland woman frequently bears more than twenty children, while a pampered fine lady is often incapable of bearing any, and is generally exhausted by two or three. . . .
>
> But poverty, though it does not prevent the generation, is extremely unfavourable to the rearing of children. The tender plant is produced, but in so cold a soil and so severe a climate, soon withers and dies. It is not uncommon, I have been frequently told, in the Highlands of Scotland for a mother who has borne twenty children not to have two alive. . . . In some places one half the children born die before they are four years of age; in many places before they are seven; and in almost all places before they are nine or ten. . . . In foundling hospitals, and among the children brought up by parish charities, the mortality is still greater than among those of the common people.[5]

The solution to this problem is not, however, morally motivated intervention to save the Scottish children. This does not mean that Smith is in favor of such poverty. He rejects the argument that poverty is a necessary stimulus to work, and that workers never be given increased wages. Writing in the context

of rising standards of living, he refers to "the common complaint that luxury extends itself even to the lowest ranks of the people, and that the labouring poor will not now be contented with the same food, clothing, and lodging which satisfied them in former times."[6] Against those who make such complaints, Smith replies that:

> No society can surely be flourishing and happy, of which the far greater part of the members are poor and miserable. It is but equity, besides, that they who feed, clothe, and lodge the whole body of the people, should have such a share of the produce of their own labour as to be themselves tolerably well fed, clothed, and lodged.[7]

This reference to "equity" or justice seems to suggest a moral perspective. It is a requirement of elementary justice that those who feed the nation have food, that those who clothe the nation have something on their backs, etc. Smith provides a theoretical perspective in which the labor of such individuals is seen to be the basis of economic value itself, and to provide the underlying standard of equality or fairness in the exchange of goods. And yet the producers of the wealth of nations receive for themselves but a fraction of what they produce.

Adam Smith is not among those who would hold that people are poor because they deserve to be poor. He does not blame the poor for their poverty, or hold that the wealthy deserve their wealth because of their superior virtues. On the contrary, he holds here that poverty is undeserved and unjust. But despite this reference to injustice, Smith does not propose any positive moral duties, to say nothing of legal demands, in connection with such injustice. Least of all does he recommend the expansion of morally motivated charities, where, he writes, foundlings and orphans have a worse time of it than in their ordinary impoverished homes. The solution to the problem of poverty is to be found in the natural unfolding of economic laws, consistent with the rational self-interests of the various parties, master as well as servant:

> Every species of animals naturally multiplies in proportion to the means of their subsistence, and no species can ever multiply beyond it. But in civilised society it is only among the inferior ranks of people that the scantiness of subsistence can set limits to the further multiplication of the human species; and it can do so in no other way than by destroying a great part of the children which their fruitful marriages produce.
>
> The liberal reward of labour, by enabling them to provide better for their children, and consequently to bring up a greater number, naturally tends to widen and extend those limits. It deserves to be remarked, too, that it necessarily does this as nearly as possible in the proportion which the demand for labour requires. If

> this demand is continually increasing, the reward of labour must necessarily encourage in such a manner the marriage and multiplication of labourers, as may enable them to supply that continually increasing demand by a continually increasing population. If the reward should at any time be less than what was requisite for this purpose, the deficiency of hands would soon raise it; and if it should at any time be more, their excessive multiplication would soon lower it to this necessary rate. The market would be so much understocked with labour in the one case, and so much overstocked in the other, as would soon force back its price to that proper rate which the circumstances of the society required. It is in this manner that the demand for men, like that for any other commodity, necessarily regulates the production of men; quickens it when it goes on too slowly, and stops it when it advances too fast. . . .
>
> The liberal reward of labour, therefore, as it is the effect of increasing wealth, so it is the cause of increasing population. To complain of it is to lament over the necessary effect and cause of the greatest public prosperity.[8]

What should be done about the deaths of so many Highland children? Smith argues that artificial legal barriers to the free movement of labor should be removed, so that Scottish workers and their families have access to more flourishing labor markets. But this only means that the "natural" laws of economics should not be hindered in their operation. In the operation of these laws, workers (but not those in the superior ranks of society) are subject to the same laws as those governing commodities. From an economic perspective, workers are in fact commodities. Their wages represent the cost of producing them, not the value of their produce. Their very existence, their births, marriages, and their deaths, are the result of economic laws. The production and consumption of working people is governed by the same forces that rule the production and consumption of pins.

Even unimpeded by positive laws restricting the movement of labor, the natural laws of the free economy will result in periodic overpopulation and resulting impoverishment and death. The supply of human life will tend to accord with the demand for it. Where the demand is greater than the supply, in a rapidly growing economy, the payment of labor will tend to go up, and so in turn will the number of the laborers, until competition among workers drives the price of labor down once more toward its natural level or even below. Even in times of prosperity therefore starvation is an inevitable result of freely operating economic processes. How much worse, then, when the economic boom times are replaced by economic busts. When economic circumstances become unfavorable, and the demand for labor slows down or decreases, the necessary result is even greater levels of starvation for the unneeded workers,

and, in the first place, for their more vulnerable children. The situation in which the demand of workers for jobs is greater than the supply of them is comparable to the state in nature in which the animal's demand for food is greater than its supply. The chief difference between nature and society is that while in nature *all* members of a given species in a given area tend to suffer, in "civilised society" it is the working class almost exclusively that bears the brunt of hard times.

All of this may be regrettable, but well-intentioned interventions into this natural process are no solution. In fact, to complain of such effects is to complain of their causes; but these causes are the same causes that produce the greatest possible wealth. For governments to interfere with these laws of supply and demand, for the sake of helping individuals in trouble, is to interfere with the cause of the wealth of nations. Consequently, Smith's references to moral principles, as in his remark about "equity" in the citation above, are not meant to provide distinctive guides to action. As in Hume's conception of the relation between morality and the positive machinery of the courts of justice, so with Adam Smith the impulses of benevolence must be subordinated to the overriding imperatives of an impersonal economic process. At best there is a *conformity* of what economic laws create with what morality or equity might require. If a morally aware person holds that those who feed the nation should have food, economic laws likewise require that workers' salaries rise when the economy is expanding—as it tends to do in the long run. Of course, in periods in which the economy is stagnant or falling, the undeserved suffering of the poor follows with the fatality of a natural catastrophe. In such adverse circumstances the principle of equity is helpless before the grinding operation of the economic machine. But this is because it is not the force of the moral principle that accomplishes anything that is indicated by morality. It is the economic law, unconsciously operating through the self-interested motives of individuals, that leads by and large, in the long run and not without considerable collateral damage, to the betterment of mankind.

It is possible for governments motivated by misguided moral sentiment to interfere with the economic process and provide for destitute workers in unproductive areas out of public funds. But such interventions not only detract from the future prosperity of the nation by drawing resources from the private economy but positively impede the only long-term remedy, that is, the one that comes from the free play of the market itself. The economic laws of life and death continue to function whatever well-meaning governments do, for if they try to save lives in the immediate situation, that only costs more lives in long run. Rather than promoting such ultimately harmful "moral" solutions, let the government instead rescind laws that prevent the free movement of labor from the unproductive to the more productive areas, or which protect monopoly control over production and thereby impede the introduction of cheaper goods from abroad.

The Free Worker

In the same spirit, Smith regards the "freedom" of the modern worker in purely economic terms:

> The wear and tear of a slave, it has been said, is at the expense of his master; but that of a free servant is at his own expense. The wear and tear of the latter, however, is, in reality, as much at the expense of his master as that of the former. The wages paid to journeymen and servants of every kind must be such as may enable them, one with another, to continue the race of journeymen and servants, according as the increasing, diminishing, or stationary demand of the society may happen to require. But though the wear and tear of a free servant be equally at the expense of his master, it generally costs him much less than that of a slave. The fund destined for replacing or repairing, if I may say so, the wear and tear of the slave, is commonly managed by a negligent master or careless overseer. That destined for performing the same office with regard to the free man, is managed by the free man himself. . . . It appears, accordingly, from the experience of all ages and nations, I believe, that the work done by freemen comes cheaper in the end than that performed by slaves.[9]

The free worker, in contrast to the slave, is a self-repairing, self-replacing, and largely self-policing worker. Operating directly out of personal resources, though indirectly out of the pockets of his employer where the wages are drawn, the free worker will be more frugal in personal expenditures and so will cost less in the way of wages than the combined costs of supporting both the slaves and their overseers. Since wages represent the costs of the maintenance and replacement of the workers, and are necessarily provided by the employer, this arrangement is less costly and more profitable than slavery, and therefore will tend to become adopted by the employers of labor whose self-interest is rationally calculated.

"Freedom," when used in the expression "free worker," is meant in the usual Hobbesean sense of "free from external obstacles to the realization of desires." Freedom from control by a particular master distinguishes the free worker from the slave. But the free worker is not free in relation to survival desires that impel him, on pain of starvation, to show up at the workhouse on time. If time is money to the employer, for the worker it is also money, but much less and therefore much more powerfully constraining. Paradoxically, the source of all this money is the very same time, the time in which the worker sacrifices her happiness in her toil, for it is her labor that gives value to all commodities. If the worker's desires are tied to the employer's pockets, it is the worker's own labor that fills those pockets. Smith argues in the passage above that the money for the repair and replacement of both slave and free worker

comes ultimately from the pockets of the employer-master. But when elsewhere he probes into the origin of money itself, he finds its ultimate source in the worker's own labor, whether slave or free. Although her activity is the source of the value of all commodities, the laborer has, in the course of the complication of the market system, become a commodity herself whose value is the labor of the work that repairs and replaces her.

At some point in the natural evolution from simple starting points in the relationships of the labor of *A* and *B*, to *C, D, E*, etc., a complexity emerges in which those who provide the food are not fed, those who provide the clothes wear rags, and, in some places at least, half of those who supply the labor itself, because of its overproduction, die of malnutrition before the age of ten. When not working, the free worker has no master or overseer to direct and impede his actions. But this freedom from direct control is only the freedom to manage his own repair and, through that special form of labor that belongs only to the female worker, replacement. The very life of the worker is the result of the operation of economic laws which call her and him into existence to meet the demands of the market. In the course of hard times, but not only then, economic laws result (perhaps mercifully) in the extinguishing of potentially unprofitable human life in early childhood.

Unless he has the means of setting up shop for himself—a possibility that increasingly diminishes as large-scale production develops—the free worker must, under pain of death, find work with *some* employer. The free worker is only unlike the slave in that he is not subjected for life to the control of a particular master. However, workers are not free from dependence on the class of masters as a whole. Unlike slaves, they are free to choose their masters. But such freedom can be a curse rather than a blessing. Subject to no master in particular, the worker deems himself lucky if he can find a master to whom he can submit himself.

Hence it is clear that the freedom of the free worker has nothing to do with freedom from laws or freedom from necessity. Hobbesean theory is therefore verified and quantified in modern economic practice. Such laws of necessity, whose long-range effect is the growing prosperity of a nation, are the unintended consequences of the fact that each worker, just as each employer, seeks only to realize his or her self-interest, though under different economic circumstances. The free worker is free in the sense of not being directly and externally forced to work by some particular individual. The laws that govern the life of the free worker operate indirectly, through the individual's perception of her own interests and desires relative to the implacable demands put on her by her circumstance as a member of the inferior ranks of civilized society. Hence she finds herself fortunate if, after doing her share of feeding the nation, she has food for herself and her children, or if, having produced the clothing of the nation, she herself has shoes to wear, mostly for the purpose of getting to work.

Leisure Time and the "Immorality" of Workers

Despite common enough instances of adversity among the poor, there are some who nevertheless begrudge their periods of prosperity. Will not paying more to workers lead to laziness? This is the complaint of certain defenders of a "strict morality" who argue that if workers can make enough in four days to live for a week, they will simply waste the other three days in unproductive debauchery. Such moralists recommend that wages be reduced so that workers will have to work more than the four days a week prevailing in Smith's England of the eighteenth century. More work will be good for their souls, say these moralists, for idle hands are the devil's workshop and occupied workers won't spend their days off in wasteful and immoral behavior. Such ideas reflect the puritanical ethic, the "time is money" philosophy, recommended by Benjamin Franklin.

Smith replies that if workers have the prospect of bettering their wages by being paid by the piece, rather than work less they work even harder than before. In fact, they really will work too hard, as seen in medical evidence indicating a rise of occupational diseases resulting from overwork. The optimal working life of a carpenter in Smith's London is hardly more than eight years. Do workers have three days of leisure in the week? The reason is not inherent shiftlessness, but the natural consequences of excessive work. Smith comes to the defense of the worker:

> Excessive application during four days of the week is frequently the real cause of the idleness of the other three, so much and so loudly complained of. Great labour, either of mind or body, continued for several days together, is in most men naturally followed by a great desire of relaxation, which, if not restrained by force or by some strong necessity, is almost irresistible. It is the call of nature, which requires to be relieved by some indulgence, sometimes of ease only, but sometimes, too, of dissipation and diversion. If it is not complied with, the consequences are often dangerous, and sometimes fatal, and such as almost always, sooner or later, brings on the peculiar infirmity of the trade. If masters would always listen to the dictates of reason and humanity, they have frequently occasion rather to moderate than to animate the application of many of their workmen. It will be found, I believe, in every sort of trade, that the man who works so moderately as to be able to work constantly not only preserves his health the longest, but, in the course of the year, executes the greatest quantity of work.[10]

Not even private life is free from determination by economic laws, for the leisure time of workers is not directed by a desire for self-development so much as by the overpowering need to escape from the numbing effects of overwork.

But even such conditions can be better or worse, or more or less "humane." Smith argues here that there can be a harmony between the standards of "reason," or economic self-interest of the employer, and the standards of "humanity," or concern for the well-being of the worker. He does not here suggest, however, that the employer should act for moral purposes *against* his self-interest or in spite of economic laws. The humanistic moral standards invoked by Smith are *in accord with* the self-interest of the employer, if only he has a deep enough understanding of how to realize his interests. This is, however, an important "if," for employers are often blinded by their short-term, narrowly selfish interests, and fail to understand that they would in fact be better off were they to behave in ways that objectively correspond with "equity" or "humanity." They often do not understand that the ethic of "time is money" properly understood is not realized by pressing more work on their workers, since an overworked person makes less money for her employer than one who is sufficiently rested.

Hence, if Smith evokes a humanistic morality he does not require that this be the motive of entrepreneurial endeavor. He is not asking employers to act from feelings of sympathy or benevolence toward workers, much less out of the imperatives of justice. The sole legitimate ground of individual action in the economic world is self-interest. And self-interest, enlightened by a certain degree of science (that is, "reason") recommends the same course of action as does "humanity" or the moral sentiment of a disinterested observer. A basic knowledge of biology, confirmed by economic data, will inform an employer that an exhausted worker produces less, and produces less well, than one who receives sufficient rest. This is "humanity" perhaps only in the sense that human workers are more or less easily tired than other animals, and cannot work as long and as steadily as machines. If by "humanity" Smith means the sympathetic response of one person to another, as defended in his earlier work on ethics, he does not here require that the owner act on the basis of such sympathy. He need only pursue his own self-interest, wisely appreciated, and the outcome of his action will conform with the requirements of such humanity. It will be *as though* he acted out of sympathy for the workers.

Humanist Morality Needed in Times of Transition

And yet there seem to be exceptions to the general principles described here according to which self-interest alone ought to motivate economic interests. For example, there are many cases in which particular kinds of manufacturing had been previously protected by high tariffs against the threat of foreign competition. In such circumstances, a sudden change to free trade would have short-term disruptive and harmful effects. Some concern for "humanity" is necessary in order to prevent such harm. Morality, it seems, should temporarily

influence governmental actions during periods of adjustment, when the unnatural arrangement of mercantile protectionism is being replaced by the system of natural liberty. Smith's reasoning in this connection reveals the profoundly critical nature of his understanding of the existing society. He is not in fact attempting to defend an established order as the best of all possible worlds. He is trying to overthrow an unnatural system of alliance between government and wealth in order that the natural system be liberated from this impediment.

The introduction of free trade in areas that had previously been highly protected is sometimes beneficial to the narrowly conceived interests of powerful economic enterprises. In such cases, however, these powerful interests tend to distort what they succeed in introducing. Thus Smith points out that linen cloth manufacturers lobbied for the elimination of the duty on imported linen yarn. Cheap foreign linen yarn drove down the cost of yarn used in the manufacture of linen cloth. Four-fifths of the labor in producing linen cloth is taken up in growing and spinning of flax. Cloth manufacturers had been buying their yarn from spinners, who are "poor people, women commonly scattered about in all different parts of the country, without support or protection."[11] Thus the fall in the price of linen wool due to free trade negatively affected poor women spinners, not the wealthy cloth manufacturers. The latter, in addition to establishing "free trade" in the yarn business, "extorted from the legislature" a subsidy ("bounty") for the export of their cloth. Hence:

> By extorting from the legislature bounties upon the exportation of their own linen, high duties upon the importation of all foreign linen, and a total prohibition of the home consumption of some sorts of French linen, they endeavour to sell their own goods as dear as possible. By encouraging the importation of foreign linen yarn, and thereby bringing it into competition with that which is made by our own people, they endeavour to buy the work of the poor spinners as cheap as possible. They are as intent to keep down the wages of their own weavers as the earnings of the poor spinners, and it is by no means for the benefit of the workman that they endeavour either to raise the price of the complete work or to lower that of the rude materials. It is the industry which is carried on for the benefit of the rich and the powerful that is principally encouraged by our mercantile system. That which is carried on for the benefit of the poor and the indigent is too often either neglected or oppressed.[12]

A humanistic concern for the well-being of the poor pervades Smith's work. Thus in the previous passages, Smith contrasts two forms of economic organization—the mercantile system that is carried on for the benefit of "the rich and powerful," and another system that works for the benefit of "the poor and indigent"—that is, his own "system of natural liberty." In making any transition toward this system, the interests of the poor and indigent workers should

be uppermost in the legislator's mind. Where free trade is introduced into once protected areas of the economy, the governmental legislation should be moderated by humanistic or moral concern for the poor:

> Humanity may in this case require that the freedom of trade should be restored only by slow gradations, and with a good deal of reserve and circumspection. Were those high duties and prohibitions taken away all at once, cheaper foreign goods of the same kind might be poured so fast into the home market as to deprive all at once many thousands of our people of their ordinary employment and means of subsistence.[13]

A distinctly moral consideration—that is, concern for "humanity"—on the part of government should moderate the transition from the unnatural situation of mercantile interference with the market to the natural state of free trade. Morally motivated intervention here compensates for the misguided protectionist intervention of governments in the past. Such morality does not, however, substitute for an economic policy based on self-interest which should eventually replace policies motivated by moral concern. Such morally motivated policy anticipates the beneficial outcome expected from a policy of free trade. Ultimately, the system of free trade will naturally, and without any conscious intention, benefit the indigent workers—at least to the extent that is possible in our imperfect world—whose labor is the source of the wealth of nations.

Dehumanizing Effects of the Division of Labor

We have just seen one exception to Smith's rule against morally motivated interference with the functioning of free trade: when the sudden transition from a regime of protectionism to one of free trade would cause serious dislocation, especially to workers in that trade. As such intervention is meant to be temporary, and as it is a corrective of previous abuses of rational economic arrangements, this exception does not challenge the main thrust of Smith's argument. However, a second kind of exception emerges in Smith's writing that is much more damaging to his central conception. A much more serious and permanent harm to workers appears to arise from structural features of free trade itself. In the following passage, Smith contrasts the conditions of the early independent producers with that of the dependent worker in the modern manufactories:

> In the progress of the division of labour, the employment of the far greater part of those who live by labour, that is, of the great body of the people, comes to be confined to a few very simple

> operations, frequently to one or two. But the understandings of the greater part of men are necessarily formed by their ordinary employments. The man whose whole life is spent in performing a few simple operations, of which the effects are perhaps always the same, or very nearly the same, has no occasion to exert his understanding or to exercise his invention in finding out expedients for removing difficulties which never occur. He naturally loses, therefore, the habit of such exertion, and generally becomes as stupid and ignorant as it is possible for a human creature to become. The torpor of his mind renders him not only incapable of relishing or bearing a part in any rational conversation, but of conceiving any generous, noble, or tender sentiment, and consequently of forming any just judgment concerning many even of the ordinary duties of private life. Of the great and extensive interests of his country he is altogether incapable of judging, and unless very particular pains have been taken to render him otherwise, he is equally incapable of defending his country in war. The uniformity of his stationary life naturally corrupts the courage of his mind, and makes him regard with abhorrence the irregular, uncertain, and adventurous life of a soldier. It corrupts even the activity of his body, and renders him incapable of exerting his strength with vigour and perseverance in any other employment than that to which he has been bred. His dexterity at his own particular trade seems, in this manner, to be acquired at the expense of his intellectual, social, and martial virtues. But in every improved and civilised society this is the state into which the labouring poor, that is, the great body of the people, must necessarily fall, unless government takes some pains to prevent it.
>
> It is otherwise in the barbarous societies, as they are commonly called, of hunters, of shepherds, and even of husbandmen in that rude state of husbandry which precedes the improvement of manufactures and the extension of foreign commerce. In such societies, the varied occupations of every man oblige every man to exert his capacity and to invent expedients for removing difficulties which are continually occurring. Invention is kept alive, and the mind is not suffered to fall into that drowsy stupidity which, in a civilized society, seems to benumb the understanding of almost all the inferior ranks of the people.[14]

This passage fills in the gap between the early "barbarous" times of rabbit and deer hunters, as well as of England's famed independent yeomen, hard-pressed and going extinct with every year, and the wretched circumstances of the modern workers in the manufacturing system of "civilization." Yes, the number of pins in the same time of work has increased geometrically with the new division of labor—and the cost per pin, now embodying far less labor, has drastically fallen. The new technique of dividing the labor into miniscule parts,

and assigning different individuals to repetitively performing the simple operations required for each or a small number of those parts, has taken the process begun in primeval forests to unimaginable heights of objective wealth. But what has become of the worker himself in this process? The source of all value, she has fallen from a state of independence to one of utter dependence, from a state of mind formed by the skillful, thoughtful work that is required of the complex, multisided nature of early productive activity to the unskilled, monotonous, mechanical, degrading, thoughtless, repetitive labor that is the result of the manufacturing system.

Creative Human Activity: Foundation of the Science of the Human Being

In this analysis of the causes of human consciousness, Adam Smith takes a major step forward in relation to his philosophical predecessors who began with the action of outside causes—the elements of matter in their various configurations that impact the sensory organs and form the basis of consciousness. From this starting point, apparently required by modern physics, it then becomes a mystery as to how the human mind is capable of an independent activity of its own. In Hobbes's materialism, the mental "phantasms" are mere appearances, ultimately reducible to the deterministic movements of material particles. In Locke, however, the independent activity of the mind with its irreducibility to the movement of matter is the proper field of philosophical investigation. Although sensory ideas are initially said to be caused by material interactions with the environment, a deeper understanding shows that these movements of matter are not sufficient to produce ideas. As our sensory impressions are not material entities themselves, the operation of matter is only a condition or occasion for the creation of thought whose ultimate source is spirit. The interaction of spirit and matter is then a mystery that Locke declares impenetrable. Following on Berkeley's attempt to eliminate matter altogether, Hume agrees that any attempt to explain consciousness from the movements of matter is futile, and so he confines his investigation wholly to the interactions among the elements of consciousness, which nevertheless operate, in accord with the scientific spirit of the age, as quasi-natural deterministic forces.

In his remark that "the understandings of the greater part of men are necessarily formed by their ordinary employments," Adam Smith declares that the formation of human consciousness, like that of economic value, has its origin in human activity itself. The science of the human being does not begin with the external, inertial movements of matter, but neither is it confined to the inner operations of the elements of thought. The true starting point of scientific understanding is the activity of the human person on the material world, in the process of which that material world is transformed to suit human

purposes. Just as the economic value of the commodity is not deducible from its material characteristics, but from the purposeful activity that alters and shapes the material of nature, so human consciousness is not formed by external material processes, but emerges out of human activity itself, modifying the external environment and shaping it in accord with human needs and purposes. The scientific examination of the human mind consists therefore in the study of the development of human activity, beginning with its simplest forms and following its evolution into greater degrees and levels of complexity. Thus the determinism that is supposed to be required of science by modern physics, with its concept of external causality, is a misleading and distorting model and framework for the science of the human being. Human history is the result of the creative activity of the human being, who in the process of transforming nature at the same time transforms and shapes herself.

However, the shape that human activity largely assumes in modern times is in sharp contradiction to this explanation. On the surface level of appearances, the creative source of all the values and forms of modern life is a devalued and shapeless being. Everything transpires as if the externally caused determinism of unfeeling matter is the case. The individual appears to be a powerless cog in the great impersonal machinery of the market. Like the leviathan of Hobbes, the market of Adam Smith is a demi-god, bringing into existence, shaping the lives, and terminating them, of the human beings subjected to its power. And yet just as Hobbes sees the creative *fiat* of the human individual to be the source of the awful power and mortal god that is the state, so Smith contradicts the appearances of abject powerlessness and declares that the laboring individual "bears on his shoulders the whole of mankind."[15] The great power of market whose invisible hand creates, shapes, and destroys human life, is the creation precisely of these working individuals whose lives are so abjectly debased by its heartless mechanism.

Smith does not ponder the paradox that underlies his radically new conception of the science of the human being, but sets about practically to solve the self-destructive contradiction that he implicitly exposes—a contradiction not in his own theory, it seems, but in the reality that he himself describes.

Solving the Contradiction: New Functions of Government

In the above passage Smith distinguishes between the "duties" of private life and the "interests" of the nation as a whole. *Both* the private sphere of moral duty and the public sphere of common national interest are endangered by the development of the division of labor—the very engine of the wealth of nations. In this passage, Smith himself raises a problem that seems to contradict his own basic principles. The division of labor is responsible for the enormous wealth

of every "improved and civilised" society. The mindless worker in a modern pin factory produces up to five thousand more pins than the skilled craftsman of former times. But in the process of creating this great wealth, the worker is inevitably impoverished, both materially and spiritually. The process that creates such great benefit to society as a whole has a devastating effect on the laborer who "bears on his shoulders the whole of mankind."

We naturally wonder how the good of society can accord with that of the individual whose labor is at the basis of this good. "Society," in the persons of the owners of the tools of industry, may here certainly benefit by the accumulation of goods or wealth, but working individuals, comprising the great bulk of the population and the source of its material wealth, are clearly the losers. But if this is the case, then "society" too must lose, for no society can last if the greater part of its population sinks to the level of the manufacturing worker. This is not a problem like the one mentioned previously in which a temporary harm must be averted by appealing to government action, motivated by humanitarian, that is, distinctly moral concerns. Then it was not free enterprise itself that was responsible for the problem, but only its abrupt introduction after years of "unnatural" policies. But here the intellectual and physical debilitation of the worker is the result of the central motor of progress itself, the unfolding and deepening of the division of labor. It is the inevitable result of the development of the system of natural liberty itself that "the great body of the people must necessarily fall, unless government takes some pains to prevent it."

We have seen that Smith's basic principle is that individual self-interest, combined with a natural instinct to specialize and trade, is the main cause of human progress, and that governments should confine their activities to safeguarding this system of equal liberty. But here, on the contrary, government must intervene in order to prevent the self-destruction of this very system. The solution to the contradiction, to this problem of increasing degradation, Smith argues, is the development of a public system of education, supported or subsidized by a progressive regime of state-imposed taxes especially on the wealthy. In his solution to the problem, in which he stresses the central importance of educating the general population, Smith reflects the main currents of contemporary Enlightenment thinking.

Unlike the case of the transition to policies of free trade in areas previously protected by special trade barriers, this is no temporary problem that should be handled by temporary government policies on behalf of the working poor. It is a structural problem, inherent in the development of the division of labor itself. This suggests that government should be *permanently* motivated by moral concern for workers to provide free public education to counteract the harm done by natural economic processes. However, Smith here too does not directly appeal to moral sentiment, and certainly not to moral sentiment alone. He tries to salvage the logical consistency of his ideas by stressing non-moral

motives of self-interest to justify such a new governmental responsibility. He appeals above all to the danger of military weakness, rather than to humanistic concern for the worker, as a motive for supporting a policy of public education that is needed to compensate for the debilitating character of the modern form of labor. Instead of appealing directly to moral or humanistic concern for workers, and so openly contradicting the main trend of his system, he weakly and implausibly refers government-sponsored education to the traditional responsibility of the state for the military defense of the nation.

Similarly, he appeals to the self-interest of "society" by arguing that ignorance is a breeding ground for revolt. Let the owners of property and their colleagues in government beware of an ignorant populace, susceptible to revolutionary demagogues:

> The more they are instructed the less liable they are to the delusions of enthusiasm and superstition, which, among ignorant nations, frequently occasion the most dreadful disorders. An instructed and intelligent people, besides, are always more decent and orderly than an ignorant and stupid one. They feel themselves, each individually, more respectable and more likely to obtain the respect of their lawful superiors, and they are therefore more disposed to respect those superiors. They are more disposed to examine, and more capable of seeing through, the interested complaints of faction and sedition, and they are, upon that account, less apt to be misled into any wanton or unnecessary opposition to the measures of government. In free countries, where the safety of government depends very much upon the favourable judgment which the people may form of its conduct, it must surely be of the highest importance that they should not be disposed to judge rashly or capriciously concerning it.[16]

In Smith's time, working people in England did not have the right to vote, and for that reason had no officially sanctioned peaceful means of settling their grievances. Smith appeals to educated or enlightened self-interest on the part of the elite minority of society with access to political power to avoid the evils that arise from uneducated, narrow self-interest of a debased populace. To solve this double threat to military preparedness against external enemies as well as from internal rebellion against the system of property itself, the creation of free public education should be added to the list of basic governmental functions. Alongside the laws of justice, with police and army to enforce them, public education should be regarded as part of the framework or groundwork for the system of natural liberty.

Thus a society in which the interest of the individual unconsciously promotes the well-being of the whole, without any need for explicit concern for that social good, is possible only on the basis of an extensive set of underlying conditions. These conditions must not only ensure that the rules of the game

are followed without violence or fraud, but must also provide all members of society with the minimal mental and moral requirements needed to participate. The creation a society in which the rational self-interest and competitive cooperation of individuals can operate as they ought requires the creation of a complex and perhaps growing list of distinctly social or cultural, as well as legal and political, conditions.

The system of free trade at first reduces the areas in which government is involved in the workings of society, particularly in relation to poor laws and mercantile protectionism. And yet as a consequence of the development of free trade, new functions of government must be added in order to combat endemic negative effects of that system. Clearly, if the invisible hand of the market place is to work its beneficial effects, the visible hand of the state as the instrument of the conscious intentions of society must play a key role. This role consists not only in maintaining conditions necessary to the functioning of the market economy, but in counteracting its negative features as these emerge in the course of economic development. Smith does not appeal to "humanity" in this case, but rather to national interests, and the interests of the elite class of property owners that runs the nation. And yet infused in this prudential argument is the same humanism we saw earlier. The "dignity" of working people depends on their having access to the higher vantage point of perceiving the larger interests of society. Smith does not directly say that workers, as human beings, have inherent dignity that ought to be respected by providing them the means of education. But he does show that a socioeconomic system that degrades workers to a state in which they lose the capacity to act as socially concerned, responsible members of society leads to the destruction of that society itself.

Is the Free Market System a Utopia?

A third area of potential moral involvement in the larger affairs of society emerges that seems even more at odds with Smith's theory that only rational self-interest with its legal protections is required for the system of natural liberty to function. We see that conscious policies of the state must play a key role if the invisible hand of the market is to function properly. But how is the state to fulfill its vital functions, including the one of providing a free system of public education, if its decisions are unduly influenced by the narrow interests of powerful economic forces?

Smith held that the existence of monopolistic tendencies, including mercantile protectionism against foreign competition, is an economically irrational state of affairs. It is rational for a nation to import cheaper foreign goods, and use the available capital for investment in areas for which the country is better suited. Various countries have different natural advantages. With the use of

greenhouses and other expensive procedures, Scotland could produce a high quality wine. France, however, has a natural geographical or climatic advantage over Scotland in this regard. The maxim of the rational person is simple: Don't make yourself what is cheaper to buy from others. By importing cheaper French wines the savings in overall expenditures could be invested in raising sheep, a commodity whose production is far better suited to Scottish geography than wine. For a given amount of capital, in the first, protectionist case, only wine is available to the consumer. In the second case, wine is available, but also sheep. However, were there a strong lobby of wine merchants in Scotland, they would be inclined by their narrow, unenlightened self-interest (selfishness) to support high tariffs on foreign wines and thereby to thwart the overall public good as well as the properly understood self-interest of the merchants or industrialists themselves.

Smith explains such irrational protectionism by the narrow self-interest of dominant sections of the business class. State protection of his particular trade is obviously advantageous to the industrialist whose industry is favored. In fact, under the mercantilist or protectionist system, the English economy was so strongly sheltered by governmental regulations that Smith thought that "To expect, indeed, that the freedom of trade should ever be entirely restored in Great Britain is as absurd as to expect that an Oceana or Utopia should ever be established in it."[17] Thus the system of free trade that Smith believes to be based on enlightened self-interest so sharply contradicts the unenlightened self-interest of members of the dominant class that this supposedly natural system of economic organization seems to be an unrealizable utopia. A general system of free trade is a utopian dream due to the fact that it contradicts entrenched private interests, with their strangle-hold on government:

> Not only the prejudices of the public, but what is much more unconquerable, the private interests of many individuals, irresistibly oppose [free trade]. Were the officers of the army to oppose with the same zeal and unanimity any reduction in the numbers of forces with which master manufacturers set themselves against every law that is likely to increase the number of their rivals in the home market; were the former to animate their soldiers in the same manner as the latter enflame their workmen to attack with violence and outrage the proposers of any such regulation, to attempt to reduce the army would be as dangerous as it has now become to attempt to diminish in any respect the monopoly which our manufacturers have obtained against us. This monopoly has so much increased the number of some particular tribes of them that, like an overgrown standing army, they have become formidable to the government, and upon many occasions intimidate the legislature. The Member of Parliament who supports every proposal for strengthening this monopoly is sure to acquire not only the reputation of understanding trade,

> but great popularity and influence with an order of men whose numbers and wealth render them of great importance. If he opposes them, on the contrary, and still more if he has authority enough to be able to thwart them, neither the most acknowledged probity, nor the highest rank, nor the greatest public services can protect him from the most infamous abuse and detraction, from personal insults, nor sometimes from real danger, arising from the insolent outrage of furious and disappointed monopolists.[18]

Smith is not an apologist of the business class. The system of free trade—that "simple system of natural liberty"—is far from in favor with large and powerful capitalist manufacturers and merchants. Their "*private* interests" in fact tend to oppose this system. Those who will benefit most directly, Smith clearly thought, will be the poor, not the rich. Smith argues that the rich too will generally benefit, and must be persuaded that free trade is in their own interests. But this is an argument for ideally conceived "enlightened" self-interest, which is contradicted by actual short-range interests.

The problem that Smith sees here is generically the same as that which Hobbes confronted when he contrasted everyone's ideally conceived enlightened self-interest, which requires an enforceable system of equal laws, with the real short-term interests by which each person, privately, sees advantages in being able to avoid such laws. His solution, the quasi-divine *fiat* by which the state is created, assumes that individuals are capable of overcoming such narrow or private interests, contradicting their supposedly natural egotism, and rising to a level of consciousness and motivation that seems incompatible with mechanistic and deterministic principles. Locke's extended arguments for the reality of spirit, and its freedom from determinism, provides a metaphysical framework, however admittedly incomprehensible, for solving the Hobbesean contradiction. On the empirical plane, the problem appears all the more solvable because it has been solved, or was in the process of being solved, as England lurched forward, through the blood and tears of civil war, from darkness to some greater degree of light.

Thus, in the light of the new circumstances and understandings, Smith asks how to overcome the evident disjunction between unenlightened and enlightened self-interest that persists in economic life despite all the enlightened arrangements of the state and its equal laws. Intellectuals capable of viewing the general scene, like himself, have little or no power. The masses of people, who stand to benefit from the perfection the system of free trade, as long as it is complemented by free education, have the most to benefit. But they have even less political power, other than the dangerous and forbidden one of riot and revolution. The chief force for change to which Smith appeals in the passage above is the parliamentarian, whose duty it must be to enact laws that are consonant with the welfare of the nation. But any individual who

undertakes this task must be a brave person indeed. Personal financial interests, no less than motives of personal safety, support the maintenance of the irrational collusion of private wealth and the state. Smith here appeals clearly to a social *duty* on the part of the member of Parliament, without being optimistic that such a duty will be realized. He appeals to moral responsibility on the part of political actors to oppose the formidable obstacles that wealthy corporate interests place in the way of a free, prosperous, and rational society. Morality, however, is powerless when it goes up against powerful private interests. A system based on enlightened self-interest, that admitted utopia to which Smith ultimately appeals, is therefore doomed by the perceived, short-term, and private self-interests of those who have all the power to impede it.

Civil Government: Conspiracy of the Rich Against the Poor

How can a rational system of free trade ever arise if the most powerful interests in society have a natural inclination to promote monopolistic control over the economy? Another profound contradiction emerges if we compare Smith's basic theoretical positions with remarks about actual behavior. Thus, as a theoretician he argues that

> the private interests and passions of individuals naturally dispose them to turn their stocks towards the employments which in ordinary cases are most advantageous to the society. But if from this natural preference they should turn too much of it towards those employments, the fall of profit in them and the rise of it in all others immediately dispose them to alter this faulty distribution. Without any intervention of law, therefore, the private interests and passions of men naturally lead them to divide and distribute the stock of every society among all the different employments carried on in it as nearly as possible in the proportion which is most agreeable to the interest of the whole society.[19]

Yet observation of real behavior appears to produce a quite different picture of the relation between private interests and public benefit: "People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices."[20] "Private interest" clashes therefore with "private interest." Smith must appeal to the "enlightened self-interest" of individuals whose unenlightened or narrow or private self-interest leads them in a quite different direction.

Smith admits that intellectuals such as himself have little effect on the course of events. They nevertheless have a vantage point that is vastly wider than those of their fellow citizens, and in particular the working people who

produce all his food, shelter, and clothing. Introducing his account of the degrading effects of the division of labor, Smith as we have noted writes that "In the progress of the division of labour, the employment of the far greater part of those who live by labour, that is, of the great body of the people, comes to be confined to a few very simple operations, frequently to one or two. But the understandings of the greater part of men are necessarily formed by their ordinary employments." But what of that fortunate minority of men whose understanding is not formed by their practical occupations, but have the leisure to pursue the kind of understanding that is available through scientific education? Their understandings may be said to be formed by the totality of the practical labor of humanity as a whole. They are able to scan the larger scene that encompasses the entire globe and observe the intricate harmony of that very division of labor whose logic condemns the great body of the people to the narrow grind of mindless labor. In the contemplation of this true wealth of humanity, the cooperation of its working people as an intricate organism of majestic creative power, the mind of the observer is uplifted, enriched, and inspired. Such is the understanding that the science of the human being is capable of producing, and that government, Smith urges, should be supporting for the people themselves. Through this means, the ordinary workers will comprehend who they truly are, what is really the creative power of humanity, and thereby play the role of responsible citizens of their nation and of the world. But as the people themselves have no such understanding and therefore are powerless to act on this larger basis, the scientist, with all this theoretical knowledge, is likewise powerless. Smith recognizes the contradictions of his own privileged yet powerless situation:

> These varied occupations present an almost infinite variety of objects to the contemplation of those few, who, being attached to no particular occupation themselves, have leisure and inclination to examine the occupations of other people. The contemplation of so great a variety of objects necessarily exercises their minds in endless comparisons and combinations, and renders their understandings, in an extraordinary degree, both acute and comprehensive. Unless those few, however, happen to be placed in some very particular situations, their great abilities, though honourable to themselves, may contribute very little to the good government or happiness of their society. Notwithstanding the great abilities of those few, all the nobler parts of the human character may be, in a great measure, obliterated and extinguished in the great body of the people.[21]

For Hume, as we saw, theoretical knowledge of the inner workings of the mind provides a depressing spectacle of our radical ignorance of the ultimate state of reality, while participation in the delusions of the propertied gentry is liberating and invigorating. For Smith, too, there is the understanding of the

intellectual, and that of practical people. But for him the latter is divided into two categories—the vast body of the people whose understandings are shaped by mindless labor, and so are unable to comprehend the larger totality produced by their combined activities, and the elites whose narrow interests also blind them to the truth of the whole. The reverse of Hume, Smith is uplifted by a theoretical vision that is itself grounded in practical activity itself and so is capable of giving him a science of objective social reality. But when he finds himself required to turn to practical life, he feels oppressed by the narrowness that surrounds him on all sides, but especially by the narrowness of that class of people in whom Hume found a happy refuge.[22]

And what of the government itself, which has the power not only to establish the new cultural conditions necessary for the system of natural liberty, but also to end the system of privileges that protects the old order? The parliamentarian who goes against established privileges is not only subject to insult and slander, but to "real danger, arising from the insolent outrage of furious and disappointed monopolists." But this appeal to the honest and far-seeing member of parliament suggests that the state itself is a neutral platform for rational policy-making that is inconsistently invaded by private interests. But Smith suggests a deeper bias on the part of the state in favor of those very invaders. Contrary to the earlier view of Hobbes, Smith does not regard the state as an all-powerful leviathan, a power above society, capable of enforcing rules of a rational social contract. The state protects property rights, but since property is divided very unequally, the state essentially protects the rights of a small minority—those very "extortionists" who manipulate import duties and subsidies in their own immediate interests, and contrary to the interests of society as a whole. In the following passage, Smith presents his own view of the foundation of the state as exclusively determined by the interests of the rich:

> Among nations of hunters, as there is scarce any property, or at least none that exceeds the value of two or three days' labour, so there is seldom any established magistrate or any regular administration of justice. . . . Men may live together in society with some tolerable degree of security, though there is no civil magistrate to protect them from the injustice of those passions. . . . Wherever there is great property there is great inequality. For one very rich man there must be at least five hundred poor, and the affluence of the few supposes the indigence of the many. The affluence of the rich excites the indignation of the poor, who are often both driven by want, and prompted by envy, to invade his possessions. It is only under the shelter of the civil magistrate that the owner of that valuable property, which is acquired by the labour of many years, or perhaps of many successive generations, can sleep a single night in security. . . . The acquisition of valuable and extensive property, therefore, necessarily requires the establishment of civil government. Where there is no property,

> or at least none that exceeds the value of two or three days' labour, civil government is not so necessary. . . . Civil government, so far as it is instituted for the security of property, is in reality instituted for the defense of the rich against the poor, or of those who have some property against those who have none at all.[23]

It is not the "war of all against all" that necessitated the state, but the struggle between the rich and the poor. In our analysis of Hobbes's conception of the social contract, we noted the struggle of the Levelers against the Grandees in the English Revolution led by Cromwell to show how Hobbes's formulations neatly reflect the historical complexities of this conflict between rich and poor. Nevertheless, Hobbes does not explicitly emphasize this particular state of affairs, appealing instead to the rational understanding of the self-interested individual in general. Locke, who more concretely locates the origin of the state at an historical period in which large property owners feel the insecurity that comes with having much to lose, similarly appeals abstractly to the will of the people as the basis of the state. Hume, on the other hand, rejects the idea of a social contract stemming from the free decision of rational individuals and instead evokes historical evolution as justification of the social and economic status quo, implicitly recognizing that economic and social inequality is, if not for the best—since such a conception is not theoretically available to him—at least historically necessary. Smith, however, explicitly identifies the underlying inequality at the origin of the state and exposes the irrationality of the operation of this inequality in the existing socioeconomic order. But this only leads to the question: if the government is essentially the instrument of the rich against the poor, and if the rich are in favor of monopolies that undermine any real system of natural liberty, how can such a system be created? Is it not then an idle utopia, the dream of an ineffectual social reformer?

Inevitable Inequality in the Best of All Possible Worlds

Despite the negative aspects of his appraisal of contemporary English capitalism, Smith does not condemn social inequality as unjust. He criticizes his contemporary society, but at the same time defends the inherent rationality of capitalism on the basis of his theory of natural liberty. He argues that, as a result of the Invisible Hand, governmental protection for privileged manufacturers and merchants was being progressively, if never completely, removed. He trusts that the natural system of free competition will eventually overcome many of the abuses of economic power evident in his own day. Social inequality would not thereby be eliminated, but a return to the equality of primitive

hunters would mean only a leveling down of society to the shared poverty of those hunters.

If there were "complainers" who supposed that the workers were getting too much, there were also complainers who supposed that the worker was getting too little. Smith's remark that it is but equity that those who produce *all* the goods of the nation should receive *some* of them back in return contrasts with the more seditious idea that they should get *all* of those goods back—that property, in the words of Proudhon, is theft. Against socialist or communist ideas of radical egalitarianism, as espoused by the earlier Levelers, Smith develops a "theodicy" of capitalist society in line with Calvin's theory of predestination in which the production of wealth carries the seal of divine approval.

The first principle of a rational or enlightened "theodicy," as explained by Leibniz in his work of that name, is to recognize that it is wrong to demand a perfect world, because only God can be perfect. The relevant question is whether this is the best *possible* world. This may not be a perfect world, Smith argues, but by comparison with other worlds of which we are aware, this one is far better. It is the best of all possible worlds simply by the operation of natural laws, without any conscious human intervention to make it such. All that is needed are the innate drives of a naturally self-interested species. Comparing the commodities ("accommodation") available to the average European peasant with the possessions of members of African populations, Smith presents a justification of the work of that "Invisible Hand" that guides the operation of capitalism in the advanced European nations:

> Compared, indeed, with the more extravagant luxury of the great, [the English peasant's] accommodation must no doubt appear extremely simple and easy; and yet it may be true, perhaps, that the accommodation of a European prince does not always so much exceed that of an industrious and frugal peasant as the accommodation of the latter exceeds that of many an African king, the absolute master of the lives and liberties of ten thousand naked savages.[24]

Free Trade and the Factory System in England

Let us comment briefly on an aspect of the passage above. Smith implies that Africans live in a kind of slavery, subject to their absolute master, their king. The result is the poverty of the African. Presupposed in the comparison is the idea that the African economy is independent of the European one. African kings indeed sold African slaves to European traders. But Smith neglects to point our here that it was the "free" European economy that stimulated the growth of slavery in Africa. We previously sited Smith's remarks on the cause of the falling value of gold and silver, due in part to the introduction of African

slavery in the mines of the Americas. He was aware therefore that African slavery played a major role in the expansion of European wealth, beginning with the importation of African slaves into the New World for the purpose of working under brutal conditions in gold and silver mines. Smith apparently did not know that at the beginning of this history, Europeans found African cities to be as impressive or more impressive than their own. In many respects, by the end of the eighteenth century, African civilization was in decline as a result of the expansion of European capitalism.

As mentioned earlier, the American Declaration of Independence, demanding freedom and the pursuit of happiness, neglected the fact of slavery in the American states. Perhaps Adam Smith and Thomas Jefferson can be excused for such lapses, since both believed that slavery was a dying institution and that freedom and growing prosperity, motivated by the efforts of ambitious individuals, were the main tendencies of the modern era. Smith argues that the use of slaves was irrational on the part of their owners. Had they a better understanding of their interests, they would have freed their slaves and benefited even more from the greater industry and frugality of free workers.

But while Smith contrasts the idea of enlightened self-interest with that of narrow selfishness and greed, he recognizes that, despite his theory of "natural" liberty, the unnatural or short-sighted selfishness of powerful economic interests is responsible for a system of government protectionism. To what could he appeal as a counterforce against such ignorant but powerful interests? The government itself, he argues, is to a large extent a creature of those same narrow interests. The people, on the other hand, are ignorant and gullible. And those without a narrowly specialized occupation, who are capable of appreciating the social totality, that is, members of the intelligentsia such as Smith himself, are mostly powerless. The idea that he believed to be rooted in nature, the system of natural liberty, seems in the face of these other tendencies to be an unrealizable utopia.

And yet Smith has confidence in the "progress" of the division of labor and the impulses of a growing enlightenment. "Natural" self-interest, he believed, will ultimately triumph over shortsighted or narrow interpretations of it. The economic progress so evident in the average pin factory gives us reason to have confidence that everything is working out for the better, as if guided by an invisible hand. No doubt such progress has a dark side. A mountain of gleaming goods piles up on one side, while mental darkness and the possibilities of desperate poverty descends on the side of those who produce those goods. But such negative consequences can be overcome, Smith argues, through rising standards of living arising out of the growth of the free enterprise system which he hopes will eventually be buttressed by a governmental policy of supporting public education.

In the subsequent period, England indeed turned more and more to a Smithian system of free trade. The cheapness of English manufactured goods,

including presumably its pins, gave it great advantage over economically lagging countries. Smith argues that under such conditions, it is necessary to give the lagging countries, including the former English colonies, time to prepare themselves for free trade. The industrial development of the former American colonies was for some time impeded by competition with the cheap goods of England, now conveniently raising Adam Smith's banner of free trade. Only when Abraham Lincoln was elected on a platform that included high tariffs for imported manufactured goods, and cheap land for farmers, was British neocolonial control over the U.S. economy finally broken. Protected by tariffs from competition with cheaper British imports, the U.S. industrial economy rapidly expanded. This expansion was no doubt due also to its social make-up, consisting of enterprising individuals or individualists, inspired by puritanical and Calvinistic pro-capitalist beliefs, seeking opportunities in the New World.

Stimulated by growing world trade, under the banner of "natural liberty," the emergence of the factory system in England after the death of Smith brought about a new stage in the development of the division of labor. The mechanical labor of individuals in the manufacturing system was replaced by actual machines driven by steam power. Freed from being a mechanical drone in the manufacturing division of labor, the worker became an operator of true machines. But this continued growth of division of labor and social wealth did not lead to an improvement in the condition of the English working class. On the contrary, the introduction of machine production led to an incredible lengthening of the working day and week—contrary to the harmony between self-interest and humanity supposed by Smith. While Smith defended the four-day week as the limit of workers' tolerance, the six-day week, with child labor and working days of up to sixteen hours, soon became the norm. Smith believed that if workers had little time for education, at least their children could be taught an elementary education in the years before they went to work. But the accelerated impoverishment produced by industrial machine labor forced those children themselves to work, with no time, let alone governmental support, to attend school. Hence "narrow" self-interest on the part of the employers led to increasingly harsh working conditions, and to the further degradation of the conditions of the English worker.

Part Two

The Spirit-Based Philosophy of the European Continent

Chapter Ten

I Think: Descartes' Foundation of Modern Science

Two Perspectives on the World

In the first chapters of this book, we focused on the way modern science opens up a revolutionary new vista on the physical universe. An apparently limitless world in time and space replaces the closed, bounded geocentric world of earlier times. One might have thought that such a perspective would have been exhilarating, as if it were a liberation from a small prison. In his play, *Galileo*, Brecht places such sentiments of liberation in the mouths of fishwives and cobblers. But for some, perhaps, the feeling is more like that of being suddenly ejected from one's home and forced to find one's way in a strange world, or of being compelled abruptly to leave one's village and fend for oneself in an alien megalopolis.

It is this latter feeling that Pascal expresses when he writes: "The eternal silence of these infinite spaces frightens me."[1] He explains: "It's not from space that I should look for my dignity. I wouldn't have any more if I possessed planets. Because of its space, the universe takes a hold of me, 'comprehends' me, and swallows me up as a mere point . . . "[2] From such a standpoint, it is no wonder that the merest point appears powerless before the awesome powers of nature. So Pascal writes: "The human being is but a reed, the most feeble thing in nature; but she is a thinking reed. There is no need for the universe to take up arms to crush her: a vapor, a drop of water, suffices to kill her."[3]

This sense of being overwhelmed by the vastness of the infinite universe nevertheless inspires a compensating reflection on the astonishing capacity of the human mind, which is capable of taking hold of or "comprehending" such vastness. While the spatial universe swallows him up as a mere point, "because of thought, I comprehend it."[4] Brechtian exhilaration therefore also enters the picture. The peasant is torn from the familiar hearth, but also begins a great adventure. The new city beckons with its endless opportunities for discovery and action. Thanks to the new science of Copernicus and Galileo, the physical person can no longer have illusions about his importance in this larger context

of infinite space. But the thinking person, who has the opportunity to search limits beyond limits of this new world, has expanded her horizons "astronomically." For the mind that uncovers this new world, the prospect is that of boundless freedom. Pascal continues the previous reflection:

> But when the universe crushes her, the human being would still be more noble than that which kills her, because she knows that she dies, and the advantage the universe has over her. The universe knows nothing of this.
>
> All our dignity consists then in thought. It's from this that we take our distinctiveness, and not from space or duration, which we are unable to fill up. Let us work then at thinking well: see here the principle of morality.[5]

Pascal's work, usually entitled *Pensées* (1660), was his uncompleted "Apology of the Christian Religion." Pascal (1623–62) was writing in France shortly after Hobbes wrote his *Leviathan* in England. His philosophical and theological work on Christianity was in part directed against Hobbes and the intellectual climate of anti-religious skepticism connected with Hobbes's writings. Pascal did not, however, criticize the "worldly" outlook of the new science from a position of ignorance or religious traditionalism. He was a brilliant mathematician, the inventor of the first digital calculator, inventor of the hydraulic press based on "Pascal's Law" of pressure, as well as other discoveries. He replicated and so personally verified the experiments of Galileo. Such scientific interests inspired a desire for reformation in religion. Pascal became an adherent of Jansenism, a reform movement within the Catholic Church that attacked purely external religious practices, such as the belief that individuals could be saved by the sacraments without true interior, morally oriented conviction. Emotionally, Pascal oscillated throughout his life between complete absorption in scientific research and ardent devotion involving a return from external religion to a form of experiential spirituality based on the Gospel teachings of Jesus. Intellectually, he attempted to reconcile these two seemingly irreconcilable poles of his life.

Translated into the language of modern science, the above passage suggests how such a reconciliation should be accomplished. On the one hand, there are the laws of the physical universe according to which a drop of water, placed in the wrong place at the wrong time, is enough to kill a person. As physical beings, we are subject to deterministic laws that affect all bodies. Yet, as intellectual beings we are capable of understanding these laws. Passive as bodies, we are active as minds or spirits. Subject to deterministic laws from our physical side, we are able to "comprehend" these laws from our intellectual side. But to comprehend the laws of nature is to adopt a position outside of and so free from them. It is from this capacity of the mind to comprehend, and so be superior to, the laws of matter that a morality based on the free human spirit can be derived.

Bifurcation of Reality

In the light of these considerations, let us return to the meaning of the Copernican revolution. The conception that the sun is the center of the solar system requires freeing the mind from identification with the spatial location of the physical body of the investigator. To take the sun as a center of reference in relation to the planets requires an act of intellectual "decentering." The scientific investigator mentally "sees himself," or rather, understands or "comprehends" himself, from a theoretically conceived position outside his physical body. A dissociation takes place between the individual's mental and physical positions. One continues, of course, to exist in one's body, and to perceive the sun moving through the arch of the heavens. But mentally the thinker is no longer conceptually or spiritually located in that body. He has radically and systematically separated the intellectual standpoint from the physical-perceptual standpoint.

We have stressed the idea that the physics of Galileo and Newton reduces the variety of different apparent "natural motions" of Aristotle and ordinary experience to one single form of motion, inertial straight-line motion. This form of motion applies both to movements on earth and in the heavens. We must now stress something else, something implicit in this unification of physical laws. The unification of the laws of physics takes place through a profound bifurcation of reality into object and subject. On the one hand, there is the *object* of investigation, whether this is a star or one's own body. We apply deterministic laws of physical motion to these objects. Simultaneously, there is the *subject* who is doing the investigating. In terms of physical existence, the investigator is merely another object undergoing the effects of the laws. But as the intelligence or rational subject who understands these laws, the individual appears to have a privileged position outside the system of determinations he investigates. Is it possible that those same laws that govern the objects also govern this rational subject?

To answer this question we need to distinguish two perspectives of subjective consciousness, that of ordinary practical experience and that of scientific awareness. For the ordinary social-psychological individual who pursues desires and interests centered on one's individual bodily existence, what stands out are the laws of natural and social sciences that govern bodily (psychophysical) existence. From that standpoint, I am immersed in my individual bodily existence. I am hungry, and there is some food. My desire is elicited through a complicated set of motions presumably in accord with Newton's first law. The intelligence of the desiring individual, moreover, is naturally mustered in the service of realizing this desire. Thanks to my intelligence, I am capable of considering the immediate desire in the context of probable long-run consequences and in the light of a multiplicity of other desires. Still, it would seem, the external and internal causes (including education and other forms of cultural conditioning) determine the action I perform.

This process is not merely enacted by a single individual, but by a great multiplicity of individuals not only consuming but also producing the goods on which they depend. Social science, culminating at the time of Kant and the American Revolution in the work of Adam Smith, recognizes a higher level of lawfulness in this interaction of a vast multitude of intersecting individualities, each concentrating on realizing his or her own desires and interests. The materialistic-naturalistic tradition from Hobbes through Hume to Smith views the individual as subject to these laws.

What Pascal underlines is the radical difference between the ordinary empirical or physical subject and that thinking intelligence that rises above the operation of empirical laws in comprehending them. How can the laws that treat individuals as egocentric entities situated in their bodily existence apply to the individual who is the dissociated, decentered intelligence who comprehends all of this? Were those laws to apply comprehensively, absolutely, to the individual as subject or intelligence, no one could ever know the laws themselves. The laws apply to reasoning beings only to the extent that our minds are immersed in the pursuit of the desires and interests of bodily existence. However, to know these laws, we have to treat that physical existence, and the mental attitudes that are connected with manipulating this existence, as an object of investigation. We thereby cease being desiring intelligences and become comprehending ones. Thanks to scientific reason the individual is therefore no longer a slave to the passions, as Hume himself recognizes in his moments of solitary theoretical dejection.

To know ourselves as the object governed by laws we must adopt the standpoint of a subject outside of this objectivity. The scientific "subject," who studies the social-psychological object with all its laws, is detached from the object of investigation, even when the object includes one's own behavior. For scientific comprehension to be possible, the individual must dissociate herself from the point of view of the desiring, interested, egocentric, egotistical, preferential, emotionally driven (sometimes out of benevolent feelings for another being), bodily individuality—the standpoint which she adopts in ordinary practical life. Modern science, therefore, while it *explicitly* proposes deterministic laws governing psychophysical existence, *implicitly*, nevertheless, suggests that the intelligence or rationality that is capable of grasping these deterministic laws is independent of them.

Descartes' Method of the Free Mind

The great exponent of such radical difference between mind and body is Pascal's French compatriot Rene Descartes (1596–1650). One of Descartes' major philosophical achievements is his theory of the method by which the mind detaches itself from the direct impact of the physical world and then

builds up a mental picture of the world from a standpoint freely selected by thought itself. Scientific thought proceeds methodically, building in a step-by-step fashion from simple, clear, and distinct ideas to more complex ones. Such a method presupposes only the basic good sense (*bon sens*) or reason found in all healthy human individuals. Thanks to the revolutionary developments of scientific method, Descartes can underscore the essentially democratic character of the human mind: "Good sense," he writes in the opening sentence of his *Discourse on Method* (1637), "is of all things in the world the most equally distributed."[6] Scientific knowledge of the vast reaches of the universe becomes, through clear, step-by-step exposition of successive elaborations from simple starting points, accessible to high school students. Their real intelligence, or capacity to know the world around them, is expanded by the methods and results of the modern sciences. In this sense, typical high school students of our own time, if they pay attention to their lessons, are more intelligent—have greater real mental capacities—than the greatest minds of earlier times who lacked such science.[7]

Descartes describes his "method for finding out the truth" as follows:

> Method consists entirely in the order and disposition of the objects towards which our mental vision must be directed if we would find out any truth. We shall comply with it exactly if we reduce involved and obscure propositions step by step to those that are simpler, and then starting with the intuitive apprehension of all those that are absolutely simple, attempt to ascend to the knowledge of all others by precisely similar steps.[8]

There are three moments in this conception of scientific method: (1) There is a prior intellectual movement of breaking down the original complexity of ordinary, immediate experience into its basic components. This original experience of the world, grasped in immediate sense perception, is structured through the dominant categories of the reigning myths, religions, politics, and traditions. 2) Out of the dissolution (or deconstruction) of the immediate complexity of ordinary experience, the scientist chooses that aspect of the complexity that should serve as the beginning point of the scientific reconstruction—that is, the simplest idea or element. 3) From this simple starting point there follows the systematic, step-by-step reconstruction in thought from simple to complex aspects of the totality. We return to the original complexity of experience, no longer regarded as the seemingly immediate evidence of sensation and accepted opinion, but now *comprehended* in thought.

Here we recognize the same "resolutive/compositive" or analytic/synthetic method that Hobbes describes. The difference between the two is in the starting point that each selects to begin his overall philosophical construction. To make this point clear, I have stressed an intermediary step between the phases of analysis and synthesis: the moment of choosing the ultimate starting

point, which Descartes says is that which is absolutely simple. In Hobbes and the tradition of British empiricism that follows him, this starting point is not seen as freely chosen, but rather is regarded as imposed on the thinker—that is, the straight-line motion of deterministic matter. But for Descartes, the ultimate foundation of scientific methodology consists precisely in this power to choose—that is, subjective consciousness itself, the "*cogito*" or "I think" of the free human spirit.

Descartes' starting point is precisely the subject side of the subject-object distinction that is implicit in all scientific inquiries. The independence of the thinking subject is an intrinsic requirement and foundation of all scientific method. The scientific mind must be capable of breaking away from the egocentric view of the world according to which the way the world appears to me, here and now, is essentially the way the world is in itself. It is only because of free self-consciousness that science, modern science, is possible. Intrinsic to modern science, its ultimate foundation or starting point, is the capacity of the thinking mind to freely reflect back on itself. Through such freedom of reflection, the mind can criticize itself and its ideas and assumptions that are based on immediate experiences. The mind can liberate itself from fixation on immediate appearances and conventional opinion, and so can mentally reorder the phenomena of experience in radically new ways. Thought is therefore capable of raising itself by its own bootstraps through generating ever richer and deeper understandings of experienced reality.

If the senses are to provide valid information, Descartes reasons, there must be a starting point and method of arrangement of data that the thinking subject freely yet methodically selects out of all the welter of impressions. The starting point is attained through a process of "analysis" of the complexity that first confronts us in ordinary experience. It is necessary to dissect the complexity of immediate experience into its parts, and then select which of these is to serve as the simple starting point. This starting point, moreover, must be something simple, since the comprehension of a complex reality is to be established from this starting point through a systematic process of step-by-step mental construction or "synthesis" involving growing complexity and complexification.

There must be freedom in this selection process, for the subject can make mistakes, and so must consciously discipline the process of inquiry. There is a free choice at every moment of the reconstruction: to allow appearances to seduce one's attention, or to follow the requirements of the order of reconstruction from simple to complex. Hence, for this selection of possible starting points itself to be possible, scientific consciousness must be that of a free-standing—or perhaps, free-floating—subjectivity that is not wholly dependent on those sense impressions from among which the scientist must choose. The free subjectivity of "I think" is therefore the ultimate and simplest starting point of all possible science. It is the one unshakeable truth in all the illusions of ordinary

experience. Even in the midst of a fictitious dream, the subjective awareness of the dreamer is something undeniable and real.

This subjectivity is fundamentally different from the objects of experience, whether in a dream or in physical reality. In contrast to Hobbes, Descartes concludes that deterministic straight-line motion applies to the whole of the *material* world, but not to *spiritual* consciousness itself. If deterministic laws govern matter, free self-consciousness, which is the foundation of scientific knowledge, must be a nonmaterial or spiritual reality. The meaning of "I think" is that the human subject can reflect back on himself and so cause his own intellectual "motion," independently of outside causes. She can do so in a free but disciplined manner, creating ever more complex or profound understandings within the rational requirements of the constructive order.

This implication of the requirements of the method of science, while not directly stated by Descartes himself, is particularly suggested in his discussion of the difference between human intelligence and the possibility of artificial intelligence. We can imagine, Descartes says, machines that give particular verbal responses to particular stimuli. But we can never get the self-ordering of speech that is found in all human beings, including those who are mentally defective. No matter how complex we imagine the construction of such machines, their "speech" remains limited to the particular sequences that are built into it. Whereas human speech is capable of responding to an unlimited number of situations. This is due to the infinite capacity of the rational soul—which implies its inherent freedom. Descartes says:

> For we can easily understand a machine's being constituted so that it can utter words, and even emit some responses to action on it of a corporeal kind, which brings about a change in its organs; for instance, if it is touched in a particular part it may ask what we wish to say to it; if in another part it may exclaim that it is being hurt, and so on. But it never happens that it arranges its speech in various ways, in order to reply appropriately to everything that may be said in its presence, as even the lowest type of man can do.[9]

So machines can be created that far surpass the capacity of the human being in certain types of mental performances—as clocks are far better than we are at telling time. But no machine is capable of responding to an unlimited number of tasks, as is the human being, whose progressive knowledge of the world opens up never-ending horizons on the equally unlimited universe. Similarly, no matter how adept animals are to special kinds of behavior, they evidently lack a principle that underlies human speech and "rational" intelligence—that is, the kind of intelligence that is presupposed in the ordinary speech of ordinary people. While animals are adapted to certain kinds of behaviors in certain kinds of environments, the human being is unlimited in her capacity

for adaptation and so is capable of transforming her environment as she does her own thought. Animals clearly lack the type of soul that distinguishes the human being—the free soul capable of reflecting on itself and constructing for itself a view of the world, and so implicitly capable of scientific thought. If animals have souls, they must be of a different type from the souls of humans.[10]

In order to choose which of its impressions to elevate to the status of basic starting point, the thinking person must be free to reject the direct influences of the outside world. Freedom is required even in the rational arrangement of more complex material since the scientist must discipline himself to accept only certain elements and not be beguiled by others that do not belong at a particular place in the exposition. The step-by-step process of reconstructing the elements of experience according to rational method implies mastery of the mind over externally received information. The human being, Descartes therefore argues from such requirements of scientific method, is a unity of two radically different substances, spiritual mind or soul and material body.

The New Logic of Rational Transformation

From this ultimate starting point in the subjectivity of human consciousness—"I think"—a system of connected propositions can be constructed in a logical order. The "rationalistic" method of analysis and synthesis is similar to that of Descartes' near-contemporary Hobbes, and opposed to the method of later empiricism. But Descartes stresses against Hobbes the primacy of "thinking." Descartes therefore is the true father of modern rationalism. It is Descartes who gives methodological primacy to the free self-consciousness of the self-aware spirit, capable of rationally ordering data from simple to complex. The "I think" of conscious spirit, not the movement of matter, is the fundamental starting-point of modern science—that is, the universal starting point behind all the particular starting points of the particular sciences. This consistent rationalism of Descartes contrasts with the starting points in the matter-based tradition of Hobbes, Locke, and Hume, according to which scientific knowledge begins with sense impressions coming from the external world, and the validity of abstract ideas is established by tracing their origin back to such impressions. But for the new sciences, as the order of the reception of sensory information does not give us the order of the reality itself, the sensory information must be actively reordered by the thinking individual on the way to scientific knowledge. In selecting and arranging sensory information, the activity of thinking spirit is *methodically* primary, as Descartes explicitly recognizes, in relation to the immediacy of the sensory experience of external matter.

Rationalism does not imply that sense data is ignored while everything is, so to speak, magically pulled out of the hat of Reason. There is no science of

the material world separate from sense data or experience of some sort (including internal experience). Here there is agreement between Descartes and Locke. Locke does not name Descartes as one of those who builds his theories on supposed innate ideas without recourse to experience, and includes Descartes' reasoning about the indubitability of self-consciousness in the course of his investigation of the history of consciousness. Locke, too, recognizes the independence and activity of thought. Nevertheless, he stresses the original passivity of the mind, and the idea that the thinking mind is a blank piece of paper with nothing written on it prior to experience with the material world, which remains the anchor and guide of our potentially wayward intellectual activity. However, in our experience of the material world, as Descartes argues, real knowledge depends on the fact that independently of all sensory information we are able to think about whatever it is that we experience and to rearrange this information according to patterns of organization intrinsic to thought itself.

Writing at the same time as Descartes, Francis Bacon (1561–1626) provided a striking metaphor for the nature of modern scientific method. In his *New Organon* (1620) he distinguishes among the methods of the ant, the spider, and the bee:

> Those who have treated of the sciences have been either empirics [experimenters] or dogmatical [reasoners]. The former like ants only heap up and use their store, the latter like spiders spin out their own webs. The bee, a mean between both, extracts matter from the flowers of the garden and the field, but works and fashions it by its own efforts. The true labor of philosophy resembles hers, for it neither relies entirely nor principally on the powers of the mind, nor yet lays up in the memory the matter afforded by the experiments of natural history and mechanics in its raw state, but changes and works it in the understanding. We have good reason, therefore, to derive hope from a closer and purer alliance of these faculties (the experimental and the rational) than has yet been attempted.[11]

The title of Bacon's book refers to Aristotle's *Organon*, which contains the exposition of his science of the logical laws of thought. In writing a *New Organon*, Bacon maintains that modern science requires another kind of logic, a logic according to which the mind is freed from dependence on direct sensory experience—the method of the ant—and, without reverting to the method of the spider and its appeal to the authority of unexperienced innate ideas, is capable reworking the materials of experience in accord with its own transformative inner processes. Only with such a logic (or method-o-logic) of thought can the post-Copernican science be firmly established. Of course, Hobbes recognizes all of this, as does Adam Smith in his presentation of the modern economy starting from simple experiences of production and

exchange. But Hobbes does not draw out the fundamental implications of the active nature of scientific thought in his conception of consciousness as consisting of phantasms that are reducible to the movements of matter. Despite the fact that his method is essentially the same as Descartes', he fails to recognize that this method implies the freedom of the thinking subject. Instead, he treats consciousness solely as an object moved by the externally received sensory data themselves. Since he regards this data as actual physical impulses determining the phantasms of thought, how could thought actively "resolve" the data into their basic components and then reorder them in a manner that is independent of the temporal order of in which the external data impress themselves on the organs of sense?

Here is another implicit contradiction in Hobbes's philosophy. We saw that his conception of a rationally based social contract suggests the free *fiat* of the divine creation, contradicting his deterministic theory of human action as governed by egotistical desire. Similarly, his conception of scientific method also implies the free motion of a mind that is not a slave to sense impressions, but instead is able to break these impressions into parts and then reorder their sequence in a way that provides scientific understanding. Hobbes's materialist and deterministic conception of the nature of consciousness is therefore inconsistent with the implications of his conception of scientific methodology. When we understand this, we see that it all depends on what we take as more fundamental for modern science: the straight-line motion of matter or the consciousness of the human spirit that ingeniously establishes this principle for the ordering of nature, the material world that imposes its laws on the physical being or the spiritual power of thought that rises above this causality in order to comprehend it.

While forcefully challenging Hobbes's materialism, Locke nevertheless retains Hobbes's insistence on the initial passivity of the mind and the primacy of sensory ideas. In this retrospect, we can see that a methodological dualism emerges that is implicit in Locke's metaphysical dualism. Locke's insistence on the passivity of the mind in his philosophy of science vies with his recognition of the active power of the mind, which is most evident in his practical philosophy with his conception of the social contract. Hume's radical empiricism draws out consistently the methodological implications of the materialist or naturalistic conception of the nature of consciousness. He privileges "impressions" over conceptual thinking in theory, and passion over reason in practice. He seeks to bring conceptual constructions back to the direct impressions upon which, supposedly, they are based. At least for the study of human experience, Hume rejects the analytic/synthetic method in science as expounded by Hobbes and Descartes. He therefore rejects Locke's half-hearted empiricism in which the universal ideas of reason transcend their origin in particular sensuous experiences and provide paradigms for the construction of a rational social order based on freedom and equality. Recognizing that this method of

theoretical reconstruction is often successful in the physical sciences, Hume dismisses it for the science of the human being, despite the fact that it is the human being whose rational reconstructions are the source of the physical sciences themselves. While Hobbes inconsistently defends a rationalist methodology together with a materialist conception of consciousness, Hume recognizes the inconsistency of these two positions when he accuses Hobbes of advocating a power of reason that is independent of passion. He argues that Hobbes's conception of a reason-based morality implies a reintroduction of the supposedly unscientific concept of free will. But this is impossible, Hume says, since "reason is, and ought only to be, the slave of the passions." It "ought only to be" such a slave because that is what is implied by the deterministic laws of motion. Thus Hume turns Hobbes's basic argument back against him.

Once the empiricist point of view is consistently adopted, and human experience is regarded as the flow of impressions and ideas and their consolidation through the mechanism of association, where is the evidence of a unitary and subsisting Self that Locke regards as a self-evident intuition? From her transcendent standpoint of observation, the high-flying eagle of empirical consciousness observes the river of impressions flowing below her in the channels of ideas. She spies no grand Self in these vistas of inner experience, and dismisses that moving speck gliding below her across the surface of a tranquil lake as a trivial component of the scene. And yet she feels the chill of the icy stratosphere and the gloom of her solitary existence. Is there not a glaring contradiction in this perspective of Hume?

In his conception of the science of the human being, Hume shows how the passions rule over the lives of individuals, producing beliefs about God, the independent reality of the material world, the self, and the moral responsibility of individuals. The science of the human being explains how such beliefs arise out of the combined passions and thoughts of individuals, while at the same time showing that these regularly arising beliefs are theoretically unfounded. Theoretical skepticism in this way shows the human consciousness breaking away from the processes that produce ordinary consciousness. Thus, in the times of philosophical withdrawal to his library and desk, the thinking person is freed from the deterministic mechanisms of social life. But no positive reconstruction follows from this recognition, no new, scientifically-founded conception of reality to contrast with the opinions and prejudices of the times, however its surface appearances may be acutely observed. To escape from his theoretical nihilism, Hume advocates practical immersion in existing reality and the peace of forgetfulness it brings. Still, somehow, to some extent, the freely formed ideas of philosophy produce a beneficial effect on that practical life, giving it a balance it would not otherwise have.

Similarly, for Adam Smith, the scientific mind is capable of rising above the world of economic cause-and-effect to enjoy the varied prospects of a vast order of interacting individualities caught up in the machine of the market. Such

detachment of theoretical reason from practice in both Hume and Smith results in poignant frustrations. For Hume, it is the frustration of the withdrawal itself that depresses him and drives him to seek oblivion in the mechanisms of practical life. For Smith, it is a frustration that stems from an awareness of his own powerlessness to influence the course of events whose hidden mechanisms and beneficial impulses, blocked and impeded by powerful obstacles, he clearly comprehends. Give the laborer, source of all the wealth of nations, a similar view of the vast collaboration of which she is a part, and watch those confining and impeding channels of opinions and prejudices, so comforting to Hume, give way to the freely flowing purposes of combined humanity. Thus, despite his Hobbesean principle that all human society is the result of self-interested individualities, Smith, like Hobbes himself, implicitly evokes the higher power of the human Spirit.

Cogito Ergo Sum

Descartes' constructive or synthetic method begins, famously, with the rational deduction, *Cogito, ergo sum*: "I think, therefore I am." This starting point is preceded by the systematic analysis of all objects of experience to see if any of them can stand as a simple indubitable starting point. One function of the initial step of putting oneself in a state of general doubt, Descartes says, is that it "sets out for us a very simple way by which the mind may detach itself from the senses. . . ."[12] This detachment from immediate sensory experience is a fundamental condition for the modern scientific approach. For the scientific understanding of the world to arise, the thinking self must be capable of breaking away from immediate sensory experience and all concepts built on the assumption that immediate sensory experience reflects reality.

In this spirit of detachment from ordinary experience, Descartes suggests an experiment with our thoughts. Suppose a malicious demon has trapped us in a perpetual dream from which there was no awakening.[13] How would we be able to tell that the objects we seem to be perceiving are in fact unreal, mere projections of the dreaming mind? When we are dreaming, we believe in the reality of the objects in the dream, and then, on awakening, discover that we were mistaken. Why then might we not be similarly mistaken about the objects that we perceive in the so-called waking state? Perhaps all our ordinary waking experience too is but another dream. Such nightmarish anxiety before the once solid-seeming world must have afflicted all thinking, scientifically educated individuals of the time. They must often have looked up at the revolutions of the sun through the vault of the heavens and said to themselves: What I am seeing is not real. It is an illusion produced by the deceptiveness of my perceptual standpoint. We don't need to invent an evil demon as the possible cause of deception. Such a demon is real, and it is our very selves!

Nowadays, such a feeling of detachment from the appearances of direct experience has become the normal state for most people from childhood. And so the shock of discovery and the experience of wonder is considerably weaker than it was for Descartes' time, when a whole worldview, constructed around the seemingly self-evident truth of direct experience, came crashing down as a result of the new sciences. The pre-Copernican worldview allowed individuals to focus intellectually and emotionally on the apparent movement of the sun as a meaningful reality around which all their philosophies, theologies, and mythologies were constructed. Today, without such meaning infused into this ordinary experience, most people probably don't know what to think or feel about what they see with their own eyes. The only exception to this thoughtlessness is the poet, exercising the right of imagination. Thus Wordsworth contrasts his pre-Copernican vision of the sun in the heavens with his later, post-Copernican return to this same perception. Writing of the ten-year-old boy he once was, he says:

> Daily the common range of visible things
> Grew dear to me: already I began
> To love the sun; a boy I loved the sun,
> Not as I since have loved him, as a pledge
> And surety of our earthly life, a light
> Which we behold and feel we are alive;
> Nor for its bounty to so many worlds—
> But for this cause, that I had seen him lay
> His beauty on the morning hills, had seen
> The western mountain touch his setting orb,
> In many a thoughtless hour, when, from excess
> Of happiness, my blood appeared to flow
> For its pleasure, and I breathed with joy.[14]

Descartes reinforces his idea of doubting the world he sees around him by reflecting on his own particular search for the truth. He discovers that the accepted truths of his day and age are not as solidly established as their proponents believe and would like others to believe. Such doubting of the immediate appearances of things becomes second nature to the modern scientist ever since the discovery that the sun does not circle the earth as it appears to the eye to do. From this point on, truth, if such a thing is possible, cannot rest on the spontaneous impressions of the senses and the voices of authority of the age.

In this meditative state of doubtfulness, it suddenly dawns on Descartes that there is one thing about which there can be no doubt even in a dream: the existence of the self-conscious "I." He writes:

> And since all the same thoughts and conceptions which we have while awake may also come to us in sleep, without any of them being at that time true, I resolved to assume that everything that

> ever entered into my mind was no more true than the illusions of my dreams. But immediately afterwards I noticed that whilst I thus wished to think all things false, it was absolutely essential that the "I" who thought this should be somewhat [something], and remarking that this truth "*I think, therefore I am*" was so certain and so assured that all the most extravagant suppositions brought forward by the sceptics were incapable of shaking it, I came to the conclusion that I could receive it without scruple as the first principle of the Philosophy for which I was seeking.[15]

Even in the midst of a fictitious dream, the subjective consciousness of the dreamer is something undeniable and real. This is how things in fact are in the dream world, when we consider it after awakening. Everything there is unreal except for my awareness, in the dream, of these unreal things. In the dream I create all of the objects of my experience, while falsely believing that they exist independently of me. However, the "I" which is the ground of this illusory experience is itself real. This "I" or "I think" or "I am conscious" or "I am aware of myself" is not the product of external sensations in the dream but their source. Contrary to what the materialist philosophers argue, this awareness of the self-conscious "I" cannot therefore be the product of material impressions or sensations received from the outside. And so it is legitimate to conceive of this "I" as existing even if all the objects of thought do not exist and are no more than the illusions of a dream. On the other hand, even if all the objects we might think about are real, existing independently of my consciousness, they do not by themselves produce the sense of "I." An entire physical world may exist without there being in that world any experience of "I." And if there were no self-referring act of consciousness on my part, there would be no evidence from purely physical objects for supposing that "I" exist. "I think" is therefore a self-referring awareness that is independent both of the objects of my thinking and of the material things of the world (if there are any). It is a distinct reality or "substance," independent of any material substances.

Descartes therefore concludes:

> From that I knew that I was a substance the whole essence or nature of which is to think, and that for its existence there is no need of any place, nor does it depend on any material thing; so that this "me," that is to say, the soul by which I am what I am, is entirely distinct from body, and is even more easy to know than is the latter; and even if body were not, the soul would not cease to be what it is.[16]

Some of Descartes' critics replied that from the fact that *I can think of* myself as a thinking thing separate from all materiality, it does not follow that *I am* such a separate or separable thinking thing.[17] Thinking something is one thing; its actual existence is something quite different. I may think of myself as

flying through the air, but it doesn't follow from the mere fact of my thinking it that I am a being capable of flying. So why should thinking in this case make it so? But there is one case in which thinking does make it so—the case of thinking itself. It is not what we are thinking about that is at issue, but the thinking itself. The criticism misses what might be called the existential nature of Descartes' argument. This is not a logical argument from one proposition to another—from the proposition that I think of myself as existing without a body to the conclusion that it necessarily follows that I exist, or am capable of existing, without my body. Descartes asks his reader to enter into a certain state of consciousness, following the method of doubting everything possible to doubt, or imagining herself in a dream state, or imagining the possibility of a malicious demon, or, were he alive today, the possibility of being in The Matrix, a virtual reality world created by artificial intelligences as a prison for the mind.[18] All of these intellectual devices have the function of isolating the pure act of self-awareness, which we recognize to persist independently of the unreality of the postulated objects of thought. This is not propositional thought but an existential awareness of self in which the thinking consciousness directly "entails" its own reality as a thinking self. There is no missing proposition that would supply a major premise, obviously false, such as, "All objects one is capable of thinking about must exist." This is a unique case of thinking entailing or involving being. Or, I should say, almost unique. For there is another thought of this type that is must be considered soon—the thought of perfection.

Immortality of the Soul

Descartes concludes that "even if body were not, the soul would not cease to be what it is." This reflection rests on the soul's independence of the body as this is demonstrated inside the dream, where the images of which I am dreaming are not the effects of externally existing real bodies, but where there is nevertheless a real experience of the self. The experience of the self is not therefore the effect of the experience of real bodies, a phantasm of their action. This phenomenological argument for the independence of the thinking self is strengthened by further consideration of the nature of this self-consciousness in contrast with the nature of material things. Further reflection on the nature of this thinking substance leads to a more complete understanding of just what this thinking self is. We begin with the bare kernel of the concept of the awareness of the subject and then proceed synthetically to expand on this initial experience of the self, elaborating or developing further implications of it. Descartes' complex argument for the immortality of the soul builds on the initial assertion of the existence of the "I" as an independent substance. Methodologically, we begin with a simple, quite abstract concept of "I," and then move from this starting point in a step-by-step fashion to examine further

aspects, and so we develop a richer conception of who or what I am. In this way, we move from "I think," that is, from I am aware of myself, to "I am"—from self-consciousness to the consciousness of my being.

After noting the bare existence of the thinking self, we next consider its nature in contrast with that of the objects of thought as these present themselves in consciousness. As opposed to the *multiplicity* of objects of sensory experience, the act of consciousness is a *unity* with itself. The self or "I" remains essentially the same throughout all its experiences. The objects come and go, but the subject remains the same. The "I" is therefore a single thing, a unitary substance. It is not multiple in its various experiences. Descartes' expression "I think" refers to the self-awareness that is present in all the modes of consciousness. It is the unity of I-with-I of self-consciousness. It is a mistake to suppose that "I think" means "I think abstractly or rationally or scientifically," since "I think" is also recognized in the playful fantasies of a dream. While there is a multiplicity of modes of consciousness—desiring, imagining, dreaming, loving, thinking abstractly, etc.—a self-referring "I" remains attached to all of them: "I" desire, "I" dream, "I" love, "I" analyze, etc. So Descartes' fundamental starting point is rather: I am aware of myself in all of my acts of consciousness.

This consideration is further reinforced by contrasting the features of this self-aware "I" with the features of externally existing matter, as this is given to us in modern science. The basic characteristic of matter in this science is three-dimensional spatial extension. Because the thinking self is a self-referential unity, it cannot be an extended, material being. Material objects, extended in space, are essentially divisible. However, "I" am not divisible. The presence of the thinking "I" in all the forms of mental activity is the pure identity of the thinking self with itself. I cannot conceive of the "I" in parts. Although the brain itself has two sides, there is not a left side of my self-consciousness and a right side. It is wholly present in every thought and every mode of consciousness, in both left-brained and right-brained modes of consciousness, in abstract rationality and the urges of passionate desires. Self-consciousness is the underlying pure awareness of itself in all the activities of the mind, whether these activities be directed to materially existing realities or to the illusions of the dream. Because they consist of parts that are external to each other, material organisms can be divided. In death, the parts of the organism lose their connection to each other. It is because they are divisible that material organisms are capable of death, and all material bodies are capable of division or destruction. But what about the indivisible, self-aware "I"?

In the Synopsis to his *Meditations*, Descartes reasons from the indivisibility of the soul to the "hope" that this soul is immortal:

> [W]e cannot conceive of body excepting in so far as it is divisible, while the mind cannot be conceived of excepting as indivisible. For we are not able to conceive of the half of a mind as we can

> do of the smallest of all bodies; so that we see that not only are their natures different but even in some respects contrary to one another. . . .[W]hat I have said is sufficient to show clearly enough that the extinction of the mind does not follow from the corruption of the body, and also to give men the hope of another life after death. . . .[19]

Descartes thinks that this argument only gives grounds for "hope" because "I think" is not conceptually the same as "I am." Self-awareness implies being but does not itself cause or produce being. Being is not a necessary property of any finite entity, including the thinking self. It is conceivable that the thinking "I" will cease to be at the moment of the death of the body, not because the "I" is divisible, but because the "I" is no longer sustained in its being. For further reflections on this unhappy possibility, we need to examine in more detail, carefully going step by step, the inner complexity of "I".

The Light Within Us

We have discovered firm truth amidst a sea of possible illusion. But why were we not simply content with the illusion? What impels us forward to seek truth in the illusion, and to move from one truth to another? Descartes next reflects on *the idea of perfection* as an underlying condition of this entire enterprise.

The spiritual being that we are in self-consciousness is capable of error and illusion. Otherwise, this whole exercise would be pointless. We are trying to free ourselves from the illusions of existence as evident in the pre-Copernican point of view on the relation between the earth and the sun. Clearly, human beings are capable of being deceived regarding the nature of reality. We are therefore imperfect. But also, we have shown ourselves capable of overcoming initial awareness of imperfection, in the form of skepticism, and reaching toward perfection through the discovery of some unshakable truth. We have therefore moved from the ignorance of a conceivable all-encompassing illusion to the truth that "I think" and so "I am"—that is, the I that thinks is something real and not illusory. In this way, we have perfected or improved our understanding in a profound way—in a way that enables the very existence of the modern sciences. But such perfecting of our consciousness is only possible because of the initial awareness of actual imperfection in the light of an absent perfection that nevertheless is present to us as an idea or ideal—an ideal that becomes realized as our understanding progresses. The very recognition of our imperfect state of consciousness is impossible without an idea of perfection to goad us on and make us feel discontented with ideas connected to immediate sensory experiences.

We have within ourselves, then, the idea of perfection—that is, the idea of something truer, better than what we in fact think and are. Were it not for this

idea of perfection, it would not be possible for me to know myself as I truly am. I know myself as a limited, finite, and imperfect being, prone to illusory sensations and ideas. But this conception of my actual state of affairs presupposes a judgment, an evaluation, against the background of an unlimited, infinite, and perfect reality to which I aspire as the goal of my truth-seeking enterprise, and the practical development of my being that is connected to it. Thus although methodically we begin with "I think," this is not the ultimate ground or foundation for our consciousness. More fundamental than "I think" is the idea, "Perfection is." Starting with the thinking of a fallible, imperfect consciousness, Descartes proceeds to uncover within this consciousness the necessary thought of God:

> By the name God, I understand a substance that is infinite [eternal, immutable], independent, all-knowing, all-powerful, and by which I myself, and everything else, if anything else does exist, have been created. . . . I see that there is manifestly more reality in infinite substance than in finite, and therefore that in some way I have in me the notion of the infinite earlier than the finite—to wit, the notion of God before that of myself. For how would it be possible that I should know that I doubt and desire, that is to say, that something is lacking to me, and that I am not quite perfect, unless I had within me some idea of a Being more perfect than myself, in comparison with which I should recognise the deficiencies of my nature?[20]

The idea of perfection, or of perfect Being, constitutes therefore a fundamental feature of our consciousness of self. The "I" that I find and am even in a dream is not happy with mere dreaming. I want to wake up to reality. For the sake of this awakening I am willing to challenge and overturn all the evidences of my senses and convictions of my past and set off in quest of another world, a world of perfection for which I am willing to sacrifice all my illusions, however sometimes comfortable and comforting, however often fearfully enforced by convention and social controls, they may be.

The self that is revealed in self-consciousness is not a fixed or frozen entity, something stable or solid, a mental "thing," so to speak. By defining self-consciousness as a spiritual substance Descartes is not treating consciousness as if it were the sort of inert, passive thing of material science. On the contrary, he is arguing that it is precisely *not* that sort of "thing." The idea that the self is a "substance," taken outside of Descartes' method of unfolding our understanding from simple to complex, misleadingly suggests something complete in itself, like a rock that just sits there until someone kicks it. Such a conception of thinghood may be true of physical objects, but not of the "I." Although the "I" is always present to itself, its initial mode of experiencing itself is not as a fullness but as a lack. Its first mode of being is not self-satisfaction, but desire. But this is not the

materialist desire of Hobbes, wholly subject to external causes and reflecting physical need. It is a spiritual desire. It is an inner emptiness that is aware of its emptiness in the consciousness of a fullness to which it aspires. It is a darkness aware of its darkness because of a light that it strives to make its own. "I think" therefore means—I am aware of a void, not a fullness; a nothingness, not a being. And nevertheless I am, and I know this because I am aware of myself. But the blessing or perfection of my being cannot be the product of that imperfection, that emptiness, that I experience myself to be. Hence, aware of imperfection through the light of perfection that I find within my consciousness, I need to take a further step and examine the source of my being.

In view of our experience with illusion, it is only natural that the next step in the progression of philosophical thought is to investigate this implicit awareness that we necessarily have, and have called the idea of perfection. How is it possible that the admittedly limited, finite, imperfect, and fallible being that I know myself to be has within itself the opposite idea of Infinite and Perfect Being?

Chapter Eleven

God and the Good Society

First Proof for the Existence of God: Cause of the Idea of Perfection

The simplicity of "I think" is a starting point for investigating a complexity. Although the "I" is present to itself in the various modes of consciousness, the fact that it has such modes shows that, without being divisible like material organisms, consciousness is complex. This complexity can be scientifically understood only if we proceed from the simplest element of consciousness, clarified and identified step-by-step in contrast with what is not it—both with nonthinking substances and with its own internal imperfection, negativity, or lack. After establishing the initial point of departure, we then introduce more elements of this complexity in an order that allows for maximum intelligibility. We begin then with "I" or self-awareness in all its simplicity and unity abstracted from all the modes and objects of consciousness and the relation this consciousness has with material things. Descartes begins with an external contrast, and then proceeds to an internal one. He clarifies the nature of self-consciousness by contrasting the unity of self-awareness with the multiplicity of its objects, and its self-identity with the divisibility of matter. We then turn to an inner contrast between the imperfection of the "I" and the perfection that makes awareness of this imperfection possible.

The next step is to ask what explains the existence within the imperfect being that we experience ourselves to be of this idea of perfection that is the underlying condition for this expanded self-awareness that "I" am not perfect. Logically, the concept of an imperfect, lacking self that is subject to illusion supposes an idea of perfection. If I were wholly immersed in illusion I would not even have the concept of illusion. The idea of imperfection is a necessary implication of this awareness of illusion. But perhaps the idea of perfection is itself merely a higher-order illusion invented by the imperfect being to give it

the false but comforting thought that there is something more than ignorance and deception. Am *I* then the source of the idea of perfection?

But how can a being that is so obviously and clearly imperfect itself have produced the idea of perfection? The heroic notion that human beings create ideals to spur themselves on to greater achievements presupposes an idea of heroism, of greatness, in the first place. That is, it supposes the prior existence of an idea of perfection—of something greater than myself, of a fulfillment of the lack that I experience myself to be, of a truth that is capable of replacing my errors. The particular form that this idea of perfection takes in different times and places may be an invention of the human being, but the general form that underlies these inventions must be an innate characteristic of consciousness itself, something that the individual doesn't herself create but finds already there in her awareness of self, and of self-discontent.

Can the thinking being itself create the idea of perfection out of the materials of experience by extending or magnifying or embellishing these experiences until they provide an ideal by which we measure the imperfections of these experiences themselves? Can we cobble together, as it were, an idea of perfection out of imperfections added up or magnified? Descartes rejects such an empiricist explanation of the idea of perfection. The supposed attempt to create the idea of perfection out of experience presupposes that this idea already exists. It must be, contrary to Locke, an innate or natural or *a priori* feature of our consciousness. But even Locke recognizes that there are inherent or innate characteristics of the activity of thought, such as its capacity to form abstract ideas and paradigms or ideals of practical action. We discover these characteristics of consciousness when we reflect on the nature of our own conscious activities. But these characteristics were present already before we form our conscious ideas of them.

It does not seem possible, Descartes thinks, for the imperfect being that I am to create an idea of perfection out of my experiences in *a posteriori* fashion. As Kant will later say, this idea must be an *a priori* feature of consciousness. It cannot be created by the finite mind out of its empirical experiences because the empirical experience itself presupposes it. It is a necessary condition for the ability of the finite mind to recognize its finitude—and seek to transcend it. It is only because of this prior idea that we have empirical experiences in the first place—at least the type of empirical experience characteristic of human consciousness. For human beings, experience is not something that is taken for granted as merely given or present. Instead, it is something to be analyzed into parts, compared with other experiences, evaluated, measured, tested, and rearranged according to judgments of better and worse, truer or less true, real or illusory.

If the idea of perfection cannot be explained by the causal activity of the imperfect finite being, and if it cannot be derived by abstraction or generalization

from our experiences with the external world, there is only one other possible explanation for its existence within us. It is the effect and reflection within us of actually existing perfect being itself. As Locke himself learned from Descartes, the lower cannot cause the higher; the more cannot come from the less. As Descartes puts this idea: "Now it is manifest by the natural light that there must at least be as much reality in the efficient and total cause as in its effect."[1] Only perfect being therefore can cause the idea of perfection. Only a being that is itself perfect can stamp our consciousness with the idea of perfection and, hence, with the striving to realize or become that perfection ourselves by overcoming the imperfect state of our existence.

Locke's critique of innate ideas fails to capture the essence of Descartes' argument for the preexistence of the idea of perfection. If such an idea is innate, this is so as an ever-present illumination rather than as a particular thought, such as an idea that one has once learned and must recall from time to time. The causality of perfect being does not operate as a cause in the past that once created an idea of perfection and placed it in the head of a baby or child, perhaps as a seed that needs stimulation from outside for it to develop and flower. The idea of perfection is not like the idea of bitter or sweet but is the illumination itself whereby the sweet is preferred to the bitter, and, for maturing palates, some combination of the two, as we search for ideal combinations of foods, is regarded as best. It is the better, or the best, that stands above pleasure and pain and allows us to be discontent with our own contentment. Thus for Locke too an idea of perfection, when taken to heart, is capable of goading us on from imperfect states of being. Is this *Summum Bonum* or Highest Good something that we learn from revelation? Or is it presupposed to revelation, which only gives to it a more elaborate form?

The child who has no distinct idea of perfection nevertheless knows when something goes wrong or is inadequate to its way of looking at things. It's not fair, the sister says when her brother gets more than she does. She has no distinct idea of fairness which she can articulate consciously, but nevertheless operates in the light of an idea that, in a male-dominated society, may never have been taught to her. This idea of fairness is only a particular expression of the more general idea of a truth or standard or ideal by which all things are variously evaluated. The idea of perfection merges with the light of consciousness itself, with the illumination that exists in the here and now as an intrinsic characteristic of the operation of consciousness itself. When I turn to the cause of this "idea," then, I am trying to look into the very light of consciousness. If my consciousness is so much in the dark, as Locke insists, it has a light which cannot be attributed to my efforts but makes those efforts possible.

In asking how such an idea can be caused, Descartes is not referring to an act in the past that produced a certain structure of consciousness, but to a present or existential feature of consciousness itself. The step from the idea of perfection to God Himself is a very short one, since this idea is the very divine light presently shining within me and as a part of me. If divine or perfect light is

regarded as distinct from my own imperfect and fallible consciousness, it is so as a vertical illumination, rather than as a horizontal or temporal causal process. We will see more clearly from the second and third proofs of the existence of God that Descartes is not reasoning from a causal perspective that has to do with a process that occurred in the past, but with a present reality.

In summary, Descartes argues: 1) I think imperfectly in the light of the idea of perfection. 2) An imperfect being cannot create an idea of perfection. 3) Only perfect being, which we call God, can produce the idea of perfection in me. 4) Therefore, God must exist.

We will return to this argument about perfection when we consider Descartes' third proof for God's existence. Following the method of synthetic reconstruction of the complex reality of consciousness, Descartes continues to reflect on and elaborate the meaning of perfection, starting with the simple awareness that we are not perfect. This negative conception of perfection—this idea of fullness that highlights our own emptiness—acquires more positive content in the further stages of Descartes' step-by-step presentation. In this process of intellectual enrichment, our thought goes from a very abstract or vague concept of perfection to an idea that is more and more concrete.

Second Proof for God's Existence: Cause of Existing Being

Descartes recognizes that the previous argument may not be sufficiently convincing. It is coherent, with one step following another, and therefore it is clear to "anyone who desires to think attentively on the subject."[2] But such consistent thinking requires an effort of attention and concentration on the sequence of thoughts. However, we often relax this attention and let ourselves become "blinded by the images of sensible objects."[3] Then the above reasoning—why the idea that I possess of a being more perfect than I, must necessarily have been placed in me by a being which is really more perfect—escapes us. The discipline of thinking requires that we not stray from the direct path of construction. The fact is, however, that we do often so stray. Therefore, we need many paths, some of which are more appealing to and operate more effectively for particular individuals than others. Descartes does not therefore present us with a purely linear method of intellectual development, but suggests a converging plurality of ways to truth. Hence, he approaches the topic of God's existence from more than one perspective. This multiplication of perspectives, moreover, involves an enrichment and deepening of earlier concepts by the later ones. In the second proof we learn more about the nature of God's causality and in the third we go more deeply into the idea of perfection itself.

Descartes accordingly supplements the previous argument with another. We go back to our starting point and consider it from another angle. I think,

therefore I am. There are two parts to this proposition, my thinking and my existing. We first asked how it was that we are able to think, with the indispensable illumination provided by the idea of perfection. Now we need to ask what explains the fact that we exist. The second argument for God's existence focuses on the cause of the very existence of the thinking self. What explains the fact that I am a thinking *being*?

Perhaps I myself, as a thinking consciousness, am the cause of my existence? This seems unlikely. Causing something to exist is surely more difficult than increasing one's store of knowledge. If I had the power of bringing myself into existence, I should have been able to make myself exist with more knowledge, more beauty, more goodness, than I find myself to have. If I had the power to produce my very existence, I would also have the ability to create these other qualities within myself.

If we are not the cause of our own existence, perhaps our existence is the result of some other being or beings. We normally think of our existence as something created for us in the past by our parents, and their existence in turn as the creation of their parents, and so on. If we reflect deeply enough on the nature of being or existence, however, we will recognize that while we inherit many traits from our parents, existence itself cannot be something handed down to us from the past. We may be taller or shorter because of them, have red hair or black hair. We may have learned a certain language because of them, or we acquired from them a number of other personality characteristics. My parents have the causal power to confer such properties on me, just as I can create new knowledge or new habits in myself. But just as I do not have the power to confer on myself my very being, neither do my parents. The reason is that existence or being is quite different from these other properties. Unlike these other properties of my reality, being—existing here and now in the present—is not something that can be produced by a cause that existed in the past.

Descartes' argument deviates sharply from Hobbes's argument for God's existence from the chain of causes. Hobbes argues that the chain of causes cannot go on infinitely without undermining the fact of some definite present effect, and so there must be a first beginning of things in the creative act of a First Cause—a Being that is the cause of Itself. This causality takes place at the beginning of creation, which may have been so many thousand, or so many billions of years ago, depending on the extent of cosmic history. But the main thing for understanding the distinctiveness of Descartes' approach is that the creation to which Hobbes refers took place in the past.

Locke too argues about a creation that involves a temporal process. He reasons from the principle that the more cannot come from the less to the conclusion that spiritual being cannot be created by material being. Locke begins from material causation and then argues that if something cannot come from nothing, spiritual reality cannot arise out of material causes. Hence we must

conclude that one's soul or spirit was created some time in the past by a spiritual cause—presumably at conception or some later time in the womb, as Locke does not venture into Platonic speculations about the preexistence of the soul before the body itself. This causal argument differs significantly from Descartes' first argument that an imperfect being cannot create the idea of perfection. Reasoning on a methodological level which at this point has not admitted the existence of anything material, Descartes avoids all mention of such material causation and the temporal chain of causes that is connected with it. This approach carries over into the second argument as well.

Descartes' first proof has to do with the causality of "I think," when thinking is seen as requiring an idea of perfect being. Here Descartes is concerned with the causality operating within spiritual being itself. Descartes' second proof, however, is not concerned with the creation of that spiritual being as spirit, but with the creation of being itself. We move from the inner dynamics of "I think" to the mystery of being contained in the conclusion, "therefore I AM." In turning to the causation of our being, Descartes avoids the causal argument from the chain of causes except to point out that this is wholly inadequate to explain, not spiritual consciousness, but the being of that consciousness, the fact that it IS. He is not therefore reasoning as Locke did, who argues that the creation of spiritual beings requires a special act of spirit, over and above the causal processes of the material world. Locke's perspective analogizes the creation of spirits or intelligent beings with that of material beings. Sometime in the past a "spiritual thing" is created, just as, from another perspective, material things are so created in the temporal process. Descartes, however, does not locate the causal power of God in the near or distant past. For being is itself something *that only exists now.* The cause of being or what it means that something IS cannot be located in the past for the simple reason that the past no longer IS. Since the past, by definition, no longer exists, how can it cause existence in the present? How can a past nonbeing be the explanation of present being? Here is the ultimate case of causal inadequacy: how can something come from nothing, how can being come straight out of nonbeing?

Time and Causality

Clarification of Descartes' argument requires reflection on the nature of time. Time is often imagined to be a continuous solid line extending beyond the horizon of our possible knowledge far into the remote past. And then from the fleeting moment of the present it goes off into the future for another unimaginable distance. In this representation, the present moment is an infinitesimally small part of this infinitely long line. It is continuity of time that underlies the deterministic perspective of a chain of causes in which the present moment is merely a transition belt from past to future.

In view of this picture, the question arises as to whether there is a beginning to this line. Not being able to suppose that it continues infinitely into the past—for if it did there would be no cause of any present effect—Hobbes argues that there must have been a Creator by whose wholly mysterious *fiat* the world of things with their initial motions was first created. After that first beginning, the things of the world continue through deterministic causal laws to produce everything else, including my presently existing being and thinking. This argument supposes that God, as the First Cause or Prime Mover, has causal importance only in the distant past, and that our present being is the consequence of the chain of causes extending back to the original creation.

Past actions can be cited to explain certain particular properties of presently existing beings. We can explain the fact that a billiard ball moves into a side pocket as the result of a chain of causes going into the past. The force of the moving billiard ball results from other movements, with their particular forces. It can all be calculated ahead of time, in fact, so that the future event is seen to be a direct outcome of the past, and the present moment has no distinctiveness relative to any other moment, except that there is only one of it and a near infinitude of the others. However, all physical characteristics of any possible billiard shot can be calculated with absolute accuracy, and yet the shot itself might not exist. Being itself is not a necessary property or consequence of any of the particular physical properties studied by the physicist. It is rather something presupposed by all of these when they are intended to relate to any reality.

Descartes presents a radical challenge to the causal picture of mechanical science. Instead of an unimaginably long line in which an infinitesimally small moment of present being plays but a tenuous role, Descartes sees time as the perpetual recreation of the present moment. Neither the past nor the future in fact exists. Only the present moment exists. Being only is, now. What was and what will be *are* not. How then can being itself be conferred by any past action? In Descartes' understanding, the present moment is perpetually detaching itself from the past, which, as past, no longer *is*. We cannot therefore explain our present *existence* by the past actions of other persons or events since they are not. Not existing themselves, because past being no long is, how can they cause being, present being which is the only being, and only is now? If there must be at least as much reality in the cause as in the effect, how can what is not or is no longer, the past, explain present being in the present? Only presently existing being can be the cause of present being.

Descartes puts the argument this way:

> For all the course of my life may be divided into an infinite number of parts, none of which is in any way dependent on the other; and thus from the fact that I was in existence a short time ago it does not follow that I must be in existence now, unless some

> cause at this instant, so to speak, produces me anew, that is to say, conserves me.[4]

I think, therefore I must exist, but I do not exist because I think. I think because I exist as a thinking being who is continually sustained in existence by a being who, unlike myself, is capable of creating being itself. Descartes begins with "I think," and then moves on to the metaphysical condition of that thinking: the fact that "I am." "I think" and "I am" are not the same. My being is not wholly taken up by thinking however broadly understood. If self-consciousness is the first step in the order of presentation of the system of science, it is not first in the order of reality itself. Descartes does not identify the human being with thinking alone. Who I *AM* is not identical with my consciousness or self-awareness of myself. There is also that in me which transcends my thinking—that is, my being itself of which I am aware. Such being radically surpasses thinking, is not identical with it and cannot be explained by it, just as it cannot be explained by anything in the chain of causality that is connected with our materialistic concept of time.[5]

Recognition of the distinctiveness of being as the present moment, and only the present moment, disrupts the continuity of time and the causal sequences that give it regularity or order. When our thinking is connected to being, understood as the independent upsurge of the present moment, it becomes liberated from the chains of the past. As long as thought is shackled by the past and the future, which are supposed to define the order of reality, it is caught up in the conditioning processes of causal events. But the present moment, in its being, is radically new or fresh. Here is the metaphysical basis of genuine freedom. When my thinking is in line with my being I am free from the causal chains linked to past and future.

Pascal criticizes Descartes' conception of God when he writes in his *Pensées*: "I cannot forgive Descartes. In all his philosophy he would have been quite willing to dispense with God. But he could not avoid having him flick his finger to set the world in motion; beyond this, he has nothing to do with God."[6] This might have been said of Hobbes, but is obviously an inaccurate portrayal of Descartes. Descartes does not give us a "horizontal" chain of deterministic material causes in time, but a "vertical" excavation, a metaphysical archeology, into the inner source of the present thinking being reflecting on herself and on the conditions not only of thinking, but of being in the here and now.

Meditation on the Divine Perfection

In the book of *Genesis* we read that God created human beings in His own image. Descartes derives this idea of the religious tradition from reflections on the nature of human consciousness with its awareness of its own imperfection

and its conscious striving after perfection. In the Gospel according to Matthew (5:48), Jesus says, "Be ye therefore perfect, even as your Father which is in heaven is perfect." This maxim corresponds to Descartes' conception of the intrinsic nature of the human being. The thinking being is a striving for perfection in knowledge and action that reflects the divine perfection from which we issue. We proceed out of the divine perfection, and because we contain something of that perfection within ourselves we strive to make ourselves more and more like the being that is perpetually illuminating us and sustaining us in being in the ever renewed moment of now.

Descartes explains that the idea of perfection in us is the inner likeness of our being to the divine being that sustains us:

> And one certainly ought not to find it strange that God, in creating me, placed this idea within me to be like the mark of the workman imprinted on his work; and it is likewise not essential that the mark shall be something different from the work itself. For from the sole fact that God created me it is most probable that in some way he has placed his image and similitude upon me, and that I perceive this similitude (in which the idea of God is contained) by means of the same faculty by which I perceive myself—that is to say, when I reflect on myself I not only know that I am something [imperfect], incomplete and dependent on another, which incessantly aspires after something which is better and greater than myself, but I also know that He on whom I depend possesses in Himself all the great things towards which I aspire. . . .[7]

In contemplating the idea of perfection, then, we contemplate the image of God within us. What does Descartes mean by "image"? Is it something separate from God, or is it God's own presence within us? Descartes states cautiously that "it is . . . not essential that the mark shall be something different from the work itself." Since the mark of the craftsman need not be different from the working of the craftsman Himself, our reflection on our self consists in the very contemplation of the present activity of God as our own inner light and source of being. God is the inner Light that draws us out of the path of confusion and blindness, stemming from our preoccupation with immediate sensory experience, and onto the path of intellectual and moral perfection that stems from our inner act of self-awareness. In contemplating God, we are not thinking about an alien being that is outside of us, a remote being from the beginning of time. God is our own source and destiny as well as our innermost depth. Against those who say we can never love God because he is too high above us, Descartes writes, citing the Roman poet Horace (68–65 B.C.E.), that "our soul's nature resembles his sufficiently for us to believe that it is an emanation of his supreme intelligence, a 'breath of divine spirit.' "[8]

We strive in thought and action to live up to the divine presence within us. In this act of contemplation of a perfection that is both present and absent, the

human being achieves the highest state of happiness. Descartes concludes this third meditation with a moment of awe-inspired meditation on the nature of God. The title of his book of 1642, from which our discussion is taken, is *Meditations on the First Philosophy in which the Existence of God, and the Real Distinction of Mind and Body, Are Demonstrated.* That he means meditation in the sense of spiritual contemplation, rather than simply intellectual argumentation, is clear from the following passage, which hardly justifies the complaint by Pascal mentioned earlier:

> [I]t seems to me right to pause for a while in order to contemplate God Himself, to ponder at leisure His marvellous attributes, to consider, and admire, and adore, the beauty of this light so resplendent, at least as far as the strength of my mind, which is in some measure dazzled by the sight, will allow me to do so. For just as faith teaches us that the supreme felicity of the other life consists only in this contemplation of the Divine Majesty, so we continue to learn by experience that a similar meditation, though incomparably less perfect, causes us to enjoy the greatest satisfaction of which we are capable in this life.[9]

The Third, Ontological Proof for God's Existence

In addition to the two "causal" proofs for God's existence—the cause of the idea or light of perfection within us, and the cause of being, both causes involving vertical or present-moment activity—Descartes proposes a third, "ontological" proof. "Ontology" refers to the study of being or existence. The third proof continues the reflection on the nature of being or existence begun in the second proof, as well as on the nature of perfection of the first proof. The ontological proof rests on the insight that the self-aware "I" does not exist necessarily or by its own causal power. This leads to the appreciation that there must be a being whose very existence is a necessary or intrinsic part of its nature. Descartes approaches this argument from the point of view of the thinking subject who must necessarily think the idea of perfect being.

The ontological proof is the argument that being or existence is inherent in the idea of perfect being, and so it is impossible to think of perfect being as not existing. Our idea of perfection cannot be a merely subjective thought on our part. The very idea of perfection requires the existence of a being that corresponds to that idea. This is because it is logically contradictory to suppose that we have an *idea* of perfect being—the fact of which has been previously established—while at the same time thinking that no *actually existing* perfect being corresponds to that idea. This is not an "analytical" argument from the verbal definition of God. It is the unfolding of the conceptual implications of

the idea of perfection—the step-by-step reconstruction of the complexity found in human consciousness. Just as it is a necessary implication of the concept of a triangle that its angles add up to 180 degrees, so it is a necessary implication of the concept of perfect being that perfect being exists.

To fully appreciate Descartes' argument, it is necessary to refresh our memory, and focus again on the supreme importance for us of the idea of perfection. This idea is essential to the inner dynamics of the thinking being itself, moving from illusion to truth, from imperfection to perfection. Next it is necessary to recognize that existence is a basic part of our idea of perfection. It is evident that something that has the property of existence is more perfect than the same something conceived as not existing. An apple that is only imagined, but does not exist, is (immensely) less perfect than an existing apple.

One might reply that a non-existing bad apple is better, more perfect, than an existing one, just as we sometimes are tempted to think that the world would be a better place if certain individuals didn't exist. Assassins and murderers in their own way are seeking to create a better world, striving after the idea of perfection. But our conception of value, of perfection and imperfection, requires that the imperfection of something being bad should be removed, not that the being with that imperfection shouldn't exist. And rotting apples, like rotten people, have their role to play in the cycle or spiral of being. It is the property that is bad, the behavior, not the being.

It follows that *an idea* of (infinite or complete) perfection that did not include the property of being or existence *in that very idea* would simply not be an idea of perfection. The idea of non-existing perfect being is a self-contradiction, an oxymoron. Perfect being conceived of as non-existing is not what we mean by perfect being. Consequently, when we think of perfect being, as we necessarily must, we must necessarily think of such being as existing.

To grasp the full force of this argument, it is further necessary to understand that this necessity to think of God or perfect being as existing is a unique characteristic of the idea of God. I cannot conceive of a triangle without having certain properties, such as having its angles add up to 180 degrees. But I can have an idea of a certain triangle without having necessarily to think of it as existing. There is no contradiction in thinking of a particular triangle, and then adding that it does not in fact exist. This is because existence is not a necessary part of the idea of a triangle. Similarly, I cannot think of a mountain without thinking of a valley. But this conception of a mountain-with-a-valley does not require that I think of a particular mountain-with-valley as existing. The concept of a mountain necessarily requires the concept of a valley, but it does not require the concept of its existence. Again, if I understand what "bachelor" means, I must necessarily think of "unmarried man." This would be true even if all men were married. There is nothing in the definition of "bachelor" that requires that one be an "existing un-married man."

In all such concepts regarding finite beings, we are used to thinking of existence or being as distinct from essence or form. We may know *what* the thing is—its essence or form—but we do not thereby know that it *is*. And so we suppose that we can likewise think of God in the same manner. We suppose that we have a concept of God, let's say as a perfect being, and then that we may debate about whether or not there is any actual being that corresponds to our concept. Hence we have so-called proofs for the existence of God, implying a separation of the concept of God and the existence of God. As with finite objects where we can distinguish existence and essence, or being and form, we suppose that we can do the same with the concept of God.

But this way of thinking about God is superficial. When we think about what we mean by the concept of God, we recognize that we cannot distinguish God's essence from God's existence. It is a contradiction to think of perfect being that lacks perfection. And since existence or being is a perfection—in fact, the greatest of all perfections—we must necessarily think of perfect being as existing. Hence Descartes writes that "it is not within my power to think of God without existence (that is, of a supremely perfect Being devoid of a supreme perfection) though it is in my power to imagine a horse either with wings or without wings."[10]

The Unfolding Logic of Descartes' "Proof"

Paradoxically this proof of God's existence is an argument that there is no such thing as a proof for God's existence in the usual or classical conception of such proofs. Such proofs require that we have a concept of God, on the one hand, and an argument for God's existence, on the other. Instead there is an unfolding of our understanding according to the post-Copernican method-o-logic of scientific thought. Hence in the course of the step-by-step presentation we become more clearly aware that we *already* know God's existence as inherent in our self-awareness itself, as an implication of "I think therefore I am." We are making explicit what is implicit in the complex, global intuition of self-awareness from which we begin. This ontological argument is not a verbal trick from a nominal definition of God conceived of as perfect being, but a step-by-step development of the idea of perfection as a necessary condition of our own consciousness. Since we see that such an idea cannot be separate from its being, we recognize that the idea of perfection, which is the idea of God, is the existing light of God within us, without which we could not even know ourselves.

Hence this "proof" or unfolding of thought to deeper or richer levels of understanding reflects back on the first "proof" and on the entire argument about innate ideas. The idea of perfection is not an idea like others, like the idea of bitter or sweet, an apple or a mountain. To verify whether or not it is innate is not to proceed in the manner we would follow to confirm whether the

idea of an apple or a mountain is innate. The idea of perfection is the being of perfection itself which is one with the being of our consciousness itself. To doubt this being, once we have become clear about it, is the same as to doubt that "I think."

In fact the existence of God seems to be even more indubitable than my own existence, because it seems at first that we can conceive of "I" without being, as separate from being. Hence we distinguish between "I think" and "I am." But as we cannot think of the idea of perfection without its being, and so to the extent that "I" implies the idea and hence the being of perfection, "I" too am intrinsically linked to being. Hence "I think therefore I am" turns out implicitly to be a deeper unity of self and being than originally presented. If we cannot think of God as not existing, neither, it turns out, can we truly think of "I" as not existing, for "I" cannot be separated from what is meant by God, or perfect being. Although in one sense "I" am clearly not perfect being, for I am painfully aware of myself as an imperfect being, it is nevertheless impossible for me to think of myself separately from perfect being, for its light and its being are intrinsic to who and what I am an "emanation" of divinity.

The logic of Descartes' argument pushes him into risky theological waters, given that the separation of divine and created being is an essential dogma of orthodox Christianity. The unorthodox logic of the argument is there to be seen, although Descartes does not and pragmatically cannot explicitly spell it out himself. The fact that the books of the pious Catholic Descartes were placed on the Church's Index of Forbidden Books suggests that this implication of Descartes' argument had not been buried too deeply.

In summary, the idea of God, the perfection of being itself or the being of perfection, is a necessary idea inherent in our self-understanding. We must necessarily think the *idea* of God. But a God that exists only as an idea—only in imagination—and not in reality, is not really a God. Since we *must* think of God, we must therefore think of God *as existing*. We might object that the fact that we have no power to *think* of God otherwise than as existing does not mean that God actually *does* exist. However, this objection is based our supposing a concept of a non-existing God. But such an idea, we have just shown, is a contradictory, that is, an unintelligible, thought. The objection is based on the impossible attempt to take a position outside of our own thinking. We try to say something like, yes those human beings are forced to think that God exists, but we nonhumans all know that thinking something, even necessarily thinking something, doesn't make it so. But who is making this objection? Either it is God Himself, or it is a finite, imperfect thinking being who must necessarily think the idea of perfect being, and so must think of that being as existing.

The self-reflecting thinking of a spiritual being seeking to rise from imperfection to perfection, from ignorance to knowledge, therefore presupposes the prior existence of perfect being sustaining it in its being and illuminating it with its inherent truth and goodness. This perfect being constitutes the ideal

toward which the thinking being aspires, and, most fundamentally, gives to this thinking being the gift of its very being, which is the intrinsic or essential characteristic of perfect or self-constituting being. But this last formulation is inadequate if it implies an unthinkable separation of the thinking being and its being. Although in the order of the presentation of thought we first examine the thinking or consciousness aspect of "I," with its necessary idea of perfect being, it is logically impossible to stop at this point and not go on to recognize our being at the source of our thinking, and then perfect being at the source of our being.

This discussion of the nature of God as self-determining being continues the idea that began with the analysis of time and causality. Determinate features of the present, its "essence" or "form," can be explained by reference to the past and its conditioning or causal process. But the being itself of what exists cannot be explained by the past because the past no longer exists, however much we imagine it to exist when we think of it in terms of an ongoing temporal-causal process—the long line of the past that superficially seems so much more solid than the fleeting moment of the present. But this past being no longer exists. The more, which is the present existing being, cannot come from the less, which is the past being that no longer is. The present moment, which is the only part of time that actually is, is therefore independent of the past, not in its particular form, but in its being. If thinking truly connects with being—as is implicit in the progression involved in "I think therefore I am"—we discover the mystery of being in the core of the "I" itself. This mystery consists in the recognition that self-awareness does not cause being yet inescapably implies being.

Hence there is something in self-aware consciousness that is not reducible to a form-related concept. I do not make myself exist by thinking or other ways of being conscious. I merely recognize that as I am conscious I must exist, I must participate in being, which means in the now of the present moment. Thinking presupposes and opens up onto being. If thinking comes first in the "order of presentation," then in "the order of being" what comes first is not thinking but being. Descartes' concept of God is not that of a prime mover who stops the infinite regression of causal connections into the past—as in Hobbes's proof for God's existence. Descartes' concept of God is of the being who is the source of being itself, the source of the now of present awareness aware of itself now—and not the conceptual thinking about past causes or future effects, in the framework of causal explanation and prediction in the material order. Being is not something different in God and in us. Finite being as finite is being involved in the forms of things of past and future processes, but finite being as being is free from this causal order. Being as being is the same whether as God's being or our own. In awareness of this being as its own being, the self-conscious "I" is independent of the patterns of past conditioning of material processes. "I" recognize the transcendence of being, and so of

my own being, from all material causal sequence, together with the impossibility of explaining being from conceptual thinking itself—that is, from the kind of thinking that focuses on essence or form, and not being. In other words, "I think" is not conceptual thinking. It is the self-aware "I" that is the basis of all abstract thinking, as it is of desiring, feeling, willing, loving, etc. This self-consciousness does not "think" being in the matter of conceptual thinking, but contemplates or meditates on the being that it is, which as being itself is inseparable from that self-sufficient, uncaused perfect being that we call God.

Scientific Knowledge of the Material World

What about the external world? What truths are possible in respect to that other kind of substance, the materially extended bodies, the concept of which forms the logical antithesis of spiritual substance? Out of all the welter of impressions received by the senses, the notion of matter as consisting of spatial extension—size and shape—provides the key or foundation for constructing a physical science. Clearly, this idea of the basic nature of matter reflects the new physics of Galileo. Straight-line motion, movement directly from point A to point B, supposes spatial extension as the central property of bodies. The particular motion of the extended, material beings, however, is not an intrinsic property of bodies. Motion is always external, coming to bodies from outside them, from other moving bodies. No material being causes its own motion. It follows that all material objects of investigation are governed by externally operating causal laws. This is the case for all animals, as well as for human beings inasmuch as we are bodily existents. Descartes writes:

> By the body I understand all that which can be defined by a certain figure: something which can be confined in a certain place, and which can fill a given space in such a way that every other body will be excluded from it; which can be perceived either by touch, or by sight, or by hearing or by taste, or by smell: which can be moved in many ways not, in truth, by itself, but by something which is foreign to it, by which it is touched . . .: for to have the power of self-movement, as also of feeling or of thinking, I did not consider to appertain to the nature of body: on the contrary, I was rather astonished to find that faculties similar to them existed in some bodies.[11]

We can be confident that deductions carefully based on such a clear and distinct concept will give us a truthful science of the external world. Otherwise, God, whose light endows our reasoning capacity with its standards of clarity, would be a mischievous, deceiving demon, and not the perfect being He must be. Descartes here puts the previous demonstration of the existence of perfect

being, light of the human mind, to methodological use. God's perfection guarantees the truthfulness of rationally derived ideas about the world. This idea provides a central step in the rational organization of our concepts about the external world. It provides the bridge between the inner spiritual existence of the reflecting subject and the objects of that reflection in the outside world. Thanks to the confidence we gain in our intellectual powers through the idea of divine truthfulness, we can be assured that our method of step-by-step rational development of scientific thought gives us a truthful picture of the external material world.

Locke's understanding that all the objects of thought are *directly* only objects of and in the mind, that is, ideas, is also Descartes' position. In the post-Copernican world, we must abandon Aristotelian notions of direct access to the outside world. But if the direct objects of thought are always and only thought-objects or ideas, we are faced with the issue of how we can know things outside of our minds. Locke and Descartes propose sharply opposed solutions to this problem. Locke's solution is to stress the stubbornness of sensory ideas, perceptions, or impressions. We cannot help but see red when we look in the direction of the apple, and therefore our sensory ideas provide us with "true" representations of the external reality that causes them—although such "representations" may "resemble" nothing that is there. Our complex and abstract ideas derive from these sensory ones and can be validated internally by retracing their origins in such simple ideas (impressions, according to Hume). We have traced the evolution of this orientation to Hume's skepticism. But even in Locke's own thought, knowledge of the external world is highly problematic, partial, provisional, and ultimately "dark."

The above analysis shows in what sense Descartes' ideas of self-consciousness and God, the foundations of his science of matter, can be said to be innate. Briefly, this is not in the sense of there being distinct concepts such as apple and mountain to be found by exploring the early history of the inner realms of the mind. Rather, this has to do with experiential awareness unfolding from present consciousness. In this process the "I think" of self-awareness is identified by contrast with the concept of matter. Matter is the "not-I" which our reflective examination of inner experience necessarily unfolds. Unlike matter, "I" am not extended and divisible into parts. Unlike material things that are moved by outside forces, "I" am a source of inner movement. A concept of matter is therefore intrinsic to our thinking about consciousness; matter is the "other" which allows us to identify the contrasting characteristics of the self. These characteristics of matter, rationally necessary as contrasting concepts to the spiritual self, are in fact the ones that form the foundation of the new science of physics.

Did the new physics discover these characteristics through empirical generalizations based on sensory impressions? Or are these somehow necessary thoughts for the truly thinking reflective mind once it frees itself from the

illusory power of sensory impressions? It is in fact such sensory impressions that give rise to the illusions of the ancient sciences. And it is only in thinking, in the liberating power of the self-aware mind, that science frees itself from the despotism of sensory ideas. And such liberated and liberatory thinking comes, as we have seen, with its own inherent warrant of truthfulness—the perfection of divinity that is the ground of all thought moving from imperfection to perfection, from illusion to truth. If the pure concepts of self-referring thought must be the starting point of true science in general, and if in the formulation of these concepts of self-conscious spirit we necessarily contrast them with the other of matter, then the concepts of matter too are necessary thoughts. Our necessary concepts of the nature of external matter therefore provide the conceptual foundation of the material order. Descartes' *a priori* deduction of the basic characteristics of the material world in this way contrasts with Locke's empirical generalization from the characteristics of so-called ideas of primary qualities.

How do we distinguish truths about this external material world from illusion? Thanks to the awareness we have of the divine light within us, we can distinguish between the illusory characteristics of dreams and other projections of the human consciousness and objectively true characteristics of the external beings that are the objects of natural scientific thought. The strict laws of external causality, characteristic of the science of matter, clearly distinguish the order of waking life from the fancies of the dream. The ideas that we construct in step-by-step rational fashion therefore give us both true and adequate knowledge of the fundamental characteristics of the material objects outside our minds. If these objects too were unreal dream-like fantasies, even though without the fancifulness of dreams, the light of our reason would betray us, and God, the source and substance of that light, would be a wicked deceiver, and not the perfect being we have demonstrated Him to be. Perhaps if he had better understood this argument, Bishop Berkeley would not have presented God as precisely such a deceiving demon, giving us ideas about an external world that really isn't there.

The Jansenist philosopher Antoine Arnauld sees a vicious circle in the above argument.[12] If the existence of God is the guarantee of the objectivity or validity of our basic rational concepts, how could Descartes ever demonstrate God's existence in the first place? The criticism repeats the mistake considered in the previous chapter in which Descartes supposedly makes an illicit move from the proposition that I can conceive of myself as existing without a body to the conclusion that I actually do so exist—the move from subjective concept to objective truth. The being of the self-conscious "I," as well as the being of divine perfection, are necessary, inescapable thoughts, clearly and distinctly perceived, although at different moments, once we embark on the path of reflection from simple to complex. The notion of God as the guarantee of the validity of rational method comes later in the exposition of this system of

thoughts, so that after we have clearly seen that God, the perfect being, exists, our confidence in the validity of the earlier steps is reassured and all possible doubt—from the supposition that the rational faculty we have been counting on was created by a deceiving demon—is removed. The idea of God, while resting on earlier steps, also supports them, as the keystone of an arch supports the foundations it rests upon. In the progression of thought, we do not come across something new, something later, which proves that which is older and earlier. We become clear about that which was present from the beginning, although, because we must move in partial steps to produce a whole truth, and cannot say everything at once, what was existentially implicit from the start—the light of divine intelligence—becomes a definite step in the presentation only at a later point.[13]

Genesis of the Material World

But how can thinking be truthful unless its method corresponds to the structure of the world that it is constructing in thought? The rational method consists in a step-by-step build-up from simple to complex. But if the material world itself is an unmoving complexity, then the subjective movement of thought by which we produce a more or less complete understanding does not correspond to anything outside our heads. A discrepancy between the method and movement of thought and the nature of the outside world would result in a distorted understanding of reality. To be completely reliable, the method of thought should therefore correspond to something outside of our heads.

Descartes draws prescient conclusions from this idea of a necessary correspondence between the process of thinking and the nature of the world that we think about. If thinking must proceed in step-by-step fashion from simple to complex, how can such a subjective *process* reproduce the basic structure of the world if the object of that process of thinking is conceived as an essentially static reality? We have already seen that when we think about our own subjective consciousness, we do not find it to be a static reality, but rather a dynamic process capable of realizing itself by moving from imperfection to greater perfection. Similarly, rational method inspires us to think of the material world too as a dynamic evolutionary reality, and not a static being fixed in its traits once and for all.

It would be in accord with the movement of rational method if the world itself evolves in the same step-by-step fashion. However, according to Christian theologians relying on the book of *Genesis*, God created the world in a mere six days, with all the features and species that we find with us today. If reason requires evolution, theology asserts a static, essentially non-evolutionary conception of the universe, created once and for all in its presently observable shape. The world we observe in ordinary perception is indeed relatively static,

since we only notice minor changes in our short lifetimes, or in times in which measurements of changes have taken place. The biblical account of creation in six days roughly corresponds to the ordinary perception of a relatively unchanging world. But, as we know from our reflections on the Copernican revolution, the world as it appears to us in direct sensory experience is not the world as it truly is.

Descartes does not disagree with the static theological conception of the universe. He grants that theology and revelation give us the true picture of how the world was actually created. God is free to create the world as He chooses. In this conception of the primacy of Christian Revelation, Descartes agrees with Galileo's own view of the matter. On the one hand, human reason finds the Copernican perspective on the nature of the solar system to be far simpler and thus intellectually more satisfying than the complex system of epicycles proposed by Ptolemy and his followers. But the intellectual or rational superiority of one system over another is not an argument for the *existence* of the rationally superior system. The Creator is not obliged to create the rationally superior system because His choices are supremely free. Which universe and which method of creation God in fact freely chose is not accessible to our reason by itself. Just as being is independent of form or essence, matters of actual fact transcend what rational scientific method is able to determine independently. Divine revelation is therefore required to bridge a gap between rational necessity and existential fact. The Church has the God-given authority to pronounce on such matters of fact, of faith, and of revelation. So Galileo writes in correspondence in 1641:

> The falsity of the Copernican system must not on any account be doubted, especially by us Catholics, who have the irrefagable authority of Holy Scripture interpreted by the greatest masters in theology, whose agreement renders us certain of the stability of the Earth and the mobility of the Sun around it. The conjectures of Copernicus and his followers offered to the contrary are all removed by that most sound argument, taken from the omnipotence of God.[14]

If as faithful members of the Church, Descartes would argue, we make this concession to the higher truth of theological revelation, as philosophers we should be permitted to propose a conception of how the world might have been created had God decided to follow the method of reason. Being absolutely free and omnipotent, God is not constrained to follow that method Himself in his creation. Revelation therefore gives us the account of how God *actually* created the world, while scientific philosophy provides the speculative rational account of creation—of how God might have created the world according to a rational method.

In his posthumously published work, *The World*, Descartes presents the evolution of the universe from simple to complex. As a purely hypothetical

conception, he describes the birth of the solar system as one stage in this evolutionary process. To take an expression from Kant's later works, Descartes proposes a "conjectural history" of the universe. Descartes concedes to the theologians their prerogative in the interpretation of a revelation that is inaccessible to reason. His own view, he says, does not challenge such revealed truths. However, were we left to the powers of reason alone, we should conceive of the creation of the universe as a developmental rather than an instantaneous one. The step-by-step procedure necessary to thought would harmoniously correspond in this way to the step-by-step process in reality by which the world could have come into being.

Despite his attempt to placate the religious authorities, the Church nevertheless banned Descartes' book containing such an evolutionary conception of the universe. Descartes' trouble with the Church ostensibly centered on the implications of his metaphysics for the doctrine of the transubstantiation, according to which the bread of the Eucharist becomes the body of Christ.[15] If matter is wholly mechanical, how can it be permeated by the being of Christ? The accusations of doctrinal unorthodoxy were successfully brought against Descartes by the Jesuit religious order when, in 1663, the Church placed Descartes' works on the *Index of Forbidden Books*. This, despite the fact that Descartes' *Meditations* were modeled at least to some extent on the *Spiritual Exercises* of Jesuit founder, Ignatius of Loyola.[16] The real basis of the Jesuit opposition was Descartes' radical opposition to the Aristotelian-scholastic philosophy, which the Jesuits were determined to champion against the Cartesian opposition. According to a contemporary, the Jesuits felt deeply threatened by the Cartesian philosophy: "Believe me, once and for all, they'd sooner stop teaching than reject the philosophy of Aristotle."[17] Strong support for Descartes was led by Antoine Arnauld, a follower of the reform movement of Jansenists. Arnauld constructively criticizes Descartes' argument for the distinction of soul and body in a set of objections, followed by Descartes' replies, that are incorporated into Descartes' *Meditations*. The famous Port-Royale *Logic*, a textbook that Arnauld coauthored, was "thoroughly Cartesian in inspiration."[18] Arnauld's defense of Descartes, *Several Reasons for Preventing the Censuring and Condemnation of the Philosophy of Descartes*, was instrumental in blocking such condemnation in the French parliament, despite pressure for such condemnation by the University of Paris, in 1671. As we have seen, Pascal, also a Jansenist, was unsympathetic to Descartes, accusing him of supporting a mechanistic philosophy.[19]

The Human Being as a Unity of Soul and Body

I have outlined the basic laws governing the material world as comprehended by the thinking self. The next step is to address the issue of how the radically

distinct domains of spirit and matter are united. The human being, clearly, belongs to both of them. As a substance capable of self-awareness, the human being is spiritual. But human beings are not bodiless spirits or angels. We are souls incarnated in bodies. Bodily existence profoundly affects how we think and feel about things, all too often negatively. The process of achieving truthful knowledge about ourselves and the world requires a struggle to free ourselves from illusions that stem from sensory impressions, from customary beliefs imprinted on our minds by practical experience and education, and from the harmful priorities of our own egotistical, body-centered passions.

The human body, like that of any animal, is a highly complex, marvelous machine. The idea that the body is a machine is an expression of the basic laws of physics—according to which bodies are moved only by external causes, and are not capable of self-movement and self-consciousness. Such external causality or mechanical motion governs the formation of much of our experience. Descartes adopted a position reminiscent of Hobbes's in describing the way the "passions" govern human behavior. Sensory stimuli coming from the outside world cause specific reactions in the organs of the human being, producing effects that we experience as pleasures and pains, passions and desires. In Descartes' theory of matter as in Hobbes's, animal spirits are hypothesized minute bodies that communicate both to the brain through the nervous system from externally received impulses and from the brain through the nerves to the muscles of the various parts of the body. Today we speak similarly of electrical impulses traveling to and from the brain in connection with sensory organs and appropriate parts of the body. Desires or passions are aroused in the soul by the action of harmful or desirable objects on our bodily organs. The effects of such actions are communicated to the brain by the action of the nerves.

Not all passions are physical in origin. There are also spiritual passions, loves that owe their origin to ideas, to the higher human qualities of personalities and societies, to the perception of beauty, etc. These are also communicated to us through the vehicle of physical impressions, as thought is signaled to us through the sounds and signs of language. Contrary to materialism and its reduction of the soul and its phantasms to physical processes, for Descartes the soul is an independent substance that is capable of influencing and redirecting the course of the passions. The passions are not directly the product of material interactions, but, as Locke explains for all such "ideas," they are the product the activity of the soul in the presence of physical impressions. Experiences of pleasure or pain, desires and fears, loves and hates, are spiritual realities, movements and objects of spiritual consciousness. Operating on the spiritual realities of the passions, the soul can redirect its ideas and its inclinations through its own inherent freedom. Since the passions are inclinations of the soul, the soul, by changing the direction of its attention, can also change its inclinations. This can be done directly or indirectly. The mind directly changes the order of its ideas in developing scientific systems of thought. By

orienting our attention in appropriate avenues where alternative external stimuli are to be had, the free human spirit is able indirectly to change the nature of her passions. The soul then sends appropriate signals back to the body—our will giving directives to the animal spirits that move the body in ways that embody and carry out our decisions.

As a unity of soul and body, the human soul is present throughout the body. However, Descartes argues that the pineal gland, a pea-sized organ in the center of the brain, is the organ in the body in which the union between body and soul is especially, though not exclusively, operative. Descartes explains why he thinks this is the case:

> It is also necessary to know that, even though the soul is joined to the whole body, there is nevertheless one part in [the body] in which [the soul] exercises its functions in a more particular way than in all the others. . . . I observe that the other parts of our brain are all double, just as we have two eyes, two hands, two ears, and, in short, all the organs of our external senses are double; and that, inasmuch as we only have a single and simple thought of a given thing at a given time, there must necessarily be some place where the two images coming through the two eyes . . . can coalesce into one before they reach the soul, so that they do not represent two objects to it instead of one. . . . But there is no place else in the body where they can thus be united unless it is done in this gland.[20]

Descartes gives an example of an early "inclination" he once had for cross-eyed people. At first he did not understand why he felt such a peculiar attraction. Eventually he recalled a childhood love for a girl with a slight squint. After he came to understand the nature and origin of the passion, the passion itself disappeared. Thanks to the freedom of the spiritual substance and intellectual understanding, human beings can modify their own passions, their own natural psychology, and come by this means to control themselves.[21]

While it is common to speak of Cartesian "dualism," it is more appropriate to speak of the human being as a unified duality of soul and body. "Dualism" suggests two independent substances, each with its own separate mode of operation. But for Descartes the two substances not only interact but are unified. In this unity, the soul or spirit has primacy over the material body. Thus if Hobbes defends a materialism in which soul or consciousness is reduced to body and the laws of matter, Descartes argues for a spiritualism in which human consciousness directs the body, which is not only its instrument but its extension—although because of ignorance and fear this direction is highly imperfect. The individual's body, together with the entire physical universe, is the vehicle of the human spirit, the arena of its activities. The spirit can and should be in control of the body and the desires arising out of physical existence. Bodily pleasures should be enjoyed and pains avoided within limits created by the fact that

we are also spiritual beings, and so have potentials that go beyond physical existence.

The Physics of Mind-Body Interaction

The main issue is not Descartes' speculation about the special position of the pineal gland in this interaction, but how there can be any interaction at all without violating the basic principles of physical science. There is first of all the problem of how to reconcile the freedom of the mind with the determinism of the physical processes according to the modern science. Far from challenging modern physics, Descartes is a ardent exponent of the new sciences. But he does not think that this requires him to reject such traditional doctrines of Christian spirituality as the notion of free will or the immortality of the soul. But were we to cause a physical process to change by the free act of the will, wouldn't we thereby violate the laws of physics? That we would indeed do so is the basic objection of Hobbes to the concept of free will. Those who are acquainted with the laws of motion, he argues, must reject the idea that some motions can be initiated by something that is not physical and does not operate according to physical laws. Free will creates an unbridgeable gap in the continuity of the chain of physical causes. It is one thing to hold that at the very beginning of the chain of causes, a free creative *fiat* must be invoked as the cause of all finite material beings. It is quite another to say that whenever human beings make decisions their choices constitute little *fiats* of their own, creative causes that disrupt the orderliness of the physical world and violate its laws.

For Locke the whole question of how mind and body interact is a mystery of God's beneficent coordination of the two orders. In taking this position, it is Locke who adopts dualism. The two distinct substances do not interact, and so must be coordinated by a third power, that of the divine planner and coordinator of the two realms. Descartes however attempts to reconcile the two orders under the primacy of the free human spirit as itself capable of directing the motions of the body. Such a position does not, he argues, violate the laws of physics. He argues that the mind does nothing to alter the *quantity* of the physical forces at play, but merely modifies the *direction* of the flow of their operation. Physical force or energy is still conserved in this process, according to physical law. The mind does not move the body as if it were itself an additional physical force. *Physical* impulses still move our bodies and their quantity remains unchanged by the mind's intervention, which only changes the direction of these motions or energies of the body. By changing the direction of our attention, we can place ourselves in circumstances in which we are subject to different causal stimuli, evoking different passions within us. The body remains an impassioned one, but the rational soul can free itself from passion's grip *indirectly* by modifying the course or direction of the passions that directly move us.

If the sight of certain food causes us to want to eat it, and if we judge that the effects of eating this food are harmful, we can modify our desires by looking at and smelling some other food of greater benefit to us. In each case, visual and olfactory stimuli in interaction with the needs of the body produce the physical desires or passions that move us to act according to physical law. But in the interim, freedom of the mind to turn the body in new directions results in new circumstances that solicit new desires within us.

Of central importance is Descartes' argument that the direction of physical motion can be changed by the immaterial mind without violating physical conservation laws. Arguing that direction or velocity too must be part of physical law, Leibniz later challenges this argument.[22] However, twentieth century quantum mechanics gives new life to Descartes' argument. According to Heisenberg's indeterminacy or uncertainty principle, it is impossible to determine simultaneously both the position and the velocity/direction of a quantum particle. Although such indeterminacy is normally negligible for ordinary objects such as automobiles, it is significant at the subatomic level, with the movement of electrons, for example.[23] There is sufficient indeterminacy in quantum mechanics, therefore, for just such a freely willed redirection of the flow of physical energy as Descartes supposes. If the mind were able to affect the direction of the quantum elements of things—those "animal spirits" of contemporary physics—the object would move in the willed direction without any violation of quantum laws.

The Limits of Metaphysical Explanation

A second, more serious, problem relates to the mechanism by which the mind achieves its redirecting activity. If mind and body are two radically different substances, how can they possibly interact? The subtle bodies that he postulates in order to explain interaction are extended, externally moved, material bodies. Describing them as extremely small does not make them any the less material, and so subject to the laws of material causality. As he himself describes these laws in a passage cited previously, causal influences operate by "touch" or physical contact. How then can the soul, which is not physical, "touch" the animal spirits and so redirect their flow? A material body can only be moved by another, "alien" body directly touching it. The immaterial mind, however, is incapable of touching anything. If spirit has the capacity to move, or alter the direction of, material bodies, it must itself be material. As we will see, this is precisely how Descartes solves this problem.

In discussing the problem of the unity of soul and body, Descartes emphasizes the necessary limits of purely intellectual, metaphysical reasoning. It is not general metaphysics, but everyday sense experience that assures us of the power of the mind to move the body, and of their intimate union. Sense

experience makes evident to us *that* the mind is capable of moving the body. If we restrict ourselves to evidences of purely intellectual, metaphysical thinking, we only obscure the matter, for then we will have to explain how two different things can at the same time be one, which, Descartes tells his correspondent Princess Elizabeth, is absurd.[24] Absurd, that is, to metaphysical thinking, which establishes the distinction of soul and body.

Metaphysical thought can nevertheless explain why we *cannot* understand how the mind moves the body. Metaphysics should be limited to the evidence available to it. Metaphysics gives us the distinction of mind and body, based on experiences and reasonings available to purely intellectual reflection. Metaphysics does not, however, give us information about the world that comes to us in sensory experiences, both internal and external. Corresponding to the metaphysical distinction of soul and body are two types of experiences, internal and external. Reflecting on the sphere of our consciousness by itself, we are aware of willing a hand to move in a certain direction. We then turn to sensory experience, kinesthetic and observational, and observe that it does in fact move the way we want it to. In both kinds of experiences we are limited to the evidence available to us. Metaphysical thinking, reflecting on the nature of consciousness as opposed to the properties of matter, establishes the distinctness of the soul from the body. Ordinary sensory experience however clearly establishes the fact of their unity, for we directly feel our unity with our bodies and our ability to move them. But when we want to know *how* the mind moves the body, we go beyond both the inner sphere of mental experience and what is available to us in sensory experience. Descartes tells Arnaud:

> But it is true that we are not conscious of the manner in which our mind sends the animal spirits into particular nerves; for that depends not on the mind alone but on the union of the mind with the body. We are conscious, however, of every action by which the mind moves the nerves, in so far as such action is in the mind, where it is simply the inclination of the will towards a particular movement. The inflow of the spirits into the nerves, and everything else necessary for this movement, follows upon this inclination of the will. This happens because of the union of the mind with the body, of which the mind is certainly conscious. . . .
>
> That the mind, which is incorporeal, can set the body in motion is something which is shown to us not by any reasoning or comparison with other matters, but by the surest and plainest everyday experience. It is one of those self-evident things which we only make obscure when we try to explain them in terms of other things.[25]

If we doubt our direct sensory experience because of metaphysical reasoning from physics, calling it an illusion as Hobbes does, we are extending

purely intellectual reasoning beyond its capacity to provide illumination. Descartes himself was satisfied with this answer.[26] Many of his critics, including followers who called themselves Cartesians, were not, but it is not always clear why they disagreed. Often, different aspects of his theory were mixed up. There is 1) the issue of the location of the interaction of mind and body in the pineal gland, where it is supposed that this is the only place where body and soul meet; 2) the issue of whether the redirection of physical forces violates physical law; 3) the precise manner in which the mind moves the body; and 4) the issue of how it is conceivable that the mind, which is a nonmaterial substance can move a material substance without violating the law, which Descartes himself accepts, that physical bodies can only be moved by contact with other physical bodies. It seems at first that in discussing 1, 2, and 3, Descartes fails to come to grips with 4.

There is, however, one more point in Descartes' exposition of this problem which, though startling to those accustomed to hearing of and thinking about Descartes' "dualism," nevertheless is luminously clear. In replying to Princess Elizabeth's perplexities regarding his discussion in a previous letter, Descartes says: "I should have explained how, although one may wish to conceive of the soul as material (which is, strictly speaking, to conceive of its union with the body), one may still recognize afterwards that it is separable from the body."[27] To think of the union of the soul and body is to think of the soul as material! Later in the same letter he repeats this idea:

> Your highness observes that it is easier to attribute matter and extension to the soul than to attribute to it the capacity to move and be moved by the body without having such matter and extension. I beg her to feel free to attribute this matter and extension to the soul because that is simply to conceive of it as united to the body.[28]

If the soul is one with the body, as is evident from the experiences of ordinary life, then the soul is, in this oneness, a material force—that is, it is its body itself—even as it remains the soul. We cannot understand this by purely intellectual reflections, which give us two distinct things, but the unity of the two is something we directly feel. As a material entity with extension, the human being can move herself—and so there is no violation whatsoever of physical laws. All that is needed, to reconcile freedom of will with modern physics, is the capacity of thought to redirect the animal spirits, or quantum particles. There is no problem of how a nonmaterial thing moves a material one, because, insofar as the soul is one with the body, it is something material. The problem of mind-body interaction arises when, approaching the issue in the framework of purely intellectual considerations, we consider the soul as separate from the body, operating like the driver of a machine who pulls levers and turns wheels. How can this separate driver move the machine if he has no hands? Inadequate

attention to what Descartes says about the pineal gland fosters this misrepresentation. The soul, he affirms, is not only present in the pineal gland but is one with the body as a whole. The soul is therefore no driver in the machine of the body. If there is real unity with the body, it *is* the machine; it is a physical reality. And so it is a machine that directs itself, using the circulating energy of the physical universe for its own purposes.

To grasp this solution, Princess Elizabeth would do well, Descartes advises, to spend more time in ordinary life, and less with her metaphysical meditations on the distinctness of the soul and body. For "it is the ordinary course of life and conversation, and abstention from meditation and from the study of the things which exercise the imagination, that teaches us how to conceive the union of the soul and the body."[29] Descartes goes on to explain his "chief rule" for all his own studies: "never to spend more than a few hours a day in the thoughts which occupy the imagination and a few hours a year on those which occupy the intellect alone. I have given all the rest of my time to the relaxation of the senses and the repose of the mind."[30] It is those few hours with the intellect alone that gives him the knowledge of the soul in its purity, apart from the body. But such reflection creates perplexity if extended too long and too far. Like Hume, Descartes recommends taking the abstractions of philosophical reflection in limited doses. Unlike Hume, however, he advises the quite life of the country rather than immersion in distractions of the city: "In the busiest city in the world I could still have as many hours to myself as I now employ in study, but I could not spend them so usefully if my mind was tired by the attention required by the bustle of life."[31] He therefore suggests: enjoy simple physical activities, walking in the quiet of the country, surrounding yourself with the natural world, opening yourself up to Nature's beauty through sensory experience and bodily feelings. And in this way you will come to appreciate that you are one with her. Here is "thinking" of the most beneficial kind—not the abstract thinking with which the "cogito" is too often identified, but that awareness in which we are one with our being, our physical being in all its materiality and connectedness with the universe.

Reason-Based Maxims of Morality

The development of a system of science leads ultimately to the knowledge of how human beings should live: to morality. The key to morality, Descartes thinks, is knowledge. If we truly *know* that something is good, we will love that object and direct ourselves toward it. The problem is that we do not yet have a full-fledged system of knowledge. We have the roots and some of the branches, but the "fruit" of the tree of scientific knowledge have yet to mature. Morality and other useful sciences, such as medicine, are the fruit of the full development of the tree of knowledge. Without the completion of a rationally

elaborated system of knowledge in a science of human life, our morality must remain, in various degrees, a provisional one. Descartes therefore proposes a first metaethical principle apparently pleasing to the authorities: 1) until we truly know better, thanks to the maturation of our tree of science, we should follow the laws and customs of our country. More fully expressed, Descartes adopts the conservative and Stoical maxim

> to obey the laws and the customs of my country, adhering constantly to the religion in which by God's grace I had been instructed since my childhood, and in all other things directing my conduct by opinions the most moderate in nature, and the farthest removed from excess in all those which are commonly received and acted upon by the most judicious of those with whom I might come in contact.[32]

In his elaboration of this maxim, Descartes immediately begins to alter its apparent passivity. For one thing, his course of action is not governed by the average conformity of the masses of people, but by those practices that he detects in "the most judicious" of his compatriots. Regarding his advice to follow the middle way between extremes, moreover, he finds it extreme to limit oneself to one position when a better one comes along. So he effectively makes a commitment never to bind himself to the set of principles or course of actions prescribed by the laws and customs of his country, but to be ready to change his course of action as soon as a better one presents itself. Hence at the heart of his provisional and conservative ethic involving submission to the given standards of the community, he inserts the principle of maintaining his own freedom: "And I also made a point of counting as excess all the engagements by means of which we limit in some degree our liberty."[33]

Descartes further qualifies the tone and thrust of this provisional conservatism in a number of ways, with additional moral maxims that are implicit emendations or qualifications of the above: 2) to stick to decisions once made, so that, as a traveler in a forest who is lost, he will at least finally arrive at some new place instead of moving in circles; 3) to conquer himself rather than external circumstances, in the recognition that all we can really control are our own thoughts and desires, and 4) to spend his life in pursuit of truth. The second maxim already implicitly alters the first, which suggests that we follow the laws of custom and country until that remote time when a fully developed system of morals has been achieved. In adopting a course of action in the absence of such clear knowledge, we should go by the knowledge actually available to us, that is, "we should follow the most probable."[34] Hence, he does not advise waiting until the utmost scientific certainty is attained, but allows for decisions based on probable truth. And where there is equal probability of two opinions being true, for each has its own plausible reasons, we should choose one of these and then follow our chosen course without wavering, as if it were in fact

based on completely solid foundations. Descartes receives a great sense of inner peace from adopting this maxim of practical action:

> And henceforward this principle was sufficient to deliver me from all the penitence and remorse which usually affect the mind and agitate the conscience of those weak and vacillating creatures who allow themselves to keep changing their procedure, and practice as good, things which they afterwards judge to be evil.[35]

The second maxim raises the Stoical goal of attaining inner peace, the contentment of a good conscience. But while the Stoics find such peace through adhering to the practical life prescribed for them by circumstances and imposed upon them by their condition of life—that is, the position that Descartes seems to adopt in the first maxim—Descartes adopts an unstoical activism based on choice and reason. Acting on the basis of some reason, even if it is only one of many, is superior to acquiescing to a given state of affairs prescribed by an outside fate or authority. The third maxim explicitly evokes the morality of the Stoics, "those philosophers who, in ancient times, were able to free themselves from the empire of fortune, or, despite suffering or poverty, to rival their gods in their happiness."[36] And yet in the third maxim, too, Descartes departs significantly from Stoicism:

> to try always to conquer myself rather than fortune, and to alter my desires rather than change the order of the world, and generally to accustom myself to believe that there is nothing entirely within our power but our own thoughts: so that after we have done our best in regard to the things that are without us, our ill-success cannot possibly be failure on our part.[37]

Concern for success in changing the outer world is not left in the hands of the gods or God, as the ancient Stoics required, expressing in this outlook the fatalism that emanated from the overwhelming power of the Roman Empire. Descartes instead intends to do his best to improve the condition of mankind and only considers the option of resignation if his efforts in this direction fail. In his conception on how to change the world, he starts from a resolution first and foremost to improve himself. Instead of supposing that by changing the world we will create the conditions for changing humanity, regarded deterministically as the passive product of external conditions, he places self-change, self-transformation, at the heart of any prescription to elevate and reform the world. Then, if from this standpoint his actions as they impact the world around him meet with frustration, unforeseen negative consequences, or outright failure, he will feel no guilt or remorse for having done his best. His conscience, that inner light in which he seeks to remain in complete accord with himself, an "I" that is one with itself, will be clear.

This improvement or perfectioning of self has two parts: altering his desires to conform to his thoughts, and, as he states in his next maxim, altering his thoughts to conform to the truth by whole-heartedly following philosophical method for the construction of a system of true knowledge. In altering his desires to conform to his thoughts, Descartes is not prescribing a Stoical detachment from desire, but rather a redirection of desires to objects that are more worthy of his love. While the Stoics advised against the attachments of love, Descartes urges the highest levels of love.

It is in the fourth maxim that he directs his intelligence to the understanding of just what those love-worthy objects are. Hence the basic principle on which Descartes makes his initial recommendation of submission to authority is ultimately subversive of authority. The true basis of morality, he is actually saying, is *one's own knowledge* of what is good. This knowledge is accessible to any human being using the good sense with which we are all endowed, and having the advantage of a scientific knowledge of human life. What is missing for the time being is the relative completion of the system of knowledge in a moral science. To the perfecting of this science he dedicates his life. This is the third emendation of his provisional morality: to follow the laws and customs of his country while he is engaged in a pursuit of truth that will itself become the basis of future actions. All doubts and scruples he might have about adopting a provisional morality of acquiescence are in this way forestalled in view of the final goal of devoting his life to the pursuit of truth. For this goal gives him the likelihood that his first maxim will be replaced, in one area of life after another, by practices more worthy of the free and rational beings that we are. So Descartes explains that the underlying thrust of the initial maxims is based on the final one:

> And, besides, the three preceding maxims were founded solely on the plan which I had formed of continuing to instruct myself. For since God has given to each of us some light with which to distinguish truth from error, I could not believe that I ought for a single moment to content myself with accepting the opinions held by others unless I had in view the employment of my own judgment in examining them at the proper time; and I could not have held myself free of scruple in following such opinions, if nevertheless I had not intended to lose no occasion of finding superior opinions, supposing them to exist; and finally, I should not have been able to restrain my desires nor to remain content, if I had not followed a road by which, thinking that I should be certain to be able to acquire all the knowledge of which I was capable, I also thought I should likewise be certain of obtaining all the best things which could ever come within my power. And inasmuch as our will impels us neither to follow after nor to flee from anything, excepting as our understanding represents it as good or evil, it is sufficient to judge wisely in order to act well,

> and the best judgment brings the best action—that is to say, the acquisition of all the virtues and all the other good things that it is possible to attain.[38]

Descartes reports that as he pursues his adopted course of life his provisional ethic of following the opinions of others is quickly and continuously being replaced by the influx of non-provisional truths discovered by his own independent reason:

> I had experienced so much satisfaction since beginning to use this method, that I did not believe that any sweeter or more innocent could in this life be found—every day discovering by its means some truths which seemed to be sufficiently important, although commonly ignored by other men. The satisfaction that I had so filled my mind that all else seemed of no account.[39]

In this way, a new morality quietly emerges, step-by-step, to replace what he previously calls "the corrupt state of our manners" according to which "there are few people who desire to say all that they believe" and "also because many are ignorant of their beliefs."[40] No wonder, if this is his opinion of the current state of morals in his country, that his adoption of an ethic of acquiescence would cause him scruples had he not been completely convinced that he held the formula for making progress. Ignorance and fear rule the land to the observance of whose laws and customs he provisionally commits himself. As for ignorance, his method and the unwavering pursuit of it, by himself as well as by others, is the cure for that. As for fear, he proceeds cautiously in his implicit criticism, which he makes only after first affirming his "provisional" allegiance to the laws and customs of his country, and to the faith of his childhood.

The Ethics of Free Thought

Knowledge of how to live one's life, the fruit of the tree of knowledge, stems ultimately from the roots of that tree. These roots consist in knowledge of the free spiritual soul and its immortality, the existence and presence within us of divine perfection, and the general features of the physical world in which we live our lives. From Descartes' investigation into the method by which we attain such fundamental knowledge, some things can be said about the morality that is required, not only in the taking up of the pursuit of knowledge and in the application of its results, but within the very pursuit of knowledge itself. Implicit in the formulation of his provisional ethics, Descartes implies a morality of autonomy: *Do what you yourself, through your own intelligence, know to be good.*[41]

It might be thought that such a moral principle is redundant for a theory that holds that "it is sufficient to judge wisely in order to act well."[42] Although

he affirms that all it takes to pursue the good is knowledge, this position, in the light of other things Descartes says, must be qualified. The will always remains free and is not compelled even by the truth. If we know that something is good for us, truly good, we cannot help but desire it. However, just as it is possible to suspend the will in the case of the apparent good, so it is possible to suspend it in the case of what is truly good. So Descartes writes that

> when a very evident reason moves us in one direction, although morally speaking we can hardly move in the contrary direction, absolutely speaking we can. For it is always open to us to hold back from pursuing a clearly known good, or from admitting a clearly perceived truth, provided we consider it a good thing to demonstrate the freedom of our will by so doing.[43]

If there is a good reason for holding back from pursuing the good in order to demonstrate freedom of the will, there are reasons for not pursuing the good which may not be morally justified, but are nevertheless possible for us. The corruption of the morals of the country is due not only to ignorance, but also to fear. Thus, in the face of threatened harm to one's bodily well-being, one's social station, or chosen path in life, we may turn our attention away from the spell of what we know to be good. Although we must necessarily follow the good that we know, this is the case only as long as we keep it clearly in view. The good exercises its power over us by evoking love for it, and love leads to action. In the face of our fears, however, we are tempted to turn away from contemplation of the higher good, and so no longer feel the love that such contemplation necessarily evokes, and as a result we will fail to engage in the actions that would otherwise follow from this love. Such fears inevitably arise in a country in which "there are few people who desire to say all that they believe."[44] In private letters, Descartes describes his own fears, surrounded as he is "by countless Schoolmen, who look askance at my writings and try from every angle to find in them the means of harming me. . . ." Under such circumstances, he says, "I have good reason to wish to be known by persons of greater distinction, whose power and virtue might protect me." He then expresses thanks to his correspondent for an introduction to Queen Christina of Sweden, despite his often having previously complained of not wanting to be introduced "to some grand person."[45] It was no accident that in his struggle with the Scholastic philosophers, ensconced in the Jesuit order and exercising legal and political authority through the power of the Church, Descartes sought protection from the Protestant queen. It was the invitation of Queen Christina, and her preference for early morning outdoor lessons from the philosopher, that was the occasion for Descartes' death from a cold in 1650.

Free will is essential to scientific knowledge as well as to practical action. In both cases a choice has to be made between two directions, one stemming from immediate sensation and desire, the other from the self-discipline of rational

thought and the contemplative powers of the soul. The "temptation" in the realm of knowledge is to accept the immediate impressions of sensory experience, conventional opinion, or the dictates of authority, as representing truth. Against this temptation, the mind must submit to the discipline of rational method and accept as true only what can be clearly and distinctly comprehended in the step-by-step construction of a systematic theory. Particularly when the direction of our pursuit of knowledge goes against commonly held beliefs and the seeming evidences stemming from existing social life, continuation in this path requires courage and a resolute effort of self-mastery—which, for this reason, Descartes emphasizes in his third maxim. The pursuit of truth is not an automatic or mechanical process but requires the free will decision to conquer our impulses, impressions, the socially ingrained habits of thought, and fears for our personal well-being. The exercise of free will is therefore crucial both to the pursuit of scientific truth and to the creation of a free and fruitful human world. Free will is the imprint of the divinity within us. Far from being a determinate function of causal processes, the human will is like the divine will in being infinite:

> The desire that everyone has to possess every perfection he can conceive of, and consequently all the perfections which we believe to be in God, is due to the fact that God has given us a will which has no limits. It is principally because of this infinite will within us that we can say we are created in his image. . . .[46]

Freedom of will is essential both in theoretical and in practical life. Bodily impressions, through the flow of impulses to the brain, are continually conveying to us the idea that something or other is good for us, and thereby producing in us the desire or passion to possess or enjoy it. In opposition to this tendency to pursue what *seems* good, the individual should fix his attention on what he *knows* to be good, or at least on what to the best of his knowledge is good. When this knowledge differs from the apparent good deriving from immediate sensory experience, the mind is capable of overcoming the power of the passions arising out of the appeal of the apparent good. It does this by stimulating a second passion, or love, for what one consciously knows to be good. In the case of his passion for cross-eyed women, Descartes relates his achievement in redirecting that passion. Thanks to his knowledge of the reason for this passion, he comes to see in women more worthy qualities for his love.

This alternative between intellect and sense, and between higher and lower desires, provides the framework in which free will becomes a necessary adjunct to morality. Before acting on the basis of spontaneously arising desires, we should ask ourselves whether what appears to be good really is good—is good from the standpoint of reflectively or scientifically acquired knowledge. Thanks to free will—what Locke calls the liberty of indifference—we can redirect the operation of the forces of desire. Descartes does not like connecting free will

with "indifference," with its implication of arbitrariness. We should talk rather of a power of suspending the will for the sake of more firmly attaching oneself to the good or perfection as we come to know it, or as we believe it to be to the best of our knowledge. From contemplating the real as opposed to the apparent good, there arises within us the redirection of the passions from misplaced affections and desires to truly love-worthy goals and objects. If we recognize the initial impulse to be in accord with reason, we can proceed intelligently to pursue the object of desire. When, however, we see a contradiction between what seems good and what we know really to be good, we need to overcome the passion that arises out of the apparent good by setting our minds resolutely on what we know to be good and thereby fostering a genuine love for that.

Reason is therefore not a slave to the passions. This does not mean that reason directly commands actions without any involvement of passion or desire. Descartes does not hold the "rationalist" position that Hume accuses Hobbes of implicitly holding, according to which reason directly moves us to act. Descartes agrees that we are moved to act by our passions or desires. But, guided by scientific reason, we can ourselves elicit passions by our ability to focus attention on certain things rather than others. We can focus our attention on the higher good, as revealed by reason, rather than the lower good that solicits out attention in the immediate context of our physical and social circumstances. If we turn to the higher good we cannot help but love it—but only as long as we hold this good steadily in view and discipline our will to its regular contemplation. In this sweet and innocent pursuit of objects that call forth true love consists all of our real happiness in this life. But let us not underestimate the resoluteness of the act of will that makes it possible, and the courage required to face and surmount the dangers that such a course in life, challenging as it does the corrupt state of the times, inevitably calls forth.

The Goods of Body and Soul

The parallel between the materialist Hobbes and the spiritualist Descartes regarding the development of a science of human society is worth noting. Hobbes proposes the outlines of a social-political science of human activity to complete the knowledge of the natural world begun by the modern physicists. Adam Smith completes the Hobbesian perspective on what the nature of this more developed science would be like: a science in which the individual's self-interest and pursuit of private wealth plays the role of starting point or basic principle for the systematic organization of both social science and society itself. But Descartes' conception of the direction of such scientific completion aims at a different ultimate outcome. If the mind is not the slave of the passions, but their potential master, the social science that completes this principle cannot be a science of egotistical, passion-driven individuals. We need to

ask what shape of society is outlined in this conception of the primacy of the free human spirit over the requirements of bodily existence.

What we know about the nature of human beings provides us with a culminating metaethical principle relating to this nature of ours, composed as it is of both matter and spirit, but where spirit, as the starting point and commanding element of the human composite, is primary. From this it follows quite simply that the goods of the spirit ought to take precedence, in the hierarchy of ends pursued by the human being, over those of the body. This principle is a generalization of Descartes' personal resolution to devote his life to the sweet and innocent pursuit of knowledge.

Descartes does not say that only spiritual goods are really good. Bodily pleasures are a necessary part of a good human life. The pursuit of bodily pleasure and the avoidance of pain, suitably directed by reason, play an important role in maintaining our bodily existence. What is good for us in terms of our bodily requirements needs to be determined by the development of such sciences as medicine. The purpose of medical science is to understand and so maintain, heal, and perfect the functioning of the highly complex mechanism of the body. But bodily experience with its originally confused thoughts are also the source of illusion. Spontaneously, certain experiences awaken in us bodily passions—desires and fears. Sometimes what we spontaneously desire—what seems good to us—is not something that, from the point of view of a science of bodily life, is really good for us. No doubt medicine has progressed to the point at which we can know many real truths on this level.

But the pursuit of bodily pleasure is not the whole picture of a full human life. We begin with confused ideas about what is good based on the appeal of bodily pleasures and individual self-interest. However, growing clarity or knowledge about what is really good for us as embodied intelligences or sentient souls points us beyond mere concern for bodily or purely individual well-being. Knowledge itself is therefore a good, a good of the spirit, on the basis of which the good of the body itself depends. And knowledge leads to love. Not only does knowledge facilitate the practical attainment of other goods, as an instrumental moment in the pursuit of the particular ends of desire, but when we directly contemplate the good-in-itself that knowledge sets before us, we cannot help but love it. Knowledge is not complete or pure, therefore, unless it leads to love. And in love of what is really good the individual extends beyond herself and her purely individual concerns. This is because, as Descartes says:

> It is the nature of love to make one consider oneself and the object loved as a single whole of which one is but a part; and to transfer the care one previously took of oneself to the preservation of this whole. One keeps for oneself only a part of one's care, a part which is great or little in proportion to whether one thinks oneself a larger or smaller part of the whole to which one has given one's affection. . . .[47]

Love joins us to the object of love so that we become part of a larger whole. We take care of this whole as if it were our very self, which in a certain sense it is. Any purely physical entity simply is itself, a definite quantity of matter confined to a certain space. But the spiritual being extends beyond itself through knowledge and love, just as it can retreat within itself through fear and hatred. It can devote itself to a higher cause, or something bigger than itself. And it can also seek to make itself the higher cause of other beings, subordinating them to itself. If the higher cause or bigger reality is seen to be much greater than oneself, then the part of one's care devoted to oneself, always necessary for bodily existence, is relatively small. But if a person thinks of himself as greater than the others that surround him, seen as mirrors to glorify his own importance, then he remains himself the dominant concern of his considerations. In some relationships this estimation of the person as the greater part of the whole is a true one, as when for her pleasure a person surrounds herself with beautiful things. In a fire, she rightly saves herself if she can't also save her things. But in other relationships, when the others involved are human beings, one's sense of precedence and centrality is an illusion. When one recognizes the true value of the other person, his love for that person makes him willing to give up his life for her. All the more, says Descartes, when the life of one's country is at stake:

> [W]hen two human beings love each other, charity requires that each of the two should value his friend above himself; and so their friendship is not perfect unless each is ready to say in favor of the other: "It is I who did the deed, I am here, turn your swords against me." Similarly, when an individual is joined willingly to his prince or his country, if his love is perfect he should regard himself as only a tiny part of the whole which he and they constitute. He should be no more afraid to go to certain death for their service than one is afraid to draw a little blood from one's arm to improve the health of the rest of the body. . . .[48]

There is a third object of love whose contemplation gives Descartes the greatest feeling of joy: "From all this it is obvious that our love for God should be, beyond comparison, the greatest and most perfect of our loves."[49] When we love something, but are unable to attain the object of love, the feeling we have is of sadness. When we can attain the object of our love, we experience joy. God is not a distant, unattainable being, but the infinite source of all being, which, as we know, is always present being. In the contemplation of the presence of God, the individual is capable of experiencing the joy of existence, the bliss of being. The first experience of life, indeed, is the experience of joy. For when the soul incarnates into the body in the womb, it finds all that it needs: "I think that the soul's first passion was joy, because it is not credible that the soul was put into the body at a time when the body was not in a good condition; and a

good condition of the body naturally gives us joy."[50] As the individual matures outside the womb, the relation between desire and its satisfaction becomes more complicated while the merging of the intellectual element of love and its physical element creates confusions whose clarification requires the attainment of the spiritual knowledge. When desires and loves are not met, or even opposed, we feel sorrow or anger. A state of fear and worry about surrounding possible evils is harmful to the self. We should therefore strive to think positively about our circumstances, and nothing aids this positive approach more than meditation on the thought of the providence of God and the majesty of his universe. In times of uncertainty and fear, then, let us dwell on

> the infinity of [God's] power, by which he has created so many things of which we are only a tiny part; and of the extent of his providence, which makes him see with a single thought all that has been, all that is, all that will be and all that could be; and of the infallibility of his decrees, which are altogether immutable even though they respect our free will. Finally, we must weigh our smallness against the greatness of the created universe, observing how all created things depend on God, and regarding them in a matter proper to his omnipotence instead of enclosing them in a ball as do the people who insist that the world is finite. If a man meditates on these things and understands them properly, he is filled with extreme joy.[51]

Descartes here essentially repeats the idea of Pascal. We are aware of our smallness as physical beings in an infinite universe. But by knowledge and, especially, the love of the heart—we expand, with exhilaration, to the size of the larger whole:

> [W]hen we love God and through him unite ourselves willingly to all the things he has created, then the more great, noble and perfect we reckon them, the more highly we esteem ourselves as being parts of a more perfect whole, and the more grounds we have for praising God on account of the immensity of this works. When Holy Scripture speaks in many places of the innumerable multitude of angels, it entirely confirms this view; for we regard the least of the angels as incomparably more perfect than human beings. This is also confirmed by the astronomers when they measure the size of the stars and find them much bigger than the earth, so does the extension which all astronomers attribute to it; for every one of them judges that the earth is smaller in comparison with the entire heavens than a grain of sand in comparison with a mountain.[52]

This passage is characteristic of the positive approach to the universe that Descartes not only recommends as a helpful psychological exercise, but

theoretically substantiates. When Locke writes of the vast size of the universe, and of all the beings, from aliens to angels, that fill the vast space between the lowly state of the human being and the perfection of the Creator, his object is to make us aware of our limitations—above all the limitation of our knowledge. Such a perspective follows from the empiricist premise that knowledge is based on sensation, and although it attains spiritual independence, it never escapes the essential poverty of this source. But for Descartes, knowledge of the indefinite or infinite universe, although quite general and lacking the myriad particular truths that one supposes, is nevertheless real knowledge. It is founded on the method of rational knowledge that begins with the consciousness of self, and develops to the knowledge of God and, in general terms, of the material universe, the vast, unlimited extension of space. For when we try to put a limit on the universe, to encapsulate it in a ball, we necessarily imagine the space surrounding the ball and so transcend whatever limit we might suppose for a finite universe. Since such thoughts are inescapable, and founded on the method of reason, we really do know in this general way the infinity of the universe. And what is much more, we can love it, and through love, expand outward to join with it and hence to experience its vastness as our own. So Descartes worries that "We might arrive at the absurdity of wishing to be gods, and thus make the disastrous mistake of loving divinity instead of loving God."[53]

The metaethical principle implicit in all this is to recognize the grandeur of the whole of which we are a part, and not to diminish ourselves by invidious comparisons based on fame and fortune. There are two kinds of goods—roughly those of the body and the individual person regarded as a separate being in competition with others, and those of the soul, capable of uniting with other souls and, through the infinity of the universe, with the source of all being. Descartes puts it this way:

> But I distinguish between those of our goods which can be lessened through others possessing the like, and those which cannot be so lessened. A man who has only a thousand pistoles would be very rich if there were no one else in the world who had as much; and the same man would be very poor if everyone else had much more. Similarly, all praise-worthy qualities give so much more glory to those who have them, the fewer the people who share them; that is why we commonly envy the glory and riches of others. But virtue, knowledge, health, and in general all other goods considered in themselves without regard to glory are not in any way lessened in us through being found in many others; and so we have no grounds for being distressed because they are shared by others.[54]

Descartes here discovers a culminating metaethical principle: the pursuit of objects that diminish when they are shared with others should be subordinated to the pursuit of objects that increase when shared. Material wealth in the form

of private property diminishes when shared with others—although not all goods of the body, such as health. Because the private property of individuals cannot be shared without diminishing, the unlimited pursuit of private wealth separates us from others. The same can be said for prestige or fame, which suggests that such social value is linked with the physical individual body, spatially separated from the bodies of others. Descartes here rejects the ego-centered perspective of Hobbes's materialism. Moreover, he implicitly criticizes the dynamics of the passions described by Hume: from direct desire for things outside of us, to the more sophisticated desire for admiration from others, to the common interest of the particular group—separated from other groups. The common interest of the separate community at large is indeed a higher totality, which Hume regards as underlying justice. But the truth of this larger whole, Hume argues, is unattainable by reason. It is thus the accumulated power of personal and social prejudice and opinion that sweeps individuals along in its mind-numbing wake. And hence the justice of the judge is substantially only the imaginative leap of an arbitrary mind finding a pseudo-independence by resting on the cacophony of prior decisions. This is an expression of that "corruption of manners" that Descartes is seeking to dispel by pursuing the steadfast path of ascent from simple, but powerful, to complex and practical truths.

When Descartes therefore looks at the totality of human individuals, he sees that same sharing, cooperative community that so edified Adam Smith. Smith wants the oppressed worker to rise to the height of this inspiring vision through the step-by-step process of a scientific education. He therefore offers his work of knowledge as a good that can only increase in value when shared with others. And yet because his vision of cooperative humanity is rooted in that materialist egotism of private accumulation of use and exchange values that don't admit of sharing, the vision he suggests remains a matter of intellectual contemplation incapable of inspiring a practical love. And this is the ethics he proposes: love humanity, but don't translate your love into action, because then you can only disrupt the beneficent operation of universal self-interest.

Because we recognize the good in others, Descartes implicitly replies, we should set our basic life-intention on the pursuit of goods that do not diminish when shared, such as health, knowledge, and virtue. The discoveries of a scientifically oriented philosophy and the particular sciences themselves actually increase when shared, for their further advance is stimulated through the multiplication of intercommunicating efforts, resulting in an acceleration of the pace in which higher knowledge and so greater potential well-being for all is achieved. It is here that Descartes sees the focal point of social and spiritual progress through the cooperative pursuit of truth. He therefore urges

> all well-inclined persons to proceed further by contributing, each one according to his own inclination and ability, to the experiments which must be made, and then to communicate to

> the public all the things which they might discover, in order that the last should commence where the preceding had left off; and thus, by joining together the lives and labours of many, we should collectively proceed much further than any one in particular could succeed in doing.[55]

We should therefore redirect our attention from fixation on the immediate or apparent goods of material possessions, together with what might be called the social materialism of prestige and power, toward those goods that are intrinsically universal, the goods that do not separate us from one another in accord with our bodily individualities, but that reflect our capacity to unite with others, our capacity for love that is inherent in our spiritual nature.

Descartes therefore defends a morality of individual freedom, the liberating power of reason, and the primacy of the human and universal community. He does so, in the context of modern science, by providing the general outlines of an alternative to a purely mechanistic conception of human life. He shows how we are able to subordinate the mechanism of bodily life to the enrichment of a human existence that is composed of both body and soul. He shows how the individual is part of a larger human community and finds her full significance only through working consciously to enhance this community and only as a part of this enhanced community. So Descartes provides a consistent theoretical basis for a system of government whose founding principle or keystone is freedom of thought. At the end of the eighteenth century, in the First Amendment to the Constitution of the United States,[56] with its guarantee of the public expression of freedom of thought in freedom of speech, press, assembly, and religion, this keystone was first put in place. In the first half of the seventeenth century, the science of this larger good is still in its infancy, and only some very general principles can be indicated at the time of Descartes' writing. So for him, it is best, in the meanwhile, and to the extent that our knowledge still fails us, to follow a conservative rule of obeying the laws of the existing state and following the customs of the country in which one lives. But this is only a particular way of following the great commandment to love one another which shall one day, Descartes feels assured, find a radically different footing in a community composed of fully autonomous, scientifically-educated, and mutually supporting individuals.

Chapter Twelve

Leibniz's Discovery of Universal Freedom

The Occasionalism of Malebranche

In a letter to Princess Elizabeth written in 1643, Descartes explains the underlying strategy of his works:

> There are two facts about the human soul on which depend all the knowledge we can have of its nature. The first is that it thinks, the second is that, being united to the body, it can act and be acted upon along with it. About the second I have said hardly anything; I have tried only to make the first well understood. For my principal aim was to prove the distinction between soul and body, and to this end only the first was useful, and the second might have been harmful.[1]

The philosopher should be judged primarily by what he intends to accomplish, not by what he fails to discuss, and even deliberately puts aside. According to Descartes, we all know from ordinary sensory experience *that* mind and body are a unity—that we suffer in mind when the body is afflicted, and yet can move our bodies about at will. But in an age in which the sciences are taking great steps at establishing the mechanisms of physical motion, the great danger is that the human spirit will be seen as nothing but empty froth tossed on a sea of mindless matter. Hence Descartes sets as his central goal the establishment of the independent power of self-conscious spirit—the great moving force behind the forward thrust of science itself. So successful was he at this task, that many of his followers came to doubt what for him was the obvious fact of mind-body unity—a topic he deliberately put aside in view of his primary purpose.

A major contingent of Descartes' followers, led by Nicolas Malebranche (1638–1715), argues that soul and body do not interact. It is the action of God that coordinates the radically different fields of mental and physical phenomena.

We have seen that Locke, who interprets Descartes through the perspective of this leading Cartesian of his time, espouses something like this position. The doctrine of "occasionalism" developed by Malebranche agrees with Descartes that the human will is free, but denies that an act of will can cause the body to move. Malebranche gives the following justification for this position:

> For how could we move our arms? To move them, it is necessary to have animal spirits, to send them through certain nerves toward certain muscles in order to inflate and contract them, for it is thus that the arm attached to them is moved; or according to the opinion of some others, it is still not known how that happens. And we see that men who do not know that they have spirits, nerves, and muscles move their arms, and even move them with more skill and ease than those who know anatomy best. Therefore, men will to move their arms, and only God is able and knows how to move them. If a man cannot turn a tower upside down, at least he knows what must be done to do so; but there is no man who knows what must be done to move one of his fingers by means of animal spirits. How, then, could men move their arms? These things seem obvious to me and, it seems to me, to all those willing to think, although they are perhaps incomprehensible to all those willing only to sense.[2]

I know what must be done to destroy a tower. I place dynamite, for instance, under the foundation and light a fuse attached to the explosives. Anything else that I consciously do requires a similar understanding of the steps needed to achieve my goal, of the means needed to accomplish my end. If I am to move my arm in a certain way, I should therefore know what I must do in order to reach my goal. Theoretically, I have learned that when I will to do something messages are sent from the brain through the nervous system to the limbs of the body by complex chemical and electrical processes (the "animal spirits" of the Cartesians). But it is not because I have this knowledge that I am able to move my arm. Despite all our twenty-first century knowledge of the complex mechanical processes that transmit messages throughout the body, we still know no more than did Malebranche regarding how conscious thought and intention causes this process. We still have no idea how an act of will connects with the neural system that accomplishes our goals. I can be thoroughly informed on the latest physiological science, and yet all I know about the basic issue is that when I decide to move my arm in a certain way, it moves in the way I want it to.

Indeed, relatively few people have any precise understanding of the complex physiological mechanism involved in this process—to the extent that this is understood by our still imperfect science—but even a child with no understanding whatsoever is still able to move her arms. How can I be said to cause my arm to move if I have no idea what I am doing to accomplish this purpose?

All I know is that, *on the occasion of* my willing it to move, the arm in fact moves. Consequently, the occasionalists conclude that when I will to move my arm, it is not I, but God who moves the arm. My act of willing is only the "occasion" of the motion. The same argument applies to the causal action of physical bodies on one another. Motion is transferred from one body to another, say the materialists. Do they observe this transference? Do they understand how it is done? All they know is that on the occasion of contact with one body another body moves. Hume's theory of causality aligns with these earlier occasionalist arguments of Malebrache.[3]

Malebranche adds a theological argument to this epistemological one. All true causation is creative because something comes into existence that didn't exist before. The only creative being is God. It is therefore essentially blasphemous to attribute creative power to creatures. But that is what we do when we say that one finite being causes the motion of another. The occasionalists therefore not only deny interaction between soul and body, but also the causal interaction between bodies.

Denial of the action of one body on another is only, after all, the logical implication of the mechanist view. In the realm of physical bodies, Descartes upholds this mechanistic viewpoint, stating that a body "can be moved in many ways not, in truth, by itself."[4] This position was eventually formulated by Newton as the first law of physics. But if a body cannot move itself, can *another* body move it? If a body has no power of motion in itself, how can it move another body? The next possibility to be considered is whether the human soul move the body. But this too is impossible. Human beings ought to be in the best position to understand how a body is caused to move, since we seem to do so consciously. And yet our consciousness gives us no information regarding what we do when we engage in physical motion. It's like saying the magic words and watching the action mysteriously unfold. This elimination of other possibilities, matter and the human spirit, leaves only one remaining possibility: that all motion comes from God, acting not only in the original creation of the universe, but also in all its moment-to-moment operations in the present.

In one fell swoop, Malebranche appears to unite mechanism and theology. For if modern physics requires the mechanistic doctrine that no body has its own power of motion, then all motion at every instant must come from God. Locke, who wrote a book on Malebranche's thought, carefully separates matter and motion in his argument for God's existence, and concludes, with Malebranche, that matter itself cannot explain motion. The arguments of the mechanistic materialists had seemed to expel God from the world. In fact their arguments, consistently understood, imply His universal and ever-present agency. Berekeley's similar effort on behalf of God seems therefore to be a matter of overkill. There is no need to eliminate matter itself to save religion from the materialists. All that is needed is to pay attention to what the materialists

themselves say—that matter is inherently powerless, and so all motion must come to it from some other, non-material, Source.

Hobbes's mechanistic idea of the divine clockmaker removes God for all practical purposes from having anything to do with the actual operation of the world. Descartes brings God back into the present moment by his argument that present existence is not on a continuum with the past, which no longer exists, and so must be perpetually created by a being whose essential nature is to exist and to be a source of existence. With his distinction of being and essence, Descartes nevertheless preserved the integrity of the causal process. The particular determinations of my existence, such as my height and eye color, come to me from my parents. However, if a past being cannot cause a present being, Malebranche essentially argues, how can a past motion cause a present motion? God is therefore not merely the being that winds up the clock of the universe, as the materialists say, nor the being that conserves all being in existence, as Descartes says. God is required to understand how particular present motion is possible, since, according to the new physics, matter is in itself inert, and motion always comes to it from the outside. By the logic of the mechanistic position itself, followed out consistently, God must be reintroduced into the dead universe of modern physics in order to explain how motion itself is possible—not only in the remote beginning of creation but in the very moment of present existence.

Leibniz Universalizes the Principle of Self-Consciousness

Gottfried Wilhelm Leibniz (1646–1716) was a major mathematical and scientific genius of the early modern era. He and Newton independently discovered modern calculus. He elaborated his own theory of motion in correspondence with Newton's friend Samuel Clarke, and so indirectly in discussion with Newton himself. Leibniz founded the Society of the Sciences at Berlin, which later became the Prussian Academy, and is regarded as the father of German Enlightenment.

Leibniz too was determined to reconcile modern science with traditional religious and philosophical thought in order to counteract the materialistic interpretations of modern physics. He is, however, unhappy with the perceived antithesis between the modern philosophy, as represented by Descartes and followers, and the traditional Aristotelian philosophy of the Scholastics. Regarding the attempt to abolish the scholastic or Aristotelian philosophy and replace it with "Cartesian" occasionalism, Leibniz writes that

> I see that a number of able people believe that the *Scholastic Philosophy* must be abolished, and an entirely different one

> substituted for it, several wishing it to be the *Cartesian* philosophy. But after weighing the matter, I find the philosophy of the ancients solid and that we must use the philosophy of the moderns not to destroy but to enrich that of the ancients. I have had many disputes on that score with some able Cartesians, and have shown them by mathematics itself that they do not have the true laws of nature, and that to obtain them we must consider not only matter but also force in nature, and that the old forms or *Entelechies* are nothing but forces. In that way I believe in rehabilitating the ancient or scholastic philosophy which is so useful to theology without derogating from any of the modern discoveries or mechanical explanations, since mechanics itself presupposes the consideration of force.[5]

Leibniz rejects the occasionalist doctrine of the "Cartesians." Occasionalism explains everything, he argues, by continually invoking miracles, rather than relying on the intrinsic laws and operations of the created world. Universal divine interventionism means the universal powerlessness of created being. Occasionalism contradicts the scientific spirit, which consists in explaining phenomena, as much as possible, by the actions of the things themselves. Occasionalism also contradicts a reasonable theology. God is not so crude a creator as to be obliged to intervene on a moment-by-moment basis to make his creation work. Nor is He so imperfect a creator as to be unable to infuse truly creative power in his creatures. Leibniz does not deny the occasionalists' idea that God is actively present everywhere. As Descartes shows, it is indeed necessary to explain the *existence* of the creature by the power of the Creator, since no being is the cause of its own being. In this sense, God is manifested everywhere in the very being or existence of things. But existence, whether in God or in the creature, is itself a source of inner power. The occasionalists are right that a finite being composed solely of inert matter cannot cause either itself or another being to move. But this only obliges us to rethink the whole theory of the mechanism of matter according to which motion comes to a being from outside it. It is necessary to reconsider therefore the ancient doctrine of Aristotle, in which matter is combined with form, just as modern physics unites matter and force. In this way beings *are* able to move themselves. Leibniz writes:

> For although [the occasionalists] have excellently adduced that in strict metaphysics one created body cannot make inroads on the nature of another, and although, as I even gladly admit, everything arises perpetually through the continual creativity of God, yet the reason, as I believe, for any natural truth whatsoever is never to be sought immediately in the activity or will of God, but rather in the fact that God has enclosed *in things themselves* properties and determinations from which all their predicates can be explained.[6]

Everything Is Alive

Leibniz may have taken his cue from Malebranche's argument that "the ancients" (Aristotelians, and by implication the Scholastics) make gods of things by ascribing to them causal powers. Human beings are indeed "like little Gods," Leibniz affirms.[7] Human beings have the power of motion within themselves, as the Aristotelians claim. He welcomes therefore the Aristotelian doctrine that finite beings have within themselves the power of self-movement. But how reconcile this notion of self-movement with the laws of modern physics?

To understand how Leibniz goes back to Aristotle, let us first look at certain experiential phenomena. The Aristotelian concept that the soul is the "form" of the body makes good sense of Descartes' notion that the soul is united with the whole body, and not merely in contact with the body only at one miniscule point, such as the pineal gland. In our conscious experiences we do not have the feeling that the mind is located in some particular place in the brain. Consciousness seems to be diffused throughout our bodies. When someone steps on my toe, *I* feel injured in my toe. I do not experience my toe as something separate from my self-consciousness. This experience of my presence throughout my body agrees with the position of Aristotle that the soul gives the entire body its unity as *my* body.

Correspondence with immediate experience, of course, does not necessarily make the Aristotelians right. Direct experience, as modern science shows, is highly fallible. Also, it is necessary to recognize that modern science has clearly refuted certain features of the Aristotelian position. But we must not throw the baby out with the bath water. We recall that Aristotle interpreted the notion of substantial form in such a way as to absolutize certain appearances of things in our immediate experience. As a result of this approach, Aristotle argues that there are an irreducible number of distinctive types of motion. The substantial form of fire supposedly directs it upwards, while the form of other kinds of objects gives them downward motion. The modern conception of a uniform law of motion for all material beings replaces this conception of ancient physics. Such uniform lawfulness is said to be due to the "matter" that is common to all beings, not to the "forms" by which they are distinct from each other. A certain kind of materialism therefore seems to follow from modern physics, while the immaterial forms of Aristotle seem to play no role in such scientific explanations. We have seen that for the thoroughgoing materialists, such as Hobbes, even human consciousness and will are simply more complicated expressions of the same material movement. According to the materialists, we should dismiss the seeming experience of free will as an illusion on the same order as the apparent movement of the sun across the arc of the sky.

Instead of considering the laws of bodily motion as expressions of a metaphysical principle of "dead" (inert) matter, Leibniz regards these laws as

expressions of a principle of "life" or "spirit" similar to what must be admitted for conscious human beings. In the case of the human body, this underlying principle of action will be, of course, the self-conscious individual soul or spirit. For other kinds of beings, Leibniz extrapolates from what we know of human consciousness. In the case of other bodies, whether organic or inorganic, Leibniz proposes that we consider them to be animated by something like a soul, though of a lesser degree of perfection than the human soul. Leibniz argues that *all* bodies are animated by a living, spiritual principle, similar to the substantial forms of Aristotle. He reasons that all entities everywhere, and not just human souls and angels, are non-extended unities capable of exerting force or energy and of doing so with some degree of consciousness. Consequently, for Leibniz the starting point in physics and all other sciences is not straight-line, externally directed motion, but a soul-like substance that expresses itself in movements of various kinds. He calls these basic units of reality "monads" to distinguish them from the atoms of the ancient materialists. The monad is a kind of spiritual atom—one that is a self-moving consciousness.

The prime example of a monad is human self-consciousness itself. The human soul or spirit is the "dominant monad" for the human body. The body itself is composed of lesser bodies, each animated by its own monadic soul. The heart, for instance, is a relatively independent organ within the body. It has its own principle of unity, and acts with its own perceptions of the other elements and organs of the body under the higher unity of the self-conscious soul. Within the heart are the cells of the heart, further units composed in turn of their own subunits, and so on down to the ultimate units of existence, the simplest monads. The entire world, instead of being made up of dead stuff—inert matter incapable of moving itself—is rather filled with conscious beings at various levels of organization and self-movement.

On the surface, much of the world around us does in fact appear inert or "dead." This appearance gives plausibility to the mechanistic conception that bodies do not move themselves. But the progress of science—including new discoveries in biology—and the invention of new instruments of observation undermines this early idea. Thanks to the recent invention of the microscope, Leibniz points to discoveries at the microscopic level. When we look deeply into seemingly inert "matter," such as a pool of water, do we not find worlds within worlds? The mechanistic worldview is plausible only because of the limitations of our five senses. When we go beyond the appearances of ordinary experience, in which many objects seem inert and passive, we discover life everywhere. Leibniz writes that "Every portion of matter may be conceived as like a garden full of plants, and like a pond full of fish. But every branch of a plant, every member of an animal, and every drop of the fluids within it, is also such a garden or such a pond."[8]

The Unity of Method and Content

Further advancing Descartes' discovery of the centrality of self-consciousness, Leibniz proposes that the mechanists or the matter-based empirical philosophers have it backwards. They regard deterministic relations as the fundamental reality, while holding that free will is either an illusion or, as might be said for Locke, a mysterious exception. We should consider whether it might not be the case that free will—that is, the self-determined activity of the thinking "I"—is itself the basic and universal reality. Deterministic material relations may then be thought of as a kind of secondary appearance or phenomenon that should be explained on the basis of the active power of this inner "soul" that should be discerned everywhere in the "material" world. The seeming independence of matter and its laws then turns out to be the illusion. Instead of constructing our philosophical picture of reality by building conceptually from inert matter to consciousness, why not go in an inverse direction? Why not begin with "spirit" and show how what we see as "matter" can be understood on this basis? Consistent materialists, after all, do the opposite. They deny the independent reality of consciousness and argue instead that consciousness or spirit is another form of matter in motion, subject to universal deterministic laws. Any attempt to compromise with mechanical materialism, as Descartes did by allowing independent laws for both matter and spirit, is bound to fail.

Thanks to a deeper consideration of the central idea and starting point of Descartes, we now have reason to believe that the mechanistic view of the world that allegedly follows from the modern laws of motion is untenable as a universal philosophy of existence. If the activity of the thinking subject were itself the effect of material causes, then science, particularly modern science, would be impossible. Leibniz further extends Descartes' idea that the freedom of the thinking human being is central to science. Instead of seeing this idea as only one half of the structure of science—the other half being the mechanistic laws of matter—Leibniz universalizes Descartes' principle of free self-consciousness. Given the central importance of this seeming exception to the laws of physics, we should consider whether free self-consciousness should not rather provide us with the general rule, rather than appearing to be a fortunate exception.

A deeper appreciation of the unity of the method of science and its content argues for this universalizing of the spiritual starting point of science. All of scientific knowledge arises out of the activity of the self-reflecting subject. But if such knowledge is to a great extent about beings that are radically unlike self-consciousness, how can there be any consistency between the starting point of scientific thought and its eventual developments in relation to material entities? If scientific methodology is a reflection of reality, then reality too must in some sense be the expression of the movement of consciousness. Descartes used this principle of the connection between the method of science and the content of science to justify his theory of the evolution of the physical universe.

But even if we can confirm Descartes' conjecture that there is an evolutionary dynamic in material reality that parallels the dynamics of the scientific thinking that reflects it, there is still this major discrepancy between thought and material reality, that they are not only radically different substances, but even contradictory to one another. Berkeley uses this argument to deny the very possibility that our ideas of external objects like rocks and trees correspond to any independently existing reality, for how can an unextended spiritual idea reflect an extended material body? How, after all, can the scientific mind give us a reflection of matter if matter is completely mindless? But the fact that our thinking cannot reflect beings radically unlike our thoughts about them does not mean that there can be no beings outside of thought. There is of course another type of being that resembles that of the thinking being—namely, other thinking beings. Leibniz therefore extends this conception of the unity of method and content to the inner nature of matter itself.

The postulation of spiritual atoms at the heart of all beings need not reintroduce the pseudo-explanations that had brought scholasticism into disrepute. One can admit at a general metaphysical level the existence of active principles in nature, similar to souls in human beings, without having "to plump for Aristotle's intelligences in the celestial spheres, things as artificially convenient as they are unfruitful—for example, making the four elements strive upwards or downwards by virtue of their own forms."[9] Admitting the concept of spiritual forms at a *general* level does not mean using them as pseudo-explanations at the *particular* level—arguing, for example, that something that goes up does so because of an up-going soul.

How then does Leibniz reconcile his extraordinary idea with the laws of modern physics? He argues that modern physics itself requires such fundamental principles to explain the *force* that is intrinsic to very material being. Monads are required to remedy certain deficiencies of the Cartesian, mechanistic conception of matter as consisting of pure extension or as understandable in purely geometrical-spatial terms. In the first place, extension cannot be the ultimate principle of bodies, because the properties of extension cannot account for the *unity* of bodies. Spatial extension is infinitely divisible, but bodies cannot be significantly divided without ceasing to be what they are. Some bodies do indeed seem to be divisible without ceasing to be what they are. When we break up a block of marble, the pieces, up to a point, continue to be marble. But that only proves that the block of marble was not a true unity to begin with. However, when we divide the body of an animal, it ceases to be the individual it was. So there must be a principle of unity that is irreducible to the features of extension alone. The gardens and ponds that we discover as we delve into minute drops of water display smaller and smaller unities, living entities in the heart of seemingly dead matter. Criticizing those (including Descartes) who "degrade animals into mere machines," Leibniz says "it is impossible to find the principles of *a true unity* in matter alone or in that which

is only passive, since everything in it is only a collection or mass of parts to infinity."[10] If matter as conceived by the Cartesians is a purely passive mass of parts, infinitely dispersible, the principle of unity "must be conceived in imitation of the idea we have of Souls."[11]

From Newton's First Law to the Third Law

Leibniz's conception of monads explains not only the unity of bodies, but also certain basic characteristics of their behavior. Here again, he tests the adequacy of his theory primarily against the Cartesian or mechanistic conception of the laws of physics. But he also directs his arguments against the theories of his contemporary, Isaac Newton. According to the Cartesian school, matter consists entirely of geometrically describable features of extension, characterized by "size, figure, and motion."[12] But this conception of extension fails to account adequately for basic phenomena of physical motion, as well as being, like color and heat, relative to our perception. The Cartesians suppose that a so-called resting or stationary object is completely passive, only awaiting an outside cause to transfer to it some form of motion. But if this were the case, a small moving body would carry along a much larger resting body with no diminishment of its own motion. Instead, the small moving body barely budges the large resting body, and perhaps comes to a stop itself. To explain this phenomenon, we must suppose that the larger body contains its own power of action, or at least a power of resistance to the motion of other bodies acting upon it. It is therefore not purely passive but a power unto itself. Leibniz writes:

> Accordingly, if we think of bodies only under mathematical concepts like size, shape, place and their modification, and introduce the modification of velocity only at the instant of collision, without resorting to metaphysical concepts, that is, therefore, without going into what form has to do with active force and matter with passive force—in other words, if we must determine the data of collision only through geometrical configuration of the velocities, the result will follow, as I have shown, that the velocity of the smallest body will be imparted to a much bigger body which it meets. A body at rest, no matter how big it may be, would then be shoved along by any much smaller one which collides with it, and without the smaller body suffering any retardation, since in such a purely geometrical concept of matter there is no talk of any resistance, but only indifference with regard to motion. Accordingly there would be no great difficulty in displacing a large as well as a small body; there would be an action without a reaction, and every numerical determination of force would become impossible, for everything could be affected by anything.[13]

In describing matter as "passive force" and form as "active force," Leibniz anticipates Einstein's equation, $E=mc^2$, which states that energy equals mass times the speed of light squared. The equation identifies energy and mass, or, in the language of Leibniz's physics, force and matter. There is active force or energy, and there is passive force or matter, and the two are potentially interchangeable. Matter, in other words, is not a metaphysically independent substance, but a certain form of energy or force; it is energy congealed into a passive state of resistance. Everything is therefore force or energy, whether in an active or passive state. In the active state, the energy is self-directed and conscious or intelligent in some form. It is perceptive or aware of its environment, to a lesser or greater degree of clarity and penetration. Contrary to materialism, according to which nothing moves itself, Leibniz's establishes a monism of energy or spirit in which everything is a self-moving unit of force or energy.[14]

This idea is implicit in the simplest laws of physics, once we have gotten past a limited reading of Newton's first law. When body *A* contacts body *B*, body *A* is itself apparently affected by body *B*. Body *B* exhibits resistance or impenetrability to the motion of body *A*. Such a power of resistance cannot be explained on the Cartesian conception that bodies consist solely of geometrically describable properties. A body must contain something more than the properties of mere extension. Its very unity (or the unity of its fundamental constituents), we have seen, is incomprehensible on such a conception. In addition to contributing unity, Leibniz's form or monad is postulated on the metaphysical level to explain how every body must contain its own intrinsic force. Leibniz distinguishes between the active force of the body, due to its form, and the passive force, which he calls its matter. In the above passage, Leibniz evokes the notion of passive force—impenetrability or resistance. In the collision between the two bodies, there is a rebound effect or reaction, which can only be explained by the existence of a force already present in the supposedly purely passive, unmoving body. The resting body has passive force, a capability of resisting the action of a body external to it.

Leibniz here emphasizes the relation of action and reaction. Newton formulates his third law of motion as follows: "To every action there is always opposed an equal reaction." He adds: "Whatever draws or presses another is as much drawn or pressed by that other. If you press a stone with your finger, the finger is also pressed by the stone."[15] Newton's third law of motion suggests a completely different "metaphysics" from that of his first law: "Every body continues in its state of rest, or of uniform motion in a right line, unless it is compelled to change that state by forces impressed upon it." That first law suggests the complete passivity of bodies, unable to change their motion of themselves. It is this first law that gives the Cartesians their conception that motion always comes to a being from outside it. However, the third law of motion suggests a quite different conception of the nature of matter. It requires that we rethink any metaphysical interpretation of the nature of matter derived from the first

law only. The unity of action and reaction suggests that the motion of the first body, the so-called cause, becomes an effect of the second body, the so-called effect. The first billiard ball apparently causes the stationary ball to move into the right side pocket. But what causes the first ball to move into the left side pocket? This, apparently, is the effect of the action of the stationary billiard ball, the one that is supposed to represent merely the passive effect. I press on the stone, but equally, simultaneously, the stone presses on me. How should the one be the cause only and the other merely a passive effect? Did ball "A" move ball "B," or did ball "B" move ball "A"? It seems impossible to separate cause and effect in the mechanical manner. Motion, Leibniz writes, is therefore not absolute but relative. "[M]otion, if we regard only its exact and formal meaning, that is, change of place, is not something really absolute, and when several bodies change their places reciprocally, it is not possible to determine by considering the bodies alone to which among them movement or repose is to be attributed. . . ."[16]

Truly "absolute" causality is found only at a deeper, metaphysical level, underlying the surface phenomena of relative motions. It is an illusion to suppose that a stationary body acquires motion as a result of impact with a moving body. In the first place, there is no such thing as an absolutely stationary body. A "stationary" body is only stationary in relation to a particular frame of reference. The earth appears stationary in relation to bodies that move on it, but it is in motion in relation to the sun, regarded as stationary. But the sun is in motion in relation to the background of the stars, etc. There is nothing that is not moving in some way or another, though the limited character of our way of perceiving change of place requires that we fix a frame of reference. Thus the Cartesian conception of extension as consisting of size, figure, and motion, is relative to the standpoint of the perceiver, and not absolute properties of the external object. It is like heat or color, not an absolute property of the thing, but appearances-for-a-perceiver whose underlying reality must still be determined. The ordinary perception of matter-in-motion is itself, therefore, a superficial "appearance" that must be understood on some deeper basis.

Leibniz draws a surprising conclusion from the phenomenon of reaction, and the impossibility of identifying absolutely—clearly and distinctly—which is the cause and which the effect. He argues that *neither* is cause or effect of the other. Since it is impossible to explain the motion of any body by a transfer of motion from one body, the "cause," to another body, the "effect," Leibniz concludes that each body is simply the cause of its own motion. What happens on the collision of one body with another is not a transfer of motion from one to the other. The rebounding effect of any collision depends on the resistance or elasticity of each of the bodies themselves. When the two bodies collide, it is the internal force of *each* body that explains its own motion: "the reaction of rebounding (or reflection of motion of impact) depends only on the elastic force, that is, on the resistance of an internal motion."[17] Here a kind of occasionalism

inserts itself into Leibniz's thought. *On the occasion* that the first body, *A*, strikes the second body *B*, *B moves itself* thanks to its own "elasticity" and impenetrability to the motion or energy of *A*. It is *B*'s own power of resistance that explains its motion. Similarly, the distinctive motion of *A* following the occasion of impact results equally from *A*'s own intrinsic powers of resistance. Contrary to Malebranche's occasionalism, however, the inability to perceive or, more significantly, to comprehend the transfer of motion from one body to another, far from showing that the beings themselves are impotent, shows that they are each one the causes of their own action, self-moving beings acting "like little Gods." As for perception, there is no mysterious secret causality that is forever undetected (as Hume puts it). What we perceive is the motion of two bodies, and that is all that is required as far as perception is concerned. What is essential is to comprehend what we perceive, to explain the inner dynamics of the observed motions.

It follows from this analysis of action and reaction that the mechanical laws of causality only ostensibly or in appearance involve the transference of motion from one body to another. A deeper metaphysical understanding shows that such transfer of motion is only an *appearance*. A deeper understanding shows that motions are always only the motions of the monads themselves. Everything moves always and only with *its own* motion. On the surface, of course, the relativity of our perceptual standpoint makes it appear that one body moves another or transfers motion to another, although we see nothing of such a mysterious transfer. But such appearances are deceiving, arising as they do out of the relative temporal and spatial frameworks within which the observer operates. Everything happens *as if* motion is transferred from one body to another, and such a conception may be useful in practical ways. The behavioral laws describing the observed motions remain in operation whether the entities in question are understood from a metaphysical point of view as externally moved or as internally self-moving. Such apparent transfers of motion, and the mathematical formulations that correspond to them, represent secondary phenomena or appearances. The reality is discoverable only through the metaphysical thinking of the mind, proceeding from simple first principles, which are at the same time the primary units of reality, and constructing a system of thought that parallels the movement of reality and that proceeds to more complex levels. Leibniz in this way takes the scientific revolution begun by Copernicus to a deeper level, more fully incorporating into the world picture of modern science the free activity of the thinking mind.

There Is No Death—Only Universal Metamorphosis

Leibniz extends the concept of the soul from the human being to the universe as a whole. This bold metaphysical extrapolation has surprising implications

both for the evolutionary continuity of the universe over time and the evolutionary continuity of the human being with the rest of the universe.

As a principle of unity, the soul cannot be divided. Consequently, it cannot be destroyed—except by an annihilating act of God. But such annihilation would be the kind of miraculous intervention of God into the operations of the universe that should not normally be evoked as an explanation of the ordinary course of nature. Leibniz follows Descartes, for whom the reflective unity of "I think," of thought thinking or being aware of itself, provides the basis of its potential immortality. What cannot be divided cannot, by natural means at least, be destroyed. Leibniz strengthens Descartes' argument for immortality, since, as we will see below, he does not accept Descartes' conception of possible divine arbitrariness, except in a purely hypothetical sense.

Extending Descartes' conception of the soul beyond the human to the animal, plant, and the ultimate atomic entities themselves, Leibniz transforms the conception of immortality from a privilege for certain beings like ourselves to an ontological feature of all reality. The universe consists of an infinity of indivisible and soulful, and so immortal beings. For Leibniz, plants and animals too have indivisible souls. Leibniz follows the logic of his position to unexpected conclusions. Since the monads are unities, they are all indestructible. The soul of a flower, or the soul of a dog, is therefore immortal. What happens to its soul when the body of the dog dies? Indeed, it is necessary to ask, what happens to the monadic form or soul of the cells of the body or the molecules that make up the cells, if these subordinate unities too dissolve? Proceeding as a scientist, Leibniz does not look for answers in a theological heaven but turns to the sciences of this earth, in which Leibniz found evidence of evolutionary transformation of life 150 years before Darwin. Empirical evidence from the sciences requires that we update the ancient theory, defended by Plato, of metempsychosis or transmigration of souls from body to body. Current biological science suggests the transformation of embodied souls, such as we see in the metamorphosis of the caterpillar into a butterfly. The term metamorphosis is preferable to metempsychosis, as Leibniz argues:

> Philosophers have been much perplexed in accounting for the origin of forms, entelechies, or souls. To-day, however, when it has been learned through careful investigations made in plant, insect and animal life, that the organic bodies of nature are never the product of chaos or putrefaction, but always come from seeds in which there was without doubt some *preformation*, it has been decided that not only is the organic body already present before conception, but also that a soul, in a word, the animal itself, is also in this body; and it has been decided that, by means of conception the animal is disposed for a great transformation, so as to become an animal of another species. We can see cases somewhat similar outside of generation when grubs

> become flies and caterpillars become butterflies. . . . I believe, therefore, that if the animal never actually commences in nature, no more does it by natural means come to an end. Not only is there no generation, but also there is no entire destruction or absolute death. These reasonings, carried on *a posteriori*, and drawn from experience, accord perfectly with the principles which I have above deduced *a priori*.[18]

Philosophers are mystified by the problem of the origin of the spiritual being, the mind and/or soul, because for the same reasons that it does not die, it must also be, normally, without a beginning. The exception is when souls are created by God. But just as we shouldn't suppose that God destroys the otherwise immortal souls at death, so we shouldn't have to imagine that in the normal course of things God is continually creating new souls to inhabit bodies. The origin of the "new" soul is simply the soul in its previous state of being. Leibniz appears to compound the difficulty regarding origins by extending it beyond the human soul to the souls of animals and the spiritual principles hidden in the life of plants and ultimately to the primary elements of "matter" itself. Combining *a priori* metaphysical reasoning with the *a posteriori* evidences of the sciences, Leibniz reasons that "the animal as every other organized substance has no beginning, though we think so, and that its apparent generation is only a development and a kind of augmentation."[19] The physical birth of an animal is therefore only its "apparent" generation. The appearance of absolute birth and death to our limited sense perception conceals the underlying continuity of beings undergoing transformations and developments. Theoretical considerations referring to the ultimate principles or constituents of nature require that we understand birth as only a relative beginning of the individual and death as only a relative ending. The current lifetime of an individual animal is really only a phase of its development or evolution that goes back to the beginning of creation itself.

The evolution of the species is a result of the growing complexity of the monadic unities, beginning as the simplest units of existence, and then by combining and uniting with one another achieving more complex levels of development. At various points in this development in which more complex unities are formed there is a leap to the emergence of a new species. A similar process takes place in the life of an individual, as the seed, for example, becomes a tree, or the sperm becomes a human.[20] The dominant monadic unity of the seed is a being in its own right which makes a leap to a higher level of responsibility, so to speak, as it becomes the soul of the far more complex unity of the tree. The same is true for the human being, as the spermatic progenitor of the human being, an animal soul in this state, makes the leap to human soul or spirit.

What becomes of the animal souls "after the destruction of the individual with organized substance?" If death were the separation of the soul and the

body, as it is classically defined, this would suggest some intervening period between lives when the soul would exist by itself without a body. This idea presents Leibniz with an "embarrassing problem, in so far as it scarcely seems reasonable for souls to remain uselessly in a chaos of confused matter." The thought of souls uselessly inhabiting a chaos of matter, he says,

> made me finally judge that there was only one single reasonable line to take, and that is the conservation not only of the soul but also of the animal itself and its organic machine even though the destruction of its gross parts may have reduced it to a smallness which is as much beyond our senses as it was before being born. . . . It is, hence, natural that the animal having always been alive and organized (as some persons of great penetration are beginning to recognize), he remains so always. And since there is no first birth nor entirely new generation of the animal, it follows that there will not be any final extinction, nor any complete death taken in a strict metaphysical sense. Consequently, instead of the transmigration of souls, there is only a transformation of the same animal, according to the different ways the organs are unfolded and more or less developed.[21]

Against the mechanistic doctrine of matter, Leibniz appeals to Aristotle's hylomorphism, the theory of the unity of form and matter, as a stepping stone to his own conception of bodies as unities of self-moving monads. But Aristotle's doctrine is inadequate, among other reasons, to explain what happens at death, and as a support for the Christian teaching of immortality. For if death is the separation of soul-as-form from the matter that supposedly gives individuality, how could such a soul as pure form survive after death without some matter to inform? And even supposing it could, how would such a soul, without individuating matter, be anything other than a generic being without individuality? Hence, Leibniz offers his monadology as superior metaphysical position to scholasticism for purposes of Christian philosophy.

Empirically, what we find at the death and decomposition of an animal body are complex organic elements of life that can become or enter into new living beings. Such *a posteriori* empirical experience, appropriately combined with *a priori* metaphysical reasoning at the proper moment in the system of philosophy he calls the *Monadology*, gives us a different conception of death. In addition to the gross body, which we see disintegrating at death, there must be a more refined or subtle body which continues to exist although we cannot see it. Otherwise the developed soul, which as a unity is inherently indivisible, would have no function to perform that would be appropriate to its level of development. So instead of the soul separating from the body, there is the separation of one unity of soul-and-body from the grosser body, which disperses into the lesser units of body that had formerly been united together because of their connection with the higher-level soul. The subunit souls of the dispersing

gross body then become independent entities in their own right until they again unite with other bodies as nutrients or perhaps through leaps forward of their own. The higher-level soul too is available to take on its old functions with new, grosser, subunits or to rise to a higher stage in its evolution—as Christianity teaches regarding the human "soul" (actually a soul with an ethereal body) after death. There is therefore no radical ending to life but only new forms coming out of old. Death is therefore not the end of life but a moment in the expansion and development of the living being undergoing continuous transformations.

Leibniz addresses here the nature of animal, and perhaps plant, souls. But at some fundamental level, the same must be the case for inorganic bodies, such as marble stone. Ultimately it is composed of invisible and so immortal monads. All the infinity of monads that compose the universe undergo an endless evolutionary or developmental process from one form of bodily organization to another in which destruction and death, no less than birth, are not absolutes but only relative endings and beginnings in a continuity of evolutionary unfolding, transformation, and development.

Reincarnation of Human Beings

What about human souls? Do human beings also go through endless transformations, taking on and shedding "grosser" bodies, while the finer ensouled bodies persist, augment, unfold, develop, and, as we prefer to say today, *evolve*? Leibniz develops his conception in relation to the idea of reincarnation defended by Plato, Plotinus, and other philosophers, and perhaps with regard to the philosophical schools of Buddhism and Hinduism. Leibniz considers the concept of reincarnation in the *Discourse on Metaphysics* (1686):

> But the intelligent soul, knowing what it is, having the ability to say the word "I" so full of meaning, not only continues and exists, metaphysically far more certainly than do the others, but it remains the same from the moral standpoint, and constitutes the same personality, for it is its memory or knowledge of this ego which renders it open to punishment and reward. Hence the immortality which is required in morals and in religion does not consist merely in this perpetual existence, which pertains to all substances, for if in addition there were no remembrance of what one had been, immortality would not be at all desirable. Suppose that some individual could suddenly become King of China on condition, however, of forgetting what he had been, as though being born again, would it not amount to the same practically, or as far as the effects could be perceived, as if the individual were annihilated, and a king of China were the same

> instant created in his place? The individual would have no reason to desire this.[22]

From a general metaphysical point of view, all souls are immortal, and therefore exist in a continuous state of transformation. However, the distinctiveness of human beings involves moral responsibility for actions. If I had once been the Emperor of China, I should now bear the responsibility for my actions in that lifetime. But if I have no memory of previous lifetimes, how can I exercise moral responsibility for my actions in those lifetimes? Moral responsibility requires that what must survive in the case of the human being is the morally continuous, responsible personality. Reincarnation would be meaningless for rational spirits if the individual has no memory of previous incarnations. Since, however, in an animal preexistence, the individual was not a responsible moral agent, there is no current problem of responsibility for one's past animal lifetimes. Leibniz concludes that the human soul, having no recollection of past human lifetimes, must therefore be the metamorphosis and "elevation" of a prior *animal* existence. He writes in his short outline of his system, the *Monadology*:

> Although I find that essentially the same thing is true of all living things and animals, which we have just said, namely, that animals and souls begin from the very commencement of the world and that they come to an end no more than does the world, there is, as far as minds or rational souls are concerned nevertheless, this thing peculiar, that their little spermatic progenitors, as long as they remain such, have only ordinary or sensuous souls, but those of them which are, so to speak, elevated, attain by actual conception to human nature, and their sensuous souls are raised to the rank of reason and to the prerogative of minds.[23]

Human souls emerge from their animal "spermatic progenitors" through a kind of elevation to a higher level, such as in the metamorphosis of a caterpillar into a butterfly. Such transformations continually occur throughout the plant and animal world and are part of the creative expansion of life. Based on the then-current biology of conception as the development in the mother's womb of preexisting spermatozoa, Leibniz suggests that the evolution from animal to human existence is an ongoing event that is taking place in the present. If the human individual cannot claim previous *human* lifetimes, she can at least claim to have existed, in some part of her, as animal, as plant, as a physical element or organized matter that has passed through a series of transformations, augmentations, and elevations in an evolutionary continuity going back to the origin of creation.

The Cartesian dichotomy between the material and spiritual worlds is in this way bridged through Leibniz's evolutionary conception of the monads. For

Leibniz there is continuity in the evolution of the universe from lower to higher forms, through continuous transformations or metamorphoses. The "indivisible" monad is a constantly changing, evolving one, not a fixed, unchanging substance. Descartes' conception of the expansion of the human being from a state of imperfection toward greater perfection is extended to the whole of nature. Spirit does not enter matter from the outside, as Plato thought and as seems to take place in Cartesian dualism. Rather in the vein of Aristotle's forms, spirit, mind, or consciousness is the dynamic principle within "material" evolution. In this way, the emergence of the human soul is the culmination of the evolution of the universe.

Given this lofty outcome of evolution, should we not look back to the simpler forms of existence, including the barest kinds of inorganic matter, and see in these the potentiality for human consciousness? The outcome of a process gives us clues as to what is occurring at the early stages of the process. If the higher form cannot come out of the lower one, the more from the less, and so spirit from matter, as Descartes and Locke argue, then the higher must already be present, "enfolded" or "preformed" in some way in the lower or earlier elements of being. By inserting human consciousness squarely within the evolution of the cosmos, Leibniz provides a powerful *a posteriori* reason for supposing protoconsciousness—his simplest monads—everywhere in that universe. Only on this supposition of the monadic nature of the simplest units of being can it be explained how conscious beings emerge in an apparently unconscious universe. If the universe were indeed the mechanism of matter that the Cartesians and the materialists suppose it to be, life itself, to say nothing of consciousness, would be an unexplainable mystery, and resort would have to be had to that epitome of mysteries, but bane of science, divine causation. Leibniz's dynamic monadology, or science of the development and transformation of monads—replacing the mechanistic, atomistic, interpretation of matter—is empirically confirmed by the indications of evolution suggested by the science of his time, over 150 years before Darwin.

Leibniz's Theory of Metamorphosis and Plato

Leibniz here gives two arguments against the Platonic and Hindu/Buddhist conception of reincarnation: one from "scientific" evidence, and one from requirements of morality. The scientific argument refers to the act of conception as a transformation of the "spermatic progenitors," which Leibniz interprets on the model of the metamorphosis of the caterpillar into a butterfly. Leibniz thinks that the animal soul of the spermatozoa is elevated into a human one at conception. Later biology, we know, shows the pre-existence of not one, but two "progenitors" of the human being. There is an equal contribution to the formation of the human being from spermatozoon and ovum. Such empirical

biology seems to require that the monadologist decide which animal soul would be "elevated" to the status of the human being. Since each prior animal soul is a unity, there would have to be some third principle—the reincarnating human soul?—to unite them in a complex hierarchy. The problem of two progenitors is solved if we suppose a reincarnating soul-with-subtle-body that unifies or incorporates the animal elements of the sperm and ovum as the building blocks of a new gross body. But this supposes the preexistence and reincarnation of the individual human soul. The Platonic conception of the reincarnation of the soul into the animal body gets some modest *a posteriori* support by such biological arguments, combined, of course, with *a priori* arguments about the prior existence soul. In this Platonic perspective, preexisting rational souls would not have to go on to a different stage of evolution, but could return to new gross bodies to complete the goals of human existence. At some point in the evolution of the monads, one of the two animal progenitors would make the leap to human status—perhaps here the male spirit would go forward, and there the female. But for the most part, we can suppose preexisting rational souls to take over the command of the newly forming body. This would appear to be a more natural state of affairs, by contrast to Leibniz's notion that every human individual makes a quantum leap out of the lower stage of animality.

This idea however runs afoul of Leibniz's argument from moral responsibility. If there is no memory of previous lifetimes, how can reincarnation be in any way meaningful for morally responsible human beings? For Leibniz, therefore, the individual human soul is the final step in a series of transformations going back to the beginning of creation. The next step for the individual cannot be another lifetime here on earth, the putting on of a new gross body, but the continuation of the subtle body in a realm of being beyond earthly forms of existence. In defending the orthodox Christian idea of one lifetime for humans, Leibniz rejects, without serious argument, the Hindu/Buddhist conception of "karma," as well as the doctrine of reincarnational responsibility found in Plato. According to Plato, souls in their between-life state are drawn to certain life-situations based on their conscious remembrance of deeds in a past lifetime. Plato recounts the recollections of the soldier Er, who had a "near death experience" which allowed him to visit the interim realm that individuals frequent between lives, and from which they make choices regarding their future lifetimes. Before reentering the physical world, according to Er, the individual chooses among available lifetimes on the basis of clear recollections of prior experience. To avoid a repetition of the sufferings of his famous lifetime described by Homer, Odysseus, for instance, chooses an obscure but restful life that others had overlooked.[24]

Here is clearly the element of moral responsibility that Leibniz says is lacking in a concept of reincarnation. It is in the interim world between lifetimes that the individual takes account of her past lifetimes and on this basis chooses, with

more or less responsibility, the next one. Once this decision is made, the soul drinks from the river Lethe and forgets her prior existences and experiences in both lower and higher realms. In this way, the individual wholeheartedly undertakes the new lifetime without interfering memories of the old one, and yet there is a morally significant meaning to the new lifetime. Socrates emphasizes the importance of morality for the further evolution of the soul. If we debase ourselves in this lifetime, our choices for a new lifetime will tend to be equally debased and the next lifetime will be worse, morally speaking, than the last.

In this way, the circumstances of life that incline an individual in one moral direction or another are not accidental or external to the soul, but expressions of that soul's own conscious choices based on evolution in previous lifetimes. Such a conception of preexistence gives moral significance to the external circumstances of life. One is not born the Emperor of China for no reason at all as a sheer accident, as would seem to be the case were the Emperor of China the metamorphosis of a mere animal spermatozoon. In the reincarnational perspective, the external circumstances of life that one inherits at birth—one's natural physical and mental capacities, one's family and class environment—are not accidental but the outcome of choices based on the soul's past deeds and desires. Although we may not remember a past lifetime—who even remembers his infancy?—the belief in such a lifetime is not morally useless. It enables us to look at our present life circumstances as not thrust upon us, but as issuing from and in accord with our own inner willing and freedom. The Hindu-Vedanta concept of karma says essentially the same thing. As we will see, this idea of a harmony between one's inner development and the external circumstances of one's life plays a major role in Leibniz's philosophy. The concept of reincarnation coincides very nicely with Leibniz's most celebrated idea. It is evidence of the power of Christian orthodoxy that an otherwise so acute speculative thinker as Leibniz should propose such a weak defense of the Christian doctrine.[25]

Hence, in the normal course of things, the human individual would have lived many human lifetimes, and the personality of the infant, already marked and distinct in the eyes of his parents, would be the outcome and fruit of many previous lives. At one time these human souls did make the leap from animality, and such souls may have predominated at an early stage of human evolution when animal-like instincts would have been generally advantageous to survival. Nor should we rule out the possibility even today of newly emerging human souls, just out of the animal stage. *A posteriori* evidence regarding some persons of our acquaintance seems to give support to this concept.

Appearance and Reality, Analysis and Synthesis

Leibniz shows that the appearances that we directly perceive around us are not the true reality. Our perceptions are limited by the nature of our sense organs.

We see what appears to be only a soulless drop of water before us. But with the aid of the microscope we discover our mistake. *A posteriori* empirical discoveries, such as those made with the use of the microscope, confirm the theoretical *a priori* principles arrived at by rational reflection. While the first appearance is that of a largely dead universe of inert matter, the more we know about what goes on under the surface, the more confirmation we have that the ultimate principles of the world of matter are similar to the principle of spirit that animates the human body. No doubt, Leibniz would have been gratified by the discoveries of twentieth-century physics, according to which seemingly solid mass is an expression of fluid or wave-like, "living" energy.

In the course of scientific discovery, we are continually refining our unclear and confused perceptions and conceptions. Through scientific-philosophical reflection, we develop our perceptions and thoughts to clearer, more refined, more systematically organized levels. In this process there are both analytical and synthetic sides. As a result of philosophical analysis, Leibniz postulates the ultimate principles of things to be, not straight-line inertial motion, but dynamic, expansive, spirit-like units of energy that he calls monads. From this starting point, he synthetically constructs the system of the monadology, whose *a priori* construction is capable of including as well as being confirmed by the *a posteriori* phenomena of experience and modern science. Leibniz both reexamines the Cartesian interpretation of the laws of mechanics and extends his reflections into the new discoveries in biology. Instead of reducing the biology of man and animals to that of machines, he attempts to see in seemingly lifeless matter a potentiality for what is later to manifest in more explicit forms, first in the phenomena of plant and animal life, and then in the self-conscious existence of human beings.

The result is a more scientifically secure elaboration of the evolutionary system that Descartes sought for his theoretical cosmology. We saw Descartes' concern to harmonize method and content. If the system of scientific knowledge begins with simple elements and moves on to more complex developments, this theoretical construction ought to correspond to the actual course of the world it is alleged to explain. If we ultimately begin with the free consciousness of the scientific mind, something corresponding to this ought to provide as well the object of that consciousness. The simple starting point for external objects is therefore not inert matter moved by outside forces, but unities of conscious self-movement that undergo evolution from utmost simplicity to greater and more complex structures or wholes of many subunits. The ultimate product of that evolution is the highest form of consciousness, the self-consciousness of the human being and potential scientist. In this way there is complete and consistent unity or harmony between the thinking subject of the scientific enterprise, and the object of that enterprise, the evolution of the material world.

All life is a development or unfolding from earlier, more simple, phases, to later, more complex ones. Descartes' speculation about the evolutionary

history of a universe of inert or passive matter is not in line with the scientific evidence of biology. Mechanists attempt to reduce biological phenomena of apparent self-motion to mechanistic reactions. Leibniz defends the opposite course of reasoning: to see the higher forms of self-motion as exemplars of the reality, and so to look for their origins and seed-forms in seemingly lifeless matter. Rationalist methodology, reconstructing the complexity of experience in a step-by-step fashion, corresponds to the process by which external reality itself evolves, develops, or unfolds. In this way there is no longer a disjunction between the spirituality of the forms of consciousness and the materiality of the bodies that consciousness is supposed to reflect. Berkeley's argument is here answered: The mind can reflect, represent, or be like externally existing realities because these external realities too are mind-like.

Descartes is content to let theological revelation tell us how God actually created the world. If Divine Revelation tells us that God created the world pretty much the way we experience it today, and with a rapidity that defies the slow pace of evolution, then so be it. His task as a philosopher is to elaborate a conceptual construction based on purely rational considerations. But God is not bound by such rational constraints. God is free to create irrationally if this is what He should choose. And theological revelation, sanctioned by the authority of the Catholic Church, tells us that God did indeed choose the irrational approach of non-evolutionary creation, or even the cumbersome Ptolomaic universe of spheres within spheres within spheres. The Protestant Leibniz, who does not have to justify the arbitrary decisions of popes by attributing them to God, denies this postulate of divine freedom from rationality. For Leibniz, God is the epitome or paradigm of a rational being—and rational beings are creative extensions of God. If rational methodology proceeds from simple to complex ideas, the world that that methodology reflects must involve a parallel movement from simple beings in whom the life of ideas is enfolded, and emergent to various degrees, to the most developed form of existence of which we have empirical evidence—the self-determining, self-conscious human being. However, *a priori* reasoning points beyond empirical experience. The trajectory of rational thought confronted with the appearance of death requires that evolution extend beyond this material world, to realms in which subtle bodies continue their unfoldment in ways that we can only guess.

The World of Experience as a Well-Ordered Dream

Because our senses permit us to perceive bodies only at the "gross" level, we fail to see how the composite whole body is composed of the individual motions of numberless monads. We see only the exterior results of sensuously imperceptible but theoretically discernable forces operating within bodies themselves.

With the microscope and other ways of extending our perception we penetrate ever further into this interior reality of life within life. *A posteriori* science thereby confirms *a priori* reasoning. Physics nevertheless describes a world that follows rigid, deterministic laws. With the precision they permit of predicting movements, these laws have considerable practical utility. Leibniz shows that we are mistaken if we conclude from this pragmatic utility that the bodies they describe are reducible to the passive, merely extensive externalities they might appear to be on the surface. In Leibniz's thought, the externally determined material motions of modern physics go the way of the pre-Copernican, geocentric astronomy. From being a primary reality, they are reduced to the status of being appearances or phenomena, relative to the unanalyzed, or insufficiently analyzed, perceptions we have of things.

Descartes, like Locke after him, had already argued that certain properties of the objects of external perception, such as color, sound, smell—so-called secondary qualities—are not the properties of the external object that they appear to be. They result from external sensory stimuli interacting with our perceptual apparatus. Since the sensory stimuli, such as light waves or sound waves, are themselves colorless or soundless movements, there is no direct transmission of color or sound from the external object. The color or sound that we perceive must be produced within the mind itself. Such sensual qualities of things that we perceive are therefore not objective but subjective. Moreover, although we appear to see objects directly in an external world, we understand that the direct objects of experience can only be mental realities within us. They are psychologically projected into the external world where we imagine that we directly perceive them.

Both Descartes and Locke however argued for the objectivity of their conceptions of matter itself, defined as extended figures in motion or configurations of ultimate particles. The material objects themselves, Descartes argues, are as they are for scientific thought: extended bodies with size, shape, and motion, but without the colors, textures, etc., that they appear to have in ordinary perception. Here is another example of the way immediate experience deceives us, while scientific thought corrects the deception and exposes the immediate experience as something only apparent—again, like the movement of the sun around the earth. Leibniz pushes Descartes' (and Locke's after him) line of argument regarding secondary qualities one further giant step:

> It is even possible to demonstrate that the ideas of size, figure and motion are not so distinctive as is imagined, and that they stand for something imaginary relative to our perceptions as do, although to a greater extent, the ideas of color, heat, and other similar qualities in regard to which we may doubt whether they are actually to be found in the nature of the things outside of us.[26]

Thus even the "primary qualities" of motion through space that Descartes attributes to external bodies themselves are reduced to the status of being an

appearance. Leibniz shows that "matter" is not a separate substance with properties of extension and divisibility radically opposed to indivisible spirit. Hence, there is no longer a problem of explaining how spirit and matter interact. Inert, extended matter is an appearance only. To distinguish such appearances from ordinary dreams, Leibniz calls them "true appearances, like well-ordered dreams."[27] But unlike Berkeley and Hume who later make similar arguments against Descartes' theory of extension and Locke's ideas of primary qualities, for Leibniz the external world neither disappears nor becomes unknowable. The underlying "causes of the appearances"[28] are to be found, not in the mind of God, as Berkeley argued, nor in the mere conjunction and association of our subjective ideas, as Hume argued, but in the inner vital force of the monads making up the object itself.

We have seen that an inner force of resistance underlies the apparent passivity of material objects. Hence, instead of being caused to move by outside forces, the motion is instead a reaction of the being itself. It moves itself in the context of, or on the occasion of, the outside motion. Leibniz takes over the Aristotelian distinction between form and matter. But matter for him is not the formless dispersion or externality of the Aristotelian conception. Leibniz defines matter as "passive force" while soul or form is "active force." This is not the passivity of classical conceptions of matter, but the active resistance to external determination of the spirit-like energy within the being. Spirit and matter are therefore both forms of "force" or energy. With Leibniz, Cartesian dualism has been replaced by a monism of force or energy, understood as in some fashion intelligent or conscious—though not necessarily with the reflective, freely choosing consciousness of human beings. Such higher consciousness, we have seen, is the outcome of the self-moving evolution of the "material" world.

Not only are transfers of motion and mechanical causality secondary or surface phenomena, but so are space and time. Space and time are simply our limited ways of representing the relations between monads. In the absence of the monads themselves, space and time are nothing. Leibniz criticizes Newton's idea of absolute time and space, according to which space and time are regarded as containers in which the motions of material bodies take place. To take Newton's conception of absolute space and time seriously, a finite universe might have been created ten feet to the right of where it is now, or ten years earlier than it was created. But such differences make no perceptible difference to the universe itself. No reason could be given for such completely arbitrary acts of creation. If we want to maintain a scientific conception of reality, we must exclude the possibility of such arbitrary acts that are without any "sufficient reason" for their occurrence. These arbitrary acts, like the miraculous interventions of God of Malebranche, should be excluded from a rational construction and representation of reality. It is an essential implication of scientific methodology that we conceive of reality as rationally comprehensible.

The classical categories of modern physics—extension, shape, motion, causal transfer of motion, time, and space—are therefore not the properties of some primary substance, called "matter" by Descartes. These categories refer to phenomena or appearances relative to our perceptions. Their comprehension requires the supposition of the inner force of the monad or combination of monads that makes up the entity under observation. Material bodies turn out, therefore, to have their own activities or motions, just as Aristotle once argued. However, whereas Aristotle distinguished four of five fundamental kinds of motion, Leibniz effectively distinguishes as many kinds of motions as there are monads. Each monad is unique and distinguishable, however minutely in some cases, from every other. Its actions are not imposed on it from the outside, but arise entirely from within.

In the light of Leibniz's principles the whole theory of perception too must be revised. For if bodies do not cause changes in one another, perception cannot be the effect of bodies acting on our sense organs and producing changes in the brain that are somehow mysteriously translated into a nonphysical idea or impression in the mind. Rather, on the occasion of interaction with other beings, an idea or perception is awakened from within the soul, a soul that already has the potentiality of all being enfolded within it and so in principle, in a confused or global way, is able to know from within everything that exists without. For Leibniz there is no contact strictly speaking between beings since there is no real separation of beings, no vacuum or void that needs to be crossed between materially separated beings, but a universal oneness of the many beings. It follows that each being is in perceptual contact with every other being, although capable of grasping what is near to it more clearly and distinctly than what is far.

Universal Freedom and the Outflashings of God

Leibniz argues that each monad produces its own activities, its own movements on the occasion of but not as a result of the action of the other monads. Each monad develops itself with a more or less clear consciousness of all the other monads of the universe. The scientist who studies the particular processes of nature or society must keep these principles in mind. A true understanding of any particular component of the universe will require an understanding of the totality of all its own motions or activities, arising out of its own inner nature. Since all these activities are *its own* activities, the monad is the real cause of all its activities. As Leibniz extrapolates from human activity to the activity of the nonhuman forces of nature, we best understand this notion of the self-motion of the monads by referring to the human case. We can more persuasively argue in the case of humans that a true understanding of an individual consists in explaining how all of her actions arise out of her own free, self-determined

choices. These choices are sometimes conscious and clear ones, sometimes unconscious and obscure ones.

A complete understanding of the behavior of a particular pool player, for example, will include an understanding of why the individual decided, on such and such a night, to play pool, as well as why, at such and such moment, the individual decides to try a shot in which a ball will be struck into the right-hand pocket. Such an explanation will focus on the development of the individual's own free, but rationally mediated (that is, not arbitrary) choices. Naturally, the individual makes his decisions in the context of, or on the occasion of, the surrounding environment, and ultimately—because everything is interrelated, with no vacuum—of the entire universe. But this contextuality of the decision does not mean that the environment externally causes the action. Individuals make their own decisions in the light of their perceptions and understandings of the world around them. These decisions are not explainable as mere reflexes of the surrounding events. They involve an unfolding of the life-choices of the individual that have been continuously developing from infancy. The choice of becoming a pool player is rooted in choices made in early childhood.

Similarly but in a more subliminal or proleptic way, the actions of all other bodies in the universe reflect the inner unfolding of those bodies themselves, with their own unique perspectives on the surrounding world—perspectives that reflect their own unique histories. From a universe in which nothing moves itself *because of* the laws of physics (with the mysterious exception, for Descartes, of self-conscious human beings), Leibniz proposes a universe in which everything moves itself *in accord with* the laws of physics. Leibniz replaces the universal determinism of Hobbes and the other mechanists with a theory of universal freedom of beings at various stages of the development of their consciousness. For Hobbes matter has primacy over and explains spirit or human consciousness. For Leibniz spirit has primacy over matter, and explains the motion of matter itself. Thus Leibniz completes Descartes' project of establishing the independence of self-conscious spirit by showing how spirit and matter intimately unite as two forms of intelligent energy, as the cooperative unity of the dominant monad and the subordinate monads of the body, and through the harmony of all beings in the universe.

Every activity or motion must have a rational, sufficient cause and that cause must be found within the nature and internal unfolding or development of the monad itself. Expressed in the language of logic, a true understanding of any being would ideally consist in a proposition in which we comprehend how the predicates are contained in the subject, or, in Aristotelian language, how its properties are properties of the particular substance. Given a particular monad, with its own inner perceptions and tendencies, all of its properties will follow as the "unfolding" of its inner life in the context of the lives of everything else in the universe.

Scientific understanding of any particular human action requires understanding the reasons why the agent chose a particular action as a result of that agent's past history and present awareness of the surrounding universe. A full explanation of the behavior of a particular being therefore requires also an explanation of the actions of the other beings that make up the context for a particular being's choice. Leibniz considers such explanations to proceed by "analysis" since the choices are expressions of the identity of the individual being, of who or what it is. The analytic proposition that "a bachelor is an unmarried man" is thus the model of scientific truth, for the definition of any being consists in the properties that establish its identity. This identity develops over time in a movement from simple or earlier stages to later, more complex ones. To know a complex developed being it is necessary to trace its development back to its simpler moments. This is to analyze it, not however into the components of a static being but into the earlier and simpler stages of a developmental process. The actions of the pool player stem from his originally simple but eventually complex, unfolding, and developing being, in the context of his environment as he perceives and understands it.

This analysis extends to all the beings of the universe as a whole. The ultimate unity to which analysis leads cannot be found in any particular being, nor in the totality of particulars, since the totality is not itself a being but the collection or aggregate of particulars. Leibniz maintains that there must be a "sufficient reason" for any particular action, but that this sufficient reason cannot be found in the particular action or within the complex of the universal actions as a whole. There must therefore be a being outside of this complex of finite beings that contains within itself the sufficient reason for any and every event or action. Leibniz's argument is as follows:

> But there must also be a sufficient reason for contingent truths or truths of fact; that is to say, for the sequence of the things which extend throughout the universe of created beings, where the analysis into more particular reasons can be continued into greater detail without limit because of the immense variety of the things in nature and because of the infinite division of bodies. . . .
>
> And as all this detail again involves other and more detailed contingencies, each of which again has need of a similar analysis in order to find its explanation, no real advance has been made. Therefore, the sufficient or ultimate reason must needs be outside of the sequence or series of these details of contingencies, however infinite they may be.
>
> It is thus that the ultimate reason for things must be a necessary substance, in which the detail of the changes shall be present merely potentially, as in the fountain-head, and this substance we call God. . . .

> God alone is the ultimate unity or the original simple substance, of which all created or derivative Monads are the products, and arise, so to speak, through the continual outflashings of the divinity from moment to moment. . . .[29]

On the surface, this suggests Hobbes's argument that the chain of causality supposes ultimately a first cause, since the chain cannot go back infinitely. No limited explanation by previous causes is sufficient to explain any effect, since the causes that one investigates, however, many they may be, are themselves the effects of other causes that have not been investigated. If this process proceeds *ad infinitum* there cannot be a complete or sufficient explanation or sufficient reason for the effect. If we know that *x* is caused by *w*, can we say that we have an explanation of *x*? The man died because a bullet entered his brain. If we say that, have we understood the death? Of course, the next step is to identify the killer. Who shot the bullet? *V* is the cause of *w*. Why, we want to know, did the killer shoot him? Someone shot him for a reason. If the murder was the result of the actions of Loeb and Leopold, we should ask ourselves why they did what they did, and not be content with identifying the killers and punishing them. As Clarence Darrow points out, this explanation requires that we understand the context of the killers' childhoods, including the world war in which they were raised and learned to appreciate mayhem as a fact of life. That too then has to be explained. The world war must also have its causes. Darrow also suggests that knowledge of the biology of the killers may also be required. For pragmatic purposes we are usually content at some point to stop this process of investigation, which in any case with our limited knowledge we can never hope to complete. However, the causes that objectively produced the effect must themselves have existed for the event to have in fact occurred. But if these causes go on forever, infinitely in time and space, there is never an end to the causal chain and so there is never a causal process capable of producing the result in which we are interested—or any result for that matter. Hence, there must be a First Cause which is itself uncaused.

In Leibniz's perspective, however, the causes are not external but internal. The problem of sufficiency remains but has to be understood quite differently. In killing their victim, the killers are expressing the inner unfoldings of their identities. But so is the "victim" in being killed! We must suppose that the victim was no victim, but was fulfilling his own self-determined destiny. At some level of consciousness—no doubt more obscure than clear and self-conscious—the nominal victim is also fulfilling his own self-determined existence. Different beings evolving from all time must realize their inner natures in harmony with one another. But how explain the seeming accident that two separate identities, in their inner unfolding, harmonize with each other—that the inner unfolding of the destiny of the killer finds, at the right moment, the other being whose inner unfolding requires him to be killed? Usually such a combination

of sequences is thought to be a coincidence, an accident. But if the harmony occurs *every* time, as philosophical understanding requires, this must be the result of a harmonizing creative intelligence that is outside of the universe of particular intelligences.

Leibniz insists that particular beings are causes of their own actions because the principle of causality is within them. The Malbranchians argue that the concept of causality, attributed to creatures, makes them God-like. Leibniz responds to the accusation of blasphemy and turns it around. Is it not blasphemy to regard the Creator as so powerless as to be only capable of creating mere puppets on strings? Granted that a universe of dead matter logically requires the continuous presence of the Divine Animator. But this is an Animator incapable of breathing life or spirit into anything. More like Descartes than like Descartes' supposed followers, Leibniz sees the sparks of divinity within the creatures themselves.

Moreover, if individual beings must be unified by a soul or monad, what about the totality of such monads? Is the whole universe a mere congeries of accidentally colliding entities—as the materialists suggest? Or does it not have a unity, a harmony of its own, a kind of "Oversoul" or ultimate unifying Monad—the divine animating fire and harmonizing intelligence that bursts forth out of the divine potentiality into the infinity of creatures who are still unified in their diversity, the diverse outflashings of the divine creative intelligence?

Chapter Thirteen

The Best of All Possible Worlds

Made for Each Other

According to Leibniz, each monad is an independent self-moving entity, and so are the complex unities of monads that constitute the objects of ordinary experience. The "stationary" (that is, relatively stationary) ball *B* only moves to the right side pocket *when* the cue ball *A* strikes it on a certain angle with a certain force, but not *as a result* of the action of the cue ball. Leibniz argues—perplexingly but with a clear logic—that while the two motions are evidently correlative, there is no causal connection between them. At the precise moment when the two balls come (seemingly) into contact, the *A* ball, of its own accord as it were, moves into the right side pocket, while the *B* ball, equally independently, moves into the left pocket. The real connection of the two motions is not a matter of one causing the other or of both somehow simultaneously causing each other (if that even makes sense) but solely a matter of energetic awareness or consciousness that each has of its own unfolding evolution in the context of the other—however primitive or obscure this consciousness must be thought of in the case of inanimate objects. The action and reaction described by physics is not a matter of external action of one on the other and the other on the one, but of each preserving itself and moving itself in the proto-awareness or primitive sensing of the context of the other.

Leibniz's idea is supported in the light of contemporary physics for which the solidity of objects vanishes through microscopic examination. Ninety-nine percent of objects can be said to consist of "empty space." In this perspective, it becomes mysterious why when the two billiard balls encounter each other they do not just pass through each other. The reason of course is that the material bits of the atoms that constitute the body (which may themselves be further composed of states of energy between even smaller bits) are in a complex field of energetic relationship with one another. As the macroscopic objects enter into the zones or fields of each other they communicate with one

another energetically—that is, in anthropomorphic terms, they perceive one another—and respond accordingly from out of their own inner history, a history that is recorded within each object through distinctive patterns of energy. Objects for which the resonating energy fields are more evident to us and objectively measurable, such as tuning forks, can be seen to retain their encounters with one another over time as unique inner energy patterns—that is, they remember one another. A tuning fork responds differently to another tuning fork that it has previously encountered than to one that it has never encountered, although on a superficial view the forks all seem identical.[1]

But if these motions are ontologically independent of one another, a question naturally arises. How explain the coordination or harmonization of the innumerable monads in the movements that I initiate when, for instance, I decide to shoot a particular ball into a side pocket? The question, we know, seems easily answered from the standpoint of mechanistic materialism according to which every body is only moved by contact with another body. When I move the cue-stick at a certain angle and with a certain force, I cause the cue ball to move in a certain direction with a certain force, etc. But what causes me to move the cue-stick? Certainly not myself as a self-determining cause, Hobbes argues. This idea is incompatible with the laws of motion, as formulated in Newton's first law. My very thoughts are the outcome of forces governed by the same laws that govern the connection between the cue and the cue ball.

But if we must reject this line of argument, at least for human beings, we have to introduce a self-moving cause into the equation. Otherwise human responsibility and morality, as this is normally understood, is impossible. More than this, even science becomes impossible, for the "I think" of scientific thought must be capable of escaping the immediate impact of sense experience in order to organize the data of experience in a manner determined by thought itself. To be fully consistent with this starting point in self-awareness, Leibniz argues, we should then rethink the interaction of objects such as billiard balls in the light of this new starting point. In the case of the human action, the correlation of subjective intention and the surrounding environment is not so difficult to understand. The human subject decides to play pool as a result of the development or unfolding of all the previous decisions of his life. The action at the moment of striking the ball is the fulfillment of his life plan, however obscurely he is aware of this. These decisions and developments are not the result of the action of outside circumstances. The availability of the pool hall and the billiard balls is not the cause of his decision to play pool. He was not moved to act because of that existence, but because this circumstance fits with his own inner development. Many others will pass by the pool hall without giving it a second thought.

Since we must assume that one particular substance, the thinking human being, is self-moving, then let us see if this idea cannot be universalized. In the

light of this universalization of the model of the thinking self, problems of physics can be illuminated. On deeper reflection, we see that the most apparently inert physical objects cannot be thought of as completely passive. The mechanistic conception of "dead matter" does not square with the physical laws themselves, especially as formulated in Newton's third law. The object that is pushed pushes back simultaneously with equal force. Just as I myself must be free of external determinism if I am to be the cause of my actions, so—physics itself implies—must everything else.

When we begin with apparently inert inorganic bodies, the notion that all bodies move themselves independently of the causal influence of other bodies seems at first preposterous. But when we reason in terms of the behavior of human beings, this approach becomes more persuasive. The idea acquires greater plausibility when we recognize that human beings too are part of nature, that the human soul-consciousness and soul-force are the outcomes of the metamorphoses of the universe moving from simple to more complex, more "elevated," forms of existence. The highest form would not be possible were there not some potential for the higher form already in the simplest element. For consciousness to emerge in a material universe, what we call matter must already contain consciousness in a primitive form.

Reasoning regarding the highest form of agency in our experience—the conscious human agent—will therefore give us clues regarding what must take place in those beings that provide the evolutionary premise for this form. We readily acknowledge that in relation to what happens to the person from the outside, it is generally the person's own interpretation and the person's own decisions based on these interpretations that determine what she will make of the circumstances. Each person is responsible for her own life. With enough insight into the inner dynamics of the personality, it sometimes almost seems as though the individual's life unfolds completely independently of its surroundings, as an internally coherent process. Detailed biographies of famous individuals show a tremendous consistency in the unfolding of the personality from the earliest discernable age.[2] And yet, this coherently unfolding life of ours inevitably takes place in external circumstances that have their own independent histories. Since the unfolding of the individual's life necessarily requires external circumstances to unfold within, the surroundings then appear to be cooperating with that unfolding. Just as two individuals sometimes seem to be made for each other, so too do the opportunities an individual finds to develop his talents often seem "made" for that individual. However, when we investigate the history of those circumstances, they too follow their own internal logic. They too are realizing their own independent trajectory. From their perspective, our own inner development appears to contribute to *their* development. While they are cooperating with us, we are cooperating with them.

Preestablished Harmony

We are led to pose a fundamental question. What explains this harmonization of an infinite number of independent lines of development? No finite monad can conceivably explain by its own efforts the fact that its activities harmonize or coordinate with the activities of *all other monads*. In fact each monad can only explain its own development, never that of another. And yet, the harmonizing is so perfect that mechanistic laws can describe it, resulting in the metaphysical illusion that all is happening as a result of deterministic and predictable laws. But if this harmony cannot not be the result of the combination of mechanistic causes (as Leibniz has shown in relation to the law of action and reaction) what could possibly produce it? The unity or harmony of the diversity of actions throughout the universe, the unity of the universe itself, can neither be explained by any of its "parts" taken in isolation, nor plausibly by the mere accidental combination of such parts. Only the supposition of an ultimate unifying Monad, endowed with infinite understanding and power and whose existence is a necessary property of its substance, can explain such marvelous unity in such immense diversity.

Here is new argument for the existence of God. In addition to other arguments, such as Descartes' argument from the contingency of the *existence* of finite beings, Leibniz argues from the interdependence of radically independent monads. The harmony, order, or unity of the immense diversity of the beings of the universe is not the result of any one of them. Nor is it (Leibniz argues against the materialists) the consequence of blindly operating material interactions. It must then be the consequence of the source of being itself in its creative outflashings. To put this idea simply: if every monad acts independently of every other monad, the harmony of their separate motions according to strict laws of physics (and other detectable laws—psychological, economic, etc.) can only result from the creative plan of God, the "Preestablished Harmony."

The law of causality itself necessitates this conclusion. The action of any one body, say that of the pool player, is made possible by or is contingent on, a multiplicity, indeed an infinity of circumstances. As a self-determining agent, the pool player can only decide to play pool if there is a pool hall. The existence of the pool hall itself, in turn, is the result of an vast diversity of causal agencies. Each of these active causes realizes its own unique history only in the context of every other activity that provides its required context. But if each of these causes is self-determining, how explain the harmony that exists between the great multitude of self-determining causes? It is necessary to suppose, then, the existence of an ultimate Monad who creates a universe of vast diversity and at the same time of wonderful unity and order. If within each being in its primitive state, there is a potentiality for its later development, and if these later developments are contingent on the simultaneous unfolding of an infinity of

other beings, the initial state must be the outpouring or outflashing of an infinite potentiality that contains within it immense or infinite possibilities of development and is capable of intelligently selecting those possibilities that best harmonize with each other. This creative potentiality underlying all activities of the infinity of self-determining beings is the fountainhead of their being and of the harmonizing laws of their self-determining actions. The laws are such that every being realizes its own self over endless apparent births and deaths in free cooperation with every other being.

Human Purpose and Harmonizing Circumstance

To concretize Leibniz's breathtaking and perhaps stupefying perspective, let us return to our human example. We initially supposed harmony with circumstances, but it seems quite plausible that an individual's own internal development would be frustrated by some circumstance that would contradict that development. Perhaps my deepest aspiration is to be a hunter of great herds of buffalo. But in the world in which I exist, the buffalo are largely gone. Such a circumstance would be a tragedy for me, because I really belong in some other world. But such an example is purely hypothetical in my case. Fortunately, my deepest aspiration is in fact to develop ecologically sustainable energy sources. The world in which I find myself is, thank God, wonderfully adapted to this purpose.

The metaphysical materialist will of course say that there is no wonderful synchronicity here since my desire to improve the ecology is just the product of the environment itself. The success of Leibniz's alternative explanation depends on recognizing that the materialistic explanation for this harmony of intent and opportunity is clearly unacceptable. In the materialist or naturalistic explanation, as seen in the position of Hobbes, my desire to develop ecologically sustainable energy sources is merely the "product" of my environment and upbringing. I am then the passive product of my environment. My belief in my freedom and self-development would then be an illusion. If we have come to reject this position, then is not the only coherent alternative the one that Leibniz provides?

Perhaps there is a compromise position according to which I am merely making the best of the circumstances in which I find myself. I am not controlling my life from out of an internally developing logic, but adapting myself to circumstances in the best way I know how, "making a virtue of necessity." Were I to have been born at a time when buffalo roamed the plains, I might have been a hunter of buffalo. Instead, I have decided to develop renewable energy technology. This is the option I choose out of the possible opportunities available to me in the world in which I happen to be born. I have to deal with the cards that have been dealt to me. Thus there is an element of freedom, since I get to choose among available alternatives, and an element of determinism, in

which the alternatives that are available are limited, with some having been completely eliminated.

But this supposedly compromise position really reduces to the deterministic one. It ultimately reduces to the notion that circumstances that are completely independent of me determine who I am. The person who passionately hunts buffalo is not the same person as the one who passionately builds sustainable energy technology. If I choose *B* rather than *A*, I must conform to the requirements imposed on me by *B*. I become then the person-who-does-*B*. Either way I choose, it is the preexisting circumstance that determines what my personality turns out to be. The initial freedom of choosing, assuming that this is real, is lost once the choice is made and the course of action is committed. I may of course choose again, decide to abandon my previous course of action, and begin a new one. I am then determined by another set of circumstances. My freedom itself is only an option to choose among determining conditions. I am like the convicted murderer who is allowed to choose between hanging and electrocution. In either case, I must die. In itself my choice is empty of any content for the person I am to become. No wonder then that determinists deny the very possibility of such empty freedom. Thus the compromise position tends to reduce to that of determinism, even if it postulates the existence of something within me that is more than circumstance—a power of choosing which of the external circumstances is to determine me. Whichever I choose, however, not I myself but the external circumstance is in control.

On the other perspective—that of free, self-determining spirit—I see myself at the source of the basic decisions of my own life. I do not choose between circumstances that are externally imposed on me, but I choose that which fulfills me from within. In this framework, the individual seeks to know what is her inner *destiny*, the reason for which she exists, the person she has been born to meet or the life work that brings true inner fulfillment. Here there is no reason to stress a freedom to choose between external possibilities, since only one course of action is really suitable, the one that allows the specific being that I already potentially am to manifest itself. To know what this is, I must look within rather than without. When confronted with a choice I look to see which of the alternatives best resonates with me. So when I choose one of them, the circumstance does not determine me, but provides the occasion or opportunity for me to become myself.

In this perspective I fear my freedom to act in ways that violate my true self. I am like the person who walks across a narrow bridge over a great precipice and suddenly thinks, with alarm, that he is free to jump in.[3] To keep on track, we must reign in the freedom to destroy ourselves; we must resist the temptations to follow the stimuli or attractions that pull on us from every side. Descartes finds free will in the narrow unfolding of scientific thought, building from step to step, while having to resist the pull from the straight path of scientific method exerted by the beguiling influences of immediate sensory

experience. Yielding to fear in practical life, we have the possibility of choosing that which we do not really love. That God Himself would engage in such deviations is Descartes' perplexing doctrine that can hardly be maintained. Leibniz sees such freedom to do what is *not* right for us as an ever-present possibility that must be rejected in the light of a "determinism" from within, that is, our own self-determinism. I feel true freedom, then, not when I can choose something irrational, but only when, resisting such possible irrationality, I am convinced of a harmony between my inner impulse and outer circumstances—as the fish only feels free in the water for which it is made.

Thus, if we are to save the appearances in which we regard ourselves as free, self-determining beings, we must suppose that our circumstances are *our* circumstances. They cannot be regarded as the cause of our deepest personal aspirations without destroying our belief in our own self-determination. We must suppose that we are ever in the right place at the right time. And yet, we cannot see ourselves as causing those circumstances (including the free self-unfolding of other persons) so that they would serve as mere means for our own self-realization. We must respect the autonomy of the other person and other thing. There is only one other alternative. The free unfolding of the infinity of independent beings is a marvelous harmony of the creative intelligence that engendered this universe. "Preestablished Harmony" of the creative intelligence or "Organizing Being" explains therefore the coordination between the free actions of an infinity of individuals. An infinity of independent self-determining monads, none of which determines any other, hardly seems to be a promising foundation for an understanding of an orderly universe. Like the war of all against all in the theory of Hobbes, such rampant individualism of monadistic entities should lead to that chaos of matter that Leibniz supposes to be the outcome of death in the traditional view. In hindsight, therefore, it now appears that it is Hobbes's idea that is completely unscientific. Somehow, out of an imagined original chaos, Hobbes in effect argues, human beings produce order. Experience shows us, however, that individuals who follow their own inner inclination do not produce chaos, but harmonize with each other according to laws—mechanical laws for physical bodies and moral laws for rational, self-conscious ones.[4] The individual monads themselves cannot explain this coordination of their actions with the actions of other monads—ultimately *all* other monads. God's intelligent outpouring and manifesting of his own inner thoughts must be supposed as the only other possible explanation of this beautiful correspondence that we witness all around us.

I Move My Arm—Again

Let us look at the simplest example of harmony. I decide to move my arm in a certain direction, and my arm does in fact move in that direction. How is this

possible? To follow the historical order of responses to this problem: Descartes, having argued that spirit is inherently independent of matter and separable from the body, refuses to go further than to affirm that it is a matter of sensory experience that the human will is able to move the body, and so the human being must be a unity of spirit and matter. Hobbes, on the basis of materialism, denies that it happens, as physics implies that there can be no such power as the free will—despite his argument that the state results from a quasi-divine *fiat* of the rational human will. The Cartesian Malebranche, going beyond the limits of his master, gives the argument cited at the beginning of the previous chapter, and on the basis of the metaphysical dualism of matter and spirit ascribes the action to God. Similarly, Locke makes this an unsolvable mystery for the limited human mind, but one requiring the coordinating planning of God. Berkeley also ascribes the apparent causation of the will to God, while denying that there is any body to move, but rather only two sets of ideas to correlate. And Hume, who sees in causality nothing more than a correlation of sensory impressions in experience, refuses to speculate about any objective causes.

All the previous philosophers suppose that the material world, even if it is reduced to the status of an idea in Berkeley, operates in accord with the deterministic causal laws proposed by the new physics. But for Leibniz deterministic causal law is only an appearance for our limited sensory experience, while, in reality, rational method demonstrates that there can only be resonances and harmonies between independent beings. Preestablished Harmony provides a unique solution to the problem of mind-body interaction. At a certain point in the evolution of my soul I will decide, for conscious and/or largely unconscious reasons, to raise my arm. At that very moment, as a result of the Preestablished Harmony, the monads of my body, in their own evolution out of their inner own natures, will perform the act that I will. I do not cause them to act; they act of their own accord. They perceive or recognize my act of willing, and if they respond, "Your wish is my command," they do so not as robots and not as slaves, but as willing partners in the collective project that is my own bodily existence.

Malebranche is partly right in saying that if I don't know what I am doing, it follows that I am not doing it. But sometimes, Leibniz argues, we know things at an unconscious level, in a confused, intuitive way. Our decisions are not always, and perhaps not often, based on perfectly conscious perceptions and motives. We are often guided by relatively unconscious perceptions and desires. In fact, most of our perceptions are largely unconscious ones, since at some level of awareness we perceive the entire universe with which we are connected through the extended fields of being that leave no room between them for the void or for any real separation. Hence, at some obscure level of my consciousness I am aware of the cells and organs of my body, as they are aware of me.

However, even if it is conceivable that at some obscure level of consciousness I might be aware of how to move my arm, other considerations persuade us that we are not in fact the "causes" of the movements of our bodies. If no

being causes the motion of any other being, then certainly I do not cause my body to move. For my body is composed of independent monads organized in the systems of atoms, molecules, cells, and organs that make up the unity of the gross body, and then there is the interrelated system of the subtle body. The soul, the self-conscious "I," is the dominant monad of this complex system of interrelated bodies or subunits of my body that are united in such an intimate way that if someone steps on my toe I take this personally and feel myself stepped on. But this identification is similar to the way in which I feel assaulted if someone threatens or hurts my child. My toe is an independent being to which I have become quite attached for this present phase of the journey of our everlasting existence. We have been joined together in a marriage and have taken vows of fidelity to each other until death do us part.

Being the dominant monad does not mean that we pull the strings, as, in the physiology of Descartes, the external material forces that impact the organism pull the strings of our nervous system, or, in the reverse chain of command, the soul pulls the strings of the nervous system. Descartes adds that such interaction is not the only way that the soul is connected to the body, for the heat he feels in his heart when he finds something lovely convinces him of a thorough intimacy of soul and body. It is because of this more intimate unity of soul and body that Leibniz finds the Aristotelian conception of the soul as the form of the body appealing. But he rejects the notion, suggested by the Aristotelian conception of matter, of the body as inherently a formless chaos of matter brought into order by the soul, which then, on the soul's departure, tends to return to formlessness. The soul is the "form" of the body in the sense of being the dominant monad in a hierarchy of monads that unite with one another in a quasi-voluntary way as part of their own respective inner unfoldings and developments.

Leibniz's position is best understood in relation to ordinary human experience. It is clear on the human level that it may be essential my own inner fulfillment to work within a certain organization and to perform the tasks required by my role in that organization. I do this voluntarily, and could always leave the job. However, as the work is satisfying to me, as it fulfills my idea of what is best for me at this moment, I give little thought to the abstract possibility that I could quit at any time. If this is clearly the case for the highly complex monadic unities that we are as human beings, why should this not be possible at lower levels of complexity? Indeed, if the more cannot come from the less, so that the potentiality of the higher must already be present in the lower or earlier levels of evolution, it must be the case that in some incipient way the atoms, molecules, cells, and organs of my body act no differently from the human individual who participates in collective social organizations in voluntary ways.

In the following passage, Leibniz argues against the "common run of philosophers" who argue with the Scholastics that the species of one body is

communicated to another to produce a perception, or, with Locke, that the qualities of one body are represented within another, and in this way awareness and action take place by some bodies impressing themselves somehow on others. The true communication is of a different order, not through causal action, but through mutual awareness based on a harmony of interests. Leibniz, in an exchange of letters with Arnauld, the critic as well as proponent of Descartes, defends his own position as follows:

> The proposition which we are discussing is of great importance and should be firmly established, since from it follows that every soul is a world by itself, independent of everything excepting God; that it is not only immortal, and, so to speak, permanent, but that it bears in its substance traces of everything that happens to it. From it can be deduced also in what the inter-activities of substances consist and particularly the union of soul and body. This inter-activity is not brought about according to the usual hypothesis of the physical influence of one substance upon another because every present state of a substance comes to it spontaneously and is only a sequence of its preceding state. No more is the inter-activity accounted for by the hypothesis of occasional causes as though God intervened differently for ordinary events than when he preserved every substance in its course; and as though God whenever something happened in the body aroused thoughts in the soul which would thus change the course that the soul would itself have taken without this intervention. The inter-activity is in accordance with the hypothesis of concomitants which, to me, appears demonstrative. That is to say, each substance expresses the whole sequence of the universe according to the view or relation that is appropriate to it. Whence it follows that substances agree perfectly and when we say that one acts upon another, we mean that the distinct expression of the one which is acted upon diminishes, but of the one which acts, augments, conformably to the sequence of thoughts which its concept involves. For, although each substance expresses everything, we are justified in attributing to it ordinarily only the expressions which are most evident in its particular relation.[5]

Each monad is an independent being evolving out of its own inner identity or "concept"[6] with implicit or explicit awareness of the entire universe. One thing does not cause another to veer, so to speak, from the path of its inner development onto another path that is determined by the causal action of some external being, according to the usual materialist position which attributes all material motion to the causal influence of external bodies. All inner integrity of beings is in this way destroyed. But the same destruction of inner self-development is attributed to God by the occasionalists, including Locke's version of this, who make God the cause of our veering onto another path of

motion whenever God is obliged to put a certain correlative idea into our heads on the occasion of some physical interaction. Leibniz's own "hypothesis of concomitants" affirms the inner integrity of all beings developing from their own "concepts" or inner identities in the context of the concomitant development of all other self-developing beings. The only dependence required of this theory of the "universal agreement" or harmony of all the substances is that involved in the notion that all beings constitute the continuous "outflashings" of the universal monad of whose inner ideas the beings of the universe are the manifestation. But if the beings are the expression or manifestation of the thoughts of God, they are not dependent on some external being, but constitute God's own self-manifestation or emanation. They are therefore "like little Gods" themselves. Where we seem required to speak of cause and effect, this is only because of a relative augmentation or diminution of the expressions of particular beings in their relation to one another. I assert my goals in a positive or affirmative way when I decide to move my arm in one direction or another. The monads of the body that execute these willings of the soul defer to my choices and so to speak diminish their own potentially independent desires in favor of my decision. In doing so, however, they fulfill their purposes just as fully as I do mine. This each of us experiences when we gladly defer our own potentially separate willings to meet the needs of those we love. Rather than experience a deviation from one's own identity or life purpose in such cases, we find the emergence of new, previously hidden, and obscure purposes, and feel fulfilled. The body does what we want it to because it, or rather the billions of monads that compose it, must love us.

Metaphysical Option: Accident or Design?

Before moving to the next step in Leibniz's argument, let us consider a commonsense objection to the previous presentation. We argued from certain features of the human case for a universal doctrine of preestablished harmony. It is true that for some, perhaps many, fortunate people the circumstances of their lives clearly coincide with their life purpose in a way that lends plausibility to this idea—provides, as Leibniz would say, *a posteriori* evidence for it. This gives rise to such sayings as, "Marriages are made in heaven." People find their "dream home" or their "perfect career"—as if the events in the outer world were "tailor made" to their specifications. The question then arises: Can this be luck, an accident, or is does it involve a higher design? Leibniz argues that "God who in all things has the greatest perfection will have the greatest care for spirits and will give not only to all of them in general, but even to each one in particular the highest perfection which the universal harmony will permit."[7] Leibniz adapts to philosophical purposes the saying of Jesus that if God takes care even of the lilies of the field, how much more attentively must our Father

in Heaven be watching over His human children? Leibniz merely adds that He does this, not by intervening on the spot in accord with the occasionalism of Malebranche—which effectively destroys the integrity and self-movement of beings—but through the preestablished harmony of the self-determined unfolding of independent beings acting in awareness of all other beings.

But against this comforting idea, must not hard realism interpose some objections? The lives of many people are surely frustrated by circumstances beyond their control that block the realization of their most cherished desires. Children die at an early age from accident or disease, or, worse, from human neglect and abuse. What kind of harmony can we find in such things? And even in the case where a person's life seems to be working out well, this is only a rough generalization. Many things inevitably occur that no one wants to occur—a car accident, a slip on the ice, a death in the family. How can Leibniz reasonably claim—as opposed to taking the whole idea as a matter of blind faith—that *all* the events in one's life are in harmony with one's life purpose?

There are several aspects to Leibniz's response to such objections. In the first place, Leibniz distinguishes between conscious or clear ideas and unconscious or obscure purposes and desires. Events that seem to frustrate our conscious purposes can turn out eventually to have been quite fortunate. Someone loses a job, only to find a better, more suitable one, later. Thank God I got fired, I say to myself later. This job, I realize now, is what I unconsciously or obscurely wanted all along. Given such experiences, we can form the habit of looking for the silver lining in every cloud. If this is faith, or trust in the benignity of the universe, it is not *completely* blind. There are *a posteriori* experiences in the past that warrant the approach recommended by the *a priori* metaphysics that Leibniz proposes. In this regard, Leibniz makes a distinction between God's "determining will," involved in the creation of beings, and his "consequent will," involved in bringing out the best consequences from painful and seemingly unwanted events.

Secondly, Leibniz does not promise us a perfect world, but only a world that is as perfect as possible. The "highest perfection which the universal harmony will permit" is not always the highest conceivable or desirable perfection in our human and so imperfect way of looking at things in which we often fail to see the bigger picture. God creates the maximum amount of order for the maximum amount of diversity. There could conceivably be absolute order with a purely homogeneous universe, just as there could be a chaos of conflicting or incommensurable individualities. In the best possible world, there are optimum levels of order and diversity given the constraints that are inherent in the problem of combining unity and multiplicity in a created, and so inevitably imperfect, world. There might be far greater conceivable amounts of diversity and freedom, but at a sacrifice of order. Or we might be able to conceive of far greater degrees of order and peace, but at a sacrifice of diversity and freedom. Since the world is not, and could not possibly be a perfect one (for then it would be a perfect being, and so God Herself), there will inevitably be

discrepancies between the free development of the individual and the free development of his environment. The fit will not always be a perfect one. Sometimes it is a rough one only. What metaphysical reasoning requires us to admit is not that the fit is a perfect one, but that that it is the best possible conformity of individual diversity or individual freedom of development, and harmonization with the universal context for that development.

We adopt this perspective, not out of Pollyannaish blindness to reality, but on the basis of a fundamental metaphysical option. Ultimately, we have only two choices. Either the universe is a congeries of accidental circumstances that simultaneously determine and are indifferent to the fate of each individual—this is the perspective to which materialist determinism leads—or we are free to choose our fate, and therefore must find in the circumstances of our lives the means to realize our choices. If the circumstances are at odds with our choices, then it is meaningless to say that we are free. If external circumstances were indifferent to our choices, and only begrudgingly yielded to some of our most determined efforts, what reality could be attributed to our self-determination? It would be like the freedom of the prisoner in his cell to pace from left to right or from right to left, as he waits to be given the choice between hanging and electrocution.

Hence when we come up against events that seem to conflict with our goals, the metaphysical option for real freedom implies that we adopt an attitude of trust that our highest goals may be achieved in unexpected ways. A slip on the ice leads to an unexpected stay in a hospital, and as a result we discover how overcrowded are the emergency rooms and how overworked are the staff. A new perspective opens up for our choices, perhaps for the expanding of our sympathies and understandings that otherwise would not have occurred. And as a result our lives become enriched with new and unsuspectedly fulfilling possibilities. A child dies from a seemingly senseless car accident involving a drunk driver. As a result, new laws are passed thanks to the political involvement of the parents, who have come closer to one another and have gained insight into the preciousness of life. But what of the child herself? Is it not possible to say that her life fulfilled a great purpose if such are the outcomes of her death? Many who live long lives do not achieve as much. As she continues her journey in other dimensions (if she is not allowed by weak Leibnizian arguments to return to earth once again by taking up another gross body), she would hardly have the feeling that such a life was tragic and unfulfilled.

We should not expect or even desire our lives to be trouble-free. It is through such trouble that we develop our skills and abilities. If life were a bowl of cherries, we would soon get tired of the sweetness. By confronting difficulties and adversities we develop as human beings. Thanks to external obstacles to our free choices, we change our skins, and undergo metamorphosis from one level of consciousness to another. The roughness of the fit itself is part of the process. The caterpillar that we are only becomes a butterfly by having our

caterpillar ways frustrated, hampered, and impeded by what seems at first to be hostile external circumstances. We discover eventually that such circumstances are the gift of the universe to us, the outer coverings and temporary darkness that permit the inner unfolding of a deeper potentiality and the penetration of a more subtle and beautiful luminosity.

The world we live in is not a perfect one. But deep down, at obscure levels of our own consciousness, we do not really want to live in a perfect world.[8] We want to live in a world whose perfection is not something given to us on a silver platter, as was Eve and Adam's life in Eden, but is the result of our own freely chosen actions. This is the only way human beings can be real causes, true co-creators with God, and so "like little Gods." We do not want to live in a perfect world. We merely want to live in the best of all possible ones.

The Best of All Possible Worlds

If the order of the universe, whose laws are progressively revealed by modern science, is the result of intelligent harmonization of an infinity of active beings, it is reasonable to ask about the nature and overall purpose of this order. When Leibniz describes the inner "soul" of beings as an "entelechy," he is recognizing Aristotelian final causes or teleology as more profound or fundamental than mechanical causality. Leibniz argues that the so-called "final causes," the purposeful strivings of beings, are the primary "metaphysical" realities, while the mechanical order of events described in physics is the secondary appearance, the order of "well-made dreams." From the fundamental metaphysical perspective, each being is striving to realize itself in relation to every other being in the universe. The deeper pattern of this totality, too, is teleological, not a mere mechanical outcome of interactions. An individual cannot conceive of purpose in her own life, and by extension in the lives of all other individuals, if the totality of individuals is itself a purposeless combination of individual, egotistical strivings. There is a goal to be realized in the totality of intercommunicating beings. At some point in their development, as they become more aware of their "concept" or purpose in life, thinking individuals will want to understand what that goal is and how their own individual development plays a role in its development. From unconscious participation in the world-order we should move to more and more fully conscious participation.

Let us begin with a question about physical laws. Why—to use an example from Kant's early work, *Living Forces*—does God create a universe in which bodies move toward one another according to a law of gravitation that is inversely proportional to the square of the distance? Why are bodies not drawn together according to a different rule—for instance, in inverse proportion to the cube of the distance? There seems to be nothing inherently contradictory about this second rule. It seems equally possible, logically speaking, with the first. Why then

did God choose one possibility over another?[9] The question is a fundamental one for understanding the meaning or purpose of life, including that of one's own particular life. If the world we live in could have been fundamentally different, if there is no inherent reason for its being the way it is rather than some other way, doesn't that make the laws of existence fundamentally absurd? The question seems especially problematic when we look at the amount of suffering that exists in the world. How can we say that God created a meaningful world, when we see so much suffering and evil in our own and other people's lives? Perhaps, after all, the world we live in is not really compatible with the purposes of individuals. What kind of "harmony" can there be between the aspirations of innocent persons, and the seemingly cruel fate of accident, disease, or war that prevents them from living beyond childhood? Our previous response to this question is not very consoling to the parents who lose a child, or to all those who raise the cry, with Job, "Why me, Oh Lord?" Jehovah's answer, we recall, is that mere human intellects should not pretend to judge the decisions of the founder of the universe. Perhaps it is adding insult to injury for a philosopher to pretend to say more than what Jehovah says to Job: Be quiet and submit.

But for Leibniz, there is only one reason, whether human or divine. As expressions of divinity in our own right, we have the right to assume the mind of God as our own. Descartes adopted this position in his investigation of human consciousness, while inconsistently accepting the possibility of arbitrary decisions of the divine omnipotence and freedom. Leibniz is therefore in this respect too the truly consistent Cartesian. To suppose that God acts arbitrarily, Leibniz argues, is to insult the divine intelligence. We must suppose that God has good reasons for creating the universe he has created, that the world is inherently rational, and that the human intellect can decipher those reasons. A perfect and loving God would not act arbitrarily, like a human tyrant. This is not to deny that God acts freely. But free action does not mean arbitrary action. The free actions of intelligent beings, divine as well as human, are *rational* actions, actions performed according to reasons.

Leibniz reasons about God's actions from the paradigm of human actions. Human actions are free in the sense that what we do is not inherently (logically) necessary. An alternative action is always abstractly thinkable without violating the law of contradiction. I could always decide to become a buffalo hunter, however difficult such a profession might be today. My decision to become a scientist researching new energy technologies is therefore a free choice. But when we choose one action over another, we do not act arbitrarily. We choose a certain course of action because we think that one action is better for us, more reasonable, than another. In fact, we *always* choose the course of action that we think is best for us. It is this line of reasoning that allows Leibniz to assert that human actions are both free and at the same time predictable—in principle or by the divine intelligence, if not in practice for finite minds. Similarly, we must suppose that God too always chooses for the best.

The difference between the divine intelligence and human intelligence is simply this: whereas human beings *think* that one course of action is best, God, being infinitely wise, *knows* that one set of possibilities is best. Human beings frequently act for what *seems* to be the best, but their choices turn out to be mistaken. The pool player who thinks the best move is to put a ball into the left pocket is mistaken, because he overlooks the likelihood of the cue ball rebounding into the right pocket. With this distinction between appearance and reality in mind, let us look at the hard cases. It might *seem* to me that it is best for a child to survive a childhood disease, or for me not to have been fired from an enjoyable job because of a downturn in the market. I do not however *know* that these things are in fact for the best. A rational understanding of this limitation of our imperfect intellects counsels patience. Perhaps what is best for that child is for it to enjoy its childhood and then contribute to other goals by her untimely death. In retrospect, I may after all discover that losing my job was the best thing that could have happened to me, because it allows me to discover what I *really* want to do.

We often feel that the circumstances of our lives are those that are best for us. We can easily imagine possible worlds in which we would not at all be capable of fitting. When reading of former times, the Depression of the 1930s, the plagues of the middle ages, the dangers of the hunt in prehistoric times, the absence of indoor plumbing throughout most of history, we thank God that we are living today in this world, despite its remaining difficulties. If circumstances occur that seem frustrating at the moment, we can console ourselves with the Leibnizian thought that there is some deeper purpose in these events that corresponds to our own best interests.

This world is nevertheless not the only possible world. Could it be that God created this one world out of many other conceivable ones simply for us—for each one of us—and that means, for me? On a larger level of the totality of possible universes, there must be a reason for the selection of *this* world, this combination or lawful harmonization of the activities of innumerable monads. Before trying to answer specific questions, such as why one particular law of gravity rather than another, or why there was an epidemic disease at one time or another, we should say something of a general nature. Suppose that among the possible worlds, this actually existing one permits the least conceivable amount of joy and the most amount of suffering. Would not such a thought inspire me with a sense of frustration, inferiority, unfairness? Could a perfect, loving God have chosen to create such a world? Such a possibility is incompatible with the idea we have of God as the creative fountainhead of being. Such a generous God who is capable of issuing forth the springs of life would not withhold any possible blessing of existence. We can at least say, then, on general metaphysical grounds, that God chooses the actual universe because it is the best one possible. In the conclusion to his succinct exposition of his ideas in the *Monadology*, Leibniz writes that "wise and virtuous persons" will be

> content with what God actually brings to pass through his secret, consequent and determining will, recognizing that if we were able to understand sufficiently well the order of the universe, we should find that it goes beyond all the desires of the wisest of us, and that it is impossible to have it better than it is, not only for all in general, but for each one of us in particular, provided that we cleave as we should to the Author of us all.[10]

Perhaps, then, this is only a more complex philosophical way of saying, with the God of Job, Be silent, and submit.

The Lisbon Earthquake of 1755 and Leibniz's Theodicy

In 1755 an earthquake destroyed eighty percent of the city of Lisbon, Portugal. The tragic effects of the great Lisbon earthquake of 1755 shook the faith of many who could not understand how a good God could have allowed such terrible evils to befall so many innocent people. Perhaps, it was said by "pessimists," God did not create the best of all possible worlds. In God's defense, some halfheartedly argued that He *could* have created a better one than this, but created this one simply because He freely decided to do so. It is not our place, they said, to question the divine will. Descartes offers a similar explanation of how it could be that God created the world in six days, when reason postulates an evolutionary conception. Being absolutely free, God can create "irrationally" if He decides to do so.

In an early short writing of 1759, Kant defends the Leibnizian position of "optimism" that the world we live in is the best possible one. He rejects the voluntaristic notion that God could have created a different, better world, but arbitrarily decided not to. Such a notion is contrary to the conception of a rationally acting God. The spirit of enlightenment criticism of feudal arbitrariness can be seen in the Leibnizian arguments. God is not a tyrannical monarch, creating a world governed by arbitrarily chosen laws. The limited human intelligence may not be able to understand, at the present state of knowledge, why one set of laws, one order of relations between the existents, is better than another. But we are at least able to understand this much: the world as it is is the best one possible for us to live in.

The thirty-five year old Kant gives the following defense of Leibnizian optimism:

> Since God chose this world and this world alone of all the possible worlds of which he had cognition, He must for that very reason, have regarded it as the best. And since God's judgement never errs, it follows that this world is also in fact the best. Even if it had been

> possible for the Supreme Being to have been able to choose according to the fictitious notion of freedom which some have put into circulation, and to have preferred the worse to much that was better as a result of I know not what absolute whim, He would never have acted in that fashion. One may dream up for oneself something in the nature of a demi-god of fable, but the only handiwork which is proper to the God of gods is that which is worthy of Him, and that is the handiwork which is the best of all that is possible.[11]

Kant's defense suggests that Leibniz's argument can be broken roughly into six points:

1. In the first place, God could not have created a "perfect" world, since there can be only one perfect being, God Himself. A perfect world would therefore be nothing other than God creating Himself, which is what God must be doing in any case. For there to be something other than God, for there to be a creation, the creation must contain "imperfection," that is, non-godlike qualities. God, who is perfect being, must create beings that are mixed somehow with "nothing." This nothingness, the metaphysical foundation of what we call "evil," is intrinsic to the fact of creation itself.[12]

This issue allows us to test the theory that we live in the best of all possible worlds. God is faced with two possibilities, either to create, and therefore permit the existence of "imperfection," or to maintain the state of absolute perfection by not creating. Which, do you think, is the better choice? If you say that it is better for God to create than not to create, then we must accept the existence of nonbeing, imperfection, or "evil." The best of all possible worlds is a universe in which imperfection and the possibility of evil exist, for the alternative is simply no created universe at all.

2. Imperfection or evil, from a metaphysical point of view, is not something positive. It is a metaphysical negativity: a limitation, absence, or negation. Evil, in the root sense of imperfection, is not found in what God positively creates, but in what He does not create. The *reality* or *being* of the world consists in its perfection, its mirroring of the divinity. For, as Descartes has shown, being itself or existence is of a different order from the limited forms or essences of things. Since no creature is the cause of its being, its being itself, since it comes from God, must be something God-like. It follows that its creatureliness, its determinate form as one kind of being or another, must consist in the addition of a kind of nonbeing to this being. For the universe to exist as other than the Creator, with creatures having identities specific to themselves, their perfections must be limited. Imperfection must be combined with perfection. Nonbeing must be introduced into being. Nevertheless, as the expression of a reasonable God, the degree of perfection of creation must be, in total, the maximum amount of perfection compatible with this being a created universe. The universe must, in its evolution, be capable of approximating to the perfection of God.

Every being is God-like, an expression, an "outflashing," of the divine perfection. At the same time, the fact that created beings exist implies the insertion of nonbeing in being. It is in virtue of nonbeing that we exist at all, as beings who are *not* God. But at the same time, as *beings*, we are like God; we are "like little Gods" capable of participating in the creation of our own lives. As Descartes argues, we are imperfect beings striving for the perfection of our Creator. The *purpose* of our own strivings is therefore clear: we should always strive to be like God, and so to enhance the general perfection. In this way we participate in the creative order. Our destiny, our purpose in life, is to turn away from, negate, and surmount the nonbeing within us in order to recognize the being, the perfection, in which we reflect divinity.

So much for what Leibniz calls "metaphysical evil" or the metaphysical root of concrete evils. The concrete evils exist in the forms of physical evil or suffering and moral evil or sin.

3. "Physical evil" or suffering is one of the consequences of metaphysical evil or the imperfection of nonbeing in being. We can be overwhelmed by such evil if we focus our attention on immediately impinging, particular events in isolation, and fail to see how such events are part of a larger totality. The imperfections of a created universe are more apparent in the parts than in the whole. Indeed when we raise our minds to the larger wholes we are awestruck at the amazing order that exists in the overwhelming vastness of the universe. The perfection of the universe is primarily in the whole. What is best for the whole is not necessarily best for each part taken in isolation. In his *Theodicy*, his justification of God's ways to man, Leibniz writes: "Shall God not give the rain, because there are low-lying places which will be thereby incommoded? Shall the sun not shine as much as it should for the world in general, because there are places which will be too much dried up in consequence?"[13] When we adopt a holistic perspective we see that limited or short-term or partial "evils" are "necessary evils" for the good of the whole.

4. God's "determining will" in creating beings with certain natures is complemented by God's "consequent will," which is to turn evil to the account of good. Good can come out of what seems to be evil. Forest fires, damaging to particular organisms, may nevertheless contribute to a healthy cycle of nature. Human beings make progress, technologically and otherwise, by overcoming effects of nature that are harmful to them. Flooding rivers inspire people to build dams and eventually to harness more effectively the power of rivers. Unconscious nature by its very resistance to human wishes in this way fulfills its inner purpose to serve the goals of consciousness. Physical suffering can be the occasion for our becoming better human beings. Individuals who have been wounded by great suffering can become great healers.

5. With regard to the third kind of evil, moral evil or sin, once again we can test the concept that we live in the best of all possible worlds. The possibility of sin is rooted in the very existence of the free will of rational creatures.

Here again, God has a choice of two possibilities. He could create a world in which every creature would be determined to fall automatically, instinctively, into its predestined place, so to speak, in the world whole. This is how it generally works for plants and animals. But there is also the possibility of creating beings that freely and consciously decide for themselves how they should live in the light of their own understanding of the world. However, were they born knowing everything, they would not have this possibility; they would always know exactly the right thing to do. To be really free requires that we also be the free cause of the development of our own understanding, and this in turn requires that we begin in ignorance. Free beings make mistakes, and then learn from them. Such beings will at first ignorantly choose the short-term good against the long-term or larger good, the well-being of the part or individual, narrowly understood, over the good of the whole. They will choose the imperfection over the perfection, the nonbeing over the being. In his "consequent will," God foresees these mistakes and so fashions matters that a higher good can be achieved through them. Essential to this process of bringing good out of evil is that the human beings themselves recognize their mistakes and correct them in the future.

Which is the better course for God to take? Is it not to create free, conscious beings, responsible for their own evolution? If we agree, we have to admit that the existence of moral evil is the price we have to pay, so to speak, for the existence of human freedom and human self-responsibility. Moral evil, and the suffering it creates, is the direct responsibility of the creature rather than the creator. Complaints against God should therefore be redirected to the true source of the problems. But then let us not pretend that human beings are or ought to be perfect. Each one of us is always doing her or his best. If some act in narrow, short-sighted ways, and so harmful to others, let us protect ourselves as best as we can, but also let us remember that this is the only path to true development—that is, development in which each person ultimately takes full responsibility for his or her own existence. No one then commits evil for the sake of evil. Everyone is doing his best in the light of his own understanding, and, through the inevitable suffering this causes for oneself and others, making progress in the creation of his or her own being. Would not such a defense of Leopold and Loeb have better suited Clarence Darrow's goal of pursing an enlightened jurisprudence, than the adoption of a materialist philosophy that puts us all at the mercy of outside forces?

Some would nevertheless say that an all-powerful God who permits an avoidable evil is comparable to a parent or guardian who knowingly allows a young person under his care to be hurt. Suppose a father permits his daughter to enter a situation in which he knows she may be seduced. Suppose the father is brought to court, and argues on his own behalf, "But I'm not responsible for the crime; I didn't do it or want it. I only allowed it to happen." In his response to Bayle, who makes this objection, Leibniz accepts the trial analogy. In a

Theodicy we are putting God on trial, and that supposes that the same reason and justice that applies in human terms can also be applied to God. Leibniz rejects the voluntarism of Hobbes, who cites the *Book of Job* with its almighty Jehovah and His leviathan, and draws the conclusion that justice is whatever the First Cause causes to happen. The only difference between a trial in which God is placed on the docket and one that involves an ordinary person is that in the case against God we do not know all the facts of the situation that He has in view in allowing the event. Even in the case of the human father,

> a skilled writer of fiction might perchance find an extraordinary case that would even justify a man in the circumstances I have just indicated. But in reference to God there is no need to suppose or to establish particular reasons such as may have induced him to permit the evil; general reasons suffice. One knows that he takes care of the whole universe, whereof all the parts are connected; and one must thence infer that he has had innumerable considerations whose result made him deem it inadvisable to prevent certain evils.[14]

6. Finally, it is necessary to stress that the perfection of the world is an evolutionary one. God does not create a finished, static universe. God creates the seeds of the universe, the active strivings or energies in the core of every being. These unfold and develop in ways that dynamically enhance the perfection of life. Free human beings participate in this evolutionary process in a conscious way. Which is then the better course for God to take? He could create a universe whose perfection is independent of human activity, so that there is nothing for human beings to do (if we suppose they could exist at all under such conditions) but passively admire it. Or, He could create a universe that is in some static way less perfect than it might have been, but which allows for human beings themselves to contribute freely to the on-going process of creation itself. Such human beings would indeed be "little gods" acting in accord with the creative purposes of divinity. Again, if we prefer the latter course, we must recognize that the existence of imperfection and evil, both physical and moral, is part of a rational design for the greater happiness or perfection of creatures. We are God-like co-creators in the development of a more perfect universe—a universe that is capable of more fully reflecting the divinity of its source. The universe is in this way most perfect in its very lack of perfection.

Let us therefore not be silent and submissive, but speak up—not to God, but to ourselves and to each other. For we are Creators in training, with short-sighted perspectives and making mistakes, but learning from our experiences to move forward. God could have created an unending garden of paradise, but human beings, made in God's image, freely decided to leave that seemingly perfect but really stifling world, that world of animal instinct, to create a world worthy of the creative, intelligent, and loving beings that we potentially and fundamentally are.

The Moral Republic of Spirits

God is therefore "the monarch of the most perfect republic composed of all the spirits, and the happiness of this city of God is his principal purpose."[15] Such happiness is not something that God infuses directly into the spirits. It is something that the spirits (those souls that not only perceive the world around them, as in varying degrees of depth and clarity do all monads, but "apperceive" themselves in doing so) themselves participate in creating by uniting with one another, by helping one another. Leibniz eloquently writes:

> Spirits are of all substances the most capable of perfection and their perfections are different in this that they interfere with one another the least, or rather they aid one another the most, for only the most virtuous can be the most perfect friends. Hence it follows that God who in all things has the greatest perfection will have the greatest care for spirits and will give not only to all of them in general, but even to each one in particular the highest perfection which the universal harmony will permit. We can even say that it is because he is a spirit that God is the originator of existences, for if he had lacked the power of will to choose what is best, there would have been no reason why one possible being should exist rather than any other. Therefore God's being a spirit himself dominates all the consideration which he may have toward created things. Spirits alone are made in [God's] image, being as it were of his blood or as children in the family, since they alone are able to serve him of free will, and to act consciously imitating the divine nature. A single spirit is worth the whole world, because it not only expresses the whole world, but it also knows it and governs itself as does God. In this way we may say that though every substance expresses the whole universe, yet the other substances express the world rather than God, while spirits express God rather than the world.[16]

Echoing the words of Jesus, Leibniz explains that each of us is God-like and perfect in his or her own way. If the lilies of the field are clothed in raiment more splendid than that of King Solomon, does not God care far more for each of us, who are made in his image and likeness? If we are God-like immortal beings, incapable of dying, how can we be really harmed by earthquakes or the humanly fomented evils of war? Especially if these are the occasions of our self-development and steps toward the achievement of a worthy happiness—not the natural happiness of the Garden of Eden, but of a life that we create for ourselves. Our purpose in life harmonizes wonderfully therefore with the purpose of creation. Our fulfillment and happiness consists in recognizing our true worth and in contributing to the existence of a "kingdom of heaven," in the words of Jesus, or, in Leibniz's more modern, politically attuned expression, a republic of spirits.

Another term that Leibniz uses to express this idea of the perfected or ideal human community is that of a "kingdom of final causes." The purposeful or goal-oriented members of this kingdom rule over the "kingdom of efficient causes" or the mechanisms described by the modern natural sciences. Kant later adopts this terminology in his final, richest formulation of the Categorical Imperative when he states that morality requires the individual to see herself as a member of a "kingdom of ends," regarded as providing the highest law for all other orders of reality.[17] Leibniz writes:

> [A]ll events can be explained in a twofold fashion: through the *kingdom of power* or *efficient causes* and through the *kingdom of wisdom* or *final causes*: that God as an architect created bodies as mere machines according to *mathematical laws of quantity*, and yet has determined them for use by souls. However, he rules over souls that are capable of reason in the fashion of a prince, or rather, indeed, of a father, who rules in a sort of community, according to the *moral laws of goodness* and guides everything to his greater glory. These two kingdoms everywhere interpenetrate without confusing or disturbing each other's laws, so that there always comes to pass the greatest in the kingdom of power and at the same time the best in the kingdom of wisdom.[18]

Each human individual is a manifestation of the divine perfection, but the full truth, beauty, and goodness of that perfection is achieved only in the whole, the republic of spirits or kingdom of ends, which we co-create by cooperating with and helping one another. Leibniz returns, by the complicated process of metaphysical reflection, to an affirmation of the basic ideas of the moral tradition in which the fulfillment of the individual involves purposeful participation in the welfare of the human community. Such welfare is not conceived of as the unintended outcome of self-interested passions, but as the fulfillment of each one's individual strivings for self-development. In contrast to the matter-based tradition from Hobbes to Adam Smith, Leibniz here reformulates Descartes' concept that spirit unites while matter divides, and so morality requires placing the unifying matters of mind and spirit above those of physical pleasures, wealth, fame, and power over others. The ruler of the ideal state is therefore not a fearsome leviathan, but the spirit of love that flows from its source through a brother-sisterhood of humanity.

The complexity of this metaphysical reflection is required by the problematic of modern science. It is necessary to reconcile the deterministic laws of physics with the freedom, purposeful creativity, and spirit of love required by morality. Leibniz argues that the laws of the lower physical universe—inorganic things, vegetative and animal life—provide the building materials, so to speak, for the creation of the divine city of spirits. Far from reducing human beings to the status of cogs in a vast deterministic machine, these physical realities

perfectly harmonize with the strivings of individuals to create a better, more harmonious, and loving world. The "machine" of matter, the mechanism of the natural world, is the tool of spirit, the tool of purposefully acting or goal-oriented human beings. Descartes' conception of the unity of the human being as a duality of spirit and matter, with the subordination of the latter to the former, must be qualified in that for Leibniz, in his deeper metaphysical understanding, "matter" is implicitly or inherently or potentially spirit. In the earlier passage, Leibniz states that the apparent dualism of matter and spirit is in reality a harmony of two distinct orders. But at a deeper, more esoteric level of understanding, it is more than this. As spirit is enfolded in matter, and as matter is spirit in the form of passive force, the duality that is here emphasized is ultimately a unity—and for this reason, the harmony of the two orders is simply the natural unfolding of the intrinsic oneness or monism of spiritual being.

This creation of a kingdom of heaven on earth is the fulfillment of the basic teaching of Jesus: to love God with our whole hearts, God who is the Father of all human beings, and in this spirit of universal unity to embrace with love all our brothers and sisters in one human family and one human polity. Leibniz struggled throughout his life to unite the Christian factions, the various Protestants with the Catholics, around such a simple core message of Jesus, which Leibniz called natural religion. But it is not only Christians who embrace this message, since it was also contained in the Jewish religion of Moses before Jesus, as well as in the works of Plato and other ancient philosophers. The main difference between Jesus and these philosophers consists only in this: that while Plato and the others failed to turn the universal philosophy of love into law, Jesus succeeded. And after Jesus, the Muslim teachings of Muhammed spread the same message to the farthest corners of the world. Leibniz concentrates on what he regarded as the core teaching of a universal and natural religion. In the Preface to his *Theodicy*, the only book he published, he writes:

> I refrain from considering here the other points of the Christian doctrine, and I will show only how Jesus Christ brought about the conversion of natural religion into law, and gained for it the authority of a public dogma. He alone did that which so many philosophers had endeavoured in vain to do; and Christians having at last gained the upper hand in the Roman Empire, the master of the greater part of the known earth, the religion of the wise men became that of the nations. Later also Mahomet showed no divergence from the great dogmas of natural theology: his followers spread them abroad even among the most remote races of Asia and of Africa, whither Christianity had not been carried; and they abolished in many countries heathen superstitions which were contrary to the true doctrine of the unity of God and the immortality of souls.[19]

Leibniz's distinguishes the "natural religion" of Jesus—the religion that is evident to natural human reason—from the "revealed religion"—particular teachings of Christianity, such as the Trinity, that are based on revelation. It was part of his ecumenical approach to religion in a time of religious tensions and wars to stress the primacy of such natural religion. He is critical of Christians who emphasize what separates Christianity from other religions, or separates one sect of Christians from another, instead of focusing on what is central and universal in the Christian message. In fact by this focus on the particularities of the Christian religion, the Christians risk missing the central teaching of Christianity. The Christian missionaries therefore have much to learn from those whom they are striving to convert. Leibniz smiles at the irony of it: "We are sending missionaries to the Indies to preach revealed religion, which is all very well. But it seems that we should have need for the Chinese to send us missionaries in their turn, to teach us the natural religion that we have lost."[20]

The Windowlessness of the Monads

In these concluding sections, let us cast a critical eye on Leibniz's achievement. We do this with another eye on Kant's own intellectual development. The philosophy of Leibniz provides crucial intellectual background for Kant's thought. Kant writes that his *Critique of Pure Reason* is his apologia for Leibniz.[21] Seeing Kant's lifetime work as in particular a defense of Leibniz makes especially necessary a detailed account of Leibniz's thought as providing crucial theoretical background for understanding Kant. It requires at the same time emphasizing certain possible difficulties with the general Leibnizian conception. Already in his first philosophical work, at the age of twenty-two, Kant writes that even if one is wrong a thousand times, the fact that "it might even be possible to catch a Master Leibniz in error" encourages him to break away from "the beaten path" and try out his own intellectual forces.[22] In his earliest work, Kant struggles with the doctrine of Preestablished Harmony. He is especially concerned with Leibniz's doctrine that there is no real interaction between the monads. Kant then attempts to elaborate a conception of interaction by building on the insights of Leibniz and without reverting back to materialism. With the aid of Kant-inspired hindsight, let us look at some of the problems that may seem to arise out of Leibniz's thought, first of all the problem of interaction.

Leibniz's position is similar to that of the Cartesian occasionalists in denying any direct interaction between substances. But whereas for the occasionalists the difficulty of conceiving interaction on the basis of materialism leads to a theory of generalized divine interventionism, an external orchestration of puppet-like pseudo-actions, Leibniz replaces external causality with internal self-development taking place through each individual's perception of the world around it. What prevents the Cartesian from successfully explaining

interaction is the doctrine of two radically different substances. For Descartes, spirit and matter constitute two regions of the world: the inner realm of thinking beings, and the outer realm of purely mechanical bodies. But if inorganic bodies seem plausibly to be such passive, extended substances, living bodies and animal bodies do not readily fit within such a framework. This much Descartes clearly recognizes when he considers the human body, intimately one with the soul. The passions arising out of our interaction with the physical world are therefore for him "passions of the soul." The world we see around us, if we look closely enough, is alive with living energy. Even inorganic bodies, Leibniz argues, are in some fundamental way "alive" with internal perceptive force.

Leibniz takes a major step in the direction of overcoming the dualism of matter and spirit by supposing that every being is in fact a being like ourselves, with an interior form of consciousness however crude. Instead of two radically separate kinds of being, then, Leibniz gives us a unified world in which soul-force or soul-energy exists everywhere in the so-called material world. A body, for Leibniz, is an "organized mass," that is, a hierarchical, organically connected ordering of monadic unities. Matter is not a separate principle from spirit, but a form or function of the inner soul-force by which it resists incursion from the outside. Each individual entity walls itself off from the intrusions of every other in order to maintain its independence and allow for its own self-development.

But doesn't this mean that there is absolutely no real connection between the monadic individual and the rest of the world? Before we look at the relation of an individual being with those around it, let us look inside the being itself. Any complex individual consists of an interdependent system of monads, organized into atoms and molecules, cells and organs. How are all these monads connected with one another if each is an independent being unto itself? Leibniz describes the inner life of the monad as relying on *representations* of the rest of the universe. Each monad represents all the others, in the first place all those others with which it coordinates its actions within the organized body. In describing the inner life of the monad as consisting of representations, Leibniz follows the same general conception of experience as found in Descartes' internal self-conscious I, searching for truth in its own ideas, or in Locke's theory that the direct objects of the understanding are only ideas, and later in Hume's theory that the objects of thought are sensory impressions and ideas. In all of these epistemologies, the individual does not directly perceive the external world, but does so only through internal representations, ideas, impressions, etc., of the surrounding world. Leibniz at first seems to follow this usual way of ideas. However, all these other epistemologies essentially follow Aristotle in supposing that in order to produce the representations, the external world must somehow first penetrate the individual knower. In Aristotle it is the "species" of the being itself that enters the mind so that, infused with its spiritual form,

we can truly know at least the formal or general features of the being outside of us, whose matter is informed by that same species-making soul. In the matter-based causal theories of perception of modern post-Copernican and post-Galilean philosophy, configurations of material particles are propagated through various intervening material media until the brain is affected, and then, somehow, the idea emerges in the mind. Locke shows that this emergence of the idea cannot be the direct consequence of the material action of the organs, because material forces only alter other material forces, and the idea, whatever it is, is not itself a configuration of material particles. Hence, *on the occasion of* the material interaction, the mind itself produces the corresponding idea. Thus for Locke, contrary to Aristotle, the external world never really enters the mind itself. The idea is produced out of the mind itself just as if, in the presence of certain circumstances, it remembers what it already knows. But this idea of Platonic anamnesis is precisely the doctrine of innate ideas that Locke so strongly opposes. In order to avoid this conception that the mind itself is the source of its ideas, Locke has to resort to the mind of God as the cause of the ideas within us. But then, says Berkeley, what is the point of all these material bodies interacting with one another and the mind in the first place? If on a superficial, purely materialist, view it may have seemed that the human mind requires them, Locke shows that they cannot cause ideas. If we must have resort to God, let us be consistent, says Berkeley: it is certain that God does not need them.

In the Preface to his *New Essays on Human Understanding*, in which he describes a dialogue between the representative of Locke's theory and himself, Leibniz contrasts the view of Aristotle and Locke, that the mind is a blank slate or *tabula rasa*, with that of Plato, for whom learning is a kind of remembrance or recollection. Thus Leibniz puts himself on the side of Plato on this matter.[23] At the same time, Leibniz also follows the directive of Descartes to derive all knowledge from the starting point of inner self-consciousness. In Descartes' theory of perception, the mind is not infiltrated by matter, but instead directly perceives the configurations of the particles of matter, materially representing some external reality, in the pineal gland, and on this basis produces its ideas. How does the mind do this? Not by receiving an impression from without, but by reaching out from within, just as in Plato's theory of perception the light of the mind shines from within to illuminate and thus to perceive the object existing outside it. However, whereas for Plato the mind shines on external objects at a distance from the body of the perceiver, for Descartes there is only the minutest distance to cross between the mind and its nearest organ, the pineal gland at the heart of the brain, where a physical representation of the external object actually exists. In this way, Descartes is able to respect the positions of material science on the physical actions of the body in producing thought without reducing the mind to a body impacted by other bodies, but also without resorting to God as the cause of our ideas.

In his conception of windowlessness, Leibniz is critical of the foundations of the classical externalist theories of representation from Aristotle to Locke:

> The Monads have no windows through which anything may come in or go out. The Attributes are not liable to detach themselves and make an excursion outside the substance, as could sensible species of the Schoolmen. In the same way neither substance nor attribute can enter from without into a Monad.[24]

Leibniz rejects the Aristotelian notion that the species of some thing detaches itself from the thing and goes on an excursion in which it penetrates the perceiver or thinker of that thing. He also rejects the modern notion that the primary or secondary qualities of things, through material causality, somehow, with the help of God, penetrate into the inner substance of the individual who produces representations or ideas of aspects of those things. Without such penetration from the outside, each monad is "windowless," self-contained inside its own consciousness, and yet capable of observing the rest of the universe as it were on television or radar screens, but without interconnecting cables or permeating electrical frequencies. Somehow, without penetration of the external world into the subject, we are capable of perception and knowledge. Objects in our immediate vicinity are most clearly represented, while the rest of the universe is more distantly and obscurely represented. Through the advances of science, the thinking, human spirit can perfect its representations so as to acquire ever clearer ideas about the universe as a whole.

Back to Plato's Theory of Perception

But how is this done without some sort of window through which the external world enters into our inner one? Before attempting to answer this question it is important to recognize that the traditional theory of representation itself conspicuously fails to answer this question. Hume's agnosticism is the outcome of this failure in the British tradition. Descartes' appeal to a perfect God as guarantor of the truthfulness of our thinking is an attempt to find completely reliable internal truthfulness in the very process of thinking itself. But until we have certainty regarding the nature of God we can entertain the possibility of being deceived by an evil demon manipulating our thoughts from outside us, just as our reliance on sense impressions produces illusions in ordinary experience. Perhaps then it is this externalist, causal theory of perception that produces the problem. According to this theory, external material objects somehow penetrate into consciousness, or at least as near to consciousness in the brain as possible. And yet this penetration from outside somehow leads to representations that are radically different in their make-up from the causes that produce, induce, or occasion them. How can ideal representations be said

to represent what is material and so radically unlike them? Berkeley poses a question that Hume answers by saying he doesn't know and doesn't care to speculate.

For Leibniz, as there is no material causality in general, there can be no such material causality at the origin of our perceptions. Moreover, there can be no metaphysical discrepancy between ideal representation and material thing represented, since the thing perceived is itself inherently "ideal." Thus the whole conception of thought as representation needs to be reexamined in the light of Leibniz's critique of spirit-matter duality. Either knowledge arises from without or from within. The "externalist" theory, starting with Aristotle, fails to give us a valid theory of perception and knowledge. Perhaps, then, Aristotle was premature in rejecting the "internalist" theory of Plato. Following this internalist line of thought of Plato, Leibniz argues that perceptions are awakened from within on the occasion of contact, or rather, as contact is itself an appearance due to the limitations of our ordinary perceptions, in the universal presence of other moving, evolving beings. In accord therefore with the inner desires or appetitive tendencies of the individual, the individual produces from within appropriate representations of the world around her in the presence of that world. It is not as though the individual varies its behavior as a result of those perceptions, and so adapts itself to its surroundings. Both desires and perceptions emerge from within the individual in accord with the inner unfolding of the individual's life. That the unfolding perceptions accord in fact with the world around us is not because that world enters the window of the soul. It is because of the harmony that exists between the inner unfolding of each individual and every other individual. Hypothetically, then, we could see the entire world as we do see it, while in fact there would be no other being than ourselves. But such an abstract possibility, being the very deception that Descartes imagines as a theoretical possibility, would not be in accord with the divine perfection and reason of which the monad itself is an "outflashing."

Such an inner unfolding of perception and thought in objective correspondence with the world around us is not the result of the action of that world on us, or our own adaptation to that world through the window of perception. Rather it is made possible by the fact that each being is in its essential nature inherently in a correlation with all other beings by virtue of the preestablished harmony. My own inner unfolding requires the presence and context of the other beings of the universe, so that just as I know myself, the "I" that I am, I implicitly know all the beings without which I could not become myself. In this way Descartes' starting point is consistently developed. The starting point of "I think" implicitly contains all the objects of thought within it. Of course there is the ordinary process of *a posteriori* learning, as in the new discoveries of biology, aided by the penetration of the microscope. But such *a posteriori* learning, once it is truly, that is, scientifically understood, coincides with *a priori* reasoning in the step-by-step construction of thought that corresponds

to the step-by-step unfolding of life itself. Leibniz's conception of knowledge therefore returns to that of Plato's anamnesis or remembering of what we already know. We already know, obscurely and implicitly, all that we are and will be, for what we are is the specific potential for unfolding that contains our destiny. Similarly, for Plato, perception is not a process by which properties of the external object penetrate us, but, on the contrary, a movement from within us to the object, a light that shines from within to illuminate the object that is outside of us, whose paradigm is already known and is awakened through the perception of the sensory surface of the thing. But for Leibniz, if nothing goes in, nothing goes out as well. Thus Leibniz out-Platonizes Plato. There is therefore much perplexity, and no doubt absurdity, for the student of Leibniz that was Kant to ponder and catch in error.

Universal Powerlessness

The idea that the inner life of the particular monad consists merely of mental representations without the power to affect anything else seems especially at odds with Leibniz's insistence that inner "force" or power is the core idea of the monad. It is this inner force that is supposedly missing in the Cartesian conception of matter. By stressing the deficiencies of mere extension, Leibniz supplements the Cartesian conception of "matter" with the assumption of inner "spiritual" energy capable of manifesting itself in observable physical movements and activities.

But Leibniz undermines the notion that inner force explains observed movement when he describes the inner life of the monad as consisting only of thoughts, of ideal representations, of perceptions and, in the case of humans, self-reflecting "apperceptions." True, these thoughts also involve "appetitions" or desires. They are not only theoretically oriented but also practically oriented. The monads move themselves. However, they are powerless to move anything outside of themselves, including their own bodies or, in the case of subordinate monads, subunits of a body. Since the body is a hierarchy of monads, each monad in the body is itself an independent self-moving entity that moves itself but doesn't move anything else. Monads therefore are powerful enough to resist outside forces, but powerless to effect anything outside themselves. Consider this passage from the *Monadology*, following the eloquent description of God as the "original simple substance" whose "outflashings" create the limited monads:

> In God are present: Power, which is the source of everything; Knowledge, which contains the details of the ideas; and, finally, Will which produces or effects changes in accordance with the principle of the greatest good. To these correspond in the

> created Monad, the subject or the basis of the faculty of perception and the faculty of appetition.[25]

There is a major discrepancy here between the Creator and the creature. Three faculties are described in the inner Trinitarian life of God: Power, Intellect, and Will. But in the creature there are only the analogous capacities of intellect (perception) and will (appetition). Power is noticeably missing. And yet it is the absence of inner force or power that Leibniz criticizes in the Cartesian representation of matter. Clearly, force or power is expressed in movement, but the movement of any complex body is not the result of the (dominant) monad itself. The monad "desires" motion, but the translation of the desire into effect is the result of the "mechanism" of the body itself. What this "mechanism" means for Leibniz is that each of the monads constituting the body follows its own purposes *as if* it were an automaton or self-moving machine whose movements are perfectly timed to correlate the desires or will of the other monads. The appearance is therefore completely mechanistic, although the inner reality consists of self-movements. The total result of the self-movements of the independent monads perfectly accords, amazingly, with the apparently deterministic laws of physics—with mechanistic, completely predictable, laws. The translation of ideal force in the creature into real force in the material world is not the result of the creature itself. It is due to the harmonization of completely independent lines of self-causation. The happy coincidence of these myriad independent movements cannot obviously be the result of chance, and so, on this basis, Leibniz demonstrates the necessity of divine planning, divine gardening, preestablished harmony.

Freedom Succumbs to the Orderly Dream

Instead of explaining how mind causes body and body causes mind, Leibniz denies all causal power, whether of human beings or blocks of marble, whereby one being moves another. It is necessary to think seriously about the reasons for what must have struck Kant as a preposterous outcome of the thought of his ingenious and captivating Master. Why does Leibniz not argue, for example, that when I will to move my arm, I in fact move it—and so must have the power to do so? The problem is clearly this: how is it possible to reconcile the self-evident idea that I freely will to move my arm with the requirement of modern science that the movement of my arm be in accord with a mechanistic movement of bodies—with a mechanism that, although only an appearance, is nevertheless predictable according to the strict physical laws of motion?

Malebranche holds that because I do not know how I move my arm, I am incapable of moving it. Leibniz, following his Master Descartes in his anticipation of Freud, enables us to recognize that we do many things without having

a clear or conscious understanding of what we are doing. Why we make the choices we do is generally not clear to us until, perhaps, after the fact. We generally operate on the basis of obscure or unconscious representations. Perhaps then at some obscure level of consciousness we know what we are doing when we translate our desires into actions. The chief problem is not, therefore, with lack of conscious knowledge about how to move one's body. The problem is, and has been from the beginning of modern philosophy, how to reconcile the mechanistic order and mathematically precise laws of modern science with the unpredictability and vagaries of human freedom. Leibniz takes a major step toward such reconciliation by arguing that the mechanistic order of physics is not a distinct ontological realm. It is on the level of secondary appearances of a "well-ordered dream" rather than being an independent metaphysical reality.

Certainly, Leibniz strives to justify the existence of a moral order in which individuals are responsible for their own actions and so independent of mechanical causality. The problem is how to acknowledge that moral order in a physical universe governed by mechanical laws that appear to be completely indifferent to the moral order itself. We cited Leibniz's assertion that "the organized mass [the body] in which the point of view of the soul lies, is expressed more proximately and finds itself in turn ready to act itself by obeying the laws of the bodily machine at the moment the soul wishes to act, without disturbing the laws of nature, the [animal] spirits and blood then having exactly the motions they need to correspond to the soul's passions and perceptions."[26] The problem is clearly expressed here: free, morally responsible behavior must take effect in accord with "the laws of the bodily machine . . . without disturbing the laws of nature." The two orders of action, soul and body—or, from a more esoteric metaphysical point of view, the inner self-movement of the monads and the outer appearances of the well-ordered dream—"correspond" without interaction. There is correlation without causation or interaction.

These laws of physics are completely indifferent to the dynamics of moral life. And yet every action of the moral agent must engage the "bodily machine" that implements her decisions. And that machine behaves *as if* it were governed by the actions of other machines and inserted into a larger machine, endlessly expanding towards larger cosmic totalities and smaller microcosmic ones. But how can this vast outward mechanistic order of the modern sciences relate to the internal order of the soul, with its free goal-oriented strivings that must be recognized everywhere in all beings of the universe? How can freedom be compatible with necessity? If the soul is truly free in the sense of being self-determined, and not in Hobbes's sense of fulfilling externally caused desires, how can the body, which must implement its commands, be itself the apparent arena of a purely mechanical order?

The soul of this apparent machine is not itself a machine. There is, parallel to this apparent physical mechanism and permeating it at every point, a spiritual

realm that underlies it and manifests itself in and through it. It is a major achievement on Leibniz's part to have discovered soul in a seemingly soulless mechanical realm. But because of the rigidity of the laws of this mechanical realm, that soul, it seems, must ultimately be a powerless one, incapable of accomplishing anything outside of itself. It has its own ideas and its own desires; but it cannot *itself* realize its desires or its moral decisions. It relies, Leibniz argues, on the actions of other beings.

Fair enough. To realize our own goals we require the cooperation of other beings. It takes two to tango. And that supposes that we each and every one of us does something to create the dance of life. But if everything depends on following precisely the steps of the divine architect, programmer, or choreographer, the spontaneity of the dance is destroyed, replaced by the robotic scheme that mechanistic science is capable of comprehending. Leibniz clearly wants to subordinate the laws of physics to free human decision. However, rejecting Descartes' proposal to separate the direction of motion from the quantity of the energy involved, Leibniz admits no possible variation in the outward show of mechanism and so is unable theoretically to allow for any freedom of movement.[27] Despite his best intentions, he therefore ultimately subordinates the moral order to the physical one. If the entire universe has been planned by God in advance to harmonize with my decisions, then not only are the external events strictly determined, but the whole course of my own life must remain fixed in the single trajectory that corresponds to the rigidly determined external motions. I must decide to raise my arm at the moment I do, because if I don't make that decision the arm is going to raise itself anyway. Then I would be in a strange place!

Metaphysical Freedom and Psychological Necessity

Leibniz recognizes this problem and provides a coherent reply to it. Fortunately, he says, although I *couldn't* make some move that doesn't harmonize with the unfolding of the monads that is required to implement that move—because if I did make such a move I would be out of sync with everything else—it is equally true that I *wouldn't* make such a move. And I wouldn't do so, not because I couldn't at least try to do so—for theoretically, as a free being, I could will to perform many alternative actions—but because it makes no sense for me to do something that is not what I think to be the best for me to do. And there is always only one such action that seems best, even if it's the one that comes up heads at the flip of a coin. Leibniz here rejects Descartes' idea that we could indeed do that which does not appear best for us—for good reasons, as when we want to show that we have freedom of will, as well as for bad reasons, when we take our mind off the good and let ourselves be filled with distracting or

fearful thoughts. For Leibniz, however, we never deviate from actions that we think are in alignment with our own best interests and unfolding identity, however obscurely perceived.

We need to backtrack over Leibniz's attempt to harmonize free will with the determinism of natural laws. Leibniz acknowledges that it is necessary to the concept of free will that I have the power to act otherwise than the way I do in fact act. It would seem then that a free choice must in principle be unpredictable. But since my decision to act differently ultimately affects, by the correspondences of events, the entire universe, at every moment two different universes must be possible. But how is this possible if God has once and for all preestablished *this* universe as the best one of all possible universes?

Leibniz severely strains the concept of freedom in order to make it appear compatible with his theory of preestablished harmony. He argues that human actions are "metaphysically free" in the sense that there is no inherent logical contradiction in our willing one thing rather than another, and it is theoretically possible for us to chose such alternatives. Choices are nevertheless "morally necessary" since each person always chooses what seems best, in the light of his given understanding of the situation. Such moral (meaning psychological) necessity allows for the predictability of actions that is essential to preestablished harmony. If I know enough about someone, I know that she will not walk out in the snow in her bare feet. Is that because she is determined? Or is it not rather because she always does what she believes is best for her in the moment, and clearly walking in the snow in one's bare feet does not seem, for most people, to be such a good idea. If this approach is sufficiently expanded, it is possible to say that all the actions of every creature are in principle predictable and yet also entirely self-determined and free. One wonders, however, whether such "moral necessity" is compatible with our normal understanding of moral experience. How can there be real moral responsibility if there are no *real* choices—really possible as opposed to merely logically possible—and the individual always chooses what seems best?

In chapter 2, we examined Kant's example of a person who believes that sexual desire is an overpowering, uncontrollable passion.[28] Let us suppose, Kant replies to this person, that a gallows is set up in front of the house where that individual wishes to satisfy his lust. There is little reason to doubt that the individual will be able to control his lust in the face of such an immediate and fatal consequence. What is best for the individual, clearly, is life itself. The option of death is only a theoretical possibility, not a real one. But that logical possibility is enough, Leibniz thinks, to warrant attributing free will to the individual. He could theoretically act differently, but because he is a rational agent he will not perform the irrational action that is theoretically possible. Hobbes would have seen in this example the proof of precisely the opposite position: that the individual's action is determined by the powerful desire for life. There is really no free choice here, says Hobbes, but only evidence for the greater

power of the desire for life than for sexual pleasure. However, Leibniz has refuted this Hobbesean determinism, and presumably Kant would agree with Leibniz's formulation of the matter. Although it is completely predictable that the individual will not go through with such a suicidal rendezvous in the house of ill repute, this is not because of the power of passion but because of the good sense of the individual, who will necessarily do what he thinks is best. He theoretically could, of course, go to his death, and so he has the power of free will, but such an action would be stupid. And so he does not do it. Hence the notion of preestablished harmony, which has him walking away from such a situation, is perfectly conceivable without implying any true or Hobbesean determinism.

Nevertheless, this example can still be cited as giving support to the position of Hobbes. And that's why, instead of reverting to Leibniz's abstract argument, Kant proposes a second example, which not only clearly refutes Hobbes, but creates a significant problem for the position of Leibniz as well. Suppose that an absolute monarch, who is trying to rid himself of a bothersome adversary, commands you to falsely accuse that person of a crime. If you refuse to do this, the king's assassins will kill you. What will you do in this case? Here there can be no clear prediction, Kant thinks. You will have to make a choice. On the one hand are all the forces of physical existence, urging you to do what is necessary to stay alive. On the other hand, there is moral conscience urging you to do what is right. Which of these choices is the "rational" one? Which is the best? One choice is rational or best from the perspective of preserving one's physical existence. The other choice seems rational or best from the perspective of those human spirits who of all beings, according to Leibniz, "aid one another the most, for only the most virtuous can be the most perfect friends." But does it really follow from this concept of an ideal society of friends and universal family that the individual will choose the high road of self-sacrifice—the path of love that Descartes and Leibniz regard as the morally true and good one?

Moreover, if the individual confronted with this alternative truly believes that betraying an innocent person to save his skin is the best possible action, how could we say that he is at fault in his betrayal? Moral fault is only an issue when a person chooses to betray an innocent individual all the while believing that this action is *not* in fact best. The potential betrayer knows that his betrayal is "best for himself," in some narrow sense of physical survival, but perhaps not the best in some higher sense. He therefore faces a serious choice between two different kinds of "best" actions. He may in fact acknowledge that what is best for himself as a physical individual is not really the best action over all. He may in fact believe that he *should not* betray the innocent man. But does it follow from this belief that he will in fact do what seems best to him? Kant supposes that the individual knows that the course of self-sacrifice is best, but he is not at all certain that a person placed in this situation would in fact do what he thinks is best. All that he wants to convince us of is that such a person *could* in

fact make such a choice—not in the abstract, theoretical sense of its being a logical possibility, but as a psychologically real, because morally required, possibility. For Kant, moral necessity does not mean psychological necessity, and far too often it does not in fact mean this.

Leibniz would argue, however, that a person who actually chooses to betray an innocent individual must do so out of an imperfect understanding of what is "best." If he chooses to betray the innocent person to save his life that is because he believes that this is really the best action. Given all the circumstances, and the limited understanding of the individual, this action is then "morally necessary." It is nevertheless metaphysically free, Leibniz argues, because it is possible, logically, to conceive of the alternative action without falling into contradiction. Thus there is a *logical* possibility of this individual not betraying the innocent individual. But such an action would be "morally" impossible: that is, it would not be possible psychologically, given the way the individual understands the options.

Such a presentation of the options seems to contradict our ordinary understanding of the nature of moral responsibility. For there to be moral responsibility, how can there be a psychological necessity that the individual sees betrayal as what is good or best? There is, of course, the pressure of egotistical desires that inclines him to the betrayal in order to save his own neck. At the same time, the alternative action of non-betrayal clearly stands before him. This is more than a mere logical possibility. It is what is morally demanded of him, and so it is seen by him to be a real possibility. He agonizes. He cannot sleep. What will he do? The outcome of this choice, Kant thinks, cannot be predicted in advance precisely because it is a free choice.

But for Leibniz, the "mechanism of the body" is supposedly already determined to move either in one way or another as a result of preestablished harmony. Leibniz does argue that this mechanism, despite the fact that it is in accord with the strictest laws of Newtonian physics, is only an apparent mechanism. In reality the appearances described by physics are the result of the "free" movements of all the monads that make it up. Nevertheless, such inner freedom does not imply a real possibility of deviation from what the external mechanistic law would predict. And so if the body is already determined to move in one direction, how can the soul or spirit face a real alternative? To make sure that the individual always chooses in line with the mechanism of the body, Leibniz argues that the alternative choice is only logically possible—meaning that it is not to be taken seriously as a practical option. Leibniz argues that individuals have freedom because it is always possible to conceive of an alternative action without contradiction. They nevertheless do not implement this conceivable alternative because it is not what they consider to be the best choice in terms of their limited understanding of what seems best. Because they necessarily do what seems best, their actions are psychologically necessary and foreseeable, and therefore compatible with the strictest laws of physics.

But the concept of moral responsibility, as seen in Kant's example, suggests a more complicated situation. In the moral situation, the individual does indeed conceive of two different actions, the one contradicting the other. Metaphysically he is free. But he is also psychologically free to choose because there are two opposing conceptions of what is best. It is quite understandable that individuals can truly believe that betraying innocent people is inherently wrong and yet, out of fear for their lives, proceed to do what they believe is wrong. In this way, they engage in an action that contradicts their own highest beliefs regarding what is best. They act for what is not best—even as they themselves see it. Or rather, there are two radically different ways of "acting for the best." One involves a focus on bodily continuity, in which the "mechanisms" of physical desire for continued existence require betrayal of a fellow "spirit." The requirements of the "republic of spirits," on the other hand, suggest to us that helping an innocent human being is what is best on the level of the totality. Ideally, there ought to be harmony between the two orders. The higher demands of the republic of spirits ought to prevail. In reality, we know all too well and sadly, there can be a really possible and not just logically possible contradiction between them. And so there must be an unpredictable choice between two courses of action. But then how can such a situation be reconciled with the mechanisms of nature that allow for only one course of action?

Chapter Fourteen

Justifying God's Ways: Kant's Progress from Leibniz through Pope to Rousseau

Voltaire's Satire of Leibniz: *Candide*

In 1759, Voltaire published his satirical novel, *Candide, or Optimism*, which lampoons the doctrine of Leibniz in the character of Dr. Pangloss. A young man, Candide, follows the lectures of Dr. Pangloss "with all the good faith of his age and his character." What did Dr. Pangloss teach his young student? Voltaire's novel describes the philosophy of Leibniz as follows:

> "It has been proved," said he, "that things cannot be otherwise than they are; for, everything being made for a certain end, the end for which everything is made is necessarily the best end. Observe how noses were made to carry spectacles, and spectacles we have accordingly. Our legs are clearly intended for shoes and stockings, so we have them. Stone has been formed to be hewn and dressed for building castles, so my lord has a very fine one, for it is meet that the greatest baron in the province would have the best accommodation. Pigs were made to be eaten, and we eat pork all year round. Consequently those who have asserted that all is well have said what is silly; they should have said of everything that is, that it is the best that could possibly be."[1]

The Lisbon earthquake is a central event in the early part of the novel. The powerful rulers of Lisbon, both secular and religious, choose what seems to them the best way of dealing with this event:

> After the earthquake, which had destroyed three-quarters of Lisbon, the wise men of the country had found no means more effectual for obviating total ruin that that of giving the people a fine *auto-da-fé*; it was decided by the university of Coimbra that

> the spectacle of a few people roasted at a slow fire, with grand ceremonies, is an infallible specific for preventing earthquakes. They had therefore seized a native of Biscay, who had been convicted of marrying a fellow god-parent, and two Portuguese, who in eating a fowl had rejected the bacon [Jews avoiding pork].[2]

As a result of the inquisitorial event, Candide is whipped and Pangloss himself is hung. Naively convinced by the arguments of Pangloss, Candide philosophizes: "If this is the best of all possible worlds, I wonder what the others are like!"[3]

Kant on Earthquakes

While such a presentation of Leibniz's philosophy involves great satirical exaggeration, biting sarcasm from one of the most influential writers of the time could not be simply dismissed by a serious admirer of Leibniz like the young Immanuel Kant.[4] Kant defends the general lines of the Leibnizian theory of theodicy in an essay on "An Attempt at Some Reflections on Optimism" in 1759.[5] In response to public interest in the Lisbon catastrophe, Kant also published some short articles on the nature of earthquakes. These were based on a monumental work of genius, Kant's 1755 treatise on the origin of the universe, *Universal Natural History*. There he argues that our particular corner of this universe, the earth, has come into being out of an orderly process in which primordial gases condense through gravitational attraction to form galaxies, suns, planets, and comets. Developing Descartes' ideas on the evolution of the cosmos, Kant antedated Laplace's (1749–1827) similar theory of cosmic evolution by eighteen years. However, because of publishing difficulties, few people knew of Kant's genial idea by which he "out-Newtoned Newton by offering a purely mechanical account of the structure and motions of the universe."[6] Kant's application of the theory of gravitational force to the universal interaction of the primal gases provides solutions to problems regarded as insoluble by Newton—problems such as why the planets revolve around the sun on the same plane.[7]

Reasoning from his larger conception of the formation of the universe from primal gases (suggestive of Leibniz's primal monads), Kant speculates that earthquakes may result from the eruption of gases still trapped within the earth. Although he is mistaken about the precise mechanism, his general point remains valid in the light of current theory. Earthquakes result from the same processes by which the earth came into existence in the first place. To question the occurrence of earthquakes therefore amounts to questioning the existence of our earthly planetary life itself. Since local disturbances such as earthquakes are a byproduct of the evolutionary processes that create the universe, they cannot be cited as grounds for doubting the existence of an intelligent creator.

If we attend to the magnificent grandeur of the universe in its orderly progression from chaos to cosmos, we should not find grounds to complain against God from the existence of certain inconvenient local disturbances such as the Lisbon earthquake. Such complaints derive from the point of view of particular, short-term human interests. Given the nature of a material world, events such as earthquakes are inevitable. The only real alternative to such local disturbances of the existing world would be no world at all.

From Leibniz to Pope: All That Is, Is Good

While he comes to the defense of Leibniz in the context of the Lisbon earthquake, Kant does not accept the Leibnizian perspective uncritically. Important criticisms appear in a series of short manuscripts written in response to an essay contest sponsored by the Prussian Academy of Sciences in 1753, two years before the Lisbon earthquake. The theme of the Academy contest was Alexander Pope's proposition, from his *Essay on Man* (completed in 1734), that "All is good." Writers were encouraged to compare Pope's position in his philosophical poem, *Essay on Man*, with that of "the system of optimism, or the choice of the best," that is, with the position of Leibniz and his followers.[8] Kant did not enter the contest, but he drafted a number of notes with this theme in mind. In these notes, Kant argues that Pope's view that "all is good" is superior to that of Leibniz, who argues, in effect, that not all is truly good, but only the best that is really possible.

Pope is clearly engaged in the same sort of theodicy as Leibniz. He concludes the preface to his *Essay on Man*:

> Eye Nature's walks, shoot folly as it flies,
> And catch the manners living as they rise:
> Laugh where we must, be candid where we can;
> But vindicate the ways of God to man.[9]

Pope anticipates a reply to Voltaire in declaring the purpose of his poem to be a vindication of the goodness of divine creation without thereby justifying the follies of mankind. Pope is therefore "candid" about human crime in a way that Voltaire's philosophically naïve Candide fails to be. Voltaire's satire reflected the way the rich and powerful might abuse the idea that we live in the "best of all possible worlds." However, just as Pope does not consider a justification of divine creation to be incompatible with "shooting folly as it flies," so Leibniz does not argue that the choices that *human beings* make are in fact always the best ones. While God really chooses for the best, one of those best choices is the choice to create free and fallible human beings, who only choose what seems best to them in the light of limited knowledge—not what is *really* the best.

Pope goes further than Leibniz, however, in his justification of God's ways. The passage from his *Essay on Man* in which the theme of the Prussian Academy contest was taken is the following:

> All Nature is but art, unknown to thee;
> All chance, direction, which thou canst not see;
> All discord, harmony not understood;
> All partial evil, universal good:
> And, spite of pride, in erring reason's spite,
> One truth is clear, Whatever is, is right.[10]

We recognize here some of the central themes of Leibniz's theodicy, but with a significant modification. Nature is divine art, but the Artificer is more skilled in Pope's vision than in that of Leibniz. In Leibniz's world God draws good in terms of the whole out of the evil that must play a role in the parts of the whole. All is *not* good, but only the best that is possible for a given combination of parts. It is the whole that is the best possible construction that can be made out of the parts with which God has to work. Pope seems to say the same thing: All partial evil is universal good. But he does not mean that the part is evil. It only seems to be evil from the point of view of our limited perspective. The apparent discords are really "harmony not understood."

Pope criticizes intellectuals who, in their "pride and erring reason," fail to grasp these truths. They think they can devise a better universe than the one that actually exists. Humility points the way to the truly profound insight that "Whatever is, is right." This final line of the first "Epistle" of the poem appears in the German translation that Kant read as "*Das alles das, was ist, ist gut*": Whatever is, is good.[11] The problem with Leibniz's optimism, Kant argues, is not that it is overly optimistic, as Voltaire charges, but that it is not really optimistic enough. In the first place, in the Leibnizian scheme God is not capable of creating certain good things that He would like to create. When God considers the possibilities of creation, but puts these together with other possibilities, He finds that they are incompatible with one another. He is therefore constrained by limitations inherent in the problem of *combining* different "perfections" to exclude certain of them because they are not compatible with others.

For example, there appears to be a conflict between creating people who are perfectly good and creating people who are perfectly free. Both are desirable "perfections" but they cannot coexist in the same universe. God is like the captain of a ship who, to save the vessel as a whole, has to throw some of the cargo overboard for the sake of the whole, while other matters He would not like to have must be tolerated for the good of the whole. Constrained against His will by the necessities of composition or harmonization of independent possibilities, Leibniz's God is similar to the gods of Epicurus, who are subject to an overriding Fate.

All, therefore, is not good in Leibniz's conception of the universe. It is only on the whole or on balance that creation is good. Leibniz insists that creation contains more good than evil, more happy individuals than miserable ones—though that may not be evident to us (nor even true in our miniscule corner of the universe). The displeasure that certain evils evoke, in God's mind as well as in the minds of morally sensitive individuals, must be compensated for by the good that God is able to bring out of them, after the fact or because of beneficial consequences. Often such "silver linings" work in mysterious ways that finite human minds cannot comprehend. We should therefore be grateful, as Candide says, that the world is not even worse than we perceive it to be. Despite witnessing true horrors, we are encouraged to believe that a greater good is somehow being served.

Troubling Arguments for God's Existence

Kant agrees with the logic of Leibniz that *if* we grant the existence of a God who is perfection itself it follows that a greater good must come out of any partial evils that must be admitted into creation. A perfectly good God, after all, is not a sadist and will make the best of the mixed materials with which He has to work. Kant disagrees, however, with the general structure of this argument, and with the "troubling"[12] way in which Leibniz argues for God's existence in the first place. For Leibniz does not argue for God's existence from the perfection of the world that we see around us. He can't do this, in fact, if the world around us really includes evils that even God cannot exclude from his creation.

For Leibniz our belief in the goodness of the whole cannot stem directly from examining the universe itself. The world that we observe—that is, the parts of the larger universe that are evident to us in our particular corner of it—may in fact not be very good, not in fact optimal, whether in human judgment or in the judgment of God Himself. Although undesirable in themselves, such realities must be tolerated as necessary to the good of the whole. It follows from such an approach that our belief in the goodness of the whole cannot be based on a consideration of the goodness of those aspects of reality that we understand, since these aspects may in fact be horrible. The premise of the argument for the goodness of the whole is therefore not the goodness that we in fact empirically observe or experience, but merely the existence of the divine Creator, the organizing principle that is capable of bringing about the best results possible given the inevitable imperfections of creation.

How then do we know that the premise of the argument is itself valid? How do we know, in the first place, that the universe has been created by a supreme wisdom? We cannot use the simple, most readily comprehensible argument: from the wonderful harmony that we in fact see around us. We cannot use this argument because, according to Leibniz, what we see around us, in our

particular corner of creation, may be marked by imperfections, disharmonies, and evils that even God Herself is obliged to tolerate for the good of the whole. Since we cannot use the simplest and most convincing argument for the existence of creative wisdom, we must resort to more abstract and complex, more "troubling" arguments. Our belief in God's existence must rest on other grounds than observable perfections and harmonies. Kant writes:

> Leibniz admitted that the irregularities and imperfections, which upset those who are of good disposition as if they were true imperfections, were indeed true imperfections. But he reserves the right to excuse the Supreme Wisdom, which he acknowledges for other reasons, for the responsibility of admitting such imperfections. Thus, the properties of God are placed in safety to the satisfaction of those who have enough understanding and sufficient submissiveness to applaud the metaphysical proofs of the Divine Existence. As for the rest of those who are willing to acknowledge that contemplating the world reveals traces of God—they remain troubled. Pope chooses a path which, when it comes to rendering the beautiful proof of God's existence accessible to everyone, is the best suited of all possible paths. This path—and it is precisely this which constitutes the perfection of his system—even subjects every possibility to the dominion of an all-sufficient original Being; under this Being things can have no other properties, not even those which are called essentially necessary, apart from those which harmonise together to give complete expression to His perfection. Pope subjects the creation to detailed scrutiny, particularly where it most seems to lack harmony; and yet he shows that each thing, which we might wish to see removed from the scheme of greatest perfection, is also, when considered in itself, good. He also shows that we should not beforehand entertain an advantageous prejudice in favour of the wisdom of the Organising Being, in order to win applause for Him. The essential and necessary determinations of things, the universal laws which are not placed in relation to each other by any forced union into a harmonious scheme, will adapt themselves as if spontaneously to the attainment of purposes which are perfect.[13]

In Kant's meaning, we can see how Descartes uses such a "troubling" argument when he reasons from the *idea* that we have of perfection to the existence of Perfect Being. This idea of perfection is not derived from observation of perfections, but from the recognition of imperfections, which is possible only because we have within us an idea of perfection. Descartes' argument for God's existence is compatible with a miserably imperfect finite existence, as long as we are capable of recognizing it to be so. Descartes himself admits that such an argument requires extended concentration of mental powers to be

comprehended. It is not the simple and directly persuasive argument that Kant finds in Pope.

Leibniz stresses three arguments for God's existence, one from existence itself, a second from the need for sufficient reason, and a third from preestablished harmony. Leibniz argues for divine creation from the mere fact of existence, however paltry and horrible it may be in its partial realization. It is as though he were to argue that miserable beings can explain their own misery, but not the fact that such misery *exists*. The argument from mere existence, borrowed from Descartes, must therefore be deemed troubling, and hardly accessible to the common ways of thought. In addition to this argument from existence, Leibniz argues from the need for a sufficient reason for every event. This argument runs parallel to the Hobbesean argument that the chain of causes can never be "sufficient" unless we suppose a First Cause. But Leibniz holds that the chain of causes is merely phenomenal, since nothing really affects anything else. As the chain of causes is an illusion, Leibniz replaces this with the search for reasons, and ultimately for a "sufficient reason" for the confluence of events involved in every action. Inference to God's existence from such unreal appearances of causal interaction can hardly be a straightforward one, and seems therefore also troubling.

Leibniz must therefore focus attention on what he calls his most original argument—from the need for preestablished harmony. But this is the most troubling argument of all, since it is based on the very implausible notion that nothing affects anything else. A world of solipsistic monads of course would require preestablished harmony to explain the correspondences of the isolated existences. If we suppose the underlying independence of the movements of the myriad entities involved in a particular action, the mere fact that my arm moves when I will it to move, is either a tremendously implausible coincidence, or an astonishing outcome of their divinely preestablished harmony.

We have spoken of synchronistic harmonies between people, such as meeting one's life mate in the most seemingly fortuitous circumstances. But this was an attempt to put the rosiest face on it. What about disastrous encounters? We are assured that the best outcome possible can emerge from the disaster. But this is hardly a reassuring perspective, as Candide recognized. And as to the event itself, this may be one of those partial evils admitted only reluctantly by a God constrained by the greater evil of all the alternative choices. Having proven that the economy of Western Europe is the best of all possible earthly societies, Adam Smith, in the spirit of Leibniz, effectively tells the Scottish mother who suffers the loss of ten children from starvation: think of how much worse your naked African sisters must have it.

A much better proof for God's existence, if it is defensible, is the way of Pope, which is to find perfection everywhere, in the parts as well as in the whole. From the perfection of the creation in whatever corner of nature one looks, it is then but a short step to the idea of a perfect Creator.

Calculation of the Lesser of Two Evils: Wolff's Ethics

Let us consider the alleged necessity for God to permit imperfect beings with free will to commit evil instead of creating perfect beings to begin with. People of good disposition, Kant affirms, are particularly disturbed at humanly created evil. According to Leibniz's representation, God too is upset by this possibility, but is forced to tolerate this "necessary evil" by the preferability of creating free human beings. Believing in the creative wisdom, such well-disposed people are required to suppose that God brings, from out of such evils, benefits to the whole that outweigh them. One might here imagine Candide, upon witnessing the butchery of the Inquisition, finding consolation in the thought that all other possible worlds would be even worse than this one. Kant represents Leibniz's argument as follows:

> However, the choice of the lesser of two evils, of which one was the lack of freedom and the other the morally best, was an unavoidable necessity. And even in the best plan there were other impediments which could have induced God, from fear of even greater irregularities, not to institute certain motive causes, which might have been able to prevent some kinds of evil. In a word: nothing else was possible; evil had to be. Gratitude is due to the Eternal Wisdom for having admitted only the smallest amount of evil, and for having executed everything in the whole to his glory in the most magnificent fashion.[14]

In Leibniz's perspective, God chooses freedom with the perspective of moral progress over instant moral perfection. Is this really the only choice? Kant suggests another possibility. Granted that human beings must have the *possibility* of committing evil. But why are they so readily inclined to do so? Could not God have created people whose "motive causes" involve a much more forceful inclination to the good without absolutely violating freedom? Why are the created natures so readily, so naturally, so spontaneously inclined to selfishness, rather than to loving their enemies—or even their neighbors? We are told that God must have considered such possibilities and found them preferable in themselves. However, he had to exclude them because of even greater irregularities, about which we can only speculate, that must ensue in a world in which individuals love one another more directly and forcefully than they love themselves. If the world is the creation of a rational being, there must be a discernable reason for this choice, as well as the prospect of a higher good for the whole, compensating for the permitted evil in the part. This higher good should come out of the substitution plan in which the evident evil of our egotistical inclinations replaces the alternative good of our having more forcefully loving natures. But Kant cannot conceive of what this reason might be,

nor do we "yet see what the real effect will be of the substitution, which is intended to compensate the whole for its partial defects."[15]

In terms of narrowly conceived ethical theory, this calculating approach of Leibniz's God is accentuated by the chief follower and systematic exponent of Leibniz's thought, Christian Wolff (1679–1754). In his *Ethics* (1720) Wolff translates Leibnizian spiritual vision and metaphysical thought into ethical maxims and methods of decision-making. Thus the main moral maxim for individuals is that of seeking perfection: "Do what makes you and your condition, or that of others, more perfect; omit what makes it less perfect."[16] Which action is the more perfect one is however difficult to know, because knowing this consists in estimating future consequences of the possible actions. An implication of this position is that learned or scientific men are better able to discover the path of virtue and perfection, which is simultaneously the path of happiness. Wolff sees no basic conflict between the pursuit of one's own perfection and happiness, and that of the perfection and happiness of others. Following Leibniz's view of the unity of humanity, Wolff writes that "we are obligated to see others as if they were one person with us."[17] However, calculation of the greatest amount of good or perfection can require certain trade-offs between one's own good and that of others. J. B. Schneewind summarizes:

> The lesson Wolff derives is that amounts of good are the sole considerations to be weighted in making decisions. I need not help another to a good he can procure for himself, though I am bound to help him where he needs assistance. If, however, the damage to myself would be greater than the benefit to him, the obligation to help ceases. Similarly, a promise binds only because of the good the promised act will bring about; promising as such adds nothing to the obligation to do the act, and if it turns out that I would obtain more good from breaking my promise than you would get from my keeping it, I should break it.[18]

Kant objects to this mode of ethical reasoning in which individuals weigh up possible goods to come out of an action in order to justify committing apparent, or even real, evil—following, according to Leibniz, the example of the Creator himself. Pope, Kant thinks, provides a more appealing conception of the divine creation and the moral order deriving from it.

Self-Love: The Origin of Beautiful Harmony

If we look more closely at the offending "parts" of creation, we will discover a perfection in them that was unsuspected at first. We will see that these parts are not evils that are tolerated for the sake of a greater good. They are inherently good in themselves. Kant's rejection of Wolff's consequentialist or utilitarian

ethics of larger good outcomes in the whole justifying evils in the particular parts follows from his defense of Pope's position that *all* is good. From the perspective of Pope, the moral rightness of an act is not based on a calculation of the balance of good and evil, as found in its anticipated consequences. The act itself, in its intrinsic nature, is inherently good. The goodness of a particular action is found in adhering to the inner requirements of the act itself. Evil consists in freely violating those inner requirements.

Pope, Kant thinks, shows that the seemingly offensive inclination to self-love is not merely tolerated because of the larger good. It is not an undesirable evil out of which God draws some higher good. It is good in itself. It is the indispensable means by which the harmony of the whole is produced. These "parts," the particular actions motivated by egotism, are not necessary evils to be tolerated for their contribution to the good of the larger whole, but good in themselves because of the role they play directly in producing the over-all harmony of life. The higher good or harmony does not overcome the necessary evil. It is a result of this so-called evil, which we then see is not really evil at all. It is not necessary to bring two different things into a "forced union" imposed from the outside through a balance of evils and goods. The seemingly offending inclinations, such as those governing much of human motivation, turn out, on closer inspection, to "adapt themselves as if spontaneously to the attainment of purposes which are perfect."

Kant continues the paragraph cited above:

> Self-love, which has as its only purpose one's own pleasure, and which seems to be the manifest cause of the moral disorder which we observe, is the origin of that beautiful harmony which we admire. Everything which is of use to itself also finds itself constrained to be of use to other things, as well. The universal bond, which links the whole together in a fashion which has not been examined, ensures that individual advantages always relate to the advantage of other things, and do so in a perfectly natural sequence. Thus, a universal law of nature firmly establishes the love which maintains the whole, and it does so by means of the motive causes which also naturally produce that evil, the sources of which we would happily see destroyed.[19]

The central issue is that of justifying self-love as something good in itself. The powerful natural inclination to seek one's own individual good would appear to contradict the ideal of moral perfection, which is universal love. Is this observably natural human tendency to pursue the satisfaction of one's individual desires merely a "necessary evil" that God is obliged to tolerate for some inscrutable reason? Wouldn't it be preferable for God to create individuals who naturally loved each other and the universal good more than they love themselves? They could of course still choose to be egotists, despite the fact that this

goes against the grain of their loving natures. They would have the Leibnizian "logical possibility" of engaging in such unnatural acts, and so would, by Leibniz's reasoning, be truly free. But Pope finds a good reason for God to create human beings as we find them, with powerful motives of self-love. Rather than a necessary evil, Pope sees this primacy self-love to be a necessary good:

> Two principles in human nature reign;
> Self-love, to urge, and reason, to restrain;
> Nor this a good, nor that a bad we call,
> Each works its end, to move or govern all:
> And to their proper operation still,
> Ascribe all good; to their improper, ill.
> Self-love, the spring of motion, acts the soul;
> Reason's comparing balance rules the whole.
> Man, but for that, no action could attend,
> And but for this, were active to no end:
> Fixed like a plant on his peculiar spot,
> To draw nutrition, propagate, and rot;
> Or, meteor-like, flame lawless thro' the void,
> Destroying others, by himself destroyed.[20]

Yin and Yang

Two principles therefore balance one another—one is tempted to say, like Yin and Yang in the ancient Chinese cosmology. In a book on the Chinese art of Feng Shui, Nancy SantoPietro presents a similar Eastern theodicy:

> The whole premise of Feng Shui is based on the universal yin-yang principles that are said to govern all mankind. In short, these principles espouse the belief that all facets of nature (and mankind) have both negative and positive aspects. This does not refer to good versus bad, but rather to opposing aspects that depend on each other's existence to create wholeness. For example, without night we wouldn't know day, without hot we wouldn't have cold, without winter we wouldn't see summer, etc. *Many of Feng Shui's theories take their cues from nature and try to bring indoors the beauty and perfection of God's original floor plan . . . the environment of our world.*[21]

The apparent "bad" things, such as winter or self-love, are not merely tolerated for the sake of something else, as if for some reason God could not create a world where there are only summers, or a world in which people love one another more readily than they love themselves. While there can be worlds in which temperatures would uniformly fall in the "summer" range, in such

worlds there would be no "summers" in the sense that we understand them. In tropical climates one does not find "sun worshippers." Only the person who has gone through winter fully appreciates the beauty of summer. It is only through the contrasting opposites that the "perfect" whole itself exists. And that means that one pole is not "good" and the other "bad," but that the seemingly "bad" pole is really good, because without it the good could not be appreciated. *All is therefore good.*

Thus, Pope maintains in the passage above that self-love and reason are two complementary principles of human life. Neither the one nor the other is "good" or "bad." What is "bad" or evil are not the principles themselves in their "proper operation," but only the improper way of relating them. Self-love is the moving spring of action. Reason gives long-range goals to those actions by enabling us to balance one end against another or compare one with another. If we merely reasoned with no impulse to action arising out of our own needs, we would go nowhere, but vegetate and rot. On the other hand, if motivated solely by self-love, as in the supposed state of nature imagined by Hobbes, we would burn ourselves up along with everything else, like meteors flashing across the sky only to plunge chaotically into the earth.

It is important to keep this background in mind in an examination of Kant's mature ethical theory. Contrary to common interpretations, Kant never holds that morality is about suppressing "self-love." Without this initial impetus from self-love, passionate feeling, or self-interest, there would be no action whatsoever. Immorality consists rather in isolating this "polar force" from the opposite pole of rational reflection. It is just as "immoral," then, to adopt a purely rational perspective, cutting ourselves off from the personal, passionate motives of life, as it is to adopt the irrational perspective of orienting everything exclusively to oneself, one's selfish desires, inclinations, and spontaneous feelings.

Rousseau Too Wakes Up Kant

In Kant's early cosmogony, inspired by Leibniz with the important emendations of Pope, a self-moving, harmonious, love-bound universe unfolds before the astonished mind of the contemplator of creation. What better evidence is there of the magnificence of the Creator than a creation that so closely approximates the loving nature of God?

And yet, is it not a little disturbing that at the very moment when Europe is grappling with the tragedy of the Lisbon earthquake, when Voltaire adds to this reflection even more bitter commentaries on the cruelties of mankind, we see Kant endorsing Pope's enraptured paean to the perfection of creation? It takes a great deal of confidence in the insights of metaphysical thought to boast, at such a time (no doubt, at any time), that "Whatever is, is right!"

A much more sober and morally sensitive estimate of the world we actually see around us, it seems, is found the following note from Kant's work of 1763, *Observations on the Feeling of the Beautiful and the Sublime*:

> Upon a closer consideration one finds that as amiable as the compassionate quality might be, it still does not have the dignity of a virtue. A suffering child, an unfortunate though upright lady will fill our heart with this sadness, while at the same time we hear with indifference the news of a terrible battle in which, obviously, a considerable number of the human species must suffer undeservedly under horrible evil. Many a prince who has averted his face from sadness for a single unfortunate person has at the same time, and often from a vain motive, given the command to make war. Here there is no proportion in the result; how then can anyone say that the universal love of man is the cause?[22]

Kant's *Observations* were written shortly after reading *Emile or On Education* (1762) by Jean-Jacques Rousseau (1712–78). The story that Kant broke his rigorous work schedule on the occasion of his having obtained this book may be spurious,[23] but the passage cited below, written at this time in his life, reflects the revolutionary significance that Kant attributed to Rousseau. Kant famously wrote, in his later *Prolegomena to Any Future Metaphysics*, that thanks to his reading of Hume—which took place about the same time as he encountered Rousseau—he was awakened from his "dogmatic slumber."[24] He was referring to the effect of Hume's work on his early metaphysical speculations about the universe, God, and immortality. But he could just as well have made the same remark about the impact on his moral thought produced by the reading of Rousseau. In a set of notes composed following his reading of Rousseau, Kant writes:

> Newton was the first to see order and regularity bound up with great simplicity, where before him disorder and badly matched manifoldness were to be met with, whereas since then comets travel in geometric course. Rousseau was the first to discover under the manifoldness of the available shapes of mankind man's deeply hidden nature and the concealed law according to which providence through its observation is justified. After Newton and Rousseau the objections of King Alfonso and the Manicheans are no longer valid, God is justified, and Pope's teaching is henceforth true.[25]

In describing Rousseau as the Newton of the moral science of humanity, Kant breaks sharply from that tradition of philosophy that attempts to extend Newtonian theory into the human or moral realm, and to see in Newton's mechanics the scientific foundation for understanding human affairs. This is the project of Hobbes that culminates in the philosophical theory of Hume and the economic science of Smith. But it also permeates the works of Locke,

Descartes, and Leibniz, each of whom seeks to reconcile deterministic physical laws with the human world of free choice. Instead, Kant calls for a radically new beginning in moral theory, for which the works of Rousseau supply the place that Newton holds in the physical realm.

Kant's main work up to this time was his *Universal Natural History*, containing genial contributions to the evolutionary understanding of the physical universe. In this work, we find a paean to the majestic harmony of the external universe and to the internal wonder of human intelligence capable of appreciating that harmony. In his later rendition of this hymn to the universe, in his *Critique of Practical Reason*, Kant retains his appreciation of the "starry heavens above,"[26] but substantially shifts his conception of the locus of human worth. It is not to the human *intellect* as the capacity within us to comprehend the laws of nature that we should look with wonder, but to the capacity within us to break with such laws as a result of our awareness of a higher *moral* law. Hume's empiricist skepticism helped undermine Kant's confidence in the powers of reason to understand the universe. But Rousseau's moral orientation in metaphysics, which we will consider in the next chapter, gave Kant his distinctive direction for overcoming the skepticism of Hume and adopting a radically new approach to issues of metaphysics. Rousseau's work impelled Kant to shift fundamentally from a largely theoretical-speculative focus, inspired by the rationalist tradition from Descartes and Leibniz, to a practical-moral one.

Rousseau Reinterprets Hobbes

Prior to the influence of Rousseau, Kant shared the "optimism" that characterizes the "enlightened" thinkers of the age. For the classical enlightenment, the advance of the science of nature is integrally connected to a comparable and parallel progress in human affairs. Pope's poem, after paying due respect to traditional Christian theories of the fall of man and the possibilities of human wickedness, portrays a kind of progressively positive outcome of the polar forces of reason and self-love that leads to moral progress. Taken by itself in isolation, self-love drives individuals to extremes of selfishness. But in the group, where mutual egotism produces suffering for all, such evils stimulate rational human beings to restrain themselves, by way of the social contract, to the rule of government and positive laws. In this way Pope effectively gives poetic license to the thought of Hobbes. The clash of egotistical wills, Hobbes explains, renders the material accumulations of greedy individuals exceedingly precarious. In the state of nature, the powerful do not sleep soundly in their beds. Such insecurity drives them to acknowledge the equality of human beings and to accept basic legal limits on their power. Pope endorses the Hobbesean view according to which enlightened self-love leads to the imposition of laws and concomitant peace. Echoing "The Fable of the Bees; or, Private Vices,

Publick Benefits" (1714) by Bernard de Mandeville (1670–1733), Pope explains how private vices become public virtues. Egotism, duly restrained by law, becomes a necessary part of the dynamic of progress. This concept is continued and perfected in the economic theory of Adam Smith, according to which the restrained, "rational" pursuit of self-interest leads us towards the best of all possible worlds. No doubt, Pope says it all, in pithy rhyme and dialectical paradox, far better than anyone:

> So drives self-love, thro' just and thro' unjust,
> To one man's power, ambition, lucre, lust:
> The same self-love, in all, becomes the cause
> Of what restrains him, government and laws.
> For, what one likes if others like as well,
> What serves one will, when many wills rebel?
> How shall he keep, what, sleeping or awake,
> A weaker may surprise, a stronger take?
> His safety must his liberty restrain:
> All join to guard what each desires to gain.
> Forced into virtue thus by self-defense,
> Even kings learned justice and benevolence:
> Self-love forsook the path it first pursued,
> And found the private in the public good.[27]

What a difference from this "optimistic" perspective did Kant find in Rousseau's sardonic revision of the story of the birth of the state. Rather than suppose with Pope that the foundation of the state is the fact that "All join to guard what each desires to gain," Rousseau rejects the Hobbesean premise of a "war of all against all." The real war is not a war primarily between individuals but between classes: the rich against the poor and the poor against the rich. In Rousseau's account, which accords with the essentials of both early Greek and Roman history, the rich, establishing their control over greater and greater amounts of land, find themselves opposed by an impoverished but armed majority. The landed aristocracy therefore faces the prospect of violent expropriation by the landless poor in the war of class against class. The outcome of this situation was, Rousseau writes, a very cunning plan:

> [T]he rich [man], pressed by necessity, finally conceived the most thought-out project that ever entered the human mind. It was to use in his favor the very strength of those who attacked him, to turn his adversaries into his defenders, to instill in them other maxims, and to give them other institutions which were as favorable to him as natural right was unfavorable to him.
>
> With this end in mind, after having shown his neighbors the horror of a situation which armed them all against each other and

> made their possessions as burdensome as their needs, and in which no one could find safety in either poverty or wealth, he easily invented specious reasons to lead them to his goal. "Let us unite," he says to them, "in order to protect the weak from oppression, restrain the ambitious, and assure everyone of possessing what belongs to him. Let us institute rules of justice and peace to which all will be obliged to conform, which will make special exceptions for no one, and which will in some way compensate for the caprices of fortune by subjecting the strong and the weak to mutual obligations. In short, instead of turning our forces against ourselves, let us gather them into one supreme power that governs us according to wise laws, that protects and defends all the members of the association, repulses common enemies, and maintains us in an eternal concord."
>
> Considerably less than the equivalent of this discourse was needed to convince crude, easily seduced men who also had too many disputes to settle among themselves to be able to get along without arbiters, and too much greed and ambition to be able to get along without masters for long.[28] They all ran to chain themselves, in the belief that they secured their liberty, for although they had enough sense to realize the advantages of a political establishment, they did not have enough experience to foresee its dangers. Those most capable of anticipating the abuses were precisely those who counted on profiting from them; and even the wise saw the need to be resolved to sacrifice one part of their liberty to preserve the other, just as a wounded man has his arm amputated to save the rest of his body.
>
> Such was, or should have been, the origin of society and laws, which gave new fetters to the weak and new forces to the rich, irretrievably destroyed natural liberty, established forever the law of property and of inequality, changed adroit usurpation into an irrevocable right, and for the profit of a few ambitious men henceforth subjected the entire human race to labor, servitude and misery.[29]

In Rousseau's reinterpretation of the theory of the origin of the state, Pope's idyllic chain of love turns out to be a self-imposed chain of servitude. "Man is born free," Rousseau writes at the beginning of *On the Social Contract* "and everywhere he is in chains."[30] The vaunted progress of civilization is a sham, a delusion, a guileful deception of the gullible many guaranteeing continuation of the unjust privileges of the few. Not only did the progress of civilization not bring about moral progress, but the reverse is actually the case. As a social elite becomes wealthier, more learned, and sophisticated, it loses contact with basic moral understandings that are the natural impulse of every human individual. Such innate moral dignity, Rousseau holds, is more evident

among peoples whom Europeans disdainfully call savages than among the so-called civilized Europeans themselves. Rousseau here reverses the comparative judgment that Adam Smith was to make a few years later when he asked the impoverished European mother to compare herself with the "naked savages"[31] of Africa. But whereas Smith compares the poor peasant with Africans living under a supposed tyranny, Rousseau measures rich Europeans with the free natives of North America. What primarily matters for Rousseau is not wealth as measured by the goods of industry, for with the competitive struggle for such wealth comes a life of fear and a sense of futility—the inner spiritual side of the outward magnificence of material production. What matters is the sense of human freedom that has by and large been lost in the economic jungle that produces the vaunted material successes of the most economically advanced societies:

> Now I would very much like someone to explain to me what kind of misery can there be for a free being whose heart is at peace and whose body is in good health? I ask which of the two, civil or natural life, is more likely to become insufferable to those who live it? We see about us practically no people who do not complain about their existence; many even deprive themselves of it to the extent they are able, and the combination of divine and human laws is hardly enough to stop this disorder. I ask if anyone has ever heard tell of a savage who was living in liberty ever dreaming of complaining about his life and of killing himself.[32]

Kant's Mind Bows

Rousseau had a profound impact on French prerevolutionary intellectual life as well as on the ethical and political ideas of major figures in the American Revolution such as Thomas Jefferson. Writing in the rigid hierarchical conditions of eighteenth-century German feudal society, Kant says that he has learned democratic respect for the common person from Rousseau. In notes in his copy of *Observations*, Kant writes: "The belief in inequality makes people unequal. Only the teaching of Mr. *Rousseau* can bring it about that even the most learned philosopher with his knowledge uprightly and without the help of religion holds himself no better than the common man."[33] In the *Critique of Practical Reason* Kant gives expression to this Rousseauian democratic egalitarianism:

> Fontenelle says, "I bow to a great man, but my mind does not bow." I can add: to a humble plain man, in whom I perceive righteousness in a higher degree than I am conscious of in myself, *my mind bows* whether I choose or not, however high I carry my head that he may not forget my superior position.[34]

Beneath the hierarchical social distinctions that authorize him to hold up his head before passing a "humble, plain man," his mind inevitably bows if he recognizes in this man a higher degree of moral integrity. Kant underlines the words, "his mind bows." The mind in this way recognizes a higher standard even than scientific or philosophical genius or ingenuity. Implicit in this formulation of respect for the plain humble man of high moral character, Kant recognizes a fundamental discrepancy between science and morality. In the *Critique of Pure Reason*,[35] Kant distinguishes three fundamental questions for philosophy: What can I know? What ought I to do? And, What may I hope? The first question, "What can I know," is addressed primarily to the "learned." Interest in this question presupposes literacy, intellectual education, and years of study leading to mastery of basic sciences such as geometry, mathematics, physics, etc. To understand the theory of knowledge it is necessary understand Newtonian physics and the general features of scientific thought. But the question, "What ought I to do?" is addressed to any individual with the basic common sense or reason that Descartes saw in all human beings. Contrary to Descartes, however, moral understanding is not primarily the result of a lengthy chain of scientific reasoning. Contrary to Leibniz and Wolff, moral perfection does not require complex calculations of consequences and a balancing of good and evil. Answers to the question, "What ought I to do?" are not based on acquiring information from the external world, but on an understanding coming "from within" of how a person ought to act. It is only on this basis of inner moral understanding that the third question, "What may I hope?" can be addressed.

Philosophical ethics, since it is the philosophical *study* of morality, does of course require intellectual preparation. Philosophy demands an ability to reflect in a disciplined way on general, very abstract concepts. But thanks to the teachings of Rousseau, Kant learns that moral knowledge already exists in the minds of simple, ordinary people, not necessarily well educated or theoretically inclined. To know what it is that we are supposed to be studying in our philosophical ethics, to know what morality itself is, something in addition to intellectual skill is necessary. Our minds must be prepared to bow, as Kant's did, before the plain man or woman, perhaps with much less formal education than ourselves, in whom we perceive a degree of moral integrity superior to our own. A valid ethical theory must be based on such a recognition.

Thanks to Rousseau, Kant breaks sharply with the rationalist line of thought beginning with Descartes and continuing through the ethical writings of Wolff, for which progress in moral perfection follows from scientific advancement and intellectual skills. An elitist ethics based on scientific knowledge and on calculations of long-range consequences, which Leibniz attributes even to God Himself, cannot therefore be correct. The complex calculations and weightings of goods and evils to achieve the "best possible" results are foreign to the radically different conception of the nature of morality taught by

Rousseau. But equally disturbing for a democratic sensibility is the empiricist line of thought as epitomized in Hume's equation of morality with deterministic feelings, above all with the passionate feeling that assures the elite members of society that the great inequalities of society conform to the dictates of justice. And when Adam Smith dispassionately ascribes the birth of the state to the calculating interests of the rich against the poor—showing here that he has read and accepted the doctrine of Rousseau—there is no sense of disapproval, but instead an affirmation that the inequalities cemented by both economic and political laws are characteristics of the best of all possible worlds, as defined by a calculating God, operating through the permutations and combinations of the market.

New Starting Point for Human History

If one can find moral dignity in a simple person, in an upright peasant—if the minds of those of superior social status must inevitably, if reluctantly, bow before such individuals—how account for the discrepancy between the dehumanizing, external standards of the dominant civic values and this buried internal one of freedom and natural morality? How explain the social inequality that so glaringly contradicts the inner standards of moral worthiness? If nature urges a fundamental human equality, why is human history so *unnatural*? If the course of history has turned fundamentally free individuals into various kinds of slaves, including those slaves of fashion and fad who arrogantly proclaim themselves to be superior to the masses, how is it even possible to know any other potentiality than such unnatural servitude? And if our essential nature is to be free, how is it even possible for us, not merely to become enslaved by others, but, as Rousseau insists is the case, to enslave ourselves? Rousseau poses such problems with inimitable eloquence:

> For how can the source of the inequality among men be known unless one begins by knowing men themselves? And how will man be successful in seeing himself as nature formed him, through all the changes that the succession of time and things must have produced in his original constitution, and in separating what he derives from his own wherewithal from what circumstances and his progress have added to or changed in his primitive state? Like the statue of Glaucus, which time, sea and storms had disfigured to such an extent that it looked less like a god than a wild beast, the human soul, altered in the midst of society by a thousand constantly recurring causes, by the acquisition of a multitude of bits of knowledge and of errors, by changes that took place in the constitution of bodies, by the constant impact of the passions, has, as it were, changed its appearance to the point of being nearly unrecognizable. And instead of being

> active always by certain and invariable principles, instead of that heavenly and majestic simplicity whose mark its author had left on it, one no longer finds anything but the grotesque contrast of passion which thinks it reasons and an understanding in a state of delirium.[36]

In his reference to the statue of the sea god, Glaucus, all covered in seaweed and barnacles in its underwater abode, Rousseau here evokes Plato's approach to the problem of appearance and reality. Writing of the state of the soul in her current reality, Plato says,

> Thus far, we have spoken the truth concerning her as she appears at present, but we must remember also that we have seen her only in a condition which may be compared to that of the sea-god Glaucus, whose original image can hardly be discerned because his natural members are broken off and crushed and damaged by the waves in all sorts of ways, and incrustations have grown over them of seaweed and shells and stones, so that he is more like some monster than he is to his own natural form. And the soul which we behold is in a similar condition, disfigured by ten thousand ills.[37]

The gap between appearance and reality is at the heart of the Platonic dialectic with its conception of true knowledge as involving remembrance or anamnesis. In his allegory of the cave, Plato likens the world as we see it before our eyes to a shadow and distorted image of the true reality. Human beings are like life-long prisoners in a cave who spend their time watching shadows cast on a wall and, because they have been accustomed to such trickery all their lives, assume that the shadows are the real thing.[38] The soul, however, is not to be reduced to the capacities of bodily sensation and the concomitant cult of wealth, status, and power. Its nobility is of a higher origin that can be recalled by those who allow the love of wisdom, or philosophy, to awaken within them. Thus like Descartes and Leibniz before him, Rousseau turns to the Platonic tradition of ancient philosophy, with its internally derived standards of truth.

In his *Discourse on the Origins and Foundations of Inequality among Men* (1753) Rousseau presents an analytically derived, historically oriented reimagination of the human soul in its original state of nature, and then constructs a synthetic account of the processes whereby human beings, whose nature or native character is to be free, and so must once have lived in freedom, became slaves in the course of history. Like Hobbes, Rousseau begins with the simple human being as his starting point. But this is not the calculating, egotistical, predatory human ready to sacrifice others to his own well-being, but the "heavenly and majestic simplicity" of the human being as she emerges from that font of the Creator, which is the womb of Nature. Rousseau's conception of the proper starting point of human history is tied directly to the question of the origin of

economic and social inequality between human beings. Contrary to Adam Smith, who begins his conjectural history of the human race with the supposedly natural "propensity to truck, barter, and exchange,"[39] Rousseau takes a different, historically specific starting point. The original human beings are not envious of their neighbor's goods and desirous of possessing them, whether by raiding, according to Hobbes, or by trading, in Smith's account. The first human beings are instead motivated by the simplest desires, and, consequently, desires that are easily satisfied. Smith seems to have forgotten Locke's account of the earliest phase of human history, to which Rousseau returns. Why should individuals who are close to the simplicities of nature be envious of what others possess? Nature in its spontaneous opulence provides all that a simple person, in harmony with the natural world, could desire.

The true starting point of what we call history, or of civilization and its "progress," is accordingly not some natural property of original humanity. Retracing Locke's evolutionary account, but with a far more critical eye, Rousseau does not wait until the stage of commerce to discern the incursion of the unnatural life. The seed of servitude is planted in the first stage of agriculture when the individual family separates itself from others by building fences and digging ditches. Rousseau does not flatter admirers of human progress when he proposes his own historical starting point for the state:

> The first person who, having enclosed a plot of land, took it into his head to say *this is mine* and found people simple enough to believe him, was the true founder of civil society. What crimes, wars, murders, what miseries and horrors would the human race have been spared, had someone pulled up the stakes or filled in the ditch and cried out to his fellow men: "Do not listen to this impostor. You are lost if you forget that the fruits of the earth belong to all and the earth to no one!" But it is quite likely that by then things had already reached the point where they could no longer continue as they were. For this idea of property, depending on many prior ideas which could only have arisen successively, was not formed all at once in the human mind. It was necessary to make great progress, to acquire much industry and enlightenment, and to transmit and augment them from one age to another, before arriving at this final stage in the state of nature.[40]

The transition from the original stage of humanity immersed in the natural world to a world dominated by a dehumanizing culture is not a progressive moment for humanity but something entirely unnatural. The final words referring to "progress" and "enlightenment" have an ironic meaning. Yes there is progress—progress of knowledge and knowledge-based technique. But this is not the same as moral progress. Progress in "civilization" is at the same time regression for human nature. This progress is destructive of the humanity that

is in tune with nature, from which is derived the essential freedom of the individual, the recognition of the equality of other human beings, and fellow-feeling, mutual support, or brother-sisterhood—the three intellectual pillars of the French Revolution inspired by Rousseau's impassioned critique of the aristocratic civilization of his time. The starting point for civilization is therefore not some general feature of human nature, such as a supposedly natural inclination of self-interest, or a mixing of one's labor with the land, or a tendency to truck, barter, and exchange. The starting point of civilization is a specific product of prior human history, human history in its "natural" phase. This historical starting point is not something *in* human beings at all. It is something outside of them: a thing, a piece of land, the appropriation of the natural world by some individual so that it can no longer be shared by others. Because of the institution of property, nature ceases to be the universal presupposition for human life, the mother of us all. She is no longer a beneficent source of life as well as a menacing power over life. She is tamed, fenced-in, and rendered exclusive to one individual rather than another. Since the natural world is finite, a process is inaugurated that leads "progressively" to the accumulation of the natural world in the hands of the few and the exclusion of the many from their birth-right and ready source of the untarnished soul.

Locke had traced a similar evolution before Rousseau, but with the aim of justifying the accumulation of wealth, and expulsion of the simple tillers from their inherited lands, on the grounds of an implicit contract whereby the dispossessed acknowledge the right of the possessors. Since they have accepted a few coins in their desperate labors to feed themselves and their children, they have agreed to the system of money that allows some to accumulate land and wealth far beyond their individual need. This is allowable, Locke says, since nothing is wasted. In effect, the products with which the hired hands mix their labor are put into the circulation of the market from which the few coins given for their dependent and precarious labor reaps many more for the owner. Thanks to Rousseau, we are now in the position to evaluate Locke's argument for this social contract binding the poor to the rich, and all to a system of servitude. Continuing the cunning arguments of the rich, Locke effectively turns the minds of the impoverished poor of England to the untilled soil of the Americas with the implicit counsel: since you have been rightly dispossessed, go and dispossess others.

How contrary to "human nature" must all this have seemed to its first victims, deprived of the natural source of life and forced into an unnatural slavery to get back for themselves a meager portion of the fruits of their own labor. Why would anyone "in his right mind" accept this situation? For at this time there were as yet no cunningly contrived "rules of justice and peace" according to which the laws of property have been rendered sacrosanct. There was then only "natural right," the right of each individual to share in the blessings of nature. It was in this context that there occurred "the most thought-out project

that ever entered the human mind," the epitome of injustice and hypocrisy, that is, the formation of the state based on "the will of the people." Its basic rule is that all have rights to property, and so must join together in protecting property and in punishing the violation of property by the severest measures. Even if very few have any significant property themselves! Since lack of property means no free access to nature, acquiescence in such rules condemns the propertyless to serve those with property and condemns the property-owners to the servitude of fashion and the other methods of pomp and circumstance whereby they seek to justify their privileges in the eyes of their social inferiors and, if they have any sense of shame, in their own eyes as well.

Such is the complex legacy of the British intellectual tradition culminating in the works of Hume and Adam Smith. In the thought of Hobbes and Locke, the rule of property is still circumscribed, confined by the sovereignty of government legislation on behalf of the people. Although Hobbes begins with the self-interested individual, the purpose of the state and the sovereignty of the law is not the advancement of individual self-interest, but its limitation as a fundamental condition of social peace. Contradicting his natural self-interest, the rational individual joins with others in a common will to create a commonwealth. With a similar attempt to circumscribe possessive individualism, Locke argues that the promotion of the common rights of humanity to a viable existence constitutes a higher law than that of individual self-interest and the protection of property. In Hume's thought, however, no such higher restriction impedes the common-law judge in the meting out of justice other than that arbitrary decisions be based on other arbitrary decisions whose origins must be sought, not in human reason, but in the depths of the dark ages. Humanistic benevolence therefore succumbs to the rights of private property. The common interest of society that ultimately rules over individuals and constitutes the hidden source of the law is but the crystallization of a chemical reaction resulting from the fusion of the private interests of individuals. In Adam Smith, morality must not exceed its role in private life and interfere with the larger law of self-interest alone that governs the wealth of nations. Confidence must be extended to history in the hopes that with maximum liberty extended to the principle of individual self-interest, the wealth of nations will trickle down to the producers of that wealth themselves. And yet unless the state interferes with this law, whether out of humanistic concern for the minds of the working masses or in the interests of military defense, the engine of progress and source of all economic value, the laboring individual, will self-destructively sink to the level of the mindless matter to which materialistic philosophy reduces her.

For all their insistence on science and the progress of the intellect, achievements accessible in their time only to a small minority of the population, Descartes and Leibniz straightforwardly recognize that intelligence is the potential power of every individual, and that the social good takes precedence over the private. Affirming the moral goodness and equality of the simple

human being without intellectual culture, Rousseau subscribes to these basic positions of the spiritualist tradition. It is the worship of material gain in the name of a philosophy of self-interest that provides the main target of Rousseau's fire. Nevertheless, progress of the sciences by itself is no guarantee that virtue too will advance as a kind of spin-off effect. Virtue has its own distinctive foundation in the human heart, whose promptings go unheeded where reason alone is worshipped.

In contrast to Pope's motto that "Whatever is, is right," Rousseau's might seem to be, "Whatever is, is wrong!" By "whatever is" we must mean, of course, not the works of Nature herself, wellspring of authentic human nature, but the historically evolved reality of a humanity imposing servitude on itself. So Rousseau says, revising and qualifying Pope, "Take away our fatal progress, take away our errors and our vices, take away the work of man and everything is good."[41] For Rousseau, while everything in nature, including human nature, is good, the handiwork of the human intellect, whether in the service of individual self-interest or science by itself, clearly is *not* good. There is a profound discrepancy between cultural evolution involving science and technique, and the natural order of creation, including the essential nature of humanity. As a consequence of historical progress in science and technique, motivated mainly by the egotism of private property, the natural goodness of human nature has taken on a distorted, nearly unrecognizable visage.

But how can all this be reconciled with the idea of divine providence? How could Kant say, in his notes written after reading *Emile*, that after "After Newton and Rousseau, the ways of God are justified and Pope's thesis is henceforth true?" Kant means that Pope's thesis is true, but not on Pope's own grounds. It can be true only on Rousseau's grounds. If after Rousseau the ways of God can still be justified, the method of justification must become far more complex than is the case in Pope's poem.

Chapter Fifteen

Rousseau's Reasoning of the Heart

The Profession of Faith of the Savoyard Vicar

The key text for Rousseau's own theodicy is the section of *Émile* entitled, "The Profession of Faith of the Savoyard Vicar." Rousseau's fictional account of the education—above all the moral education—of two young children, Émile and Sophie, contains a long philosophical discourse by a curious priest, the Vicar of Savoy. The Vicar's discourse was first related to Émile's tutor by a third party, a formerly confused and alienated young man whose life was turned around by his encounter with the strange priest and the discourse or profession of faith of that teacher.[1]

The Vicar, like the young man himself, had reached a state of despair due to disillusion with his Catholic religion as a result, primarily, of its unnatural requirements of celibacy for the priesthood. The alienated priest at first abandons his religion entirely. Then he undergoes a profound philosophical and spiritual transformation leading to a reconciliation of sorts. The outcome of his spiritual rebirth is related in his "Profession of faith," recounted for the first and perhaps only time to the young man. Thanks to his new interpretation of religion, he is finally able to reconcile himself to his priestly role. Through the assistance of a friendly benefactor the Vicar comes in the end to earn a living in the capacity of a priest while doing his best to be of service to others. Although he conscientiously practices the rites of his Church, he has become an ardent opponent of the pretenses of any particular religion, including his own, to provide the exclusive way to salvation. The faith that he discovers in the throes of his despair is the religion of nature itself, which is also the religion of morality.

New Method: Knowledge and Ignorance

Central to the exposition of the Vicar's new outlook is a philosophical-metaphysical interpretation of the meaning of modern physics. We see once

again how moral and spiritual issues are inevitably intertwined with the interpretation of the findings of modern science. A religion of nature or natural religion must come to terms with the knowledge of nature as advanced by the foremost sciences. At first the Vicar summarizes the philosophy of nature that is already more or less familiar to us. He begins by repeating Descartes' method of doubting everything, but gives this method a more "existential" or personal-emotional quality. "I was in that frame of mind of uncertainty and doubt that Descartes demands for the quest for truth."[2] However, this state of doubt is not primarily a methodological exercise for him, for disillusion with certain dogmas and practices of religion had plunged him into a general condition of despairing unbelief.

Significantly, Rousseau's priestly educator is unable, try as he might, to proceed successfully according to the method of Descartes. Attempting to follow the Cartesian method of advancing from simple to more complex truths, he discovers as much mystery as certainty. Instead of aiming to fulfill Descartes' ambition of achieving a complete system of knowledge, the task, he finds, becomes one of knowing both what can and what cannot be known. In the light of his eventual philosophical development, Kant must have especially taken to heart this reflection on the limits of metaphysical knowledge:

> We hardly know if man is a simple or a compound being. Impenetrable mysteries surround us on all sides; they are above the region accessible to the senses. We believe we possess intelligence for piercing these mysteries, but all we have is imagination. Through this imaginary world each blazes a trail he believes to be good. None can know whether his leads to the goal. Nevertheless we want to penetrate everything, to know everything. The only thing we do not know is how to be ignorant of what we cannot know. (*Émile*, 268)

If the task of metaphysical knowledge is thereby radically modified, the Vicar's standard of truth is also significantly different from his predecessors in the rationalistic tradition. He resolves to take as his guiding principle "to accept as evident all knowledge to which in the sincerity of my heart I cannot refuse my consent" (270). Sincerity of the heart must complement rational deduction from first principles. Truthfulness with oneself, rather than consistency with a set of abstract ideas, must become the main standard of truth. He must feel personally convinced that something is certain before he will accept it.

Having adopted this standard of truth, the Vicar cannot accept Descartes' famous starting point as personally convincing. "I think, therefore I am," said Descartes. Descartes begins with "I think" as an indubitable starting point. In the sincerity of his innermost convictions the Vicar can entertain no pure "I think" in separation from an external world. He rejects Descartes' approach in which a purely inner world is first established while the connection of that

inner world with an outer one must then be demonstrated by speculative arguments. Instead of a single first principle, the Vicar finds a first *set* of principles. Instead of beginning with simplicity, he begins with duplicity—a twofold set of ideas, a unity between internal consciousness and external object. "I exist, and I have senses by which I am affected" (*Émile*, 270). He begins, then, with both consciousness of himself and consciousness of material bodies outside of himself.

The Activity of Thought

But as soon as we accept this dual starting point, we are confronted with mysteries:

> Do I have a particular sentiment of my existence, or do I sense it only through my sensations? This is my first doubt, which it is for the present impossible for me to resolve; for as I am continually affected by sensations, whether immediately or by memory, how can I know whether the sentiment of the *I* is something outside these same sensations and whether it can be independent of them? (*Émile*, 270)

The "sentiment" of self, of "I," is at first so entangled with the experience of physical things outside himself that it seems impossible to isolate it as something relatively independent. In a prior section of *Émile*, Émile's tutor, in the voice of the narrator, reflects on the difficulties involved in arriving at such abstractions of philosophy as the notion of spirit. In the natural course of human development, children begin their lives immersed in a world of physical things. Our philosophy too should begin with our involvement with physical objects outside of us, including other people, and show how the conception of spiritual existence or of an independent "I" emerges from this original standpoint of an "I" that is at first immersed in the world:

> Consider also that since we are limited by our faculties to things which can be sensed, we provide almost no hold for abstract notions of philosophy and purely intellectual ideas. To arrive at them we must either separate ourselves from the body—to which we are so strongly attached—or make a gradual and slow climb from object to object, or, finally, clear the gap rapidly and almost at a leap, by a giant step upward of which childhood is not capable and for which even men need many rungs especially made for them. The first abstract idea is the first of these rungs, but I have real difficulty in seeing how anyone got it into his head to construct it. (*Émile*, 255)

Before there is philosophy, with its abstract concepts, there is practical life. The philosophical discourse of the Vicar to the young man, which is then

relayed to Émile by his tutor, is timed to a particular stage in the young man's education. This is the stage at which he first becomes reflectively aware of the issues of life that both foster and naturally require a philosophical consciousness. It is however a great illusion of certain philosophies to suppose that life itself begins with such abstract philosophical ideas. Method in philosophy ought to follow the method of life itself. To begin therefore with the mind and its ideas, and to suppose that this is the very starting point of children, is to begin with the higher steps on the rung of human development while imagining that they are the very first steps. Rousseau is in particular critical of the methodology of Locke, who begins with the mind and its ideas and illustrates this conception with examples from children who perceive bitter and sweet: "Locke wants us to begin by the study of spirits and later go on to that of bodies. This method is that of superstition, of prejudices, and of error. It is not that of reason nor even of nature in its proper order. It is to stop up our eyes in order to learn to see" (*Émile*, 255).

Rousseau's Vicar here abandons the "way of ideas" of his predecessors—of Descartes and Locke, Berkeley and Hume, Malebranche and Leibniz—who take ideas or mental impressions as the direct objects of the understanding. The Vicar asserts that the first stage of life consists in direct contact with the world around us through practical involvement in it. Such an idea is suggested by Adam Smith when he examines the thinking processes of manufactory workers. Characteristically, Rousseau's Vicar does not explain *how* such direct contact with the world outside of us is possible given the theory of perception stemming from modern physics. But it is not required that we be able to explain everything. We need only recognize the truths indicated by personal conviction, as well as the mysteries we inevitably encounter in our own ignorance. But if he doesn't explain how such direct contact with the world outside us is possible, he is certain that the alternative view—that we somehow learn to see the world indirectly, through deductions from the resembling ideas of primary qualities, as Locke argues, or through implicitly reasoning about the relative sizes of the shapes that appear on the flat screen of our minds, as Berkeley and Hume hold, or through the windowless Preestablished Harmony of Leibniz—seems entirely implausible. We do not learn to see things. We simply see them. If we had to learn how to see before we saw we would never be able to see. Rousseau's Vicar begins therefore with a unity of self with things-outside-self, a unity of subject and object. Separating out the subject as a distinct being with inner experiences apart from the outer world involves an evolution of consciousness that is intimately connected with the young man's or woman's first philosophical inquiries into issues of personal existence.

The goal of education, Rousseau writes, is "to form the man of nature" who is capable of living in civilization. It is not "to make a savage and to relegate him to the depths of the woods" (*Émile*, 255). Actual human evolution, with its twin forces of passion and opinion centered on the accumulation of private

property, has defaced the real nature of the human being. It is however possible to begin all over again with an uncorrupted infant, and through an educational process that accords with the natural developmental process insulate the young person from these corrupting influences until both he and she, both Émile and Sophie, reach a point of understanding and self-confidence at which they can participate in the social whirlpool without being caught up and drowned in it. The goal of natural education is not to isolate individuals from society, and thereby recreate the simple savages of mankind's earliest period. It is to raise individuals who remain always in touch with nature and so with their own authentic natures, with their own innate freedom, and who never give up their freedom to the power of ego-based civilization. The ego-centered individuals of the alleged state of nature in Hobbes as well as Smith turn out to be the products of later evolution projected into the past. Such ego-centered individualities are the products of a corrupted civilization divided into rich property owners and dependent poor. A social contract allegedly based on the free consent of such individualities is actually a deception played by the rich against the poor. However, truly free individuals, raised in accord with the simplicities and honesties of nature, individuals who are confident in their own fully evolved powers, can provide the basis for an authentic social contract and a truly human society.

The possession of a natural philosophy and a natural religion is an intrinsic requirement for reforming society through the formation of uncorrupted social individuals. The order of reason in natural education and in natural philosophy is therefore the order of the natural development of the human being. And so we must begin, not with things by themselves—the independent order of matter—nor with minds by themselves, but with conscious beings who are immersed in the natural world. From this point of view, the problem is not how we get from ideas of things in our heads to the things themselves, but how we ever get in the first place to that rung on the ladder of human development at which we first separate a mind or consciousness or sense of self from its immersion in the world.

Émile is at the point in his education in which he first begins to reflect on his own powers in order to understand them. Up to this point he has been developing these powers in practical experiences with the world of nature, including the care of nature, as Émile has his own corner of a garden. At some point in his maturation, he naturally comes to wonder whether he can distinguish his own activity from that of the world around him. We can partly resolve this issue, the Vicar instructs, by distinguishing two different faculties within us. There is the power of sensation, by which we are passively affected by the material bodies outside of us, and the power of judgment, by which we are able to lift those sensations out of their natural context so as to compare them to one another. Through this active power of judgment, we are able to superimpose one object of sensation on another and compare and contrast the two objects.

This active power of the mind produces comparative ideas or categories such as "larger" and "smaller," "one, two, three," etc. So if there is a part of oneself or one's subjective experience that is directly dependent on sensations and the effects of outside bodies, there is another part that is free from these influences. The question of whether the self is simple or compound is resolved by a phenomenological experience of two different forms of consciousness, two different ways by which the subject relates to the object. On the one hand, the mind is affected by external reality through sensation. On the other hand, the mind is free from such affections and is capable of initiatives of its own.

But rather than making clear headway with such an idea, Rousseau's Vicar finds that he is once again surrounded with difficult or unsolvable problems. We see whatever we see—such evidence of sense experience is certain. But when we make judgments we frequently fall into error. Paradoxically, it is from this fallible part of ourselves that we derive our dignity as human beings. Were our subjective experiences entirely constituted by the sensations we receive, we could never go wrong. But then our consciousness would be wholly determined by outside causes. Rousseau in this way discards both the Hobbesean materialist doctrine that consciousness is the product of external sensations coming from physical objects as well as Leibnizian spiritualism.

The upshot is that we have an active power of the mind by which we make judgments, and, with judgments, mistakes. Thanks to this fallible power, we can in some sense be masters of ourselves—free! "Without being master of sensing or not sensing, I am the master of giving more or less examination to what I sense." He draws a momentous conclusion: "Therefore, I am not simply a sensitive and passive being but an active and intelligent being; and whatever philosophy may say about it, I shall dare to pretend to the honor of thinking" (*Émile*, 272). In a complex, roundabout, evolutionary way, then—and despite what materialist "philosophy" has to say to the contrary—the Vicar finally clears a path for Émile to the standpoint of Descartes and the "I" that is capable of truly thinking.

The Hand That Launches the Planets

The Vicar next turns to a consideration of motion. He finds that there are two kinds of motion: self-caused or spontaneous motion and externally caused or communicated motion. For the idea of self-motion, he finds the main evidence in himself:

> You will ask me if the motions of animals are spontaneous. I shall tell you that I know nothing about it, but analogy supports the affirmative. You will ask me again how I know that there are spontaneous motions. I shall tell you that I know it because I sense it. I want to move my arm, and I move it without this movement's having another immediate cause than my will. It would be vain to

> try to use reason to destroy this sentiment in me. It is stronger than any evidence. One might just as well try to prove to me that I do not exist. (*Émile*, 272)

So much for the reasoning of Hobbes and others who deny the freedom of the will to move bodies because this contradicts the laws of physics. So much for the reasoning of Malebranche, that because I don't know what I am doing when I move my arm, I must not be doing it. So much for the logic of Leibniz, who admits that the will is free but concludes, from complex rational deductions, that the power of the human will does not extend to the movement of the body. Consulting the inner feeling of conviction within him, the Vicar finds that he is personally unconvinced by such reasonings. Whatever the reasons, however impossible according to prevailing philosophical theory, his own direct experience tells him that he has the power to move his body by acts of his own free will.

But even in this immediate act of will all is not clear and distinct. Looking more deeply into this phenomenon, he is again baffled:

> It is no more possible for me to conceive of how my will moves my body than it is to conceive of how my sensations affect my soul. I do not even know why one of these mysteries has appeared more explicable than the other. As for me, whether it is when I am passive or when I am active, the means of uniting the two substances appears absolutely incomprehensible. (*Émile*, 274)

We recall that Hobbes reasons that we do not move our bodies by an act of free will on the grounds that if we did such a thing we would violate the laws of physics according to which all changes of motion come from external forces and nothing moves itself. Malebranche follows Descartes in affirming the liberty of the conscious subject, but then asks how it is possible to move our arms at will. He holds that we do not really move our bodies for the reason that we don't know how we do it. Here are some examples of how metaphysical reasoning leads to conclusions that blatantly conflict with personal convictions. Let us simply assert what we really believe in our heart of hearts, says the Savoyard Vicar. We do move our bodies at will, *and* we haven't the least idea how we do so or how it is even possible to do so. Let us not use one firm conviction as a "reason" against the other, but admit the limitations of reason itself to penetrate very far beyond the veil of direct sensory experience.

By analogy with this unshakable inner experience, the Vicar tentatively extends the conception of spontaneous or free motion to animals. But he is unable to find it within him to attribute self-movement to other bodies that are composed of "scattered and dead matter":

> I have made every effort to conceive of a living molecule without succeeding. The idea of matter sensing without having senses appears unintelligible and contradictory to me. To accept or to

> reject this idea one would have to begin by understanding it, and I admit that I have not been so fortunate. (*Émile*, 273)[3]

So much, it seems, for the Leibnizian monads, capable of primitive perceptions and volitions, as the underlying metaphysical basis of the motion of atoms and molecules, billiard balls, and planets. The Vicar follows the mechanistic conception of Hobbes and Locke, Descartes and Newton, in supposing that the motions of inorganic material bodies are not inherent in them, but communicated to them from the outside. Such a conception has fundamental implications:

> This same universe is in motion; and in its motion, which is regular, uniform, and subjected to constant laws, it contains nothing of that liberty appearing in the spontaneous motions of man and the animals. The world therefore is not a large animal that moves itself. Therefore there is some cause of its motions external to it, one which I do not perceive. But inner persuasion makes this cause so evident to my senses that I cannot see the sun rotate without imagining a force that pushes it; or if the earth turns, I believe I sense a hand that makes it turn. (*Émile*, 273)

The Vicar particularly opposes the idea that derives universal self-motion from the force of gravity. An incomprehensible atheism is implicit in the notion of the world as "a large animal that moves itself" by the natural force of attraction. Admitting a centripetal law of gravity as a force of nature, he stresses that it is also necessary to admit a centrifugal force against which gravity draws the propelled bodies into curved motions. What explains the original and continuing centrifugal flight of matter that balances the force of gravity? The Vicar finds the purely mechanistic explanations of the cosmic motions unconvincing:

> Descartes formed heaven and earth with dice, but he was not able to give the first push to these dice or to put his centrifugal force in action without the aid of a rotary motion. Newton discovered the law of attraction, but attraction alone would soon reduce the universe to an immobile mass. To this law he had to add a projectile force in order to make the celestial bodies describe curves. Let Descartes tell us what physical law made his vortices turn. Let Newton show us the hand which launched the planets on the tangent of their orbits. (*Émile*, 273)

Finding it impossible in his heart sincerely to accept the idea of a material universe capable of moving itself, the Vicar follows Hobbes's mechanistic argument from causality that leads to a first cause in a self-moving will:

> The more I observe the action and the reaction of the forces of nature acting on one another, the more I find that one must

> always go back from effects to effects to some will as first cause; for to suppose an infinite regress of causes is to suppose no cause at all. (*Émile*, 273)

The First Dogmas of Natural Philosophy

Unable to convince himself of a self-moving material world, but aware of the capacity of his own will to move his body, the Vicar extrapolates from this personal sentiment of his own will to a belief that "a will moves the universe and animates nature." From effects he reasons by such analogy with his own personal experience to a cause beyond the perceivable effects. Just as his own body moves as a result of his own act of will, so by analogy he finds himself personally convinced that the "dead matter" of the planets and stars, incapable of moving themselves, must be set in motion by a similar act of will. This he calls "my first dogma, or my first article of faith" (*Émile*, 273).

The expressions "dogma" and "article of faith" suggest once more that there is some central mystery in these findings of rational inquiry. His "dogmas" or articles of faith are not demonstrably certain conclusions of pure reason. Reason sheds some light but also comes up against impenetrable shadows. This first will, this hand that launches the planets, is of course an invisible one. What I directly perceive is the fact that I move my body by an act of will. Where bodies are not moved in this way, one naturally tends to imagine that in the beginning of things a similar act of will communicates motion to them. Rousseau therefore begins with the active power of the conscious will, the "I think" or "I will," in its action on the body, and then reasons by analogy to the rest of nature, without going so far as supposing that molecules similarly move their bodies. Therefore the only convincing analogy with the human experience of moving one's body is that which preserves the distinction of spirit and matter, soul and body, and attributes causal efficacy primarily to spirit and causal passivity to matter. Hence the vast bodies of the planets and the stars require a spirit to move them, whatever inner powers of attracting one another they may be said to have.

The Vicar derives a second "article of faith" from recognition of laws of motion: "If moved matter shows me a will, matter moved according to certain laws shows me an intelligence" (*Émile*, 275). He is eloquent about the magnificent mechanism of nature, testifying to the intelligence of the Creator. "I do not know why the universe exists, but that does not prevent me from seeing how it is modified, or from perceiving the intimate correspondence by which the beings that compose it lend each other mutual assistance" (*Émile*, 275). He is like a man who sees the mechanism of a watch for the first time. He may not perceive the purpose for which it has been made, but recognizes immediately that everything in it is skillfully coordinated or harmonized with everything

else. How can the blind movements of matter explain the perfection of these mutual correspondences and harmony? There are limits to what can be explained by statistical laws of chance.

> I should not . . . be surprised that a thing happens, if it is possible and the difficulty of its occurrence is compensated for by the number of throws of the dice. Nevertheless, if someone were to come to me and say that print thrown around at random had produced the *Aeneid* all in order, I would not deign to take a step to verify the lie. "You forget," I shall be told, "the number of the throws." But how many of those throws must I assume in order to make the combination credible? (*Émile*, 275–76)

Without the assumption of divine intelligence, moreover, how can we explain the existence of the intelligent beings we ourselves have the honor and dignity of being? "I do not have it within me to believe that passive and dead matter could have produced living and sensing beings, that a blind fatality could have produced intelligent beings, that what does not think could have produced thinking beings" (*Émile*, 276).

The young Kant, frustrated with the indirectness of the arguments of Descartes and Leibniz, must have found in these more direct arguments of *Émile*, with their appeal to sentiment, not nearly so "troubling." Everything in nature proclaims the existence of this invisible God who moves the heavens and the earth, and who creates human beings capable of appreciating this grandeur. Echoing Pascal, the Vicar acknowledges that the highest place in creation belongs to the human being who alone of all the creatures "appropriates to himself, by means of contemplation, the very stars he cannot approach" (*Émile*, 278). The personal feeling evoked by this recognition of the exalted place of humanity in the scheme of creation is grateful humility, not arrogant boasting:

> Can I see myself thus distinguished without congratulating myself on filling this honorable post and without blessing the hand which placed me in it? From my first return to myself there is born in my heart a sentiment of gratitude and benediction for the Author of my species; and from this sentiment my first homage to the beneficent divinity. I adore the supreme power, and I am moved by its benefactions. I do not need to be taught this worship; it is dictated to me by nature itself. Is it not a natural consequence of self-love to honor what protects us and to love what wishes us well? (*Émile*, 278)

Rousseau therefore concludes his reflections on the material universe with a meditation on his own existence and consciousness. Aware of the universe outside of him, he at the same time recognizes the consciousness that grasps and comprehends this universe as his own consciousness. Acknowledgment of

the grandeur of God the creator and organizing intelligence is accompanied by the grandeur of the human intelligence, of his own personal intelligence, in grasping and participating in this immensity and splendor. From an investigation of the material world outside of himself he returns to himself where he finds not only the power of intellect but the sentiment of gratitude and beatitude. His is not only a reasoning intelligence; his is also a responsive, appreciative heart.

Reason and Sentiment

Thus, the Savoyard Vicar deduces the fundamental premise of the rationalistic tradition—the active power of autonomous thinking, free from dependence on sensory impressions. But this is no longer a purely intellectual, confident, and perhaps arrogant or elitist rationalism for which a long chain of discursive reasoning is able to produce truth out of itself. Truth comes from reality itself with which, while the intellect ponders, the heart resonates. "I know only that truth is in things and not in the mind which judges them, and that the less of myself I put in the judgments I make, the more sure I am of approaching the truth" (*Émile*, 272).

There is truth only when our judgments agree with the objects, when, for example, something we call shorter than something else really is shorter. The honor of thinking derives from the active power of the mind, or reason. But the activity of reason produces fallible judgments that interfere with the truth. Paradoxically, reason must get out of the way of the truth which is in the things themselves. The rationalists are therefore wrong. But this does not mean the empiricists are right. The sensations coming from things do not directly create truth. In addition to sensation, rational judgment is necessary. But this is admittedly fallible. Therefore, as long as we stay with reason-based judgment and external sensation we move in a vicious circle in which truth is impossible.

Recognizing this circle, the individual must seek some basis of conviction outside of reasoning, but not in sensation. Reason itself therefore points to the need for a third standpoint beyond reason: a voice of truth within us that is more fundamental than the fallible judgments of reason. The Vicar calls this fundamental source of truth "sentiment" or the sincerity of the heart. We know that we have attained truth, not when we have an irreducible sensation by itself, nor when a set of ideas coheres logically, but when, supplementing rational argument connected to empirical experience, we are convinced in our hearts that something is true. "Thus my rule of yielding to sentiment more than to reason is confirmed by reason itself" (*Émile*, 272).

It is important to recognize that the Vicar's metaphysics is not based on a pure "sentimentalism." Inner sentiment and reason are joined together in a single act of judgment. Reasoning is anchored in both sense experience and

inner conviction. While referring always to sense experience, the reasoning person needs also to consult, at each step, the inner feeling that is intimately tied to one's inner self. We might say that reasoning must be "existential." Reasoning must be tied to vital feelings. It must be "authentic": not reasoning for its own sake, taking flight on the wings of metaphysical imagination in all sorts of possible directions depending on the cleverness of the thinker, but reasoning for the sake of life, seeking truths that matter, truths one can live by. It is reasoning that is in tune with the inner Self, the deepest personality, the "heart." It was Pascal who said that "The heart has its reasons, of which reason knows nothing."[4] This is not sentiment without reason, nor "the grotesque contrast of passion which thinks it reasons and an understanding in a state of delirium."[5] It is a sentiment that also reasons and a reason always in touch with sentiment. It is reason by itself, abstract reason, that turns out eventually to produce the delirious rationalizations of the passions.

The Mystery of Gravity and the Bond of Love

Thus far in the discourse, the Savoyard Vicar remains within the general framework of traditional theodicy. Causal dependence and purposeful order justify the ways of God before the free and active intelligence of the human subject. There is an important modification from traditional rationalism, however, in the insistent recognition of certain impenetrable mysteries. Moreover, the Vicar takes aim at reasonings in the metaphysical tradition that are meaningless or unconvincing on the personal level. There is a significant shift from rational coherence in a logically deductive system, in the manner of Descartes and Leibniz, to the standpoint of the "sentiment" of a "simple and true man" with "no system to maintain" (*Émile*, 278). Sense experience, closely allied with personal, heart-felt conviction, restrains the daring but easily deluded thrusts of metaphysical speculation.

The feeling of the heart does not replace reason. It is reason itself that acknowledges its own limitations and seeks a surer compass in the heart. Even in his taunting of the excesses of rationalism, Rousseau's Vicar proclaims the honor, dignity, and freedom of human reason. Although he modestly asserts that "I am not teaching my sentiment; I am revealing it" (*Émile*, 277), although he is careful to recognize certain impenetrable mysteries in attempting to grasp the mystery of the divine being, he nevertheless finds it within the power of reason to reaffirm the core notions of Descartes' self-existing Being, and Leibniz's trinitarian God of power, intelligence, and will:

> This Being which wills and is powerful, this Being active in itself, this Being, whatever it may be, which moves the universe and orders all things, I call *God*. I join to this name the ideas of intelligence, power, and will which I have brought together,

> and that of goodness which is their necessary consequence. (*Émile*, 277)

On the side of human consciousness of divinity, "sentiment" must become the necessary supplement to the pure reason of the preceding rationalistic tradition. It is perhaps for this reason that the Vicar pointedly adds a fourth dimension to the divine nature—that of goodness, which is accessible primarily to the sentiment and heart of the intelligent creature. It is sentiment that grounds reason, which otherwise engages in the wildest flights of speculation. What is sentiment? Here is another mystery, but on a different order from the mysteries of the natural world—such as the mystery of gravitational attraction. Sentiment is not to be confused with sensation, bodily feeling, or personal passion. It is another capacity of the soul, complementary to, but more fundamental than, intellect. The Vicar contrasts attraction in the sphere of matter with sentiment in the spiritual realm, while suggesting that there is an important analogy between a power binding the material world and one serving a similar function in the world of incarnated spiritual beings. In a note on the nature of sentiment, Rousseau takes issue with materialism:

> Attraction may be a law of nature whose mystery is unknown to us; but we can at least conceive that attraction, acting according to mass, contains nothing incompatible with extension and divisibility. Can you conceive the same thing of sentiment? The sensible parts are extended, but the sensitive being is indivisible and one. It cannot be divided; it is whole, or it is nothing. The sensitive being is therefore not a body. I do not know how our materialists understand it; but it seems to me that the same difficulties that make them reject thought also ought to make them reject sentiment, and I do not see why, having made the first step, they would not also make the other. What more would it cost them; and since they are sure that they do not think, how do they dare affirm that they sense? (*Émile*, 279)

The law of gravity is that bodies attract one another in direct proportion to the size of their masses and in inverse proportion to the square of their distances. Attraction therefore acts in proportion to mass or matter and so must be an effect of matter. But how does matter attract across distances without contact? Here is clearly something completely mysterious. But such a mystery parallels that bonding activity of spirit that we directly experience in the sentiment of our own unity that cannot be derived from the material and so intrinsically divisible parts of the body. Rousseau here suggests Newton's own personal view that the binding power of gravity, acting across great distances, and so inexplicable by matter and material contact, is due to the divine spirit, to the sentiment of love that creates the universe. Rousseau's idea therefore resonates with Kant's earlier conception of the "universal bond, which links the whole

together in a fashion which has not been examined. . . . [A] universal law of nature firmly establishes the love which maintains the whole. . . ."[6]

From Divine Order to Human Chaos and the General Injustice

With regard to the metaphysical conception of nonhuman nature Rousseau remains close to the rationalist tradition. It is in his conception of humanity, however, that he presents a dramatic critique of the Leibnizian "optimism." The metaphysical picture of the natural world does not serve for him as a springboard to the optimistic conception that we live in "the best of all possible worlds." It serves rather as a means for contrasting the natural state of affairs with that of human society. Turning to human society, after his initial investigation into the natural world and the basic features of human nature, the Vicar exclaims:

> What a spectacle! Where is the order I had observed? The picture of nature had presented me with only harmony and proportion; that of mankind presents me with only confusion and disorder! Concert reigns among the elements, and men are in chaos! The animals are happy; their king alone is miserable! O wisdom, where are your laws? O providence, is it thus that you rule the world? Beneficent Being, what has become of your power? I see evil on earth. (*Émile*, 278)

The main doctrine of the Vicar corresponds to Rousseau's argument in *Discourse on the Origins of Inequality*. There is systematic injustice in the world. He draws from this perception of injustice an argument for the immortality of the soul: since the world is unjust, the soul must be immortal, for otherwise a profound dissonance is admitted in the natural harmony of existence. The Vicar argues:

> If the soul is immaterial, it can survive the body; and if it survives the body, providence is justified. If I had no proof of the immortality of the soul other than the triumph of the wicked and the oppression of the just in this world, that alone would prevent me from doubting it. So shocking a dissonance in the universal harmony would make me seek to resolve it. I would say to myself, "Everything does not end with life for us; everything returns to order at death." (*Émile*, 283)

The evils of human life present a challenge to the "Beneficent Being" and its providential care of creation. Evil exists in the injustice of our world. All is *not* good, no matter how you twist and turn it. Perhaps then God is no beneficent being, and there is something wrong with our previous argument from nature.

But no; if we recall our sentiments and reasons regarding the natural world and our own basic powers of thought and action, that argument still stands. Leibniz, who, unlike Pope, admits evil, would say that there must be a compensating good at the level of the totality to be brought out of the necessary evils in the particular circumstances. But where is this redeeming level of the totality, and what does it have to do with us and with innocent and unjust suffering? Leibniz's general arguments that God must have good reasons for permitting the evils, although we cannot know what they might be, is not convincing enough for the doubt-ridden Vicar. Kant would say that this is a "troubling" argument, since it does not directly draw from the intelligence and beauty of the human order an argument for the existence divine harmony. But where should one look for such harmony?

The Vicar eventually sees what must be the case and wherein, to our utmost benefit and flourishing, the totality or greater good must lie. Rather than seeing in the evils of human existence an argument against a benevolent creator, the Vicar sees evidence for the radical incompleteness of human life as we understand it. Something must be missing in our picture of human injustice. Only half of the picture of human life is apparent to us. It is the missing half that provides the solution to the puzzle, and reconciles the first picture that we have formed of the order, intelligence, and goodness of nature, and so of its creator, with the picture we see of the present disorder of human life. The source of the goodness and beauty of nature, who is also the source of human existence, would not tolerate the evils of the human disorder, even though wholly caused by human beings themselves, unless there were more to human experience than meets the eye. How could such a beneficent being permit the miserable lives of humans subjugated to other humans—even if it is they who so often implicitly subjugate themselves? The goodness of creation that is evident in the natural world, to which we, in the deepest part of ourselves continue to belong, requires that there must be an extension of life beyond these miserable existences that seem to end in only in death. All can be justified and harmony established only if the soul survives death and finds justice, whether through punishment or reward, in a future life beyond the grave.

Of course this leads to "the quandary of wondering where man is when everything which can be sensed about him is destroyed" (*Émile*, 283). But the Vicar has already distinguished the two substances, the active soul and the passive body. The one can dissolve without affecting the other. Indeed, life in the body is only life lived halfway, as we directly feel when our bad habits and wayward ways keep us from rising to our highest aspirations and realizing our fullest potentials. With death, the Vicar surmises, the active energy of the soul is no longer tied to the inertial mass of matter it must be constantly moving, and being moved by, in embodied life. Liberating the active power of the soul, death therefore releases a fuller, more consciously and energetically lived existence. "The active and living substance regains all the strength that it used in moving the passive and dead substance. Alas! I sense it only too much in my vices: man

lives only halfway during his life, and the life of the soul begins only with the death of the body" (*Émile*, 283). Far from being the end of life, death is the end of a life lived only halfway, halfheartedly, and the beginning of a life that is lived in its fullness. It is only by supposing that there is such a higher life for human beings that the harmony of existence, recognized as operative in nature, can be consistently and universally affirmed. The human life lived halfway, with all its waywardness and injustices, has its justification only as a stage in the advance of human beings to a world of justice and happiness that is worthy of the intrinsic intelligence, power, and goodness of the human soul. Only in this way, by following Rousseau's more complex route through the evils of human existence and then beyond, is Kant able to say that Pope's teaching is true.

The sentiment of justice is therefore the basis of a theoretical and moral argument for the immortality of the soul. Without survival after death there is a profound dissonance in existence that contradicts both the harmony of nature outside of us and the sentiment of justice that we feel within ourselves. If the soul were *not* immortal, and so incapable of future compensations, rectifications, and amplifications, how could the manifest injustice of the world be borne? How otherwise reconcile the magnificent harmony of nature with the manifest disharmony of human society than to suppose that life goes on after the dissolution of the body in such a way as to make sense of the prior embodied state?

For the Vicar, this is not a theoretically compelling argument for immortality, which means infinite life, for "all that is infinite escapes me" (*Émile*, 283). We must recognize the limitations of our minds in such matters. All that the argument establishes is that there must be sufficient survival of the soul-self after death to meet the requirements of a just order of existence. "Who knows whether that is long enough for it [the soul] to last forever?" (*Émile*, 283). What I can understand and not understand nevertheless favors belief in immortality, for I can readily understand how the body dies by the division of its parts, but I cannot similarly imagine the dissolution of my consciousness, which (as Descartes shows) is not similarly composed of parts but is all at once contained in the awareness of "I." And so "not imagining how it can die, I presume that it does not die. Since this presumption consoles me and contains nothing unreasonable, why would I be afraid of yielding to it?" (*Émile*, 283). Theoretical certainty is not demonstrated, but neither does theory refute the idea. To decide this all-important matter of personal immortality, which reason can neither affirm nor deny, the Vicar can legitimately and without irrationality consult inner sentiment, and affirm what the heart desires.

Toward an Authentic Social Contract

While the priestly Vicar argues from the injustice of the world to immortality of the individual soul, this is not the only outcome of this argument. More

generally, Rousseau argues for a just world in this life as well. The manifest evil of the present injustice cannot be the entirety of human existence. It did not exist in the beginning, and it need not exist in the future. Indeed, the above argument for personal immortality for the separated soul implicitly requires justice in this world as well. The evil of social injustice is reconcilable with the universal harmony perceived in nature only if it is regarded as a stage on the way to social justice. In this way the simple, natural harmony of the life of savages falls into the wily snares of a hypocritical civilization so that a new harmony can be established by the human beings themselves. The harmony of nature issuing from the hand of God is not worthy of human freedom. Born free but everywhere in chains, human beings must recover their freedom by their own efforts. And then the period of servitude will appear wholly justified as a necessary condition for mankind's self-liberation. All then, including the apparent evils of the present disorder, will be seen as good.

The injustice of the present order is reflected in the deceptive social contract, eloquently described in *Discourse on the Origins of Inequality*, by which the rich property owners manipulate the poor into defending their wealth. Rousseau's work, *On the Social Contract*, proposes what we can call an authentic Social Contract of the Poor. This new social contract requires that individuals rise above the perspective of fearful, envious, and divisive egotism to recognize and participate in the greater whole of which they are a part. It is recognition of this whole that is the basis of what Rousseau calls "the general will," which he says

> is not so much the number of votes as the common interest that unites them, for in this institution each person necessarily submits himself to the conditions he imposes on others, an admirable accord between interest and justice which bestows on common deliberations a quality of equity that disappears when any particular matter is discussed, for lack of a common interest uniting and identifying the role of the judge with that of the party. . . . And asking how far the respective rights of the sovereign and the citizens extend is asking how far the latter can commit themselves to one another, each to all and all to each.[7]

In this new social contract the hypocrisies of the old one are exposed and overcome, for what is stressed in the above definition is not the equality of rights only, but also an equality of "conditions." The contradiction that Hume sees between benevolence and justice is solved only if we remove the conditions of inequality that create it in the first place. In Rousseau's "general will," unlike the collective will which Hume saw as the basis of the state and its common-law system of justice, there is perfect accord between justice and "equity" or benevolent morality. This difference is strikingly evident in the way Rousseau contrasts the general will with the conflict of particular wills in ordinary jurisprudence

where there is a lack of "a common interest uniting and identifying the role of the judge with that of the party." It is not the common-law judge, standing outside the parties in contention, who is capable of establishing justice, but the legislature, representing the general will, that enacts the fundamental laws that express the common interest in an authentic social contract that unites "each to all and all to each."

The laws that establish harmony between justice and equity, and that express the general will, are laws that address the fundamental inequality of the conditions of the citizens. It is the difference in the conditions of the rich and poor that makes the equality of rights a deceptive device for imposing unequal burdens on the latter. What good are laws defending property and property rights to the impoverished? The true meaning of this spurious contract, which by no means rests on Humean common interest, is summarized by Rousseau: "You need me, for I am rich and you are poor. Let us come to an agreement between ourselves. I will permit you to have the honor of serving me, provided you give me what little you have for the trouble I will be taking to command you."[8] To resolve this inequality of conditions in order to create a true community of interest, Rousseau recommends redistribution of wealth through peaceful state policies, such as progressive taxation.[9] But if there is gross inequality the evil has already been done. Rousseau lists the unequal circumstances that lead to the impoverishment of the majority of the citizens:

> It is one of the most important items of business for the government to prevent extreme inequality of fortunes, not by appropriating treasures from their owners, but by denying everyone the means of acquiring them, and not by building hospitals for the poor but by protecting citizens from becoming poor. Men unequally distributed over the territory and crowded into one place while other areas are underpopulated; arts of pleasure and pure industry favored over useful and demanding crafts; agriculture sacrificed to commerce; the publican [tax collector] made necessary by the bad administration of state funds; finally, venality pushed to such excess that esteem is measured in gold coins and the virtues themselves are sold for money: such are the most readily apparent causes of opulence and poverty, of the substitution of private interest for the public interest, of the mutual hatred of citizens, of their indifference to the common cause, of the corruption of the people, and of the enfeebling of all the governmental power. Such, as a consequence, are the ills that are difficult to treat once they make themselves felt, but which a wise administration ought to prevent in order to maintain, along with good mores, respect for the laws, love of country and the vitality of the general will.[10]

Thus the general will is not primarily a matter of voting procedures, but of a unity of purpose and interest founded on a rough equality of conditions.

Rousseau does not insist on mathematical equality of incomes, but only the avoidance of extremes of poverty and wealth. Without such conditions of relative equality any system of representation will inevitably be in reality a system of subjection and deception. But how can this Rousseauian social contract of the poor be realized in a world governed by the falsified or alienated concepts and corrupting influences of the power structure or leviathan established in the Hobbesean social contract of the rich? The corruption of reason by the passions of ingenious sophistication is the real work of the reigning leviathan. Rousseau describes the history of civilization as a progressive distortion or defacement of our original human nature, and then asks us to hear again within us the still small voice of freedom. Given existing worldly or materialistic obsessions, such a radical turn-around in the direction of original human equality seems highly unlikely.

Nevertheless, because he believes he has discovered the causes of our misery and servitude, Rousseau prescribes methods for reversing or counteracting those causes. The main hope for the future lies in the education of our children and young people. We must discover methods for preserving and strengthening the child's spontaneous contact with nature and the underlying truth of his and her own nature, and extend this to relations with other people. At some point the young person naturally becomes interested in philosophical ideas such as those propounded by the Vicar to the distraught young man. A sincere individual might employ such methods with her children. As such education becomes generalized—and given the tendency of the corruption to lead to social crises the perceived need to take up such solutions becomes more and more urgent, necessary, and widespread—there is hope for us yet.

Education of the Heart

Émile is primarily about methods of education that accord with natural characteristics of the growing child. Innate freedom and natural sentiment are positively encouraged, and at the same time protected from the degrading outside influences of the civilized world. The encounter with the disturbing effects of "society" (we should perhaps say, "high society") are postponed until the young person is physically, emotionally, and mentally equipped to counteract their influence. Part of this methodology consists in existential or practical methods of moral education. Such methods involve providing learning circumstances from which the child has the feeling of learning directly from experience. The child's own moral experience, like a picture, is a thousand times more effective than mere words.

It is not possible to protect the child forever from outside influences. During the teenage years, the young person has a natural impetus to explore

the world outside the home. Unfortunately, most parents think it advantageous to introduce their children, as soon and as often as possible, to the influences of wealthy and sophisticated people. But such experiences only result in self-destructive, soul-sapping sentiments of humiliation and envy. The tutor of Émile has another approach. At the time when the young man naturally seeks out a wider society beyond his relatively isolated home life, he should first of all be exposed to the sufferings and injustices of life:

> Thus is born pity, the first relative sentiment which touches the human heart according to the order of nature. To become sensitive and pitying, the child must know that there are beings like him who suffer what he has suffered, who feel the pains he has felt, and that there are others whom he ought to conceive of as able to feel them too. In fact, how do we let ourselves be moved by pity if not by transporting ourselves outside ourselves, and identifying with the suffering animal, by leaving, as it were, our own being to take on its being? We suffer only so much as we judge that it suffers. It is not in ourselves, it is in him that we suffer. Thus, no one becomes sensitive until his imagination is animated and begins to transport him out of himself.
>
> To excite and nourish this nascent sensitivity, to guide it or follow it in its natural inclination, what is there to do other than to offer the young man objects on which the expansive force of his heart can act—objects which swell the heart, which extend it to other beings, which make it find itself everywhere outside of itself—and carefully to keep away those which contract and concentrate the heart and tighten the spring of the human *I*? That is, to say it in other terms, to excite in him goodness, humanity, commiseration, beneficence, and all the attractive and sweet passions naturally pleasing to men, and to prevent the birth of envy, covetousness, hate, and all the repulsive and cruel passions which make sensibility, so to speak, not only nothing but negative and torment the man who experiences them. (*Émile*, 222–23)

At a certain point in his development, child will naturally "begin to have gut reactions at the sounds of complaints and cries, the sight of blood flowing will make him avert his eyes; the convulsions of a dying animal will cause him an ineffable distress. . . ." These reactions of natural sympathy need to be affirmed and cultivated rather than suppressed in the responses of the adults. The main object of attention should be the unjust sufferings of "the people." Such suffering is inevitably unjust:

> The miseries of the rich man come to him not from his station but from himself alone, because he abuses his station. . . . But the misery of the poor man comes to him from things, from the rigor of his lot, which weighs down on him. No habit can take

> from him the physical sentiments of fatigue, exhaustion, and hunger. If the people were as clever as we assume them to be stupid, what could they be other than what they are? What could they do other than what they do? Study persons of this order. You will see that although their language is different, they have as much wit and more good sense than you do. Respect your species. Be aware that it is composed essentially of a collection of peoples; that if all the kings and all the philosophers were taken away, their absence would hardly be noticeable; and that things would not be any the worse. In a word, teach your pupil to love all men, even those who despise men. Do things in such a way that he puts himself in no class but finds his bearings in all. Speak before him of humankind with tenderness, even with pity, but never with contempt. Man, do not dishonor man! (*Émile*, 225–26)

In the practical circumstances of their highly restricted lives, the poor, eking out a precarious living in the repetitive, monotonous, mind-numbing activities of Adam Smith's manufactories, cannot do otherwise than what they do, think otherwise than as they think. The potential of human greatness in comprehending the entire universe nevertheless still abides with them and deserves both our deepest respect and our commitment to the universal freedom of all humanity. And in their moral understanding, they put the hypocritical elites of society to shame. Smith follows Rousseau in urging education as the solution to a social malady that threatens the collapse of society from within. But Rousseau is not content with educational reform. In his socioeconomic and political writings he extends the Vicar's approach to the radical reform of society. An authentic social contract, based on insight into the unnaturalness and injustice of human inequality, would authorize the state to reestablish the socioeconomic dignity of the common people by enabling everyone to attain the means of economic security and independence. However, if the desired reforms of society are to come about, it must be preceded by education, both philosophical and pedagogical, taking place first of all in the thoughts and homes of thinking individuals.

The First Duty

In the first part of his "profession of faith," the Vicar "deduces" basic truths about the universe. In the second part, he considers how these truths lead to rules for life. Metaphysics therefore prepares the way for morality and provides its foundation. Only if we know certain fundamental truths about life in general can we adequately determine how we are to live our own lives. And yet, if the Vicar's metaphysics is an "existential" one, attuned throughout to the vital interests or desires of the deeper self, the moral "ought" is implicitly present from the start. The method of thought in metaphysical matters presupposes

from the beginning a moral perspective—to discover truths that are personally relevant, truths that really matter. To avoid a vicious circle in such reasoning, we might say that while "is" and "ought" are relatively separate objects of study, they are joined together by the "inner sentiment" of the self, seeking to be true to itself in all things.

Here is what the Vicar says:

> After having thus deduced the principal truths that it mattered for me to know [truths that matter!] from the impression of sensible objects and from the inner sentiment that leads me to judge of causes according to my natural lights, I still must investigate what manner of conduct I ought to draw from these truths and what rules I ought to prescribe for myself in order to fulfill my destiny on earth according to the intention of Him who put me there. In continuing to follow my method, I do not draw these rules from the principles of a high philosophy, but find them written by nature with ineffaceable characters in the depth of my heart. I have only to consult myself about what I want to do. Everything I sense to be good is good; everything I sense to be bad is bad. The best of all casuists is the conscience; and it is only when one haggles with it that one has recourse to the subtleties of reasoning. (*Émile*, 286)

Just as it is not abstract reasoning that instructs him about the basic issues of metaphysics, so he does not draw exclusively from a "high philosophy" in the sphere of morality. In regard to metaphysical issues, reason plays a central role, but judgments in the light of reason are restricted on two sides: on the side of external perception, and on the side of internal sentiment. In matters of morality there is the same need to qualify, restrain, or ground reason. Rational thought must always be united with sentiment, otherwise the subtle haggling and bargaining—the "rationalizations"—of abstract reason will lead us astray from the path of goodness.

In prescribing for himself what he ought to do and what rules he ought to follow, the Vicar does not seek guidance from any source outside of himself. Regarding the alleged revelations of religion(s), he affirms a radical principle of self-determination: "No one is exempt from the first duty of man; no one has a right to rely on the judgment of others" (*Émile*, 286). In order to know what we ought to do, what duties we have to fulfill, we need only consult ourselves. It is desire that determines duty. But this is the desire of the "inner man," the deeper self, not desires (that is, "passions") inspired in us by external attractions and competitive comparisons with others. Ask yourself, he says, what it is that you *really* want to do. We must learn how to rely on and trust ourselves in moral matters. Immorality consists above all in acting in contradiction with oneself—that is, with one's Self. In seeking to discover the duties of life by such agreement with oneself, the individual is already acting in accordance with

moral duty. The first truth about how we ought to live is precisely to recognize that each of us can only consult herself or himself to discern the nature of one's duties to others and to oneself—that is, the nature of one's life destiny.

Such a primary duty follows from the basic metaphysical "truths" about the nature of the universe, God, and the spiritual/material nature of the incarnated spirit that is the human being. In his metaphysical reflections, the Vicar "deduces" that human beings are essentially free. This follows from the very nature of the rational process: reason is capable of comparing the impressions of the senses, implying that it is independent of any of them. In addition, he recognizes in his will a free power to move his body. Such a capacity must be independent of matter, since it commands matter. He recognizes further the reflective unity of the consciousness with itself, and deduces that consciousness is not divisible and so not mortal, as the divisible body is. Being immortal, the soul has a destiny that transcends the short span of years to which bodily existence is confined. Book IV of *Émile* begins with the words, "How rapid is our journey on this earth!" (*Émile*, 211). It is up to each of us, therefore, to discern her or his destiny in these few short years.

Natural Feeling: The Common Core of All Religions

Finding the truth about one's destiny by turning within oneself is no easy matter because the din of civilization drowns out the small inner voice of the heart, the voice of conscience. We need to escape from the disorienting influences of civilization by turning within ourselves to hear what the heart truly desires. In this inward attention to the living sentiment of the soul, we can "sense" what is good and bad. Nature has imprinted in the heart basic feelings about good and evil that the external world cannot completely efface. The true religion is therefore nothing but the religion of nature and natural feeling.

Such a duty of independent reasoning of the heart might seem unrealistic. How is the individual to distinguish the authentic prompting of the soul from the externally produced solicitations of the passions and the mind-based rationalizations connected to them? Most people follow the authority of their respective religions to resolve this problem. This suggests that the great majority of mankind has confided its destiny to the authority of other human beings. Don't most people, by following religious authority, thereby violate the first duty of the human being? And yet, all of these religions, the Vicar (following in the footsteps of Leibniz) finds, essentially speak the same language of the heart. The moral core of all religions is the same: love God above all things, and your neighbor as yourself. And this is what inner experience itself teaches.

The fact that most people adhere to the religions of their families and states does not mean that they have necessarily abdicated their responsibilities

to think for themselves. If they do think for themselves, they will discover that the religion of their tribe, suitably reduced to essentials, is the same religion of nature that they would discover by their own natural lights. As for secondary matters of particular rites and dogmas, these are only historically distinctive and public modes of expressing the essential core understanding of the natural religion. The Vicar acknowledges a kind of patriotic duty connected to social requirements for a certain amount of order and uniformity. When we must speak in public about love of God and other fellow humans, when we must celebrate these central ideas of the good life in communal forms, let us do so in the language and rituals of the local and inherited religion, whether that be Christian, Jewish, Moslem, Hindu, a tribal religion, or whatever. The Vicar merely adds to this central ecumenical principle that for himself personally the particular form of religion as taught by Jesus has the greatest appeal.

Against the Intolerance of Exclusive Religion

There is one doctrine of the local religion that must conscientiously be rejected in all cases. This is the idea that only those who practice its particular rituals and swear by its particular dogmas will save their souls; and all others, no matter how much they love God and their neighbors, will be damned. It is this religious exclusivism that provides the motive force in too many cases for the horrible blight of war. "The duty to follow and love the religion of one's country does not extend to dogmas contrary to good morals, such as that of intolerance. It is this horrible dogma which arms men against one another and makes them all enemies of mankind" (*Émile*, 309). The intolerant concept that salvation depends on adhering to a particular religion would be the height of injustice on the part of any God who supposedly makes such a requirement. The beliefs and duties necessary for each person to fulfill his or her eternal destiny cannot be written in books that are inaccessible to a great majority of mankind. How, after all, is one to know the "one, true religion" if one has never even heard of it? Do the missionaries of the Christian faith "go into the harems of the princes of Asia to proclaim the Gospel to thousands of poor slaves? What have the women of this part of the world done to prevent any missionary from preaching the faith to them? Will they all go to hell for having been recluses?" (*Émile*, 304–5). If each human being has a destiny to fulfill in this short life, it must be such that the poorest slave, the most secluded woman, can discover. All the people of the world, whatever religion they outwardly follow, must have access to the only true religion:

> I regard all the particular religions as so many salutary institutions which prescribe in each country a uniform manner of honoring God by public worship. . . . The essential worship is that of

> the heart. God does not reject its homage, if it is sincere, in whatever form it is offered to Him. (*Émile*, 308)

As a result of his advocacy of such inclusive religion of the heart, the Parliament of Paris, on June 9, 1762, declared Rousseau an enemy of Church and State, and issued a warrant for his arrest. *Émile* was burned in Paris and shortly afterwards both *Émile* and *On the Social Contract* were burned in Republican Geneva. Rousseau was expelled from his native Switzerland. He was thereafter forced to disguise himself and flee from one habitation to another. After fifteen years of enforced flight, he began his late work, *Reveries of a Solitary Walker*, finished with his death in 1778, with the words:

> I am now alone on earth, no longer having any brother, neighbor, friend, or society other than myself. The most sociable and most loving of humans has been proscribed from society by a unanimous agreement. . . . Could I in my good sense have supposed that one day I, the same man that I was, the same that I still am, would—without the slightest doubt—pass for and be taken as a monster, a poisoner, an assassin; that I would become the horror of the human race, the plaything of the rabble; that the only greeting passersby would give me would be to spit on me; that an entire generation would, by unanimous agreement, find delight in burying me alive?[11]

No doubt this dire fate must have impressed Kant, who said, in a letter to Moses Mendelssohn of April 8, 1766, "Although I am absolutely convinced of many things that I shall never have the courage to say, I shall never say anything I do not believe."[12] The context of this statement is Kant's penetrating but puzzling book on the unorthodox Christian mystic, Immanuel Swedenborg. The fate of Rousseau might easily have been the fate of Kant, had he been less circumspect in the presentation of his ideas. It is a measure of Kant's own courage that the sole portrait in his home was that of the solitary fugitive Rousseau.

From the Laws of Justice to Systematic Injustice: A Review

Rousseau's natural religion of the heart is essentially a religion of morality. The Vicar describes the central features of morality with philosophical precision. The core issue of morality is the relation between one's own individual desires and interests and the requirements of existence in a larger whole. He agrees with Pope that the basic moral faculties are self-love and reason. He also agrees that evil does not consist in self-love per se or *amour de soi*, but in *amour propre* or selfishness. Selfishness consists in the *separation* of self-love from reason.

"Reason" is the human being's capacity for situating one's individual concerns in the context of the whole, of the universe. Selfishness consists then in the pursuit of individual desires and interests in separation from other beings.

There is, however, a major difference between the optimism of the English writers and the seeming pessimism of Rousseau. Pope, like Hobbes, thinks that even unfettered selfishness, unconcerned with the larger good, naturally tends toward a reasonable reconciliation of one's own interests with that of others. Pope sees a natural evolutionary or historical process leading from narrow selfishness to an expanded understanding of individual interests resulting in a harmonious relationship with the interests of others. Private vice, growing more astute as a result of its encounter with the negative effects of a too-narrow conception of self-interest, naturally evolves into public virtue. In this way, Pope follows the path of Hobbes. And this path, passing with some qualifications through Hume's slavery to passion, culminates in Adam Smith's economic reconciliation of self-interest and the social good, otherwise known as "the wealth of nations." Rousseau, however, presents a radical critique of this entire tradition.

Let us briefly review that British intellectual development. Hobbes argues that the conversion from destructive selfishness to a rational or reasonable self-love occurs as a result of the progressive expansion of self-knowledge, one that is consistent with deterministic science. A succession of rationally ordered steps, involving possible lessons learned from hard experience, culminates in the establishment of the "social contract"—that is, the creation of the state with its laws of justice. Despite this progressive evolution, life under this state involves a major reversal of the previous "state of nature" in which individuals act independently of one another in a condition of "natural liberty." Eventually coming to see their interests rationally, such naturally free individuals conclude that it is in their own interests henceforward to chain themselves, to subject themselves to the authority and power of the state. When Rousseau says that naturally free individuals have rushed to chain themselves, he is literally following the description of the social contract given by Hobbes.[13] Hobbes appropriately describes such a radical reversal of the natural condition of mankind as analogous to the divine creation of the world. Implementing the conclusions of the rational will, individuals establish a law-governed social order through a creative and quasi-divine *fiat*. It is reasonable to charge Hobbes here with inconsistency, as Hume does. If we are passionate individuals, as Hobbes says we are, then reason never has the power to contradict and redirect our passions.

Locke's theory of the social contract, founded on the admission of freedom of the will, therefore removes the contradiction found in Hobbes's determinism. Man is born free, says Locke, but in the course of history some men are also born rich, and the social contract of the new states comes about precisely to protect those riches. He thereby brings into the open the distinction of classes that hides behind Hobbesian individualism. Locke intends to ground

more concretely the new compromise state of king and parliament that issued from the Glorious Revolution of 1688. But lurking behind his arguments for limited state power is the social division of rich and poor that prevents him from extending the moral equality of individuals to political and economic equality. Thus the free will that he defends against Hobbes submits ultimately to the authority of a state in which governance is precariously divided between an elite minority of property-owners and a monarchy whose absolute power cannot be altogether abolished.

On the one hand, Hume criticizes Locke for asserting freedom of the will against the determinism of natural and social science. How can purely rational insight provide the motivating power for redirecting the all-powerful forces of human passion? Not only Locke, but Hobbes too attributes causal power to the rational will. Because such rationality breaks sharply from prior egotism, Hobbes's position implicitly departs from scientific determinism. Hume sees the fundamental difficulty as stemming from Hobbes's one-sided conception of the human being as motivated solely by his or her own rationally comprehended passions (desires) or interests. But passion and reason cannot be so easily combined. If we are moved by passions, we are not at the same time moved by reason. If I have a passionate desire for a certain food, but rationally see that this goes against my interest to live a longer life, warm-blooded passion will always win against cold, calculating reason. Such cold, calculating reason could never move individuals to change their lives from any purely selfish passion. Passionately selfish individuals would never submit themselves to the restrictions of social life unless there was a passion to do so in the first place. For social order to exist, there must, therefore, be social passions, passions both for others and for the good opinion of others, and not merely egotistical, rationally self-interested ones.

Morality is not behavior governed by a rational process of deducing right behavior from individual self-interest, as Hobbes argues, let alone from self-evident truths of reason, as Locke requires. It is an expression of our social passions, our natural desires to help others, to cooperate with them, and ultimately to submit to the demands of the collective existence. Empirical observation—as opposed to the artificial chains of reasoning constructed by Hobbes—attests to the simple fact of benevolent feelings as significant motivators of behavior. However, the moral impulse of benevolence is largely limited to the sphere of private life, to the relationships of family and friends. The virtue that governs public life is not benevolence but justice, a passion for the "common interest." The idea of justice stems from the recognition that individual interests are often best served through cooperation with other individuals having a common interest with ourselves. In the common interest, the interest of one individual combines through emotional chemistry with the interests of others to create a kind of self-interested collectivity with which the individual identifies. Justice, operating in the public sphere, does not therefore eliminate

or contradict individual interest as benevolence does but expands self-interest through identification with the interest of the nation.

The common interest or justice demands the elimination of violence and fraud from the arsenal of legal means for achieving one's individual desires. The common interest therefore limits individual interest but does not eliminate it. Within the limiting framework of the equal application of the laws of justice, the self-interest of the separate individual remains the supreme motive force in the sphere of civic behavior. The outcome of Hume's criticism of Hobbes's theory of self-interest is therefore essentially a specification of the sphere in which self-interest legitimately operates. It is not universal, but limited to the arena of civic life, the arena of civil society that occupies the space between the political sphere of the state and the sphere of private and family life. In this middle sphere, self-interest is confined by the common interest or the moral passion for justice, which demands punishment for law-breakers. Despite his criticism of Hobbes and his recognition of social passions on both the private and public levels, therefore, self-interest remains a potent force in Hume's social theory. There is a close connection between Hume's argument and the theory of Adam Smith. For Smith, disinterested acts of benevolence have their place in life, but this place is neither government regulation of the economy nor the production and exchange of commodities. When we approach the butcher or the baker for the goods they have for sale, we do not appeal to their benevolence but to their interests—of course, within the framework of law. It might be thought that giving such a wide scope to self-interest would result in chaos. But no, Smith demonstrates. The outcome is what any moralist would want: the constantly increasing wealth of nations. Adam Smith demonstrates scientifically, on the basis of empirically verifiable laws, that those of us who live in free market economies live in the best of all possible worlds.

The result of this philosophical history, following materialistic and deterministic premises, is a secularized version of Leibniz's idea that we live in the best of all possible worlds. But the two versions have radically different priorities. In Leibniz's spiritualist monadism the material interests of individuals, the "kingdom of power," harmoniously corresponds with and supports the dominant spiritual unity of mankind, the "kingdom of wisdom." Conscious recognition of the family of humanity united under a common Father—the kingdom of heaven on earth, the kingdom of final causes or ends, and the republic of spirits—provides the teleological endpoint of materialist processes. Leibniz develops Descartes' spiritualist starting point in the freedom of self-consciousness and its culminating insight into the priority of consciously seeking the goods of spirit, and fostering a loving, sharing community based on these, over the pursuit of material goods that inherently divides us.

In Smith's materialist version of the best possible world, the invisible hand of the market operates unconsciously beneath the surface of individual activities that are consciously motivated by private self-interest. The common good,

which in fact emerges, is willed by no one. Smith makes it clear that this is far from being a perfect world. The laws of the market can be ruthless, as whole populations suffer from changes in fashion and economic demand. But all other possible economic arrangements, including governmental regulation motivated by benevolence, produce even worse results. The individual facing starvation from unemployment due to shifting economic demand might do well to read Smith's book. She would then have empirically verifiable, scientific reasons, rather than the abstruse metaphysical reasons of an arcane philosophy, to repeat the thought of Candide: "If this is the best of all possible worlds, what then must the others be like?"

Kant is first impressed with Pope's demonstration that "all is good," including the selfish passions of individuals. But he finally accepts Pope's optimistic conclusion, improving on the moderated optimism of Leibniz, only after taking a detour through the pessimism of Rousseau. "After Newton and Rousseau . . . God is justified, and Pope's teaching is henceforth true."[14] Rousseau, speaking through the Savoyard Vicar, does not sympathize with the idea that self-love or self-interest *spontaneously* harmonizes with reason. Self-love in the form of selfishness (*amour propre*) does not automatically, mechanically, or progressively produce the kind of positive social consequences that somehow moderate it. Rousseau does not believe that people become more socially responsible as a result of the unfolding of self-interest. He criticizes the entire British tradition according to which the state allegedly intervenes in social life in the interests of maximum liberty and equality. Instead, he argues that the rational self-interest of the rich and powerful has created a civilization based on fundamental injustice. The "laws of justice" may be strictly observed, but as a result of the operation of these equal laws applied primarily in the defense of property there is a great and systematic social injustice. Rousseau would have appreciated the sardonic remark of Anatole France that "The law, in its majestic equality, forbids the rich as well as the poor to sleep under bridges, to beg in the streets, and to steal bread."[15]

Self-Interest and Self-Sacrifice

While recognizing a place for self-interested action, Rousseau nevertheless attacks the philosophy that makes self-interest the dominant motivator of social life. Such a philosophy, he argues, completely ignores acts of self-sacrifice motivated by selfless morality. The following passage could have inspired Kant's later paradigm moral example of a person who may be willing to die rather than to engage in an immoral act:

> It is said that everyone contributes to the public good for his own interest. But what then is the source of the just man's contributing

> to it to his prejudice? What is going to one's death for one's interest? No doubt, no one acts for anything other than his good; but if there is not a moral good which must be taken into account, one will never explain by private interest anything but the action of the wicked. (*Émile*, 289)[16]

One of the goods we act for is the moral good—the good in which we see ourselves united with others according to the general will. This capacity to rise above the private will and act on the basis of the general will is the heart of moral virtue. It is necessary therefore to find this higher, general will within oneself: "to follow the general will one must know it, and, above all, properly distinguish it from the private will, beginning with oneself: a distinction that is always most difficult to make and only the most sublime virtue is capable of shedding light on it."[17] Rousseau's Vicar severely criticizes the doctrine of "philosophers" that self-interest is the sole or primary motive of mankind. Such an idea goes against the most glaring evidence of human behavior. Do we not, for example, experience a kind of exultation in the theater when we see a hero risk his life for the benefit of another person? When do we applaud the triumph of self-interested cunning when this leads to the suffering of innocent people? We not only care for ourselves. We care for others as well. "[H]ow many times does the inner voice tell us that, in doing our good at another's expense, we do wrong!"[18] Rousseau's appeal on behalf of the existence of unselfish motives suggests Hume's similar position. But Rousseau's examples are more radical. Hume notes that "A parent flies to the relief of his child. . . . A generous man cheerfully embraces an opportunity of serving his friend."[19] But Rousseau writes:

> If there is nothing moral in the heart of man, what is the source of these transports of admiration for heroic actions, these raptures of love for great souls? What relation does this enthusiasm for virtue have to our private interest? Why would I want to be Cato, who disembowels himself, rather than Caesar triumphant? (*Émile*, 287)

Hume tends to limit his examples of benevolent selfless actions to the sphere of private life. Rousseau's "virtue" expands principally on the stage of public life, where heroes offer their lives to the cause of fighting immorality and injustice. In his conception of the possibility of self-sacrifice Rousseau implicitly criticizes the Humean concept of justice in which individual interest is linked with the common interest of the nation. What individual interest can be served in disembowling oneself? All of which reflects the more radical idea that Rousseau attempts to illuminate: the capacity of the individual free "spirit" to rise entirely above the sphere of material interests.

Passion, Conscience, and Self-Mastery

But if people are naturally, spontaneously good, how explain the fact that they so often act against the good that, the Vicar assures us, they directly "sense." Here we see the problem that Kant grappled with in his comparison of Leibniz and Pope, before he read Rousseau. Why did the Creator not endow human beings with more naturally loving inclinations? Rousseau's answer is: He did! We *are* naturally loving beings, and we know this when we turn within ourselves and listen to the inner voice of conscience telling us that when we seek our own good at the expense of others we do wrong. The descent of the human world into the war of all against all and rich against poor—which is our present world and not the divine state of nature, and which is disguised by hypocritical phrases about equality before the law—this is the work of human beings themselves.

To understand human evil, the Vicar refers back to the dual composition of the human being in the sphere of knowledge. On the one hand, we passively receive sensations from the external world; on the other, we are actively order or reorder those sensations by reason. The error of empiricism is to follow the lead of sensations exclusively, letting the passive part, bodily sensation, dominate the active part, the intellect itself. Something similar takes place in the moral sphere:

> We believe we are following the impulse of nature, but we are resisting it. In listening to what it says to our senses, we despise what it says to our hearts; the active being obeys, the passive being commands. Conscience is the voice of the soul; the passions are the voice of the body. Is it surprising that these two languages often are contradictory? (*Émile*, 286)

Passions arise in us spontaneously. In relation to our passions, we are passive—subject to external causal determinism. But as free beings, we can either yield to the passions and follow where they lead us, or we can choose our own bearings from within ourselves, and follow where that leads. We have a sure guide within us—conscience, the voice of the soul. This is not reason alone but reason combined with "sentiment," a spiritual capacity for sensing what is good and what is evil.

Hume asks how "cold" reason is able to motivate practical action. If the alternatives are between a calculating and mathematical reason, on the one hand, and the physical "passions" on the other, morality, he says, must be classified among the passions. Such a division serves Hume's commitment to scientific determinism more consistently than Hobbes in following the doctrine that passion is the internalization of deterministic physical processes and past conditioning. But for Rousseau there is a third possibility. There is also "sentiment," understood not as a passion of the physical body but as an active striving for good prompted from the depths of the spiritual soul. In following

"sentiment," all strictly individual, bodily interests can be left completely behind in actions that embody the soul's spiritual inspirations to love the good, including the good of others, and to unite with it.

Morality, says Rousseau, consists in being at one with oneself, as opposed to being in contradiction with oneself. The contradiction arises when we consider the world as we see it through the senses to be the truly real world. We then fail to recognize that the true order of things is quite different from the order of appearances. We mistakenly think that our happiness lies in satisfying the passions inspired by the objects we see around us, as interpreted by past conditioning. Simple people with simple, easily satisfied desires are less prone to this illusion. But civilization awakens limitless desires, cravings, and addictions—to wealth, prestige, power, and pleasure. Allowing ourselves to be hypnotized by these siren songs of the world, we set ourselves up for endless dissatisfaction and misery. How much better off would we be if we had not encountered such seductive attractions, if our habits had been formed on another basis, and if we had been brought up along with Émile in harmony with nature and following in the path of morality:

> Oh how easily we would remain masters of ourselves and of our passions—even during this life—if when our habits were not yet acquired, when our mind was beginning to open, we knew how to occupy it with the objects that it ought to know in order to evaluate those which it does not know; if we sincerely wanted to enlighten ourselves—not to be conspicuous in others' eyes, but to be good and wise according to our nature, to make ourselves happy in practicing our duties! This study appears boring and painful to us because we think about it only when we are already corrupted by vice, already given over to our passions. (*Émile*, 293)

The Vicar confesses that it is already too late for him. He cannot shake off the destructive habits of an earlier life. But he can at least recognize their illusory character:

> There is an age when the heart is still free, but ardent, restless, avid for the happiness it does not know; it seeks it with a curiosity born of incertitude and, deceived by the senses, finally settles on a vain image of happiness and believes it has found it where it is not. These illusions have lasted too long for me. Alas, I recognized them too late and have been unable to destroy them completely. They will last as long as this mortal body which causes them. At least, although they may very well seduce me, they no longer deceive me. I know them for what they are; in following them, I despise them. Far from seeing them as the object of my happiness, I see them as its obstacle. I aspire to the moment when, after being delivered from the shackles of the

> body, I shall be *me* without contradiction or division and shall need only myself in order to be happy. (*Émile*, 293)

Being "me without contradiction" means being in the active center of one's being, where the inner freedom of the will is in tune with the softer melody of the heart. It means retaining or returning to the wholesome energy of passionate youth which is the natural expression of the soul that is still in command of the body. Being in harmony with oneself results in mastery over one's passions and directing them from within rather than being compelled by them from without. It is in this inner harmony with one's Self that one discovers one's moral duties. In fact, this very harmony with oneself is the supreme duty, the first duty—to follow one's own inner voice rather than to rely on the judgment of others. On this basis of an authentic internally based sentiment of what one should be doing there will be clarification of subsidiary duties. Doing one's duties, both to oneself and to others, replaces the path toward illusory happiness that consists in pursuing one's pleasures and interests, not as moved from within, but by climbing the social ladder of fame and fortune. To turn now from the habits of such misspent youth and practice virtue is painful and seems boring. When we are at last freed from the shackles of the body, such dutiful behavior will no longer be a painful one, but the source of a true and lasting happiness.

Copernican Revolution in Practical Life: Finding the True Center

The Vicar describes the painful division within himself with which he struggled, and the failure of both interest-based as well as the traditional rationalist moral theory to provide him with guidance in this struggle. In countering the philosophy of self-interest, the rationalists say that one should love order. But what "sufficient reason" can be given for such self-sacrifice? Rousseau opposes the rationalist response of Leibniz to the materialist morality of self-interest:

> Constantly caught up in the combat between my natural sentiments, which spoke for the common interest, and my reason, which related everything to me, I would have drifted all my life in this continual alternation—doing the bad, loving the good, always in contradiction with myself—if new lights had not illuminated my heart, and if the truth, which settled my opinions, had not also made my conduct certain and put me in agreement with myself. For all that one might want to establish virtue by reason alone, what solid base can one give it? Virtue, they say, is the love of order. But can and should this love win out in me over that of my own well-being? Let them give me a clear and sufficient reason for preferring it. (*Émile*, 291)

In a pre-philosophical frame of mind, natural sentiment speaks to the Vicar of the common or general interest, while his reason tells him to pursue his own self-interest. Such rational self-interest is backed by the philosophers, in the spirit of Hobbes and Adam Smith, who believe that an ordered society can be established on this basis. But this opposes the spontaneous sentiment of the heart, experienced acutely in theatrical productions when the Vicar's heart goes out to the hero who risks his life for others and the common good. He then turns to rationalist philosophy in the tradition of Descartes and Leibniz which tells him that reason, instead of demanding self-interest, rather demands the sacrifice of self-interest to the good of the universal order. But when he consults reason alone, unrelated to sentiment, he can find no rational grounds for sacrificing himself. Moreover, he finds that the order of the universe to which he is supposed to devote himself is ambiguous. The Vicar then makes a discovery that resolves the opposition of the two philosophical camps, as well as the inner division which he finds within himself. The discovery is that there are actually two kinds of order and two kinds of reason, and the individual must choose between them. He discovers that

> the good man orders himself in relation to the whole, and the wicked one orders the whole in relation to himself. The latter makes himself the center of all things; the former measures his radius and keeps to the circumference. Then he is ordered in relation to the common center, which is God, and in relation to all the concentric circles, which are the creatures. If the divinity does not exist, it is only the wicked man who reasons, and the good man is nothing but a fool. (*Émile*, 292)

Those philosophers who (like Leibniz) define virtue as love of universal order fail to see that there are two kinds of order. There is the order of self-interest, of egotism, in which the whole world is seen as revolving around one's individual bodily existence. And there is also the true universal order of nature.

The Vicar evokes the Copernican revolution as applicable to morality, as he equates egotism with the pre-Copernican conception of the world as centering on oneself. When we make our individual body-centered fears and desires the center of our concerns, we compete with other would-be centers of everything, many of whom, physically considered, are richer, more beautiful, more powerful than we are. This perspective involving external comparison through sensory experience produces the illusion encountered in moral experience. And so, seeking happiness as separate physical centers we are inevitably defeated in our goals. Looking for happiness where it cannot be found, we are perpetually miserable. Impossibly trying to be the center of the universe, we experience only the nullity of this effort.

On the circumference of the universal sphere of being, however, everyone is a center and no one is. We are all equally distant from, and close to, the true

center. In this way, the Vicar applies the Copernican revolution to morality. There is the true order of nature, in which we find ourselves not at the center, but, so to speak, at the circumference of a universe whose true center is its creative source. The inner "sentiment" or voice of the inner self is always aligned with the universe as a whole in this latter way. It is in natural harmony with all that truly is by being attuned to the source and center of being. When our reason is aligned with sentiment, it supports this motive for sacrificing our self-interest and private will for the general will and good of all. The true soul-based path of virtue means, ultimately, aligning one's own actions with this true order of the universe. The post-Copernican morality of the true inner self involves a radical decentering, comparable in practical life to the epistemological decentering that characterizes the Copernican revolution in science.

So we can understand what Kant means when he describes Rousseau as the Newton of morality. After deducting for humanly created evil, "everything is good," the Vicar says, in the same words that Kant read from Pope. Humanly created evil does not really alter this fundamental principle. Humanly created evil essentially consists in an illusion and an existential impossibility: to treat our individual physical existence as the center of everything. All that really is, therefore, is good. The inversion of order that human beings introduce is an illusion comparable to the egocentric illusions of pre-Copernican astronomy. Behavior governed by such an illusion amounts to nothing, metaphysically and in its practical significance in the framework of the universe.

The possibility of willing disorder is a necessary consequence of the fact that we are free beings. Our destiny as conscious human beings is to will the natural order freely, as opposed to simply being in that order instinctively, as is the case with animals and with the primitive harmonies of the savage and some fortunate childhoods. In order to will the natural order freely there must be an alternative to this natural order, so that we can choose between them. So we must be able to will an unnatural, illusory order. Thanks to the nature of sense perception, the world seems to be physically structured in relation to our bodies. The unreal, impossible order then seems to be real because we directly perceive it and feel its force in related passions. But perception in itself does not give us truth. It is necessary to add to the appearance of perceptual experience, which is the inevitable feature of our bodily sensations, the judgment of the mind. The evil person, exercising one sort of reason, says in practice, yes, the world really does center on me. Instead of willing the natural harmony in which everything cooperates with everything else to produce a harmonious whole, human beings introduce the principle of serving one's individual, separate, physical existence as the highest good. This futile attempt to overturn the natural order leads inevitably to suffering for the self that chooses this direction.

What, then, is morality? It is freely willing the universal order on the basis of our own inner unity with it. It is aligning oneself with the cosmic intelligence by listening to the inner truth rather than giving assent to the external illusion.

It means that people should live in harmony with natural laws and with each other. It means that the "I" extends itself outside of itself to find itself in others. It means encouraging the sentiment of our oneness with others, so that when they suffer, we experience pity and compassion. Rousseau therefore responds implicitly to the problem seen at the end of our discussion of Leibniz. There are two different kinds of greatest goods, two different standards for measuring what is best. And so there must be the possibility of a real choice between them. And therefore, if such a choice is possible, there cannot be the kind of preestablished harmony in which the killer's finger pulls the trigger at the very moment when the killer decides to kill. In all such acts, there must be a choice, and that choice is in principle unpredictable. Far from contradicting the harmony of the universe, it is precisely such a choice, and the possibility of it, that establishes the harmony. For it is the purpose of bodily existence to give human beings this choice between a world of self-centered individuals, leading to the corruption of civilization that we see around us, and a world based on the common or general good, in which we freely link our will to the good of all.

Justice in This Life

The vision of widespread injustice would convince the Vicar, were there no other arguments, that the soul must be immortal. How else could there be order in the moral realm? Only if evil is punished and good rewarded can there be such order. However, in this life, it seems that the unnatural, impossible order prevails. Evil appears to be rewarded and goodness punished. Only if the soul survives death, it seems, can justice be fully realized. But any appeal exclusively to an afterlife involves a superficial appreciation of inner truths. Although from the external perspective the individual with the accumulated symbols of wealth and power appears to be happy, such an appearance of happiness is misleading. The sufferings that a moral order requires for evil deeds do not await possible afflictions in the next world. They begin in this one with the inevitable unhappiness of the evil-doer, living in contradiction with his self. Despite the external appearance of misery, the good person experiences the peace that stems from inner harmony with one's self.

Justice in the sense of moral harmony is therefore a feature of this world. Rousseau rejects some of the abstruse metaphysical arguments and conclusions of Leibniz, such as the argument that we do not ourselves move our bodies. It follows that there is no need for preestablished harmony to coordinate the trajectories of independent, self-governing monads. My body moves because I move it. But this does not mean that there is no harmony, however mysteriously established. Agreeing with the spirit of Leibniz, but abandoning abstract, personally unconvincing ideas of windowless monads and preestablished harmony, Rousseau affirms the divine and natural order in which each thing helps each

other out. Evil is an illusion of the human mind. All that exists in reality is good. And so, in this way Pope is right. The Vicar argues:

> Man, seek the author of evil no longer. It is yourself. No evil exists other than what you do or suffer, and both come to you from yourself. General evil can exist only in disorder, and I see in the system of the world an unfailing order. Particular evil exists only in the sentiment of the suffering being, and man did not receive this sentiment from nature: he gave it to himself. Pain has little hold over someone who, having reflected little, possesses neither memory nor foresight. Take away our fatal progress, take away our errors and our vices, take away the work of man, and everything is good. (*Émile*, 282)

The evil introduced by human beings is a kind of metaphysical nonbeing:

> Where everything is good, nothing is unjust. Justice is inseparable from goodness. Now, goodness is the necessary effect of a power without limit and of the self-love essential to every being aware of itself. The existence of Him who is omnipotent is, so to speak, coextensive with the existence of the beings. To produce and to preserve are the perpetual acts of power. He does not act on what is not. God is not the God of the dead. (*Émile*, 282)

Because evil is the self-inflicted suffering of human beings, God's goodness is justified. Rousseau deepens the theory of Pope, and shows, without glossing over the failings of human beings, that all that is, is good. Morality simply consists in knowing the order of the universe with one's mind as one loves it in one's heart, and then acting in accord with it. Immorality consists in attempting to do the impossible: make the universe center on oneself, a particular individual in it. Instead of seeing all human beings as god-like, through their equal capacity for goodness, the egotist wants there to be only one god: himself. When an individual acts immorally, she does not affect the natural order of the universe one bit. Atoms are rearranged as a result of the immoral action, but they still follow natural laws. Circumstances are modified for other people, but these others are still able find in these altered circumstances the inner capacity to manifest their own moral divinity and so to fulfill their destinies. The only thing that happens is that the agent isolates himself from the power, wisdom, goodness, and beauty of the natural order. Such an individual inevitably suffers, and so is justly punished, at once distanced from God and self. If we can distinguish between goodness and justice, God's justice is simultaneously demonstrated here, for the suffering of the damned, if anyone is truly damned, stems from this self-imposed privation by the egotist of the good that is "all that is." God condemns no one. We condemn ourselves. Reflecting on the question of damnation, the Vicar doubts that such a state of affairs will be eternal.

People have the capacity, after all, to learn from their mistakes and the freedom to alter the course of their lives—in this life and so, presumably, in the next as well. Moreover, at death the illusion underlying evil will disappear and the soul will be released to being itself. Why would it then persist in excluding itself from reality? (*Émile*, 284).

Sublime Contemplations

The Vicar proposes a theocentric religion of nature in which God is "coextensive with the existence of the beings." Such a religion is that of the truly empowered human being liberated from the dictates of others and enslavement to philosophical, political, or religious authorities. In a sense, the religion of nature frees the individual even from God—God regarded as an external being who gives guidance, who works miracles, who grants salvation. Thus, the Vicar's religion involves never praying for anything because prayer implies that we do not have something that we truly need. External need and dependence is impossible in the really real world in which "The existence of Him who is omnipotent is, so to speak, coextensive with the existence of the beings" (*Émile*, 282). One's own existence or being is the very presence within us of divine power producing all reality. In harmony with one's self and God, we are thereby in harmony with all that is. What we seem to lack are only the illusory symbols of an impossible self-centeredness. The only real prayer therefore is the prayer of gratitude.[20] Recognizing our own alignment with the harmony of nature, should we ask God to disturb this harmony for us? Being God-like through conscience, what need is there for us to ask God for guidance? To hear God's voice, we need only listen to ourselves! As for happiness, if we remove the illusory fabrication of an impossible contradiction with our deeper self which is in harmony with the universe and God, we are already happy. This happiness is only disturbed by our own bewitchment with the self-created illusions that constitute our civilization.

Rousseau's Vicar follows the example of Descartes, whose philosophical reflections culminate in a blissful meditation on the nature of divinity. One way to overcome our self-imposed misery, the Vicar suggests, is to practice "sublime contemplations":

> To raise myself beforehand as much as possible to this condition of happiness, strength, and freedom, I practice sublime contemplations. I meditate on the order of the universe, not in order to explain it by vain systems but to admire it constantly, to worship the wise Author who makes himself felt in it. I converse with Him; I fill all my faculties with His divine essence; I am moved by His benefactions; I bless Him for his gifts. But I do not pray to him. What would I ask of Him? That He change the course of

> things for me, that He perform miracles in my favor? I who ought to love, above all, the order established by His wisdom and maintained by his providence, would I want this order to be disturbed for me? No, this rash wish would deserve to be punished rather than fulfilled. Nor do I ask Him for the power to do good. Why ask Him for what he has given me? Did He not give me conscience for loving the good, reason for knowing it, and liberty for choosing it? If I do the bad, I have no excuse. I do it because I want to. To ask Him to change my will is to ask Him what he asks of me. It is to want Him to do my work while I collect the wages for it. Not to be contented with my condition is to want no longer to be a man, it is to want something other than what is, it is to want disorder and evil. Source of justice and truth, God, clement and good, in my confidence in You, the supreme wish of my heart is that Your will be done! In joining my will to Yours, I do what you do; I acquiesce in Your goodness; I believe that I share beforehand in the supreme felicity which is its reward. (*Émile*, 293–94)

Reason in Harmony with Conscience

What then is the role of intellect or reason? Just as in the theory of knowledge reason must be rooted in sentiment, so too in moral life: "To exist for us is to sense; our sensibility is incontestably anterior to our intelligence, and we had sentiments before ideas" (*Émile*, 290). This is fortunate for us, for otherwise in our practical lives we would be subject to all the uncertainties and mistakes to which reason is prone. "Too often reason deceives us. . . . But conscience never deceives; it is man's true guide. It is to the soul what instinct is to the body" (*Émile*, 286). The intellect acquires its ideas from science and culture, but conscience is rooted in existence or being. "To exist for us is to sense. . . ." Sentiment is the inner experience of existence or being. It is conscience, whose voice is only obscured by the idle chatter of the mind. Constantly taken up by the noises and agitations of the passions and the calculations of ego-centered intellect, we fail to pay attention to the very sentiment of our own existence and the voice of conscience that expresses it. Without this anchorage in the inner sentiment of the soul, the feeling or sentiment of existence itself, the mind will bargain and haggle with the principles of morality, providing rationalizations for the demands of passion:

> Conscience, conscience! Divine instinct, immortal and celestial voice, certain guide of a being that is ignorant and limited but intelligent and free; infallible judge of good and bad which makes man like unto God; it is you who make the excellence of his nature and the morality of his actions. Without you I sense

> nothing in me that raises me above the beasts, other than the sad privilege of leading myself astray from error to error with the aid of an understanding without rule and a reason without principle.
>
> Thank heaven, we are delivered from all that terrifying apparatus of philosophy. We can be men without being scholars. Dispensed from consuming our lives in the study of morality, we have at less expense a more certain guide in this immense maze of human opinions. But it is not enough that this guide exists; one must know how to recognize it and to follow it. If it speaks to all hearts, then why are there so few of them who hear it? Well, this is because it speaks to us in nature's language, which everything has made us forget. (*Émile*, 290)[21]

The apparatus of philosophy is terrifying because it places the ordinary human being in a state of dependence on those experts who can manipulate complex systems of thought. However, thanks to conscience, the voice of nature within us, we are not at the mercy of the rationalizations of the philosophers—teaching us that we are only motivated by self-interest, that the soul is a product of and subordinate to the body, that matter is self-moving, like a large blindly moving animal, and consequently unrelated to any higher purpose or destiny for the brief lifetime allotted to each one of us that would then be entirely futile. Reason alone cannot extricate us from this teaching—unless it is in tune with our deepest being, and at one with the sentiment of our own existence. Perhaps unwittingly Rousseau returns in this way to the deepest meaning of Descartes' philosophy, beyond whatever "rationalism" the system builders have made of it.

Reflecting on such texts, Kant learns from the Vicar's discourse in *Émile* to appreciate the dignity and moral autonomy of the ordinary human being. He learns that one can be a human being without being a scholar. He too frees himself from the terrifying apparatus of philosophy as his mind bows before the soul of an upright peasant. Rooting conscience in the sentiment of existence, prior to intellect or reason, Rousseau goes beyond ethical trends in the spiritualist camp of Descartes and Leibniz that tie morality to scientific knowledge and the calculations of consequences. But Rousseau is not a "sentimentalist" or pure romantic, jettisoning reason altogether. Reason, says the Vicar, enables us to *know* what is good. But knowledge by itself is not enough for action. We can know what is good and still do what is evil. It is necessary not only to know the good but to love it. "To know the good is not to love it; man does not have innate knowledge of it, but as soon as his reason makes him know it, his conscience leads him to love it. It is this sentiment which is innate" (*Émile*, 290).

Rousseau here appears merely to repeat the teaching of Descartes, but we know that this dependence of love on knowledge is only half of the picture that he paints. Descartes, after all, did not write an ethics, but only gave some

over-arching guidelines. The ethics he would have written would have to be consistent with his starting point, that sentiment of existence that is not abstract knowledge, but the "I" that connects to the experience of being and feels the joy of existence. It is Rousseau, not the rationalist constructors of utilitarian ethical systems, who completes Descartes. Knowledge does not merely mount up from first principles, for from which first principles do we take our start? The ego too constructs its system and establishes its order. One might say that only when reason is anchored in conscience is it truly rational. When not anchored in conscience, when not turned inward to the requirements of soul-life and the sentiment of being, reason produces rationalizations for what we know in our heart of hearts to be false. It places calculations of supposed future interest ahead of existential reality. It rationalizes present behavior as required by supposedly deterministic past conditioning or justifies questionable behavior as the righting of past wrongs. Whether turning to the future or the past, it fails to listen to the requirements of the present moment. It fails to tune into the sense of existence.

We can clearly perceive the difference between sincere reason and the haggling game of rationalization only when we listen closely to the voice of conscience speaking from the present moment that is freed from past conditioning or future outcomes. It is only in this state of awareness that the rational mind finds real consistency with itself, that is, true rationality. The rationalizations of future-projected self-interest or past-dominated retaliations and excuses are riddled with inconsistency, with irrationality. Without attentiveness to the inner life of the real self, aligned with the universal whole, we deceive ourselves into thinking that what is irrational is in fact rational. To conceal this willful blindness, such rationalizing philosophy of self-interest resorts to a kind of intellectual terrorism, in order to frighten itself and others into calling what is unreason by the name of reason.

Pope claims that reason overcomes selfishness. But when reason is linked to self-interest it can only lead to a more radical form of selfishness. When reason is separated from the inner sentiment of conscience, its artificial constructions relate the whole to me, rather than me to the whole. At the same time, we know that such an impossible fabrication is irrational. We create in ourselves a twisted fabrication of pseudo-reality as a consequence of this "grotesque contrast of passion which thinks it reasons and an understanding in a state of delirium."[22] The Vicar finds peace only when he radically decenters himself, acquiescing in the divine order of the universe. He finally accepts his destiny in the creative order, confident that "one day I myself will enjoy this order and find my felicity in it; for what felicity is sweeter than sensing that one is ordered in a system in which *everything is good?*" (292; stress added). Reason in harmony with conscience—with inner conviction centered in the sense of present reality or existence—is the source of true enlightenment. Only in such a state of inner consistency can reason truly be reason. In this way, the Vicar can speak of the authentic religion

of reason. In considering whether the so-called revealed religions add anything to the religion of nature, the Vicar affirms a religion based on "reason alone": "The greatest ideas of the divinity come to us from reason alone. View the spectacle of nature; hear the inner voice. Has God not told everything to our eyes, to our conscience, to our judgment? Their revelations have only the effect of degrading God by giving Him human passions" (*Émile*, 295).

In this context, "reason alone" is reason without the need for special revelation. Such reason without special revelation is of course reason joined to sentiment. Such morally attuned reason is all that is needed for religion. In contrast to the particular doctrines of supernatural or superrational revelation by which institutional religions distinguish themselves from each other, Rousseau describes his own religion of nature as one based on "reason alone." In this same spirit, Kant writes his *Religion Within the Limits of Reason Alone*. This title may stem directly from Rousseau's *Émile*. In this context, the concept of "reason alone" does not refer to the kind of "sufficient reason" of traditional metaphysical proofs, as proposed by Leibniz. It is a reason rooted in sentiment, or what Kant calls "moral feeling," and linked to a voluntary choice between two ways of living one's life.

The outer spectacle of the immense harmony of nature and the inner voice of morality, these are the two sources of authentic reason. In the conclusion to the *Critique of Practical Reason*, Kant repeats Rousseau, as he eloquently affirms this same profession of awe: "Two things fill the mind with ever new and increasing wonder and awe, the oftener and the more steadily we reflect on them: the starry heavens above me and the moral law within me."[23]

Rational Conjectures on the Purpose of Life

What then is the purpose of this extremely limited, mortal life? Rousseau's Vicar raises this question in connection with the contradictions he finds in himself: "Why is my soul subjected to my senses and chained to this body which enslaves it and interferes with it?" (*Émile*, 292). He knows nothing with any certainty but he offers a conjecture. He tells himself: "If man's mind had remained free and pure, what merit would he gain from loving and following the order which he saw established and which he would have no interest in troubling?" The central point of *earthly* existence—existence confined to time and space and subject to the passions of bodily life—is one of "merit." Only when there is a serious alternative to the creative order of things is there any merit in *choosing* that order. Merit is connected to freedom. The merit consists in choosing what one truly is in face of illusory appearances of reality, and in living out this choice in a conscious way.

But how can there be an alternative to the divinely created order of things—the inherently perfect order of "all that is"? Outside of the harmonious

"all that is" which is coextensive with the divine, there is nothing! This nothing, however, can acquire the illusory appearance of being something. Because we are incarnated in the physical world, we tend to focus primarily on the survival and well-being of our separate, physical individuality. This physical individuality seems to be in competition with other physical individualities over limited material resources. Although the reality is that nature abundantly provides for individuals with simple, straightforward physical requirements, the artificial order of civilization provokes limitless desires and endless fears, a state of continuous vulnerability and a sense of inherent deficiency, where acquisition and security of possessions and related social status become domineering obsessions. In this context, each individual experiences herself as the center of her own concerns in the context of a social world that may or may not reflect back or recognize that self-centeredness. In the case where society does reflect back this self-centeredness, the individual has achieved status and success. But more than likely the social world reflects back indifference, and even hostility to the survival concerns of the seemingly isolated individual. In either case, the individual is enslaved to the larger social world, made up of a multitude of other such individuals, equally enslaved to the collective delusion. Here the Vicar exposes the source of that chemical combination of interests that, according to Hume, rules the lives of individuals and creates their illusory beliefs. In this delusion, present reality seems least real of all as the individual's attention is suspended between the mind-projected unrealities of past behaviors and future possibilities (interests). The "philosophers," Rousseau says, provide additional intellectual terror by imposing this framework on a hapless audience as the achievement of the most advanced scientific reason.

Having created this world of self-imposed servitude, we seem to depart from the universal order in which freedom, abundance, and power is the birthright of every existing individual precisely because we share each of us the divine gift of existence itself. Having left this order, if only in the illusory consciousness that it is possible to do so, we can then make the discovery of our mistake and acquire credit for rectifying it. It is therefore possible to choose between two radically different orders and purposefully to express that choice through one's attitudes and actions. In this way the order of existence can be freely chosen in the face of an alternative possibility. Consequently, this very physical existence that confines the human spirit and distracts it from its true nature is itself part of the perfection of the universe: it is a necessary condition for the exercise of freedom.

Human beings are born free, but everywhere they run to chain themselves. Why is this? The answer, paradoxically, is that only by first chaining ourselves can we truly exercise our freedom and thereby get "credit" for our existence. The original freedom that is the gift of nature must be abandoned so that it can truly be realized. The Vicar conjectures that wholly spiritual beings, angels, have no such choice to make. The perfection, beauty, and goodness of the creative order

are overwhelmingly evident to such beings. The incarnate soul, however, naturally focusing through the senses on the immediate situation, is fascinated with the tiny part of the universe that seems most relevant to his own bodily existence. In this perspective there seem to be absorbing pleasures and fearful threats. There seems to be the need to defend oneself from enemies and to take aggressive actions against them—attacking them before they attack you. Life in such an unnatural state seems solitary, poor, nasty, brutish, and short. This is not, of course, the original state of existence, the original freedom of the innocent and natural being the memory of which we keep deep within ourselves. Hobbes's so-called state of nature is really only the nightmare of civilization: civilization imaginatively projecting into the past its own worst fears.

It takes an effort of consciousness, involving reason and sentiment, to rise to the larger perspective of the universal order where all that is—is good. When one attains this consciousness through the sensing of existence combined with reason, it is not with the self-evidence of a direct intuition. Mysteries, uncertainties, and paradoxes characterize our metaphysical options. Reason by itself, pure reason, cannot convince us either way. The incarnate soul therefore has a real choice to make between two ways of ordering existence. We can choose between an ego-centered order and a God-centric order. We can fixate on our own separate wills, linked exclusively to the defense and gratification of bodily existence. Or we can acquiesce in the divine will, transcending the egocentrism of bodily concerns by adopting a spiritual connection, through the inner sense, with the universal order. In the latter case there is the appreciation that "all that is, is good." If angelic beings directly see this truth and live by it as something that is self-evident, only human beings can experience this truth from the outside, so to speak, from the vantage point of being separate from it, and so acquire the "merit" of freely fulfilling our destiny by acknowledging the reality of all that is. In previous passages on the angelic domain, from Locke and Descartes, the thought of angels establishes the lowliness of humans in the cosmic hierarchy of beings. But Rousseau shows how this very lowliness of bodily existence, when its illusions are surmounted in moral conscience and morally motivated action, propels the human being beyond the angels.

This is the "merit" of the prodigal son in the parable of Jesus.[24] The prodigal son leaves his father's home, with all its idyllic harmonies, pleasures, and securities. He squanders his patrimony in riotous living. He then suffers from poverty and isolation. In his suffering, he recognizes the error of his original choice of separating himself from his family. When he returns home, there is a great celebration at the reunion of the father with the long-lost son. The son who does not leave feels that such a response is unfair. After all, he never betrayed his father's love by abandoning the home fire. Isn't it to his credit that he did not leave? Wasn't the prodigal son forced to return because of the misery he eventually suffered? The paradox of the human situation, Rousseau argues, is that there is true credit or merit only through leaving the universal

order, through living a life of separation, experiencing the misery of that life, and then discovering the goodness of what was left behind but remains always there waiting for one's decision to come back to it.

The purpose of bodily incarnation consists therefore in the self-determined *appreciation* of the goodness of the universal order, for appreciation requires a contrasting state of apparent evil. The only prayer appropriate to this return to the truth is therefore one of gratitude or appreciation. In this way, like yin and yang, there is no good without evil. Merit is linked to appreciation. Appreciation of the good requires separation or distancing from such goodness followed by a freely chosen return to the always-present inner harmony of soul and universe that is recognized in sublime contemplations. Such grateful appreciation presupposes a period of disconnection, of solitary wandering in confusion with no clear path to follow because such a route has no rational consistency but is full of contradictions. The return path involves the harmony of reason and conscience: reason aligned with the reality of our spiritual being. Motivated by suffering, this choice still remains a free one. No one who does not leave can ever have that experience of returning and the merit that comes from freely choosing to do so.

The Vicar, however, advises: it is better not to wander too far astray. It is better not to allow the corruption of civilized life to penetrate too deeply into one's soul. There is enough separation in the necessities and pleasures of bodily existence without introducing the cravings and addictions of a corrupt society into the lives of susceptible and vulnerable young people. When they are old enough to make their own choices, it is much better that a wholesome love of nature and a sentiment of humanity has been cultivated in their souls. This is great responsibility of parents and educators.

Notes

Introduction

1. Immanuel Kant, "On a Discovery According to Which Any New Critique of Pure Reason Has Been Made Superfluous by an Earlier One," in *The Kant-Eberhard Controversy*, ed. Henry E. Allison (Baltimore and London: The Johns Hopkins University Press, 1973), 160.

2. Gottfried Wilhelm Leibniz, *Monadology*, section 76, in Leibniz, *Discourse on Metaphysics, Correspondence with Arnauld, Monadology* (LaSalle, IL: Open Court Publishing Company, 1902), 268.

3. Newton writes approvingly that ancient atomists who explain everything from atoms, the vacuum, and gravity, tacitly attribute gravity to "some other cause than dense matter." That is, they "tacitly" explain the gravitational force from a non-material cause, i.e., God. It is the pure mechanists who "feign hypotheses" by claming to be able to explain everything mechanically, i.e., without the involvement of free spirit or God. See Newton's *Optics*, Book III, Query 28, vol. 34 in *Great Books of the Western World*, ed. Robert Maynard Hutchins, 54 vols. (Chicago: Encyclopaedia Britannica/University of Chicago, 1952), 524–25.

4. Immanuel Kant, *The Critique of Pure Reason*, trans. Norman Kemp Smith (London: Macmillan, 1961), B xiv; 21. The first page reference is to the German edition of Raymond Schmidt (1926), indicating Kant's first edition by "A" and second edition by "B." The second page reference is to the Kemp Smith English edition.

5. Ibid., B xv; 21.

6. Cf. Kant's book, *Dreams of a Spirit-Seer Elucidated by Dreams of Metaphysics*, in Immanuel Kant, *Theoretical Philosophy: 1755–1770*, ed. and trans. David Walford, in collaboration with Ralf Meerbote (Cambridge: Cambridge University Press, 1992).

7. "But if the psychologist takes appearances for things in themselves, and as existing in and by themselves, then whether he be a materialist who admits into his system nothing but matter alone, or a spiritualist who admits only thinking beings . . . or a dualist who accepts both, he will always, owing to this misunderstanding, be entangled in pseudo-rational speculations as to how that which is not

a thing in itself, but only the appearance of a thing in general, can exist by itself." Kant, *Critique of Pure Reason,* A 380; 352.

8. Ibid., B xvi; 22.

9. Particularly missing in our presentation is the work of Spinoza. Spinoza's thought seems to have been largely disregarded by his contemporaries. No doubt this is superficially explained by Spinoza's Jewishness as well as the condemnation of Spinoza for reputed atheism by the Christian authorities. More fundamentally, however, Spinoza stands against the individualistic orientation of the other early modern thinkers. For both these reasons, Spinoza's thought was respected but not directly confronted by the mainstream of European philosophy until Hegel placed the principle of totality at the heart of his thought. As we are emphasizing the logic of ideas over strict historicity, Spinoza's thought seems therefore ahead of its time. It makes more sense to connect Spinoza with the later work of Hegel, than attempt to interject the exposition of his thought in the context of this book.

10. Jean-Jacques Rousseau, "Discourse on the Origin of Inequality," in *On the Social Contract, Discourse on the Origin of Inequality, Discourse on Political Economy*, ed. and trans. Donald A. Cress (Indianapolis: Hackett Publishing Company, 1983), 113.

11. "Newton was the first to see order and regularity bound up with great simplicity, where before him disorder and badly matched manifoldness were to be met with, whereas since then comets travel in geometric course. Rousseau was the first to discover under the manifoldness of the available shapes of mankind man's deeply hidden nature and the concealed law according to which providence through its observation is justified." From Kant's notes to his copy of his *Observations on the Feeling of the Beautiful and the Sublime*, in Susan Meld Shell, *The Embodiment of Reason: Kant on Spirit, Generation, and Community* (University of Chicago Press, 1996), 81–82.

12. Jorge Gracia suggests such a radical break with previous metaphysics: "[I]t should be clear that what has been said thus far about metaphysics and its object does not commit us to a particular stand in this matter: it does not tell us whether many pre-Kantians were right in holding that the object of metaphysics consist of the ways things are outside the mind; whether Kant was right and the object of metaphysics consists in the ways we think; or whether contemporary linguistic philosophers are right who identify the object of metaphysics with the ways we speak or write" (*Metaphysics and Its Task* [Albany, NY: State University of New York Press, 1999], 180–81).

13. I. Kant, *Opus Postumum*, ed. Eckart Förster, trans. Eckart Förster and Michael Rosen (Cambridge: Cambridge University Press, 1993), 240.

14. "But though I cannot *know*, I can yet *think* freedom. . . ." Kant, *Critique of Pure Reason,* B xxviii; 28. Emphasis in the original.

15. Kant, "On a Discovery," 160.

16. Kant, *Critique of Pure Reason*, A 383; 354.

17. Jean-Jacques Rousseau, *Emile or On Education*, ed. and trans. Allan Bloom (New York: Basic Books, 1979), 309.

18. Albert Einstein and Leopold Infeld, *The Evolution of Physics* (New York: Simon and Schuster, 1966), 6–7.

19. James Redfield, *The Celestine Vision* (New York: Warner Books, 1997), 51.

20. Ibid., 40.

21. "Good sense is of all things in the world the most equally distributed." Descartes, *Discourse on Method*, trans. Elizabeth S. Haldane and G. R. T. Ross, vol. 31 in *Great Books of the Western World*, ed. Robert Maynard Hutchins, 54 vols. (Chicago: Encyclopaedia Britannica/University of Chicago, 1952), 69.

Chapter One

1. Immanuel Kant, *Critique of Practical Reason*, trans. Lewis White Beck (New York: Macmillan/Library of Liberal Arts, 1993), 30.
2. Immanuel Kant, *Critique of Pure Reason*, trans. Norman Kemp Smith (London: Macmillan, 1961), B xvi; 22.
3. Sidney Morgenbesser and James Walsh, eds., *Free Will* (Englewood Cliffs, NJ: Prentice-Hall, 1962), 47.
4. Thomas Hobbes, *Leviathan*, I, 2, vol. 23 in *Great Books of the Western World*, ed. Robert Maynard Hutchins, 54 vols. (Chicago: Encyclopaedia Britannica/University of Chicago, 1952), 50. Afterwards cited as *GB*, with appropriate volume and page numbers.
5. Isaac Newton, *Mathematical Principles of Natural Philosophy*; *GB* 34, 14.
6. Hobbes, *Leviathan*, I, 11; *GB* 23, 78–79.
7. Thomas Hobbes, *De Corpore*, XXV, 2; cited by J. C. A. Gaskin, in his "Introduction" to Thomas Hobbes, *The Elements of Law, Natural and Political*, ed. J. C. A. Gaskin (Oxford: Oxford University Press, 1994), xxvi.
8. Gaskin sees in this concept of "endeavor" an approximation to Leibniz's similar use of the same term in his development of differential calculus: "distance tending to nothing divided by time tending to nothing" (ibid., xxvii).
9. Thomas Hobbes, *The English Works of Thomas Hobbes*, vol. 4, ed. Sir William Molesworth (London: John Bohn, 1841), 309. Afterward cited as *EW,* with volume number. Cited by Frederick Copleston, S. J., *A History of Philosophy*, vol. 5: *Hobbes to Hume* (New York: Doubleday, 1985), 8.
10. Hobbes, *Leviathan*, IV, 46; *GB* 23, 269–70.
11. Hobbes, *EW*, IV, 246–47; cited by Yves Charles Zarka, "First Philosophy and the Foundation of Knowledge," in *The Cambridge Companion to Hobbes*, ed. Tom Sorell (Cambridge: Cambridge University Press, 1996), 78.
12. Hobbes, *Leviathan*, II, 31; *GB* 23, 162.
13. Ibid., I, 5; *GB* 23, 59.
14. Ibid., I, 3; *GB* 23, 54.
15. Ibid.
16. Hobbes, *EW,* IV, 306; cited by Copelston, *A History of Philosophy*, 8.
17. Hobbes, *Elements of Law*, XI, 5; 66.
18. "After all, doesn't Hobbes define God as a body? Doesn't this call into question any suggestion of a theology of absolute transcendence of God?" Zarka, "First Philosophy," 79–80.
19. In line with Hobbes's argument, contemporary science traces all motion back to an original "Big Bang," the moment of creation of the universe that we see around us. Is this the moment of the creation of the world by God? Or is it simply the limit of our present-day knowledge and the outcome of previous physical causes

that are hidden? Zarka argues that only a conception of God as the first cause could ground Hobbes's strict determinism. For "without the notion of an entire cause, Hobbes would not have materials for determinism" ("First Philosophy," 78).

20. Illinois v. Nathan Leopold and Richard Loeb, 1924. www.law.umkc.edu/faculty/projects/ftrials/leoploeb.htm. Owner: Prof. Douglas Lindner. Accessed Sept. 2005. Specific citation at www.law.umkc.edu/faculty/projects/ftrials/leoploeb/LEO_SDHE.HTM

21. Ibid. Specific citation at: http://www.law.umkc.edu/faculty/projects/ftrials/leoploeb/cause.htm

22. Kant writes that "the moral law is given as an apodictically certain fact, as it were of pure reason" (*Critique of Practical Reason*, 48).

23. Immanuel Kant, *Religion within the Limits of Reason Alone* (New York: Harper and Brothers, 1960), 30.

24. Blaise Pascal, *Pensées* (New York: Doubleday Collection Internationale, 1961), #348, 96; my translation from the French original, which plays on the word "*comprend*," which some English translations miss.

25. Aristotle, *Physics*, VIII, 4, 254b 10; *GB* 8, 339.

26. Aristotle, *On the Heavens*, trans. J. L. Stocks, I, 2, 269b 10; *GB* 8, 360.

27. Ibid., I, 3, 270b 10–15; *GB* 8, 361.

28. Ibid., III, 2, 301b 25–29; *GB* 8, 393.

29. Newton writes to Bently: "That gravity should be innate, inherent, and essential to matter, so that one body may act upon another at a distance through a *vacuum*, without the mediation of anything else, by and through which their action and force may be conveyed from one to another, is to me so great an absurdity, that I believe no man who has in philosophical matters a competent faculty of thinking, can ever fall into it. Gravity must be caused by an agent acting constantly according to certain laws; but whether this agent be material or immaterial, I have left to the consideration of my readers." Cited in E. J. Dijksterhuis, *The Mechanization of the World Picture* (Oxford: Clarendon Press, 1961), 488.

30. Kant, *Critique of Pure Reason*, B xii; 20.

31. Hobbes, *Elements of Law*, VI, 1; 194.

32. Ibid., 5; 197.

33. Ibid., 2; 194–95.

34. "Assuming then that my thesis as to the nature of scientific knowing is correct, the premises of demonstrated knowledge must be true, primary, immediate, better known than and prior to the conclusion, which is further related to them as effect to cause" Aristotle, *Posterior Analytics*, I, 2, 71b 19–22; *GB* 8, 98.

35. "So since the primary premises are the cause of our knowledge—i.e., of our conviction—it follows that we know them better—that is, that we are more convinced of them—than their consequences, precisely because our knowledge of the latter is the effect of our knowledge of the premises." Aristotle, *Posterior Analytics*, I, 2, 72a 30–34; *GB* 8, 98–99.

36. Douglas Jesseph, "Hobbes and the Method of Natural Science," in *Cambridge Companion to Hobbes*, ed. Tom Sorell, 88.

37. Isaac Newton, *Optics*, III, 1, Query 31; *GB* 34, 543.

38. John Aubery, *The Brief Life*, in Hobbes, *Elements of Law*, 235.

39. Since social arrangements, such as the state, are made by human beings, social science is on more solid grounds than natural science. See Jesseph, "Hobbes and the Method of Natural Science."

40. *EW*, VII, 88; from *Decameron Physiologicum*, chapter 2; cited in Jesseph, "Hobbes and the Method of Natural Science," 91. Zarka writes that Hobbes's theology belongs to a tradition of theological voluntarism that goes back to the late Middle Ages ("First Philosophy," 80).

41. Jesseph, "Hobbes and the Method of Natural Science," 89, citing a letter to the Earl of Newcastle.

42. Ibid., 105.

43. *Leviathan* I, 4; *GB* 23, 56.

44. Cited by Jesseph, "Hobbes and the Method of Natural Science," 104, from a letter to the Earl of Newcastle July 29/August 8, 1636.

45. *De Corpore*, ch. 6, 5; *EW* I, 69; cited by Jesseph, "Hobbes and the Method of Natural Science," 106.

Chapter Two

1. Thomas Hobbes, *Human Nature*, in *The English Works of Thomas Hobbes*, ed. Sir William Molesworth (London: John Bohn, 1839–45), vol. 4 (1840), chap. 1, sec. 10. Afterward cited as *EW*, with volume number. Cited in W. T. Jones, *A History of Western Philosophy*, vol. 2: *Hobbes to Hume* (New York: Harcourt, Brace & World, Inc., 1952), 129.

2. Jones, *History of Western Philosophy*, 129.

3. Jones points put that if sense is universally deceptive, one sense cannot correct another, as in the illusion of the stick that appears bent in water. He goes on to suggest that there must be something wrong with Hobbes's declaration of universal sense deception: "it is an empirical fact that some sense experiences are deceptive: We discover that they are deceptive by means of sense experience itself. But it is not an empirical fact that sense experience as such is deceptive, and this fact—if it were a fact—could never be ascertained by means of sense experience. Indeed, it is not a fact; it is an inference from another theory—the theory that all reality is matter in motion" (ibid., 129–30). But this is only as it should be for an approach that is not founded on "empirical facts" as in the empiricist theory of Locke, to be discussed in the following chapter. Hobbes's "correction" is the complex correction brought about through the analytic-synthetic method, not by comparing one type of direct sensation with another.

4. Thomas Hobbes, *The Elements of Law, Natural and Political*, ed. J. C. A. Gaskin (Oxford: Oxford University Press, 1994), part I, chap. 2, sec. 4; 23.

5. Plato, *Timaeus*, 45, vol. 7 in *Great Books of the Western World*, ed. Robert Maynard Hutchins, 54 vols. (Chicago: Encyclopaedia Britannica/University of Chicago, 1952), 454. Afterwards cited as *GB*, with appropriate volume and page numbers.

6. Aristotle, *On the Soul*, II, 12: 424a 17–20; *GB* 8, 656.

7. Hobbes, *Elements of Law*, I, 2, 8; 25.

8. If the medium between ourselves and the object were itself illuminated, we could never see any distinct object. We can only see the object at a distance from us if the medium is *not* illuminated. Otherwise we would be constantly surrounded by a perpetually illuminated fog. This consideration, which supports Hobbes's account, poses no problem for Plato's account in which the ray moves in a focused, laser-like line from subject to object, as if a channel is opened up between the eye and the object. This outward-moving light, exclusively focused from me to the object, is not diffused in the atmosphere as it would be if the light were radiating from the object for the sake of any viewer in the surrounding environment.

9. For a detailed account, see Jan Prins, "Hobbes on Light and Vision," in *The Cambridge Companion to Hobbes*, ed. Tom Sorell (New York: Cambridge University Press, 1996), 129–56.

10. Hobbes, *Elements of Law*, I, 7, 1; 43.

11. Hobbes writes that "The appetite which men call LUST, and the fruition that appertaineth thereunto, is a sensual pleasure, but not only that; there is in it also a delight of the mind: for it consisteth of two appetites together, to please, and to be pleased; and the delight men take in delighting, is not sensual, but a pleasure or joy of the mind, consisting in the imagination of the power they have so much to please. But this name lust is used where it is condemned: otherwise it is called by the general word love; for the passion is one and the same indefinite desire of the different sex, as natural as hunger" (ibid., I, 9, 15; 55–56). Gaskin thinks that this passage anticipates Shaftsbury and Hume, who hold that "benevolence, or the joy in giving to others, is a basic human motive along with, and not ultimately explicable in terms of, self-interest" (ibid., Introduction, xxxv; I, 9, 15; 55–56). To bolster his defense of an unselfish Hobbes, Gaskin cites an anecdote from Hobbes's biographer Aubrey, who quotes Hobbes as saying that he gave money to an impoverished old man because "I was in pain to consider the miserable condition of the old man; and now my alms, giving him some relief, doth also ease me" (ibid., xxxiv–xxxv). Hobbes makes an exception to his egotism for the intimate relations of family and friends. Contrary to Shaftesbury and Hume, however, Hobbes does not make use of this concept of natural feelings of benevolence in the elaboration of his science of ethics, which is closely tied with his political theory. Nevertheless, as we will see in our chapter on Hume (see chapter 7), the two thinkers are closer in these matters than some of Hume's famous criticisms of Hobbes suggests.

12. Immanuel Kant, *Critique of Practical Reason*, trans. Lewis White Beck (New York: Macmillan/Library of Liberal Arts, 1993), 30.

13. Thomas Hobbes, *Leviathan*, II, 21; *GB* 23, 113.

14. Cited by B. F. Skinner, in *Beyond Freedom and Dignity* (New York: Bantam/Vintage Books, 1971), 37–38. Skinner does not wholly endorse Rousseau's approach because it relies too much on the benevolence of the controller. A similar approach by malevolent controllers would not be so praiseworthy; hence some means of controlling the controllers is necessary. In his interpretation of Rousseau, Skinner overlooks one important aspect of Rousseau's educational theory: that the determining element of the educational process is not primarily the teacher, but nature, or the natural processes involved in the growth of the child. The teacher's ability to control the child is based on the teacher's knowledge of the natural

desires and inclinations of the child. Much depends on preventing unnatural influences from misshaping the natural path of healthy development.

It is ironic that Skinner cites Rousseau, a major critic of the deterministic perspective, as an exponent of determinism. Rousseau's *Emile* had a great impact on the development of Kant's moral theory and Kant's defense of free will. We will return to Rousseau later in our study (see chapter 15), when we will see how Rousseau distinguishes such an "appearance of freedom," which always involves control—whether from nature, circumstance, or education—from real freedom, in which the individual makes really free choices, and so comes to be in control of himself. Such a position will require a radical critique of the arguments we are presenting at this point.

In this chapter we cite both Rousseau and Kant (his example of satisfying lust or facing the gallows) in the context of expounding deterministic arguments. Recognizing the fact that both writers clearly acknowledge the force of deterministic arguments helps us to better appreciate the strength of their eventual criticisms.

15. See, e.g., Aristotle, *On the Heavens*, 289b: 4–6; *GB* 8, 381: "That both [the stars and the whole heaven] be at rest is impossible; for, if the earth is at rest, the hypothesis does not account for the observations; and we take it as granted that the earth is at rest."

16. Berthold Brecht, *Galileo*, trans. Charles Laughton, in *Seven Plays by Berthold Brecht*, ed. Eric Bently (New York: Grove Press, Inc., 1961), 379–81.

17. René Descartes, *Discourse on Method*; *GB* 31, 41.

18. Hobbes, *Leviathan*, I, 15; *GB* 23, 94.

19. Plato, *Laws*, VIII, 831–32; *GB* 7, 733.

20. Plato, *Republic* III, 414–17; *GB* 7, 340.

21. Aristotle, *Politics*, I, 9, 1257a: 14–16; *GB* 9, 451.

22. Cf. C. B. Macpherson, *The Political Theory of Possessive Individualism: Hobbes to Locke* (Oxford: Clarendon Press, 1962).

23. Hobbes, *Leviathan*, I, 13; *GB* 23, 86.

24. Thomas Jefferson, *The Declaration of Independence*; *GB* 43, 1.

25. Hobbes, *Elements of Law*, I, 7, 3; 44.

26. Aristotle, *Politics*, I, 2, 1252b: 31–35; *GB* 9, 446.

27. Ibid., I, 5, 1254a: 20–24; *GB* 9, 447. Thanks to Ernesto Rosen for this reference and connected discussions.

28. Hobbes, *Leviathan* I, 13; *GB* 23, 84.

29. Ibid.

30. Hobbes, *Leviathan* I, 13; *GB* 23, 86.

31. In *Leviathan* Hobbes, arguing that the state of nature exists in the Americas of his own time, writes: "For the savage people in many places of America, except the government of small families, the concord whereof dependeth on natural lust, have no government at all; and live at this day in that brutish manner, as I said before" (I, 13; *GB* 23, 86).

32. Hobbes, *Leviathan*, II, 17; *GB* 23, 99. See note 11 earlier regarding Hobbes's recognition of naturally altruistic behavior. In Section 17, Hobbes writes of the love that involves good will or "charity": "There can be no greater argument to a man of his own power, than to find himself able, not only to accomplish his own

desires, but also to assist other men in theirs: and this is that conception wherin consisteth charity. In which, first, is contained that natural affection of parents to their children . . . as also that affection wherewith men seek to assist those that adhere unto them. But the affection wherewith men, many times bestow their benefits on strangers, is not to be called charity, but either contract, whereby they seek to purchase friendship; or fear, which maketh them to purchase peace." See the discussion of gratitude in the next chapter.

33. Here I will use the more familiar and succinct expression "state of nature" to stand for what Hobbes called "the natural condition of mankind."

34. Hobbes, *Elements of Law*, I, 9, 21; 59–60.

Chapter Three

1. Thomas Hobbes, *Leviathan*, I, 14; vol. 23 in *Great Books of the Western World*, ed. Robert Maynard Hutchins, 54 vols. (Chicago: Encyclopaedia Britannica/University of Chicago, 1952), 86. Afterwards cited as *GB* with appropriate volume and page numbers.

2. "For though they that speak of this subject confound *jus* and *lex*, right and law, yet they ought to be distinguished, because right consisteth in liberty to do, or to forbear; whereas law determineth and bindeth to one of them: so that law and right differ as much as obligation and liberty, which in one and the same matter are inconsistent." Ibid.

3. Ibid.

4. Ibid.

5. We must not exaggerate the force of this blanket assertion, and suppose that Hobbes believes that at bottom all humans are unfeeling, calculating egotists. Hobbes acknowledges what most people call sociability, but recognizes scientific meaning to this phenomenon only in the light of a larger totality or system of thought. In chapter 2 I cited Hobbes on love as the general object of the positive passions. Hobbes states later in his book: "Of love, by which is understood the joy a man taketh in the fruition of any present good, hath been already spoken in the first section of the seventh chapter, under which is contained the love men bear to one another, or pleasure they take in one another's company; and by which men are said to be sociable by nature" (Thomas Hobbes, *The Elements of Law, Natural and Political*, ed. J. C. A. Gaskin [Oxford: Oxford University Press, 1994], I, 9, 21, 56). What this actually says is that an individual finds pleasure in the company of other individuals when this company contributes to the realization of the individual's desires and interests. There is some truth to the commonplace notion that individuals are naturally sociable, but like all such commonplaces, this is a truth that must be circumscribed to its relative place in the larger reconstruction of social science. It is a limited truth, not an absolute one. Of course, this limited truth should not be extrapolated to Aristotle's stronger claim that individuals are naturally *political*.

6. Hobbes, *Leviathan*, I, 13; *GB* 23, 85.

7. Ibid., I, 14; *GB* 23, 87.

8. Ibid., I, 15; *GB* 23, 91.

9. *GB* 23, 93.
10. *GB* 23, 96.
11. *GB* 23, 95.
12. *GB* 23, 96.
13. Hobbes, *Leviathan*, II, 17; *GB* 23, 99.
14. "After us the deluge": Jeanne Antoinette Poisson, Marquise de Pompadour. "Reputed reply to Louis XV [November 5, 1757] after the defeat of the French and Austrian armies by Frederick the Great in the battle of Rossbach" (John Bartlett, in *Bartlett's Familiar Quotations*, ed. Justin Kaplan [Boston: Little, Brown and Company, 1992], 324).
15. Job 41:1–2, 10 (King James Version). Patricia Springborg, in "Hobbes on Religion," in *The Cambridge Companion to Hobbes*, ed. Tom Sorrell (New York: Cambridge, 1996), 372, says that "Leviathan is a strange choice to name a Christian commonwealth." In view of Hobbes's general view of soteriological history, God's slaying of Leviathan would seem to represent the end of the dispensation of the state with the establishment of the Kingdom of God on earth through the Second Coming of Christ.
16. Hobbes, *Leviathan*, II, 18; *GB* 23, 100.
17. Ibid., II, 21; *GB* 23, 113.
18. Hobbes uses various terms, such as "mutual covenants." We will use the term "social contract" to apply to Hobbes's theory of the origin of the state and other similar theories.
19. Hobbes, *Leviathan*, II, 21; *GB* 23, 113.
20. According to Leo Strauss, Hobbes is the quintessentially modern philosopher. Hobbes's "political hedonism" has "revolutionized human life everywhere on a scale never yet approached by any other teaching." Leo Strauss, *Natural Right and History* (Chicago: University of Chicago Press, 1953), 177; cited in Shadia B. Drury, *The Political Ideas of Leo Strauss* (New York: St. Martin's Press, 1988), 136. See her summary of Strauss's interpretation of Hobbes in chapter 7, "Hobbes and the Character of Modernity."
21. The film *Gangs of New York*, directed by Martin Scorsese, brilliantly depicts the savagery of the state of nature with its ever-precarious rule by the most powerful. When in the finale of the film the old disorder is brutally swept away by the leviathan state, all individuals of common sense must greet this unflinching bloodletting with an eerie sense of gratitude. In this recognition of the necessity of imposing law and order by the force of arms, we all become co-signers to the social contract.
22. Hobbes writes of the historical reality of the state of nature that it exists in his time among the stateless peoples of America, whose only form of government is that of biologically based families. He believes that there never was a time when no government existed throughout the world, perhaps in deference to the biblical account of life after the fall of Adam and Eve. This would supercede the logic of a purely rational reconstruction. Hobbes writes: "It may peradventure be thought there was never such a time nor condition of war as this; and I believe it was never generally so, over all the world: but there are many places where they live so now. For the savage people in many places of America, except in the government of small families, the concord whereof dependeth on natural lust, have no government

at all, and live at this day in that brutish manner, as I said before. Howsoever, it may be perceived what manner of life there would be, where there were no common power to fear, by the manner of life which men that have formerly lived under a peaceful government use to degenerate into a civil war" (*Leviathan*, I, 13; *GB* 23, 85–86).

23. Adam Smith, *The Wealth of Nations*, IV, 9; *GB* 39, 300.

24. E. P. Thompson, *The Making of the English Working Class* (Penguin Books, 1980), 24–25.

25. Hobbes, *Leviathan*, II, 21; *GB* 23, 113.

26. Jean-Jacques Rousseau, *Discourse on the Origin of Inequality*, in *On the Social Contract, Discourse on the Origin of Inequality, Discourse on Political Economy* (Hackett Publishing Company, Indianapolis, 1986), 149–50.

27. Patricia Springborg gives a theological alternative (or supplement) to our socio-economic conception of Hobbes's claim, stated in his dedication of *Leviathan* (*GB* 23, 45), to find a middle road between "those that contend, on one side for too great liberty, and on the other side for too much authority," i.e., allowing too much liberty from the state and granting too much authority to it. As Springborg interprets this: "Those who claim too much liberty are easily identifiable as the Independents and the Antinomians, further to the Protestant left, who believe they are free but unto the Word of God. Those who claim too much authority are the Papists and the Laudians, who defend *jure divino* [divine right] powers" ("Hobbes on Religion," 366).

28. Hobbes, *Leviathan*, II, 31; *GB* 23, 164.

29. J. C. A. Gaskin writes that "Hobbes gave an account of the state which was in general so conservative that it could be used to defend almost any tyranny providing only the tyranny was efficiently keeping the peace at home and repelling enemies abroad, and so politically latitudinarian that it could justify submission to whatever form of government was securely established" (Hobbes, *Elements of Law*, xxxv). This typical assessment flies in the face of that of the renowned conservative political theorist Leo Strauss, who regards Hobbes as the quintessential anti-conservative, modern philosopher, with his conception that the role of the state is to facilitate the pleasures of equal and self-oriented individuals. See Drury, *Political Ideas of Leo Strauss*.

30. Hobbes, *Dialogue between a Philosopher and a Student of the Common Laws of England*, ed. Joseph Cropsey (Chicago: University of Chicago Press, 1971), 58; cited in M. M. Goldsmith, "Hobbes on Law," in *Cambridge Companion to Hobbes*, ed. Tom Sorrell, 291.

31. Goldsmith, "Hobbes on Law," 291, frequently uses this term in reference to Hobbes.

32. Springborg refers to Hobbes's "greater commitment to Roman publicist theories of the state" ("Hobbes on Religion," 354).

33. Goldsmith explains how the common law, justified by Sir Edward Coke, can subordinate legislated or statute law. Hobbes directs his *Leviathan* against Coke's position ("Hobbes on Law," 290–96).

34. Goldsmith summarizes Hobbes's critique of the English common law: "Law is not what the judges think, but what the Sovereign commands." And the commands of the sovereign, Hobbes is at pains to demonstrate, should be founded

on or contained within the laws of nature as these are discerned by a rational science of the law (ibid., 293).

35. Hobbes, *Leviathan*, II, 26; *GB* 23, 130.

36. That is, the thirteenth, fourteenth, and fifteenth amendments. See Mitchell Franklin, "Concerning the Influence of Roman Law on the Formulation of the Constitution of the United States," in *Tulane Law Review* 38, no. 4 (June 1964): 621–48. For a theoretical and historical account of the opposition of civil law and common law in relation to the United States Constitution, see James Lawler, "Originalism, Moralism, and the Public Opinion state of Mitchell Franklin," in *Dialectics of the U.S. Constitution: Selected Writings of Mitchell Franklin*, ed. James M. Lawler (Minneapolis: MEP Press, 2000), 1–30.

37. Hobbes, *Leviathan*, II, 31; *GB* 23, 159.

38. Ibid., III, 32; *GB* 23, 165.

39. Ibid., II, 31; *GB* 23, 164. Although Hobbes clearly cannot be regarded as an atheist, Leo Strauss describes his doctrine of the supremacy of the state over the traditional claims of institutional religion as one of "political atheism." Next to his "political hedonism," Strauss charges Hobbes's "political atheism" with undermining the moral foundations of any workable political order by subordinating or denying the traditional force of punishments in the afterlife to the rationally calculable consequences of individual actions. See Drury, *Political Ideas of Leo Strauss*.

40. Hobbes, *Leviathan*, IV, 46; *GB* 23, 273.

41. For biblical authority, Hobbes cites the Prophet Elisha, who approves of the convert Naaman, who, though recognizing no God but the God of Israel, nevertheless bows with his master in the house of the pagan god Rimon (II Kings 5:17–18). Hobbes adds that when the sovereign compels someone to worship in the manner of the country, any denial of religious truth this involves is attributable to the sovereign, not to the individual who acts out of obedience to the sovereign. Hobbes makes one apparent exception to this rule of conformity for duly appointed missionaries, and only when they are commanded to repudiate the doctrine of Jesus as the incarnation of God. However, what this comes down to, since the ultimate authority to preach the Gospel in foreign lands must come from the state, is the subordination of individuals to their own state when it clearly commands the performance of some duty in another country.

42. Hobbes, *Leviathan*, III, 42; *GB* 23, 209.

43. Ibid., III, 42; *GB* 23, 210.

44. Plato, *Republic*, III, 414–15; *GB* 7, 340. This is *not* for Plato a "noble" lie. It is ignoble because it debases the spiritual nature and essential equality and freedom of the human being. Elevating this concept above well above Plato's own opinion of it, Leo Strauss calls the lie "noble." See below, note 47.

45. Plato, *Meno*, 81; *GB* 7, 180.

46. Plato, *Republic*, X, 620; *GB* 7, 440. This story is sometimes called "the myth of Er," but Plato himself does not call it a myth but rather a "tale" that "has been saved and has not perished, and will save us if we are obedient to the word spoken . . . " (*Republic* X, 621; *GB* 7, 441).

47. Leo Strauss essentially argues that the hedonism, egalitarianism, and adherence to public, scientific rationality of the moderns (with the repudiation of "noble lies"), starting with Hobbes, leads inevitably to the crisis of modernity and

the nihilism diagnosed by Nietzsche. Better to return to the wisdom of the ancients, with their approval of noble lies regarding the supremacy of religion, the inequality of humanity and the need for an elite set of paternalistic rulers. Drury summarizes Strauss's position: "All attempts to establish a free and prosperous universal society will inevitably lead to global tyranny and to the sort of 'barbarization' we have already witnessed in our century. . . . War will always be with us. We must be satisfied with the little consolation of ancient wisdom according to which politics is the art of transforming natural man into citizen, and this requires constant vigilance and reinforcement, not to mention noble lies and obfuscation. The state must appear to be supremely honorable, nay, sacred. This 'protecting atmosphere' (Strauss borrows the phrase from Nietzsche) is necessary for political life; it is necessary if some men are to sacrifice their lives for the safety and security of others. By exploding the 'protecting atmosphere,' nihilism has threatened the political life of Western civilization" (*Political Ideas of Leo Strauss*, 168–69).

48. "Introduction," Hobbes, *Leviathan*; *GB* 23, 47.

49. Cited by Douglas Jesseph "Hobbes and the Method of Natural Science," in *Cambridge Companion to Hobbes*, ed. Tom Sorell, 104, from the Dedicatory Epistle to the *Six Lessons* (1556) in *EW*, VII, 184.

50. Hobbes, *Leviathan*, I, 4; *GB* 23, 56. This implies in fact a superiority even to physics, whose fundamental laws regarding the motion of natural bodies must be merely hypothetical.

51. Yves Charles Zarka recognizes this "inversion," writing that "Hobbes's ethics quietly turns a philosophy of body into a philosophy of mind, by which I mean a doctrine of mental life dominated by a theory of appearance of the phantasm that has a tendency to detach itself from its supposed basis in a materialistic metaphysics" ("First Philosophy and the Foundation of Knowledge," in *Cambridge Companion to Hobbes*, ed. Tom Sorell, 77). He bases this analysis on the discontinuity between natural bodies and the "body" of the commonwealth: "A natural body, which is material, and a body politic, which is artificial, could never work according to principles of the same kind. Hobbes's political theory has nothing to do with the physics of the state: It concerns institutions, and its sources and implications are quite unlike those of a physical theory" (76). Rather than concluding that Hobbes philosophy breaks down as a result of this apparent contradiction, Zarka argues that Hobbes's theological voluntarism "allows for the possibility of conceiving man as self-generating producer of a world in which social convention alone can assure the co-existence of men" (79).

Chapter Four

1. John Locke, "Epistle to the Reader," *An Essay Concerning Human Understanding*, vol. 35 in *Great Books of the Western World*, ed. Robert Maynard Hutchins, 54 vols. (Chicago: Encyclopaedia Britannica/University of Chicago, 1952), 87. Afterwards cited as *GB*, with appropriate volume and page numbers.

2. Vere Chappell, "Introduction," in *The Cambridge Companion to Locke* (Cambridge: Cambridge University Press, 1994), 9. The work has been ascribed both to Locke and to his colleague, the physician Thomas Sydenham.

3. Locke criticizes Descartes' idea that there is no vacuum, supposedly argued with the use of the maxim, "whatever is, is," *Concerning Human Understanding*, IV, 7, 12; *GB* 35, 93.

4. Locke, *Concerning Human Understanding*, I, 1, 2; *GB* 35, 93.

5. Ibid.

6. Chappell, "Introduction," 8; *GB* 35, 95.

7. Locke, "Epistle to the Reader"; *GB* 35, 89.

8. Locke, *Concerning Human Understanding*, I, 1, 12; *GB* 35, 98.

9. Ibid., I, 1, 5; *GB* 35, 96.

10. Ibid. We do not even have ideas in our memory, says Locke. But thanks to the power of memory we are capable of summoning up previously held ideas before the mind. However, we should not suppose that because of such potential for having ideas from memory these ideas exist in memory in the form of actual ideas—i.e., as they appear before the mind after being summoned up. See Ibid., II, 10, 2; *GB* 35, 141.

11. Ibid., I, 1, 16; *GB* 35, 99.

12. Ibid., I, 1, 15; *GB* 35, 99.

13. Ibid., II, 1, 8; *GB* 35, 122. This notion of ideas vaguely floating in the mind of the child, like the state of the child's experience before the formation of the distinct ideas of bitter or sweet, is quite consistent with William James's well-known depiction of the earliest state of a child's consciousness: "The baby, assailed by eyes, ears, nose, skin, and entrails at once, feels it all as one great blooming, buzzing confusion" (William James, *Principles of Psychology*, chapter 13; *GB* 53, 318). W. T. Jones in the chapter on Locke in his *A History of Western Philosophy* cites the following passage from James's chapter 9 as an indictment of Locke: "No one ever had a simple sensation by itself. Consciousness, from our natal day, is of a teeming multiplicity of objects and relations, and what we call simple sensations are results of discriminative attention, pushed often to a very high degree. It is astonishing what havoc is wrought in psychology by admitting at the outset apparently innocent suppositions, that nevertheless contain a flaw. The bad consequences develop themselves later on, and are irremediable, being woven through the whole texture of the work. The notion that sensations, being the simplest things, are the first things to take up in psychology is one of these suppositions" (Jones, *A History of Western Philosophy,* vol. 3 [New York: Harcourt, Brace and World, 1952], 251; see James, *Principles of Psychology*; *GB* 53, 146).

Locke however does not say that the child begins with distinct sensations, but rather that the child forms these after numerous repetitions and out of a variety of experiences. In the chapter cited by Jones, James does not criticize Locke himself, but "some of Locke's successors." Chapter 13 of his *Principles*, which contains the famous phrase about the "blooming, buzzing confusion" of the child's initial state, in fact begins with a long, approving quote from Locke (*Concerning Human Understanding*, II, 11, 1–2; *GB* 35, 143–44) on the faculty of discrimination, in which Locke says: "It is not enough to have a confused perception of something in general. Unless the mind had a distinct perception of different objects and their qualities, it would be capable of very little knowledge, though the bodies that affect us were as busy about us as they are now, and the mind continually employed in thinking." James writes that "Locke's descendants have been slow to enter into the path

whose fruitfulness was thus pointed out by their master. . . ." The "Lockian school," James says, has emphasized the "association" of ideas, but failed to recognize that the importance of discrimination out of the confusion of experience, which Locke himself stresses. James, *Principles of Psychology*; *GB* 53, 315.

14. *Concerning Human Understanding*, I, 2, 16; *GB* 35, 109.

15. Ibid., I, 3, 25; *GB* 35, 120.

16. Ibid., I, 2, 22 and 25; *GB* 35, 111.

17. Ibid., IV, 7, 11; *GB* 35, 340. See Isaac Newton, *Mathematical Principles of Natural Philosophy* (1687); *GB* 34.

18. Locke, *Concerning Human Understanding*, II, 1, 2; *GB* 35, 121.

19. See chapter 2 of this book, in the section, "The Great Deception of Sense: Part One." In the Preface to his *New Essays on Human Understanding*, in which he describes a dialogue between the representative of Locke's theory and himself, Leibniz contrasts the view of Aristotle and Locke, which he says is that the mind is a blank slate or *tabula rasa*, with that of Plato, for whom learning is a kind of remembrance or recollection.

20. The notion that while things are individual, ideas are universals capable of being applied to many things, implies that an idea is not a "thing." According to Thomas Reid (1710–96), Lockean ideas are thing-like entities that interpose themselves between the knower and the world and so actually prevent us from knowing anything outside us. Rather than imprints, representations, or mirrors of the world, they are veils or barriers. As we will see below, Bishop George Berkeley (1685–1753) has a similar conception of Locke's ideas and draws from it his radically idealist conclusion. Reid tries to counter Berkeley's argument by criticizing Locke's position that the proper objects of the understanding are ideas. A recent defender of Locke, John Yolton, counters the classical criticism of Reid by arguing that Lockean ideas are not "entities." Now it is obvious that a Lockean idea is some kind of object or "entity." However, when Yolton says that Locke's ideas are not "entities," he means that they are not things like the independently existing things of the external world. Ideas do not exist independently of the perceiver of them, as do things. For this argument, see Vere Chappell, "Locke's Theory of Ideas," *The Cambridge Companion to Locke*, 30–32. It remains the case, however, that ideas are not windows through which we perceive the world, as in the Aristotelian conception of ideas, but objects in their own right that we directly see. Whether Reid provides a persuasive alternative to this view is the real question. We return to this topic in several notes below.

21. Locke, *Concerning Human Understanding*, I, 1, 15; *GB* 35, 98–99.

22. Locke says that "as the mind is wholly passive in the reception of all its simple ideas, so it exerts several acts of its own, whereby out of its simple ideas, as the materials and foundations of the rest, the others are framed" (ibid., II, 12, 1; *GB* 147). This assertion that the mind here is "wholly passive" appears to contradict our conception that for Locke the mind is in some sense also active in producing its simple ideas, rather than extracting them ready made as in Aristotle. But ideas never exist independently of the mental acts that produce (or coproduce) them. They are not independently existing inner "things." They are objects of mental acts or "intentional" objects. Cf. Chappell, "Locke's Theory of Ideas," 34. So all ideas, whether "imprinted" passively on us from the outside, or voluntarily and so actively

conjured up from within, presuppose the "activity" of consciousness itself in its understanding or perceiving of those ideas. There are no ideas without someone thinking or perceiving them—i.e., without the activity, in this broad sense, of the mind. However, some of these ideas are imposed on us without our ability to avoid them, while others involve a more deliberate process. For more on this topic, see note 13 earlier on William James.

23. William Wordsworth, "Ode: Intimations of Immortality from Recollections of Early Childhood," in *The Poetical Works of Wordsworth*, ed. Thomas Hutchinson, revised by Ernest de Selincourt (London: Oxford University Press, 1946).

24. Locke, *Concerning Human Understanding*, I, 3, 24; *GB* 35, 120.

25. Locke focuses on eclectic would-be followers of Aristotle who had also absorbed some of the teachings of Plato, as well as the Platonists themselves, and any others, such as Descartes, who may be defenders of this idea. As targets in Locke's critique of innate ideas, Copleston mentions the possibility of the Cambridge Platonists and Descartes, as well as the Platonist Lord Herbert of Cherbury (1683–1648), who is explicitly and respectfully discussed by Locke (ibid., I, 1, 15; *GB* 35, 109). Copleston does not note that in his stinging attack on the practical intellectual and moral consequences of innate ideas, together with his analysis of "the abuse of language," Locke targets the Scholastic philosophers or Peripatetics, i.e., the would-be followers of Aristotle. Cf., Frederick Copleston, S. J., *A History of Philosophy* (New York: An Image Book, Doubleday, 1963–64, containing vols. 4–6 in one book), 74. It is no doubt paradoxical that the "Aristotelians" adopted the Platonic notion of innate ideas, justifying Locke's decided preference for the Philosopher himself over his would-be followers.

26. Locke, *Concerning Human Understanding*, IV, 7, 11; *GB* 35, 341.

27. This is roughly the opinion of Hegel, who wrote: "Ancient thought was the period of the formation of theoretical, reflective general concepts—the movement of thought from the concrete world of practical life and imagination to the abstract, reflective conceptions of thought considered for their own sake. Medieval thought dwells for a time in this other-world of ideas created by the ancients, until the emptiness of this mode of consciousness creates the theoretical basis for a return to the world of experience—a thoughtful return, however, quite different from the original thoughtless preoccupation with life of prephilosophical, 'natural consciousness.' " James Lawler and Vladimir Shtinov, "Hegel's Method of Doing Philosophy Historically: A Reply," in *Doing Philosophy Historically* ed. Peter H. Hare (Buffalo: Prometheus Books, 1988), 272.

28. Locke, *Concerning Human Understanding*, II, 11, 9 and 11; *GB* 35, 145–46.

29. Ibid., II, 8, 8; *GB* 35, 134. Thomas Reid cites this paragraph in *Essays on the Intellectual Powers of Man* (Cambridge, MA: The M.I.T. Press, 1969), 262, and calls it "unintelligible." Reid objects to Locke's equation of sensation and perception, and to calling them both ideas.

30. Locke, *Concerning Human Understanding*, II, 1, 21; *GB* 35, 126.

31. Ibid., II, 7, 4; *GB* 35, 132.

32. Ibid., II, 10, 3; *GB* 35, 141.

33. Ibid., II, 4, 4; *GB* 35, 130. In his discussion of Locke's theory of primary and secondary qualities, Thomas Reid writes that "Everyone knows that extension, divisibility, figure, motion, solidity, hardness, softness, and fluidity, were by Mr. Locke

called primary qualities of body . . .” (Reid, *Essays*, 252). However, Locke’s text cited here shows clearly that he does not view hardness and softness as ideas of primary qualities. (It is doubtful whether Locke regards divisibility and fluidity as primary properties of things either.)

Reid says that Locke fails to distinguish sensation and perception, the former being a feeling in us that is relative to some action on our bodies, and the latter being, in the case of the primary qualities, a direct relation to the thing outside of us. To make his point against Locke, he then analyses hardness, an alleged primary quality (263), and concludes that it cannot be a resemblance of anything outside of us, but rather is a sensation in us caused by the action of the external body on sensory organs of the body. The “conception” of hardness as “a cohesion of [the body’s] parts as requires great force to displace them” is something completely different from the sensation we directly experience. Reid here identifies the “perception” of hardness with a conception or definition of abstract thought. It is this “perception,” not the “sensation” of hardness, he says, that carries us directly to the external thing.

Reid’s main criticism is of Locke’s central doctrine that our relation to the external world is mediated by ideas, which are the direct objects of the understanding. This doctrine he thinks is due to a confusion of sensation, the experience within us occasioned by interaction with things and one’s body, and “perception,” which carries us directly to the thing itself, without intermediary. Reid admits that the “perception” of primary qualities also happens by means of “sensations,” but “When a primary quality is perceived, the sensation immediately leads our thought to the quality signified by it, and is itself forgotten” (257). So Reid too has intermediate “ideas” or sensations even in the best case of primary qualities. We just don’t pay attention to them. It is our thought that is carried to the thing that the sensation “signifies.” Locke has no doubt that our thoughts provide us with some degree of objective truth about the world outside us. Thinking is still an activity taking place within us, and our thoughts are mental objects that we think. When they are real or adequate to our purposes, they enable us to operate effectively in the world around us. But they never reveal to us the reality existing independently of us as his exhaustive examination of the results of the most advanced sciences of his day demonstrates.

34. Locke, *Concerning Human Understanding*, II, 32, 16; *GB* 35, 246.
35. Ibid., II, 8, 21; *GB* 35, 136.
36. Ibid., II, 8, 21; *GB* 35, 136–37.
37. Ibid., I, 1, 2; *GB* 35, 93. Locke here equates the two expressions: the sensations by our organs and the ideas in our understanding, i.e., the sensory ideas that arise from the actions of our organs when the attention of the mind is appropriately directed. Unlike Thomas Reid (see note 33 earlier), Locke does not have two internal entities, a sensation and a perception, but only one, which he here calls a sensation in reference to its physical causal basis, and an idea in reference to its being the object of the understanding.
38. Ibid., II, 8, 23; *GB* 35, 137.
39. Ibid., II, 8, 19; *GB* 35, 136.
40. Ibid., II, 23, 11; *GB* 35, 207.
41. Ibid., II, 8, 23; *GB* 35, 137.

42. Ibid., II, 8, 13; *GB* 35, 135.

43. Ibid., II, 32, 14; *GB* 35, 245. Thomas Reid's revision of Locke seems to fall down especially when he examines color, which he explains, like Locke, as the effect of a secondary quality. But Reid wants to say of all the sensations produced by secondary qualities of objects that the belief that they resemble objects outside of us is due to "rash judgment" and a failure to carefully distinguish sensation and perception. Thus we should recognize in the case of colors, smells, etc., that they are inner "sensations," not "perceptions" that, he claims, take us directly to the thing outside of us (Reid, *Essays*, 260). However, careful attention to the "sensation" of color does not identify any physical feeling such as is characteristic of the sensation of hardness. We *know* from current scientific theory that the perception of color presupposes corporeal interaction of light with the organism, but there is no phenomenological "sensation" of this interaction. We seem to "perceive" directly the colored things outside of us, as Reid says about our perceptions of primary qualities. However, Reid accepts the idea that colors do not exist in the material world, and so is obliged by his theory to say implausibly that it is really only an internal corporeal "sensation."

It is therefore, as Locke says, the complex thinking activity of philosophical and scientific thought that forces us to conclude 1) that what we are directly sensing/perceiving are ideas in the mind, and 2) that our color sensations/ideas/perceptions do not resemble anything in the external thing. Reid is right that there is a difference between the "sensations" of pain and hardness, involving strong impact with the environment, and the "perceptions" of things at a distance in which the sensory interaction is not noticeable. But Locke recognizes this too as he builds up his argument beginning with pain, which is very clearly not an resemblance of an external thing, and color, which plausibly is, and showing that colors, contrary to appearances, are also non-resembling representations. And if colors do not directly convey us to an external object, it then becomes plausible to accept the status of ideas of primary qualities as also directly internal objects of the mind, which nevertheless differ from colors and sounds by actually resembling external objects. The major difference between Locke and Reid is that while Locke is first of all an underlaborer of the sciences, Reid is primarily concerned with justifying "common sense." What is common sense, however, but the shifting certainties or appearances of the times—a time in Reid's case that is permeated by the new sciences? So for him it is common sense that we directly see the world outside us—except for those colors, sounds, smells etc., that a less hasty judgment recognizes to be merely internal sensations and not properties of things themselves.

44. Locke, *Concerning Human Understanding*, II, 8, 21; *GB* 136.

45. E. M. Curley argues that if certain nerve endings in the hands are selectively destroyed or rendered insensitive, a square object can feel round. This may be so if the hands are not allowed to move across the object, but I don't see how a moving hand, providing it has some sensitivity, cannot detect sharp alterations in the surface of an object and so recognize that the object is not round. Of course if the feeling sense is destroyed altogether, it can hardly feel shapes. The perception of the qualities of things, whether primary or secondary, presupposes the respective senses of the organism. E. M. Curley, "Locke, Boyle, and the Distinction between Primary and Secondary Qualities," *The Philosophical Review* 81, 4 (Oct. 1972): 459.

46. Locke, *Concerning Human Understanding*, II, 9; *GB* 35, 134.
47. Ibid., II, 23, 15; *GB* 35, 208.
48. Ibid., II, 23, 2; *GB* 35, 204.
49. Ibid., III, 6, 3; *GB* 35, 268.
50. Ibid., II, 23, 22; *GB* 35, 209.
51. Ibid., II, 23; *GB* 35, 209–10.
52. Ibid., II, 8, 23; *GB* 35, 137.
53. Ibid., IV, 3, 6; *GB* 35, 314.
54. Ibid.
55. Ibid., II, 23, 15; *GB* 35, 208.
56. Ibid., IV, 2, 14; *GB* 35, 312.
57. Ibid., IV, 9, 3; *GB* 35, 349.
58. Ibid., IV, 10, 18; *GB* 35, 353. Locke does not leave this idea completely alone, however, but goes on to reflect on the difficulty of imagining and understanding the creation of a spiritual being. But entering into an examination of this matter would "lead us too far from the notions on which philosophy now in the world is built" and it would not be "pardonable to deviate so far from them." He therefore decides to be satisfied that "the received doctrine serves well enough to our present purpose. . . ." No doubt Locke has in mind various doctrines of the preexistence of the soul, such as that found in the works of Plato and contemporary Platonists. In settling without debate for the orthodox Christian position, Locke is possibly afraid of getting people whom he respects into trouble with the powers of the church.
59. Ibid., IV, 10, 7; *GB* 35, 351.
60. Ibid., IV, 10, 5; *GB* 35, 350.
61. Ibid., IV, 10, 10; *GB* 35, 351. A "gry" is 1/100 of an inch in a decimal system of measurement that Locke was advocating.
62. Ibid., IV, 10, 14; *GB* 35, 352. Locke is alluding to the position of Leibniz here, which takes the argument completely outside the parameters of materialism—and that is all Locke says against this position at this point. It is clear from his general approach to physics that he thinks this theory too remote from mainstream physics for serious consideration.
63. Locke appears to have in mind here the theory of Spinoza, who said, *Deus, sive Natura*. God or Nature [it makes no difference].
64. Locke, *Concerning Human Understanding*, IV, 10, 16; *GB* 35, 353.
65. Ibid., IV, 10, 17; *GB* 35, 353.
66. In his argument against the possibility that one particle has created thought, Locke writes: "But allow it to be by some other way which is above our conception, it must still be creation; and these men must give up their great maxim, *Ex nihilo nil fit*" (ibid., IV, 10, 15; *GB* 35, 352).
67. Locke does not consider the notion that divinity creates out of itself—e.g., creation as the emanation of the divine being itself. As elsewhere, he is concerned with criticizing his chief opponents, the materialists, rather than the unorthodox, i.e., unchristian, spiritualism of the Platonists and neo-Platonists.
68. Ibid., IV, 10, 19; *GB* 35, 354.
69. Ibid., IV, 3, 22; *GB* 35, 319.
70. Ibid., IV, 3, 23; *GB* 35, 320.

71. Ibid., IV, 3, 25; *GB* 35, 321.
72. Ibid., IV, 3, 26; *GB* 35, 321.
73. Later knowledge of the atomic elements and the molecular structure of the materials does not solve Locke's problem but only postpones the solution. For while the particular reactions can be observed and classified, why the particular elements react on each other they way they do is unknown, and presumably depends on the dynamics of microstructures even more removed from us.
74. Ibid., IV, 6, 9; *GB* 35, 333.
75. Ibid., IV, 3, 28; *GB* 35, 322.
76. Ibid.
77. Ibid.
78. Ibid.
79. Ibid., IV, 3, 27; *GB* 35, 321.
80. Ibid., IV, 10, 10; *GB* 35, 351.

Chapter Five

1. John Locke, *An Essay Concerning Human Understanding*, II, 23, 28, vol. 35 in *Great Books of the Western World*, ed. Robert Maynard Hutchins, 54 vols. (Chicago: Encyclopaedia Britannica/University of Chicago, 1952), 211. Afterwards, *Great Books* is abbreviated as *GB*, with the volume and numbers.
2. Locke clearly opposes the doctrine that freedom and necessity are consistent or compatible. For example, he writes: "But the act of willing, or preferring one of the two [possible choices], being that which he cannot avoid, a man, in respect of that act of willing, is under a necessity, and so cannot be free; unless necessity and freedom can consist together, and a man can be free and bound at once" (*Concerning Human Understanding*, II, 21, 23; *GB* 35, 183).
3. Ibid., II, 21, 14; *GB* 35, 181.
4. "I am condemned to be free. This means that no limits to my freedom can be found except freedom itself or, if you prefer, that we are not free to cease being free." Jean-Paul Sartre, *Being and Nothingness* (New York: Washington Square Press, 1971), 567;—just after Sartre cites Hegel's expression, *Wesen ist was Gewesen ist.*
5. Ovid, *Metamorphoses*, VII, 20; trans. cited from *Bartlett's Familiar Quotations* (Boston: Little, Brown and Company, 1992), 101.
6. Locke, *Concerning Human Understanding*, II, 21, 35; *GB* 35, 186.
7. Ibid., II, 21, 43; *GB* 35, 188.
8. Ibid., II, 21, 45; *GB* 35, 189.
9. Ibid., II, 1, 21; *GB* 35, 126.
10. Ibid., II, 21, 42; *GB* 35, 190.
11. Ibid., II, 21, 44; *GB* 35, 189.
12. Ibid., II, 21, 57; *GB* 35, 193.
13. Ibid., II, 21, 71; *GB* 35, 197.
14. Ibid., II, 21, 69; *GB* 35, 196–97.
15. Ibid., II, 21, 73; *GB* 35, 198.
16. Locke writes that the rules individuals make regarding others must be "conformable to law of nature, i.e. to the will of God." John Locke, *An Essay*

Concerning the True Original Extent and End of Civil Government, chap. 11, sec. 135; *GB* 35, 56.

17. Locke, *Concerning Human Understanding*, IV, 3, 18; *GB* 35, 318.
18. Locke, *Concerning the True Original Extent*, chap. 2, sec. 4; *GB* 35, 25–26.
19. Thomas Jefferson, *The Declaration of Independence*; *GB* 43, 1.
20. Locke, *Concerning the True Original Extent*, chap. 2, sec. 6; *GB* 35, 26.
21. Ibid., chap. 2, sec. 12; *GB* 35, 27–28.
22. Ibid., chap. 2, sec. 6; *GB* 35, 26.
23. Ibid., chap. 1, sec. 1; *GB* 35, 25.
24. Ibid., chap. 7, sec. 77; *GB* 35, 42.
25. Ibid., chap. 7, sec. 78; *GB* 35, 42.
26. Ibid., chap. 7, sec. 80; *GB* 35, 42–43.
27. Ibid., chap. 7, sec. 81; *GB* 35, 43. Locke continues to qualify this statement: "—I mean, to such as are under no restraint of any positive law which ordains all such contracts to be perpetual." Whatever might justify such positive law, this argument makes it clear that it cannot be natural law.
28. Ibid., chap. 7, sec. 82; *GB* 35, 43.
29. Ibid., chap. 7, sec. 85; *GB* 35, 43.
30. Ibid.
31. Ibid., chap. 2, sec. 8; *GB* 35, 26–27.
32. Ibid., chap. 5, sec. 45; *GB* 35, 34.
33. Ibid., chap. 5, sec. 24; *GB* 35, 30. From Psalm 115:16.
34. Ibid., chap. 5, sec. 25; *GB* 35, 30.
35. Ibid., chap. 5, sec. 26; *GB* 35, 30.
36. Ibid., chap. 5, sec. 42; *GB* 35, 34. Locke here originates the labor theory of value, which we will see later taken up and elaborated by Adam Smith.
37. Ibid., chap. 5, sec. 43; *GB* 35, 34.
38. Ibid., chap. 5, sec. 51; *GB* 35, 35–36.
39. Ibid., chap. 5, sec. 46; *GB* 35, 35.
40. Ibid., chap. 5, sec. 47; *GB* 35, 35.
41. Ibid., chap. 5, sec. 49; *GB* 35, 35.
42. Ibid., chap. 5, sec. 50; *GB* 35, 35.
43. Ibid., chap. 5, sec. 45; *GB* 35, 34.
44. Richard Ashcroft insists on this point, and distinguishes Locke's theory of the state from the "empirical" approach of Aristotle, which links forms of government directly to the property structure of society. The realm of politics for Locke "could never be understood merely as the protective outgrowth of the interests of property owners." "Locke's Political Philosophy," in *The Cambridge Companion to Locke,* ed. Vere Chappell (Cambridge: Cambridge University Press, 1994), 242. Ashcroft implicitly takes issue with the claim of C. B. MacPherson, in *The Political Theory of Possessive Individualism* (London: Oxford University Press, 1962), 199, that "Locke's astonishing achievement was to base the property right on natural right and natural law, and then to remove all the natural law limits from the property right." Contrary to Ashcroft, Locke makes it perfectly clear that it is the rise of social inequality and the insecurity of property primarily of the rich that is the principal precondition and motivation for the creation of states.
45. Locke, *Concerning the True Original Extent,* chap. 16, sec. 190; *GB* 35, 69.

46. Ibid., chap. 16, sec. 183; *GB* 68. Here is some evidence, which is cited by Ashcroft ("Locke's Political Philosophy," 243), that Locke preserves the right of the preservation of humanity in conditions of political society—although the conqueror's rule is in fact not that of civil society.

47. Ashcroft, "Locke's Political Philosophy," 244, is at pains to make the point that the natural law obligation to the preservation of humanity continues to be upheld by Locke for political societies. No doubt Locke's strong statements to this effect were not meant to be limited to the state of nature, which remains the backbone of the civil law. The difficulty is in the concrete implementation of this natural law of humanity once civil societies have been established. Ashcroft has trouble finding supportive passages in Locke's (second) *Essay*. His best evidence is a memorandum by Locke for the king on the subject of the reform of the Poor Laws, in which Locke writes that "every one must have meat, drink, clothing, and firing. So much goes out of the stock of the kingdom, whether they work or no." However, the absence of such a clear welfare state concept in the Second Essay is similar to other noticeably missing notions connected to the means of guaranteeing representation in a supposedly representative parliament. In the absence of such protections, Locke's references to the untilled lands of America no doubt indicate how he believes the problem of poverty can and should be solved. Thus, as Locke argues, the problem of humanity only becomes a practical one when there is no longer land available for the earnest worker. And at the time of his writing such a situation did not exist for the English citizen with access to the colonies of America.

48. See James M. Lawler, ed., *Dialectics of the U.S. Constitution: Selected Writings of Mitchell Franklin* (Minneapolis: MEP Press, 2000).

49. Locke, *Concerning the True Original Extent,* chap. 11, sec. 142; *GB* 35, 58.

50. Ibid.

51. Ibid., chap. 19, sec. 242; *GB* 35, 81. Illustrating this concept of appeal to divine sanction for war, Locke writes: "Thus, notwithstanding whatever title the kings of Assyria had over Judah, by the sword, God assisted Hezekiah to throw off the dominion of that conquering empire. [Locke cites:] And the lord was with Hezekiah, and he prospered; wherefore he went forth, and he rebelled against the king of Assyria, and served him not, 2 Kings xviii." Ibid., chap. 16, sec. 196; *GB* 35, 70.

52. Locke, *Concerning the True Original Extent*, chap. 11, sec. 139; *GB* 35, 57–58.

53. Ibid., chap. 8, sec. 96; *GB* 35, 47.

Chapter Six

1. George Berkeley, *Treatise Concerning the Principles of Human Knowledge*, vol. 35 in *Great Books of the Western World*, ed. Robert Maynard Hutchins, 54 vols. (Chicago: Encyclopaedia Britannica/University of Chicago, 1952), 404; Preface. Afterwards this work will be called *Principles*, and the Great Books edition, *GB*, with volume and page numbers.

2. George Berkeley, *Three Dialogues of Hylas and Philonous*, Third Dialogue (LaSalle, IL: Open Court Publishing Company, 1954), 90.

3. Berkeley, *Principles*, 1; *GB* 35, 413.

4. Berkeley, *Three Dialogues*, 31–33.

5. Thomas Reid (1710–1796) considered one of Berkeley's major discoveries in his *New Theory of Vision* to be the recognition that there is a significant difference between perception by vision and by touch. "He shows . . . that tangible extension, and not visible, is the object of geometry, although mathematicians commonly use visible diagrams in their demonstration" (*Essays on the Intellectual Powers of Man* [Cambridge, MA: The MIT Press, 1969], 170). Presumably, this ingenious distinction was a result of Berkeley's attempt to grapple with Locke's example of the invariability of shape to touch in his *Essay Concerning Human Understanding*.

6. John Locke, *An Essay Concerning Human Understanding*, II, 23, 15; *GB* 35, 208.

7. Ibid., II, 11, 11; *GB* 35, 146.

8. Berkeley, *Principles*, para. 3; *GB* 35, 413.

9. Berkeley, *Three Dialogues*, 232.

10. Ibid., 233.

11. Berkeley, *Principles*, 27; *GB* 35, 418.

12. Ibid., 32; *GB* 35, 418–19.

13. Ibid., 146; *GB* 35, 442.

14. David Hume, *A Treatise of Human Nature*, ed. L. A. Selby-Bigge (Oxford: Clarendon Press, 1978), xvi.

15. Ibid., xv.

16. Ibid.

17. David Hume, *Enquiry Concerning Human Understanding*, IV, 1, 20; *GB* 35, 458.

18. Ibid., IV, 1, 21; *GB* 35, 458.

19. Hume, *Treatise*, I, 4, 2; *GB* 35, 190–91.

20. Ibid., I, 4, 2; *GB* 192–93.

21. Ibid., I, 3, 5; *GB* 35, 84.

22. Ibid., I, 4, 6; *GB* 251–52.

23. Summarizing Hume's *Natural History of Religion*, J. C. A. Gaskin writes, "At the heart of his analysis is the contention that the origin of belief in gods is to be found in fear of the unknown causes of the sometimes malevolent, sometimes benevolent, and frequently capricious events which govern human life" ("Hume on Religion," in *The Cambridge Companion to Hume*, ed. David Fate Norton [Cambridge: Cambridge University Press, 1993], 319). In this informative article Gaskin is at pains to reconcile what to him are conflicting statements by Hume regarding the reality of God. He suggests that while Hume would otherwise be an atheist, his skepticism forbids him such a certainty. Belief in God, he further argues, cannot be a "natural belief," such as the belief in the external world, since while the latter is universally held, the former is clearly not. But for Hume belief in the external world is not universal, for serious philosophers, such as Berkeley, do not hold it—as long, that is, as they are philosophizing. Hume suggests that people who in their thinking are atheists, nevertheless in practical situations, contrary to their best intentions, slip into the frame of mind of religious or quasi-religious beliefs.

24. William Thomas Cummings, *Field Sermon, Bataan* [1942], in John Bartlett, *Bartlett's Familiar Quotations*, ed. Justin Kaplan (Boston: Little, Brown and Company, 1992), 711.

25. "Marriages are made in heaven and consummated on earth." John Lily from *Mother Bombie* [1590], act IV, scene i., in *Bartlett's Familiar Quotations*, 155.

26. Gaskin notes that this argument, supposing that laws of nature come into being out of pure chance, is not supported by contemporary physics ("Hume on Religion," 328). A "nomological argument" requiring an intelligence to explain these ultimate laws is therefore still possible. Nevertheless, what Hume calls his "new hypothesis" in cosmology, based on Epicurus, "when fleshed out by Darwin's observations, vastly devalues the teleological argument even if the nomological argument partly escapes."

27. Hume, *Treatise*, I, 4, 7; *GB* 35, 264–65.

28. Ibid., II, 2, 4; *GB* 35, 352–53.

29. Robert J. Fogelin argues there is a "double movement in the development of Hume's sceptical position. First, *reasoning* shows us that our belief in an external world is not based on sound argument, for no such sound argument on this matter exists, and, second, when *empirical investigation* lays bear the actual mechanisms that lead us to embrace this belief, we are immediately struck by their inadequacy" ("Hume's Scepticism," in *The Cambridge Companion to Hume*, 93). The second approach via empirical investigation of the inner mechanisms that produce belief intensifies the initial skepticism based on rational reflection, Fogelin argues, because we see how irrational are the mechanisms that lead us to our beliefs.

True as this may be in itself, it remains true for us, according to Hume, only as long as we persist in our intellectual or reflective frame of mind. But when we step out of it, the mechanisms we have identified begin to operate irrespective of our intellectual convictions about their irrationality. If Hume is a skeptic, he also proposes a solution to skepticism—a remedy to the ailment induced by reason. Section 4 of the *Enquiry Concerning Human Understanding* is entitled "Sceptical Doubts concerning the Operations of the Understanding," and Section 5 is entitled "Sceptical Solution of these Doubts." Fogelin finds the title to section five misleading: this uncovering of the mechanisms of belief is no solution, he says, but a deepening of the problem. What he overlooks is that when Hume writes of the mechanisms of belief he is writing as both a deterministic scientist declaring their necessity or inevitability, as well as from pleasant personal experience of the enlivening effects of common company. This may only be a psychological inevitability or necessity, but it remains a real force that takes over whenever the philosophical effort that runs against the great current of life lets up a little.

Chapter Seven

1. David Hume, *A Treatise of Human Nature*, ed. L. A. Selby-Bigge (Oxford: Clarendon Press), II, 2, 3, 3; 415. Terence Penelhum criticizes Hume's conception of passion for failing to recognize that passions themselves have a cognitive element, and are not blind impulses: "Hume has perceived the importance of the passions for all our choice and conduct but has mistakenly felt obliged to deny their rationality in order to accommodate this fact. In this respect, he shares with the rationalists whose theories he contests a mistaken estimate of the passions. This mistake is one from which common sense is already free" ("Hume's Moral Psychology,"

in *The Cambridge Companion to Hume*, ed. David Fate Norton [Cambridge, UK: Cambridge University Press, 1993], 140).

Alasdair MacIntyre responds to such criticism that it mistakes "what *we* call an emotion," which combines "feeling, judgment and expression in action" with what the seventeenth and eighteenth century called and perceived to be "passion." Our twentieth-first-century conception of emotion is "in part the result of the great novelists" of the nineteenth and twentieth century. The complexities of our own more lately constructed "feelings" prevent the contemporary reader from seeing "those elements of mental life so much more clearly introspectible by the seventeenth- or eighteenth-century adherent of the way of ideas" (*Whose Justice? Which Rationality?* [Notre Dame, IN: University of Notre Dame Press, 1988], 302, 303). MacIntyre in this way warns against anachronistic criticisms.

We follow MacIntyre in our approach in this book. Instead of introducing criticisms from contemporary philosophical literature, we seek to discover an evolution of thought that will help us understand our own preconceptions as the outcome of this evolution. Concepts that seem to be intuitively obvious to us today are in part the result of this history of philosophical evolution (the other part being the history of the practices that philosophy expresses and consolidates).

I should add to MacIntyre's criticism just mentioned the importance of recognizing the problematic of the early modern sciences that is so crucial to the seventeenth- and eighteenth-century philosophers. This problematic directs them to finding a moving or motivating force within the individual that is comparable to the forces of physics. Hence, the idea of the passions involves not only introspection of some part of our psychological make-up, but a theoretical perspective that reconstructs and shapes such inner experience to some degree. But is the twentieth- and twenty-first-century philosopher so free of such theoretical presuppositions that her introspections of our psychic life unveil an objective truth? We only come to see what these theoretical presuppositions are when we understand the historical evolution of our present intellectual mentality. And we can't have this understanding if we suppose our own perspective to be historically neutral and unbiased. For the hidden frameworks within which we observe and experience are based on that very history. To suppose that observation and experience directly reveal to us the inner life of the mind, as Pehelhum suggests is the case for the allegedly more accurate accounts of the passions by contemporary philosophers, is to adopt uncritically the general philosophical standpoint of Hume's own empiricism.

2. David Hume, *Enquiry Concerning Human Understanding*, I, 7, vol. 35 in *Great Books of the Western World*, ed. Robert Maynard Hutchins, 54 vols. (Chicago: Encyclopaedia Britannica/University of Chicago, 1952), 453–54. Afterwards, this *Enquiry* is abbreviated *EHU*, and *Great Books* is abbreviated as *GB*, with the volume and numbers.

3. Alasdair MacIntyre writes that "Hume moved from the metaphysical skepticism, even if a mitigated skepticism, of Book I, to the nonskeptical moral positions of Book III, a contrast which is now clear (largely because of David Fate Norton's *David Hume: Common-Sense Moralist, Sceptical Metaphysician, Princeton*, 1982)"—a book with which "every interpretation of Hume must come to terms" (*Whose Justice? Which Rationality?*, 293). To reconcile the apparent opposition between Hume's skepticism in Book I and common sense morality in Book III, MacIntyre tries to

discern a systematic epistemological strategy based on the study of the passions in Book II. But there is no inconsistency. The scientific observer of the practical beliefs of mankind of Book III remains a skeptic in philosophical terms.

4. Hume, *Treatise*, III, 3, 3; 415.
5. Hume, *EHU*, VII, 69; *GB* 35, 481.
6. Thomas Hobbes, *Leviathan*, II, 17; *GB* 23, 99.
7. In "Concerning the Influence of Roman Law on the Formulation of the Constitution of the United States," *Tulane Law Review* 38, no. 4 (June 1964): 631, Mitchell Franklin discusses the influence of the French utopian socialist, the *abbé* de Mably, on U.S. Constitutional founders Adams, Madison, and Jefferson: "Mably then sums up his description of the position of the United States, as distinguished from England, by pointing out that the Americans had turned away from English feudal thought to that of Locke, whose name is identified with bourgeois philosophic and political theory. 'The United States of America attained to their present form by a manner totally different; and their laws are not the work of many ages and of a thousand contrary circumstances which have succeeded to each other,' Mably told Adams. 'The commissioners or delegates, who regulated their constitutions, adopted the true and wise principles of Locke, concerning the natural liberty of man and the nature of government.' Having thus differentiated the role of Locke, Mably in effect directed attention to the force of the rational, natural-law bourgeois thought which passed from Locke to France, where it was developed, refined and culminated in the Enlightenment." The Mably citation is from Mably, "Remarks Concerning the Government and the Laws of the United States of America," in *Four Letters Addressed to Mr. Adams,* 183 and 241 (English translation of 1784); reprinted in *Nature, Society and Thought* 16, no. 4 (2003): 405–38, with introduction, "Contemporary Significance of an Article by Mitchell Franklin on Two Earlier Wars on Terror," by James Lawler and Gene Grabiner, 389–404.
8. David Hume, *The History of England, from the Invasion of Julius Caesar to The Revolution in 1688*, first published in six volumes from 1754 to 1762.
9. David Hume, *An Enquiry Concerning the Principles of Morals* (Open Court, LaSalle, IL, 1966), 139. Cited below as *EPM*.
10. Hobbes, *Leviathan*, I, 13; *GB* 23, 86.
11. Hume, *EPM*, 141.
12. Ibid., 140–41.
13. Ibid., 141.
14. Ibid., 131.
15. Ibid., 127.
16. Ibid., 128.
17. Ibid., 4.
18. Ibid., 129–30.
19. The following argument is found in Hume's early work, *A Treatise of Human Understanding*. Some twenty years later he revised this work and declared that the revised work supercedes the first as representing his opinions. The later work on morality, *Enquiry Concerning the Principles of Morals*, defends the disinterestedness of benevolence, but does not contain this complex analysis of the disinterested character of moral feeling in the presence of conflicting feelings evoked by proximity or self-interest. Perhaps, rather than abandoning his former position, he

simply felt the difficulty of an elaborate defense, in a short work, of the complicated idea of impersonal feelings.

20. Hume, *Treatise*, III, 3, 1; 582.
21. Hume, *EPM*, 127.
22. Ibid., 150–51.
23. Ibid., 143.
24. Ibid., 144.
25. Ibid., 144–45.
26. Ibid., 146.
27. Ibid., 147.
28. Ibid., 147–49.
29. Ibid., 150–51.
30. My translation from the French text cited in Julia Simon's *Beyond Contractual Morality: Ethics, Law and Literature in Eighteenth-Century France* (Rochester, NY: University of Rochester Press, 2001), 95. Chapter 3 is devoted to Diderot's book.
31. See Mitchell Franklin, "Laws, Morals and Social Life," *Tulane Law Review* 31: 465–78. Also see, James Lawler, "Originalism, Moralism, and the Public Opinion State of Mitchell Franklin," in *Dialectics of the U.S. Constitution: Selected Writings of Mitchell Franklin*, ed. James Lawler (Minneapolis: MEP Publications, 2000), 1–30.
32. Hume, *EPM*, 151.
33. Ibid., 151–52.
34. Ibid., 152.
35. By contrast, the continental Civil Law methodology is linked to rationalist methodology. The civil law codes established by the French Revolution and subsequent legal history are organized from basic principles of law in a systematic fashion. The U.S. Constitution, which covers public law only, reflects such civil law and rationalist methodology. This approach constrains legal arbitrariness because of the requirement that the judge operate within a code of law established by the legislature or constitutional convention. Cf., the work of Mitchell Franklin, in *Dialectics of the U.S. Constitution: Selected Writings of Mitchell Franklin*, ed. James M. Lawler (Minneapolis: MEP Press, 2000).
36. Hume, *EPM*, 149.
37. Ibid.
38. Hume, *EPM*, 150.
39. Hume, *Treatise*, II, 3, 3; 415.

Chapter Eight

1. Adam Smith, *The Wealth of Nations*, IV, ix, vol. 39 in *Great Books of the Western World*, ed. Robert Maynard Hutchins, 54 vols. (Chicago: Encyclopaedia Britannica/University of Chicago, 1952), 300; afterwards cited as *WN*, with chapter and section, and the pagination of the *Great Books* edition, cited as *GB* with the appropriate volume and page numbers.
2. I do not mean to suggest that Hume was alone in defending this theory, which is found previously in Shaftsbury and Hutcheson. J. B. Schneewind, *The*

Invention of Autonomy: A History of Modern Moral Philosophy (New York: Cambridge University Press, 1998), 301–302, cites a number of possible influences on Shaftsbury's most influential presentation of moral feelings in his *An Inquiry Concerning Virtue, in Two Discourses* (1699).

3. Adam Smith, *Theory of the Moral Sentiments*, ed. D. D. Raphael and A. L. Macfie (Indianapolis: Liberty Fund, 1984), 80. Smith here attributes this idea of the primacy of justice over benevolence to "an author of very great and original genius." Raphael and Macfie note that some commentators think Smith has Hume in mind. However, they defend the idea that Smith means Henry Home, Lord Kames, whose *Essays on the Principles of Morality and Natural Religion* was published in 1751, the same year as Hume's *Enquiry Concerning the Principles of Morals*. Although they think that such a description of Kames "seems extravagant," they suggest that Smith was expressing gratitude for Kames's assistance in advancing his career. Hume cannot be intended, they argue, because Hume did not express the idea of the primacy and strictness of justice. But although Hume does not speak of a "stricter obligation" to justice in just those words, it is clear from my own presentation in chapter 7 that Hume certainly had this conception of justice. Perhaps Smith really intended Hume, for whom he had great admiration and who clearly deserves the praise, while supposing that Kames would think the reference was to himself, a not disadvantageous mistake.

4. Smith, *WN*, I, 2; *GB* 39, 7.

5. David Hume, *Enquiry Concerning the Principles of Morals* (LaSalle, IL: Open Court, 1966), 150.

6. *WN*, IV, 2; *GB* 39, 194.

7. In the context of the contemporary global economy, this statement of Smith seems short-sighted. Limitations of transportation and communication no longer restrict investments to the nation of residence of the investor to the considerable extent of the eighteenth century. The title of Smith's work is not, however, *The Wealth of the Nation*, but *The Wealth of Nations*. Smith was not an economic nationalist, and believed that a global free market would benefit all nations. Defenders of this position today argue that global investments enrich the nations of the world as a whole. Though such investments do not always benefit the nation of residence of the investor directly, they do so indirectly and in the long run.

8. Smith, *WN*, I, 2; *GB* 39, 6.

9. Thomas Hobbes, *Leviathan*, II, 21; *GB* 23, 113.

10. Aristotle, *Nichomachean Ethics*, V, 5, 1133a 5–14; *GB* 9, 380.

11. Ibid., V, 5, 1133a 19–20; *GB* 9, 380.

12. Ibid., V, 5, 1133a 26–32; *GB* 9, 381.

13. Smith, *WN*, I, 5; *GB* 39, 13.

14. Hume, *Enquiry Concerning the Principles of Morals*, 150.

15. Alasdaire MacIntyre defends Hume's appeal to specific historical tradition or established social convention as the basis of value. He argues approvingly that in connecting values to specific and incommensurable social-historical traditions, Hume is an Aristotelian. "What on Hume's view makes reasoning about justice sound reasoning is, in key part, that it is reasoning shared by at least the vast majority of members of the community to which one belongs. . . . The parallel at this point between Hume and Aristotle is notable. . . . So those who disagree with each

other radically about justice will not be able to look to some neutral conception of rationality, by appeal to which they will be able to decide which of them is in the right" (*Whose Justice? Whose Rationality?* [Notre Dame, IN: University of Notre Dame Press, 1988], 320–21).

16. Smith, *WN*, I, 5; *GB* 39, 14.

17. Ibid. Italics added.

18. According to Karl Marx, "There was, however, an important fact which prevented Aristotle from seeing that, to attribute value to commodities, is merely a mode of expressing all labour as equal human labour, and, consequently, as labour of equal quality. Greek society was founded upon slavery, and had, therefore, for its natural basis, the inequality of men and of their labour-powers. The secret of the expression of value (namely, that all kinds of labour are equal and equivalent, because, and so far as they are human labour in general) cannot be deciphered, until the notion of human equality has already acquired the fixity of a popular prejudice. This, however, is possible only in a society in which the great mass of the produce of labour takes the form of commodities, in which, consequently, the dominant relation between man and man, is that of owners of commodities. The brilliancy of Aristotle's genius is shown by this alone, that he discovered, in the expression of the value of commodities, a relation of equality. The peculiar conditions of the society in which he lived alone prevented him from discovering what, 'in truth,' was at the bottom of this equality" (*Capital*, I, 1, 3; *GB* 50, 25).

19. Smith, *WN*, I, 1; *GB* 39, 6.

20. Ibid.

Chapter Nine

1. Benjamin Franklin, *Advice to a Young Tradesman* [1748], cited in John Bartlett, *Bartlett's Familiar Quotations*, ed. Justin Kaplan (Boston: Little, Brown and Company, 1992), 310.

2. Max Weber, *The Protestant Ethic and the Spirit of Capitalism* (New York: Charles Scribners and Sons, 1958), 51. This work was originally published in 1904–5.

3. Adam Smith, *Wealth of Nations*, IV, ix, vol. 39 in *Great Books of the Western World*, ed. Robert Maynard Hutchins, 54 vols. (Chicago: Encyclopaedia Britannica/University of Chicago, 1952), 300; afterwards cited as *WN*, with chapter and section, and the pagination of this edition, cited as *GB*, with the page number.

4. Smith, *WN*, I, 1, 3; *GB* 39, 3.

5. Ibid., I, 1, 8; *GB* 39, 33–34.

6. Ibid., I, 1, 8; *GB* 39, 33.

7. Ibid.

8. Ibid., I, 1, 8; *GB* 39, 34.

9. Ibid.

10. Ibid., I, 1, 8; *GB* 39, 35.

11. Ibid., IV, 8; *GB* 39, 280.

12. Ibid.

13. Ibid., IV, 2; *GB* 39, 200.

14. Ibid., V, 1; *GB* 39, 340.

15. Adam Smith, *Lectures on Jurisprudence* (Oxford: Clarendon Press, 1978), 341; cited by Denis Collins, "Adam Smith's Social Contract: The Proper Role of Individual Liberty and Government Intervention in 18th Century Society," *Business & Professional Ethics Journal* 7, n. 3 & 4 (1987).

16. Smith, *WN*, V, 1; *GB* 39, 343.

17. Ibid., IV, 2; *GB* 39, 201.

18. Ibid.

19. Ibid., V, 7; *GB* 39, 273–74.

20. Ibid., I, 10; *GB* 39, 55.

21. Ibid., V, 1; *GB* 39, 341.

22. Alasdair MacIntyre describes the Scottish Hume's adaptation to and justification of English upper class society, in whose narrowness of vision Hume found salvation from the skeptical implications of philosophy: "It had been Hume's genius to understand that if once the fundamental principles and conceptions of the way of ideas [that is, the philosophy of 'ideas' of Locke and Berkeley] are adopted, then what emerge are conclusions deeply incompatible with the central theses of Scottish theology and law, and with any conception of morality which embodies them. And in so doing, Hume, a philosopher eccentric in terms of the Scottish past, found himself articulating the principles of the dominant English social and cultural order, an order itself deeply inhospitable to philosophy, but inhospitable to philosophy in a way which Hume's philosophical theorizing had led him to applaud.

"So Hume had declared 'that there are in *England*, in particular, many honest gentlemen, who being always employ'd in their domestic affairs, or amusing themselves in common recreations, have carried their thoughts very little beyond those objects, which are every day expos'd to their senses. And indeed, of such as these I pretend not to make philosophers. . . . They do well to keep themselves in their present situation; and instead of refining them into philosophers, I wish we cou'd communicate to our founders of systems, a share of this great earthy mixture . . .' (*Treatise*, I, iv, 7).

"Hume thus constituted himself the philosophical champion of an essentially unphilosophical culture" (*Whose Justice? Which Rationality?* [Notre Dame, IN: University of Notre Dame Press, 1988], 324).

23. Smith, *WN*, V, 1; *GB* 39, 309, 311.

24. Ibid., I, 1; *GB* 39, 6.

Chapter Ten

1. Blaise Pascal, *Pensées* (New York: Doubleday Collection Internationale, 1961), #206; 61. My translations from the French text.

2. Ibid., #348; 96.

3. Ibid., #347.

4. Ibid., #348.

5. Ibid., #347.

6. René Descartes, *Discourse on Method*, trans. Elizabeth S. Haldane and G. R. T. Ross, vol. 31 in *Great Books of the Western World*, ed. Robert Maynard Hutchins,

54 vols. (Chicago: Encyclopaedia Britannica/University of Chicago, 1952), 69; afterwards abbreviated *GB* with volume and page numbers.

7. According to some theorists who refer to IQ testing results, there are substantial intellectual differences between individuals, and this is essentially fixed and innate. For a critique of this idea, see James Lawler, *IQ: Heritability and Racism* (New York: International Publishers, 1978).

8. René Descartes, *Rules for the Direction of the Mind*, Rule V; *GB* 31, 7.

9. Descartes, *Discourse*, V; *GB* 31, 59. John Cottingham takes Descartes' arguments as holding open the possibility of creating artificial intelligence equal to or surpassing human intelligence. He points to the fact that Descartes allows for great subtlety and complexity for the basic constituents of matter, and yet when he considers the brain he supposes, based on anatomy, that it is a relatively simple affair, and so hardly capable of highly complex reasoning without the addition of the rational soul. "Such an argument, it seems, could hardly survive the modern discovery of the staggering structural richness of the microstructure of cerebral cortex, comprised as we now know, of over ten billion neural connections." So Descartes' scientific orientation should leave him open to the possibility of a purely mechanical explanation of human intelligence. John Cottingham, "Cartesian Dualism: Theology, Metaphysics, and Science," *Cambridge Companion to Descartes*, ed. John Cottingham (Cambridge: Cambridge University Press, 1992), 250. But human intelligence is not only highly complex, it is infinitely so. It is free intelligence, capable of reordering all inputs from without according to evolving and self-perfecting schemes of its own devising. A mechanical system, no matter how complex, remains an arrangement of determinate inputs and outputs.

10. Although Descartes is famous for his conception of animals as complex machines, he means more precisely that animals lack the distinctive soul of humans characterized by free self-consciousness. As machines are adapted to the performance of certain functions, so animals are limited by their species characteristics to responses appropriate to certain kinds of environments. Within these limitations, animals, like machines, may far surpass humans in performing certain limited activities. Descartes does not rule out the possibility that animals possess a soul of a qualitatively different type from that of humans. He argues in this fifth section of the *Discourse* that some monkeys or parrots are capable of being instructed to a greater degree than others, and yet the most intelligent of either species is incapable of equaling "the stupidest child to be found." Such a difference would not be possible "unless in the case of the brute the soul were of an entirely different nature from ours" (*Discourse*, V; *GB* 69, 60). He tells the reader his arguments for the position that "our soul is in its nature entirely independent of the body" refutes the contrary position so dangerous to the virtue of "feeble spirits" who "imagine that the soul of the brute is of the same nature as our own, and that in consequence, after this life we have nothing to fear or to hope for, any more than the flies and ants." It is significant that earlier in this discussion, when he emphasizes intelligence in animals, Descartes speaks of monkeys and parrots. Here, where he supposes animals that are unlikely to possess immortal souls, he mentions flies and ants. Perhaps there is hope too, if not a good argument, for the souls of monkeys and parrots.

11. Francis Bacon, *Novum Organum*, First Book, #95; *GB* 30, 126.

12. René Descartes, *Meditations on the First Philosophy*, "Synopsis," trans. Elizabeth S. Haldane and G. R. T. Ross; *GB* 31, 72. Cited hereafter as *Meditations.*

13. In the film *The Matrix* and its sequels, human beings are living in a virtual reality simulation that they take for physical reality until some of them awaken from this "dream world" that is created and controlled by a race of intelligent machines. See James Lawler, "We are (the) One! Kant Explains How to Manipulate the Matrix," in *The Matrix and Philosophy*, ed. William Irwin (Chicago and La Salle, IL: Open Court, 2002), 138–52.

14. William Wordsworth, "The Prelude," (1850) in *The Prelude: Selected Poems and Sonnets*, ed. Carlos Baker (New York: Holt, Rinehart and Winston, Inc., 1954), II: lines 176–88; 227–28.

15. Descartes, *Discourse,* IV; *GB* 31, 51.

16. Ibid., 51–52.

17. John Cottingham says that Descartes' move "from the proposition that he can doubt the existence of his body to the conclusion that he can exist without his body . . . is, or ought to be, regarded as one of the most notorious nonsequiturs in the history of philosophy" (*Cambridge Companion to Descartes*, 242).

18. In the film *The Matrix* Morpheus tells Neo, a denizen of this virtual reality world, "Like everyone else you were born into bondage, born into a prison that you cannot smell or taste or touch. A prison for your mind."

19. Descartes, *Meditations*, "Synopsis"; *GB* 31, 73.

20. Ibid., 86.

Chapter Eleven

1. René Descartes, *Meditations on the First Philosophy*, III, trans. Elizabeth S. Haldane and G. R. T. Ross, vol. 31 in *Great Books of the Western World*, ed. Robert Maynard Hutchins, 54 vols. (Chicago: Encyclopaedia Britannica/University of Chicago, 1952), 84; afterwards abbreviated *GB* with volume and page numbers. Cited hereafter in text as *Meditations.*

2. Descartes, *Meditations,* III; *GB* 31, 87.

3. Ibid.

4. Ibid.

5. The contemporary philosopher of present being, Eckhart Tolle, fails to recognize this deeper dimension in Descartes' thought in which being is recognized to transcend thinking. "The Philosopher Descartes believed that he had found the most fundamental truth when he made his famous statement, 'I think, therefore I am.' He had, in fact, given expression to the most basic error—to equate thinking with being, identity with thinking" (*The Power of Now* [Novato, CA: New World Library, 1999], 12). Tolle profoundly explains that insight into the originality of present existence—the "power of now"—is the central core of the great religions and spiritual traditions, and yet he fails to see that the spiritualist trend in modern Western philosophical thought, beginning with Descartes, also contains these insights.

6. Blaise Pascal, *Pensées* (New York: Doubleday Collection Internationale, 1961), #77, 23.

7. Descartes, *Meditations*, III; *GB* 31, 88.

8. Descartes, "To Chanut, 1 February 1647," in *The Philosophical Writings of Descartes, Vol. III, The Correspondence,* trans. John Cottingham, Robert Stoothoff, Dugald Murdoch, and Anthony Kenny (Cambridge: Cambridge University Press, 1991), 309.

9. Descartes, *Meditations*, III; *GB* 31, 89.

10. Ibid., V; *GB* 31, 94.

11. Ibid., II; *GB* 31, 78.

12. Antoine Arnauld (1612–94) is the author of the Fourth set of objections to Descartes' *Meditations*. His charge of "circular reasoning" is stated in Descartes' *Meditations*; *GB* 31, 150.

13. John Cottingham calls "Arnauld's circle" "the most notorious pitfall. . . . The gap between subjective cognition and essential reality is bridged by proving god's existence; yet the proof itself depends on the reliability of just that subjective cognition which needs to be validated" ("Cartesian Dualism: Theology, Metaphysics, and Science," in *The Cambridge Companion to Descartes*, ed. John Cottingham [Cambridge: Cambridge University Press, 1992], 245). This issue is further discussed in Louis E. Loeb, "The Cartesian Circle," in the same volume, 200–235. Loeb stresses the psychological character of Descartes' position that we cannot doubt that which we clearly and distinctly perceive. But this is to underestimate the role that the method of construction from simple to complex plays in the achievement of certainty. What could be doubted at one point, such as God's existence, becomes indubitable at another. So the sense of certainty is cumulative and not immediate. Plus, it needs to be said again, the subjective certainty of "I think" or "God is" is existential, and so not merely a matter of psychological conviction.

14. Cited in Dava Sobel's *Galileo's Daughter: A Historical Memoir of Science, Faith, and Love* (Toronto: Viking, 1999), 359–60. Elsewhere Roger Ariew writes, "It is well known that Descartes refused to publish his *Le Monde* after being told of the condemnation of Galileo by the Catholic Church in 1633. . . . In his *Le Monde* Descartes was clearly committed to the motion of the earth [around the sun]: 'I confess that, if the motion of the earth is false, all the foundations of my philosophy are also. For it is clearly demonstrated by them. It is so linked to all parts of my treatise that I cannot detach it without rendering the rest defective'. . . . So Descartes withheld publication and measured his public utterances on this issue. He avoided all discussion of it in the synopsis he gave of *Le Monde* in his 1637 *Discourse* and, when he finally took a public stance on the issue, in his 1644 *Principles of Philosophy*, it was to claim that 'strictly speaking, the earth does not move' (*Principles*, Part III art. 28)" ("Descartes and Scolasticism," in *Cambridge Companion to Descartes*, 77). Ariew supposes that Descartes caved in to religious pressure and betrayed his own actual beliefs. But for Descartes there is no discrepancy between the empirical facts of God's creation, for which the Church as the channel of revelation is the only reliable authority, and the conjectural constructions of philosophy. The question must be posed, however, as to whether this discrepancy between rationality and reality goes so far as to undermine Descartes' central argument for divine truthfulness as expressed in the method of reason. So Descartes had reason to worry about whether the Catholic Church's position contradicted the foundations of his philosophy.

It took the Protestant Leibniz to resolve this problem decisively in favor of the primacy of rational method over arbitrary freedom, even for the divinity.

15. See Nicholas Jolley, "The Reception of Descartes' Philosophy," in *The Cambridge Companion to Descartes*, ed. John Cottingham (Cambridge: Cambridge University Press, 1992), 399–403.

16. Ibid., 399.

17. Ibid., 400.

18. Ibid., 401.

19. Geneviève Rodis-Louis suggests that an unfortunate meeting between the two in 1643 impeded possibly fruitful scientific and philosophical collaboration. In "Descartes: Development of his Philosophy," in *The Cambridge Companion to Descartes*, ed. John Cottingham (Cambridge: Cambridge University Press, 1992), 46.

20. René Descartes, *The Passions of the Soul* (Indianapolis: Hackett Publishing Company, 1989), I, 31–32; 36–37.

21. "For instance, when I was a child I loved a little girl of my own age who had a slight squint. The impression made by sight in my brain when I looked at her cross-eyes became so closely connected to the simultaneous impression which aroused in me the passion of love that for a long time afterwards when I saw persons with a squint I felt a special inclination to love them simply because they had that defect. At that time I did not know that was the reason for my love; and indeed as soon as I reflected on it and recognized that it was a defect, I was no longer affected by it." Descartes, "To [Hector Pierre] Chanut, 6 June 1647," *Philosophical Writings*, 322.

22. Leibniz writes that "the same direction is still conserved in all bodies together that are assumed as interacting, in whatever way they come into collision. If this rule had been known to M. Descartes, he would have taken the direction of bodies to be as independent of the soul as their force; and I believe that that would have led direct to the Hypothesis of Pre-Established Harmony, whither these same rules have led me" (*Theodicy*, ed. Austin Farrer, trans. E. M. Huggard [LaSalle, IL: Open Court, 1985], para. 61; 156).

23. See, e.g., "Uncertainty Principle" in the *Encyclopaedia Britannica*, on the Internet at http://www.britannica.com

24. Descartes, "To Princess Elizabeth, 28 June 1643," *Philosophical Writings*, 227.

25. Descartes, "For [Arnauld]. 29 July 1648," *Philosophical Writings*, 357–58.

26. According to Gary Hatfield, Descartes "ultimately admitted to Elizabeth" that he did not "have a ready proposal for understanding mind-body union" ("Descartes' Physiology and its Relation to his Psychology," in *The Cambridge Companion to Descartes*, ed. John Cottingham [Cambridge: Cambridge University Press, 1992], 356). Descartes tells Princess Elizabeth that "it does not seem to me that the human mind is capable of forming a very distinct conception of both the distinction between the soul and the body and their union; for to do this it is necessary to conceive them as a single thing and at the same time to conceive them as two things; and this is absurd." But this should not be taken as an admission by Descartes of the failure *of his theory*, which he repeats more elaborately in his later letter to Arnaud. Just as in that later letter Descartes blames the overreaching of the limits of metaphysical thinking for the problem, so here he blames the obscurity on

Princess Elizabeth: "I think those meditations [on the distinction of soul and body] have made Your Highness find obscurity in the notion we have of the union of the mind and the body" ("To Princess Elizabeth, 28 June 1643," *Philosophical Writings*, 227).

27. Decartes, "To Princess Elizabeth, 28 June 1643," *Philosophical Writings*, 226.
28. Ibid., 228.
29. Ibid., 227.
30. Ibid.
31. Ibid.
32. René Descartes, *Discourse on Method*, Part III; *GB* 31, 48. Cited hereafter as *Discourse* in the text.
33. Ibid.
34. Ibid., 49.
35. Ibid.
36. Ibid.
37. Ibid.
38. Ibid., 50.
39. Ibid.
40. Ibid., 48.
41. J. B. Schneewind concludes generally that "Descartes is proposing a thoroughgoing ethic of self-governance" or, in anticipation of Kant's ethics, autonomy (*The Invention of Autonomy: A History of Modern Moral Philosophy* [New York: Cambridge University Press, 1998], 185).
42. Descartes, *Discourse*, III; *GB* 31, 50.
43. Descartes, "Letter to Mesland, 9 February 1645," *Philosophical Writings*, 245.
44. Descartes, *Discourse*, III; *GB* 31, 50.
45. Descartes, "Letter to Chanut, 1 November 1646," *Philosophical Writings*, 299.
46. Descartes, "Letter to Mersenne, 25 December 1639," *Philosophical Writings*, 141–42.
47. Descartes, "To Chanut, 1 February 1647," *Philosophical Writings*, 311.
48. Ibid.
49. Ibid.
50. Ibid., 307. Descartes clearly disagrees with the notion that the soul incarnates at the time of conception, for what would be the good of that? What experiences could the soul have in such an undeveloped state? The first experience of the soul is one that is worthy of it: the heart-felt experience of joy. "Before birth, love was caused only by suitable nourishment which, entering in abundance into the liver, heart and lungs, produced an increase of heat: this is the reason why similar heat still always accompanies love, even though it comes from other very different causes" (ibid., 308).
51. Ibid., 309.
52. Descartes, "To Chanut, 6 June 1647," *Philosophical Writings*, 322. On intelligent life elsewhere in the universe, Descartes says, "I do not . . . infer that there are intelligent creatures in the stars or elsewhere, but I do not see either that there is any argument to prove that there are not. I always leave questions of this kind undecided, rather than deny or assert anything about them" (ibid., 321).

53. Descartes, "To Chanut, 1 February 1647," *Philosophical Writings*, 309.
54. Descartes, "To Chanut, 6 June 1647," *Philosophical Writings*, 321–22.
55. Descartes, *Discourse*, IV; *GB* 31, 61.
56. "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances." *GB* 43, 17.

Chapter Twelve

1. René Descartes, "To Princess Elizabeth, 21 May 1643," *The Philosophical Writings of Descartes, vol. 3: The Correspondence*, trans. John Cottingham, Robert Stoothoff, Dugald Murdoch, and Anthony Kenny (Cambridge: Cambridge University Press, 1991), 217–18.
2. Nicolas Malebranche, *The Search After Truth*, ed. and trans. Thomas M. Lennon and Paul J. Olscamp, bk, 6, pt. 2, ch. 3 (Cambridge: Cambridge University Press, 1997), 449–50.
3. Hume of course criticizes Malebranche for his conclusion that "the source and energy of causes" must be God. David Hume, *A Treatise of Human Nature* (Oxford: Clarendon Press, 1978), 158.
4. René Descartes, *Meditations on the First Philosophy*, II, trans. Elizabeth S. Haldane and G. R. T. Ross, vol. 31 in *Great Books of the Western World*, ed. Robert Maynard Hutchins, 54 vols. (Chicago: Encyclopaedia Britannica/University of Chicago, 1952), 78; afterwards abbreviated *GB* with volume and page numbers.
5. Gottfried Wilhelm Leibniz, "Letter to Father Bouvet in Paris 1697," in *Leibniz Selections*, ed. and trans. Philip P. Weiner (New York: Charles Scribner's Sons: 1951), 104–105; afterwards cited as *Selections*.
6. Gottfried Wilhelm Leibniz, *Specimen Dynamicum*, part 1 of *An Essay on Dynamics* (1695), in *Selections*, 135.
7. Leibniz, *Journal des Savans*, June 27, 1695, in *Selections*, 108. See *Monadology*, 83, where Leibniz describes each human "spirit" as "being like a small divinity in its sphere," in Gottfried Wilhelm Leibniz, *Discourse on Metaphysics, Correspondence with Arnauld, Monadology*, trans. George Montgomery (LaSalle, IL: Open Court Publishing Company, 1902), 270.
8. Leibniz, *Monadology*, 67, in *Discourse on Metaphysics*, bk. 266.
9. Leibniz, *Specimen Dynamicum*, in *Selections*, 131.
10. Leibniz, *Journal des Savans*, June 27, 1695, in *Selections*, 107.
11. Ibid., 108.
12. Leibniz, *Discourse on Metaphysics* (1686), in *Selections*, 304.
13. Gottfried Wilhelm Leibniz, *An Essay on Dynamics* (1695), in *Selections*, 129.
14. "Whereas previous thinkers had regarded matter as inert, and motion as caused by this inert matter being given some sort of push, Leibniz saw motion—or at any rate activity—as being inherent in the nature of matter. In fact he was convinced that the ultimate constituents of matter were not themselves material but were non-material centers of activity. We now know, of course, that all matter is

reducible to energy, so Leibniz's ideas in this respect were astonishingly prescient." Brian Magee, *The Story of Thought* (New York: DK Publishing, 1998), 99.

15. Isaac Newton, *Mathematical Principles of Natural Philosophy*; *GB* 34, 14.

16. Leibniz, *Discourse on Metaphysics*, XVIII, in *Selections*, 317.

17. Ibid., 128.

18. Leibniz, *Monadology*, 74 in *Discourse on Metaphysics*, 267–68.

19. Leibniz, *Journal des Savans*, June 27, 1695, in *Selections*, 109.

20. Then-current biology understood conception as the development in the mother's womb of a preexisting spermatozoon. The equal genetic contribution of the ovum was then unknown. See, below, the section in this chapter entitled "Leibniz's Theory of Metamorphosis and Plato."

21. Leibniz, *Journal des Savans*, June 27, 1695, in *Selections*, 108–10.

22. Ibid., 340.

23. Leibniz, *Monadology*, 82, in *Discourse on Metaphysics*, 269–70.

24. Plato's account of the recollections of the soldier Er is in Book 10 of the *Republic*: "It was a truly wonderful sight, he said, to watch how each soul selected its life—a sight at once melancholy, and ludicrous, and strange. The experience of their former life guided the choice" (*GB* 7, 440). Odysseus no doubt deserves the rest of a quiet life after the turbulent career of his famous adventures.

25. See the arguments of the great twentieth-century Vedanta philosopher, Sri Aurobindo, who writes of the argument against reincarnation from the absence of memory: "One smiles to see such reasoning seriously used by those who imagine that they are something more than intellectual children. . . . How much do we remember of our actual lives which we are undoubtedly living at the present moment? . . . Do we remember even the mere fact, the simple state of being an infant on the mother's breast? And yet that state of infancy was . . . part of the same life and belonged to the same individual—the very one who cannot remember it just as he cannot remember his past lives" (*Rebirth and Karma* [Wilmot, WI: Lotus Light Publications, 1991], 4). Leibniz, of course, does not argue against reincarnation from absence of memory simply, but from the moral implications of such lack of memory. However, a simple reading of Plato's well-known presentation of reincarnation in the *Republic* provides a ready response to Leibniz's moral argument.

26. Leibniz, *Discourse on Metaphysics*, *XII*, in *Selections*, 304–305.

27. Leibniz, "New System of Nature and of the Communication of Substances, as well as of the Union of Soul and Body," *Journal des Savans*, June 27, 1695, in *Selections*, 114.

28. Leibniz, *Discourse on Metaphysics*, XVIII, in *Selections*, 317.

29. Leibniz, *Monadology*, 36–38, 47, in *Discourse on Metaphysics*, 258–59, 261.

Chapter Thirteen

1. Gary E. R. Schwartz and Linda G. S. Russek, *The Living Energy Universe* (Charlottesville, VA: Hampton Roads Publishing Company, 1999), 88–92.

2. This is a central premise and conclusion of the existential biographies written by Jean-Paul Sartre. See, for instance, Sartre's short biography of the poet Baudelaire: Jean-Paul Sartre, *Baudelaire* (New York: New Dimensions, 1950).

3. For this example of self-determined "anxiety" as opposed to externally aroused fear, see Jean-Paul Sartre, *Being and Nothingness* (New York: Washington Square Press, 1966), 36–37, chap. 1, sec. 5: "The Origin of Nothingness." Later in his book, examining the ontology of possibility, Sartre writes: "Leibniz himself seems to have wished to confer an autonomy and a sort of peculiar weight on possibilities, for several of the metaphysical fragments published by Couturat show us possibles organizing themselves into systems of co-possibles in which the fullest and richest tend by themselves to be realized. But there is here only a suggestion of such a doctrine, and Leibniz has not developed it—doubtless because he could not do so. To give possibles a tendency toward being means either that the possible is already in full being and that it has the same type of being—in the sense that we grant to the bud a tendency to become a flower—or else that the possible in the bosom of the divine understanding is already an idea-force and that the maximum of idea-forces organized in a system automatically releases the divine will" (ibid., 119).

The problem is how to understand a potential for unfolding, as the flower from the bud, without supposing a determinism that eliminates freedom altogether. This is also the problem of creativity. Is the being of the flower already present in the bud? Or is its unfolding a creative process, the expression of an "élan vitale," in the term of Bergson's *Creative Evolution*? Sartre first states (ibid., 118) that by possibility Leibniz means a non-contradictory possibility that is excluded by the causal necessity of a process that has, as it must in Leibniz's view, a sufficient reason. God, who knows Adam because Adam is an expression of His own idea, knows that Adam will choose to eat the forbidden fruit. However, Sartre also detects another meaning of possibility in Leibniz's work—the possibility that is the unfolding of a potentiality. His own example of the *angoisse* experienced by the individual crossing a precipice is helpful to understand Leibniz's own position: that the two meanings of possibility are interconnected, that the unfolding of inner potentiality is always mediated by rejecting the possibility of arbitrarily deviating from this potentiality. This rejection of the possibility that contradicts *my* possibility does not happen, Sartre would insert into the Leibnizian optimism, without a sense of anxiety for oneself. There is no absolutely clear guideline, moreover, regarding the path one must take to the realization of one's destiny, which must always be in some respect a creative process. No flower is ever the same and its unfolded state is not described in detail in its genetic plan or seed form. There is a leap to a new level in every developing being, or many leaps. And so God, who knows Adam because Adam is the expression of a particular divine idea-force, knows that Adam will eat the apple, because it is the destiny of Adam to initiate the break with the simple harmony of our first garden. And this takes place because, as God has planned and foreseen, there should be new, higher-order, more complicated harmonies that issue from *our own* self-coordinating activities, according to which we ourselves behave "like little Gods."

4. In Gottfried Wilhelm Leibniz, *Leibniz Selections,* ed. and trans. Philip P. Weiner (New York: Charles Scribner's Sons: 1951), 111; afterwards cited as *Selections*.

5. Gottfried Wilhelm Leibniz, *Correspondence with Arnauld*, in *Discourse on Metaphysics, Correspondence with Arnauld, Monadology*, trans. George Montgomery (LaSalle IL: Open Court Publishing Company, 1902), 118–19.

6. Hegel's central but often perplexing notion of "concept" (*Begriff*, in German) is clearly based on this usage of Leibniz.

7. Leibniz, *Selections*, 342.

8. In the film, *The Matrix*, Agent Smith tells Morpheus: "Did you know that the first Matrix was designed to be a perfect human world? Where none suffered. Where everyone would be happy. It was a disaster. No one would accept the program." Humans don't want perfection handed to them on a silver platter. The perfection they aim at must be earned by their own free choices. Neither Agent Smith, nor the Architect of the Matrix, understands this need for imperfection on the part of humans—not as something to wallow in as Smith surmises, but as the premise of a life created by the free human beings themselves. The Architect of the Matrix is thus unlike the God of Leibniz whose preestablished harmony begins with the imperfection of the most primitive monads, which are themselves capable of evolving ever more perfect harmonies. *The Matrix* expresses this need for self-development in its representation that the Matrix not only has an authoritarian and perfectionist Father, but also a Mother, the Oracle, whose relation to the denizens of the Matrix is one of love and guidance for her children and, as they become more self-aware, trust in their own choices. Leibniz's God, who respects human freedom above abstract perfectionism, has such maternal qualities.

9. Modern physics deduces the necessity of this law from the idea that the universe is an expanding sphere. But is it necessary or inevitable for a universe to take this form? Perhaps other shapes are possible in which the laws implicit in its form of development would be fundamentally different.

10. Gottfried Wilhelm Leibniz, from *Monadology*, in *Discourse on Metaphysics*, 272.

11. Immanuel Kant, *Theoretical Philosophy, 1755–1770* (New York: Cambridge University Press, 1992), 75.

12. The title of Sartre's book, *Being and Nothingness*, implies such a theory of finite being as constituted out of both being and nothingness. Sartre writes, at the beginning of his "Conclusion," of the relation of the conscious human being, the being that is "For Itself," to Being In-itself. "The For-itself, in fact, is nothing but the nihilation of the In-itself; it is like a hole of being in the heart of Being" (Sartre, *Being and Nothingness*, 755–56).

13. Gottfried Wilhelm Leibniz, *Theodicy*, ed. Austin Ferrer, trans. E. M. Haggard (LaSalle, IL: Open Court, 1985), 206.

14. Ibid., 93.

15. Leibniz, *Discourse on Metaphysics*, XXXVI, in *Selections,* 342.

16. Ibid.

17. Immanuel Kant, *Groundwork of the Metaphysic of Morals* (New York: Harper and Row Publishers, 1956), 100.

18. Gottfried Wilhelm Leibniz, *Essay on Dynamics*; *Selections*, 132–33.

19. Leibniz, *Theodicy*, 51; from the Preface.

20. Cited in Patrick Riley, *Leibniz's Universal Jurisprudence* (Cambridge, MA: Harvard University Press, 1996), 111.

21. Kant extends this conception to other unnamed philosophers of the past who, Kant thinks, take a critical perspective in regard to the concepts of pure reason: "*The Critique of Pure Reason* can thus be seen as the genuine apology for Leibniz, even against his partisans whose eulogies scarcely do him any honor; just as it can

be for many different past philosophers, to whom many historians of philosophy only attribute mere nonsense. Such historians cannot comprehend the purpose of these philosophers because they neglect the key to the interpretation of all products of pure reason from mere concepts, the critique of reason itself (as the common cause of all these concepts). They are thus incapable of recognizing beyond what the philosophers actually said, what they really meant to say" ("On a Discovery According to which Any New Critique of Pure Reason Has been Made Superfluous by an Earlier One," in *The Kant-Eberhard Controversy*, ed. Henry E. Allison [Baltimore and London: The Johns Hopkins University Press, 1973], 160).

22. Cited in Susan Meld Shell, *The Embodiment of Reason: Kant on Spirit, Generation, and Community* (Chicago: University of Chicago Press, 1996), 316.

23. Leibniz, "Preface," *New Essays Concerning Human Understanding*; *Selections*, 368.

24. Leibniz, *Monadology*, 7, in *Discourse on Metaphysics*, 252.

25. Leibniz, *Monadology*, 48, in *Discourse on Metaphysics*, 261.

26. Leibniz, *Selections*, 118.

27. Leibniz writes that "the same direction is still conserved in all bodies together that are assumed as interacting, in whatever way they come into collision. If this rule had been known to M. Descartes, he would have taken the direction of bodies to be as independent of the soul as their force; and I believe that that would have led direct to the Hypothesis of Pre-Established Harmony, whither these same rules have led me" (*Theodicy*, para. 61; 156). That is, without this possibility of controlling the direction of one's actions, Descartes would have been forced to conclude that the coincidence of free will and actual bodily movement could only be explained by preestablished harmony.

28. Immanuel Kant, *Critique of Practical Reason*, trans. Lewis White Beck (New York: Macmillan/Library of Liberal Arts, 1993), 30.

Chapter Fourteen

1. Voltaire, *Candide and Other Writings* (New York: Barnes and Noble, 1995), 4.

2. Ibid., 15.

3. Ibid., 16.

4. Kant was not the only one to react in this way to Voltaire. In Wordsworth's magisterial poem, *The Excursion* (1814), Voltaire's book is found among the possessions of "The Solitary," a man embittered by his life's experiences, involving both personal loss of a beloved woman, and political disappointment in the descent of the French Revolution into Napoleonic dictatorship. The poem is an extended reply to the cynicism of Voltaire, and a defense, in the spirit of Rousseau, of the God revealed in the beauty and sublimity of nature and in the lives of human beings in various ways attuned to the simplicities of the natural world.

5. Immanuel Kant, *Theoretical philosophy, 1755–1770,* ed. and trans. David Walford, in collaboration with Ralf Meerbote (Cambridge; New York: Cambridge University Press, 1992), 67–76.

6. Ibid., xxxv.

7. Cf. E. J. Dijksterhuis, *The Mechanization of the World Picture* (Oxford: Clarendon Press, 1961), 487, for a citation from Newton on the nature of this problem.

8. Kant, *Theoretical Philosophy*, lv.

9. Alexander Pope, *An Essay on Man*, "Epistle I," 13–16; in *Major British Writers*, ed. G. B. Harrison, vol. 1 (New York: Harcourt, Brace & World, Inc., 1959), 790.

10. Ibid., "Epistle I," 289–94; 793.

11. J. B. Schneewind, *The Invention of Autonomy: A History of Modern Moral Philosophy* (Cambridge; New York: Cambridge University Press, 1998), 494.

12. Kant, *Theoretical Philosophy,* 80.

13. Ibid., 79–80.

14. Ibid., 79.

15. Ibid.

16. From Wolff's *Ethics*, cited by Schneewind, *Invention of Autonomy*, 438–39.

17. Ibid., 441.

18. Ibid.

19. Kant, *Theoretical Philosophy*, 79.

20. Pope, *Essay on Man*, "Epistle II," 53–58; 793.

21. Nancy SantoPietro, *Feng Shui: Harmony by Design* (New York: The Berkley Publishing Group, 1996), 3.

22. Immanuel Kant, *Observations on the Feeling of the Beautiful and Sublime*, trans. John T. Goldthwait (Berkeley: University of California Press, 1960), 59.

23. Schneewind, *Invention of Autonomy*, 487, cites the opinion of Rischmuller, the German editor of the "Remarks" written in his copy of the *Observations*, that the famous story about Kant missing his regular-as-clockwork walk upon receiving a copy of Rousseau's book is spurious.

24. Immanuel Kant, "Introduction," *Prolegomena to Any Future Metaphysics*. In *Kant, Selections*, ed. Lewis White Beck (New York: Macmillan Publishing Company, 1988). See also Kant's letter to Christien Garve, in which he states that it was the antinomies of pure reason that aroused him from his dogmatic slumber. Emmanuel Kant, *Philosophical Correspondence 1759–99*, ed. and trans. Arnulf Zweig (Chicago: University of Chicago Press, 1967), 252. Kant therefore attributes more than one influence to his philosophical awakening.

25. Cited in Susan Meld Shell, *The Embodiment of Reason: Kant on Spirit, Generation, and Community* (University of Chicago Press, 1996), 81–82. "King Alfonso of Castile, when he first learned the theory of Ptolemy in the 13th century A.D., is reported to have said in frustration: 'Had I been at the creation, I would have given some useful hints for the better ordering of the universe.' " Cited from lecture notes of Professor Barbara Ryden, "Ptolemy," 21 September 2005.

26. Immanuel Kant, "Conclusion," *Critique of Practical Reason*, trans. Lewis White Beck (New York: Macmillan Publishing Company, 1993), 169.

27. Pope, *Essay on Man*, "Epistle III," 269–82.

28. Kant implicitly refers to Rousseau's conception in this passage when he writes later, in his "Idea for a Universal History from a Cosmopolitan Point of View," that "Man is an animal, in need of a master." Immanuel Kant, *On History*, ed. Lewis White Beck, trans. Lewis White Beck, Robert E. Anchor, and Emil L. Fackenheim (Indianapolis: Bobbs-Merrill, 1963), 17.

29. Jean-Jacques Rousseau, "Discourse on the Origin of Inequality," in *On the Social Contract, Discourse on the Origin of Inequality, Discourse on Political Economy*, ed. and trans. Donald A. Cress (Indianapolis: Hackett Publishing Company, 1983), 149–50.

30. Ibid., 17.

31. Adam Smith, *The Wealth of Nations*, I, 1; vol. 39 in *Great Books of the Western World*, ed. Robert Maynard Hutchins, 54 vols. (Chicago: Encyclopaedia Britannica/University of Chicago, 1952), 6; hereafter abbreviated as *GB* with volume and page number.

32. Rousseau, "Discourse on the Origin of Inequality," 132.

33. Schneewind, *Invention of Autonomy*, 488.

34. Kant, *Critique of Practical Reason*, 80.

35. Immanuel Kant, *Critique of Pure Reason*, ed. and trans. Norman Kemp Smith (London: Macmillan, 1961), A 805; B 833; 635.

36. Rousseau, "Discourse on the Origin of Inequality," 113.

37. Plato, *Republic*, X, 611, vol. 7 in *Great Books of the Western World*, ed. Robert Maynard Hutchins, 54 vols. (Chicago: Encyclopaedia Britannica/University of Chicago, 1952), 436; hereafter abbreviated as *GB* with volume and page number.

38. Plato, *Republic*, VII; *GB* 7, 388.

39. Smith, *Wealth of Nations*, I, 2; *GB* 39, 6.

40. Rousseau, "Discourse on the Origin of Inequality," 140.

41. Jean-Jacques Rousseau, *Emile or On Education*, ed. and trans. Allan Bloom (New York: Basic Books, Inc., 1979), 282.

Chapter Fifteen

1. Rousseau thus fictitiously erects a triple barrier between his text and himself: the discourse of the Vicar is told to a young man, who then relates this to Émile's tutor, who then, finally, tells the story to Émile. Rousseau's attempt to shield himself from anticipated attack for expressing positions contrary to Christian orthodoxy was distinctly unsuccessful. At the instigation of an outraged Church, his book was burned and he became a refugee even from his native Switzerland.

2. Jean-Jacques Rousseau, *Émile or On Education*, ed. and trans. Allan Bloom (New York: Basic Books, Inc., 1979), 267. Henceforth cited in text as *Émile*, with page numbers.

3. Rousseau's footnote.

4. Blaise Pascal, *Pensées* (New York: Doubleday Collection Internationale, 1961), #277.

5. Jean-Jacques Rousseau, "Discourse on the Origin of Inequality," in *On the Social Contract, Discourse on the Origin of Inequality, Discourse on Political Economy*, ed. and trans. Donald A. Cress (Indianapolis: Hackett, 1983), 113.

6. Immanuel Kant, *Theoretical Philosophy, 1755–1770*, ed. and trans. David Walford, in collaboration with Ralf Meerbote (Cambridge; New York: Cambridge University Press, 1992), 79.

7. Rousseau, "On the Social Contract," in *On the Social Contract*, 34.

8. Rousseau, "Discourse on Political Economy," in *On the Social Contract*, 186.

9. Ibid., 184–86.

10. Ibid., 176.

11. Jean-Jacques Rousseau, *Reveries of a Solitary Walker* (Indianapolis: Hackett Publishing Company, 1992), 1–2.

12. Emmanuel Kant, *Philosophical Correspondence 1759–99* (Chicago: University of Chicago Press, 1967), 54.

13. "But as men, for the attaining of peace and conservation of themselves thereby, have made an artificial man, which we call a *Commonwealth*; so also have they made artificial chains, called *civil laws*, which they themselves, by mutual covenants, have fastened at one end to the lips of that man, or assembly, to whom they have given the sovereign power, and at the other end to their own ears. These bonds, in their own nature but weak, may nevertheless be made to hold, by the danger, though not by the difficulty of breaking them." Thomas Hobbes, *Leviathan*, II, 21; vol. 23 in *Great Books of the Western World*, ed. Robert Maynard Hutchins, 54 vols. (Chicago: Encyclopaedia Britannica/University of Chicago, 1952), 113.

14. Susan Meld Shell, *The Embodiment of Reason: Kant on Spirit, Generation, and Community* (University of Chicago Press, 1996), 81–82.

15. Anatole France, *The Red Lily* (1894), chapter 7; cited in John Bartlett, *Bartlett's Familiar Quotations*, ed. Justin Kaplan (Boston: Little, Brown and Co., 1992), 550.

16. *Émile*, 289. See Kant, *Critique of Practical Reason*, trans. Lewis White Beck. (New York: Macmillan/Library of Liberal Arts, 1993), 30 (Part I, Book I, Chapter I, #6 Problem II, Remark).

17. Rousseau, "Discourse on Political Economy," 168.

18. Ibid., 286.

19. David Hume, *An Enquiry Concerning the Principles of Morals* (LaSalle, IL: Open Court, 1997), 146. Hume nevertheless appeals to the Roman hero when he tries to explain the disinterested character of moral feeling. Why, he asks, do I recognize the moral superiority of the ancient Roman patriot Marcus Brutus to my own faithful servant? (*A Treatise of Human Nature* [Oxford: Clarendon Press, 1978], 582). The disinterested feeling of approval for the heroism of Marcus Brutus is founded on a collective interest or common interest bound up with the life of the particular nation. It is the effect of the self-interest of the nation as a large individual. Although Hume criticizes Hobbes for a convoluted interpretation of moral selflessness as a form of selfishness, Hume does the same thing in his interpretation of the moral feeling of justice.

20. Wordsworth, the poet of nature who comes closest to expressing the ideas of Rousseau in his self-portrait of his own education in nature, *The Prelude*, writes: "Theologians may puzzle their heads about dogmas as they will, the religion of gratitude cannot mislead us." Cited in Mary Moorman, *William Wordsworth, A Biography: The Later Years 1803–1850* (London: Oxford University Press, 1965), 106–107. From a letter to George Beaumont, May 28, 1825.

21. Again, the idea finds powerful poetic expression in Wordsworth's lines:

> The world is too much with us; late and soon,
> Getting and spending, we lay waste our powers:
> Little we see in Nature that is ours;
> We have given our hearts away, a sordid boon!

22. Rousseau, "Discourse on the Origin of Inequality," 113.

23. Kant, "Conclusion," *Critique of Practical Reason*, 169.

24. Luke 15:11–32.

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Index