

Stephen Toulmin

knowing  
and  
acting  
AN  
INVITATION  
TO PHILOSOPHY

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# Preface

Let me say a word about the nature and intentions of this book. Anybody who merely adds one more to the existing supply of introductory philosophy texts has a lot to answer for, and I do not plead guilty to that charge. Rather, I have set out to produce a book that can serve as preparatory background reading *about* philosophy, and about the philosopher's tasks and interests, of a kind that will serve not just "Intro Philosophy" students, but also students of the humanities, social sciences, and behavioral sciences more generally.

The occasion for writing the book is easily explained. In recent years, introductory texts in philosophy have tended to fall into two groups. There are those that treat the subject as being inevitably a *technical* one from the word go: if the student is going to have to master the jargon and formal symbolism of professional philosophy anyway, the sooner he is pitched into its technicalities the better. Texts of this kind—and the best of them are very good—can be of real use to students whose prior commitment to logic and philosophy is clear enough already; but they too often drive away permanently those others who have a genuine feeling for the central issues of the philosophical enterprise, but no sense of the need for techniques or formalisms. ("What on earth have all these *p*'s and *q*'s, dots and wedges, to do with the problem of free will or the nature of human knowledge?") On the other hand, there are those texts that have taken care to be *relevant*: relevant, that is to say, to issues that are already of interest to the nontechnical student for reasons prior to any explicit philosophical commitment. Books of this second kind also have a value, but they have defects of their own; the practical topics they deal with (abortion, civil disobedience, or whatever) are liable to be chosen for reasons of fashion or topicality, and the authors too often

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fail to make the necessary links between these chosen topics and the longer-lasting theoretical issues debated by philosophers from Thales and Socrates up to Heidegger and Wittgenstein. ("What on earth has all this trendy political stuff to do with the problems of Plato, Kant, and Marx?")

There is no obvious reason, however, why these should be the only alternatives. The problems that have served as the starting points for philosophical discussion throughout the history of the subject and have drawn new generations of thinkers and writers into the debate lie in a world of human experience that is prior to all technicalities. The challenge thus is to show the interested beginner why the effective discussion of these issues will *in the end* become somewhat technical. In their main outlines, again, the chief styles of attack adopted by philosophers at different stages in the historical development of the tradition are not hard to describe in general terms. The subject becomes laborious and difficult to cover at an elementary level only if we attempt to expound in detail the arguments that we are led into when we follow these lines of attack through to the end in one field of discussion or another. If we wish only to convey a general sense of the manner in which philosophy has developed as philosophers have brought new lines of attack to bear on their problems from one epoch to another, this should not be impossible to achieve.

The present book therefore takes as its springboard a set of issues that all readers—however nonphilosophical—will be able to "feel on their pulses." These issues turn out to have crucially philosophical aspects that serve as the focus for the rest of the exposition. Specifically, I have chosen to concentrate on the problem of relating two kinds of *explanation* of human conduct—explanation in terms of an agent's "reasons for" his acts and explanation in terms of the "causes of" his acting as he does. This general topic is, of course, familiar to anyone working in twentieth-century sociology or psychology, e.g., from the debates about Max Weber and B. F. Skinner. The three central portions of the book accordingly deal with three styles of philosophical attack on the question, "What is it to have *reasons*

for our beliefs or actions?"; and I have used the different answers given to this question as a way of defining three traditions in philosophy—a formal or logical tradition originating in Plato, a common-sense or empirical tradition most familiar from the eighteenth century, and a critical or transcendental tradition inaugurated by Kant.

My hope is that the resulting argument will be reasonably self-contained. Still, there is no doubt that the best use can be made of this book if the reader also has access to other books in the history of ideas, of science, and of philosophy and if he is given ancillary readings from the key philosophers in each tradition. It would have been easy to clutter up the present text with detailed references, footnotes, illustrative material, and the rest, but the price seemed too great to be worth paying. The first priority was to produce a compact book which anybody could read—and keep on reading—with the minimum of built-in distractions and interruptions.

How far have I succeeded in keeping myself, and my own philosophical views, out of the argument? How far have I even *tried* to do so? That is not easy to say. Certainly, in one respect at least, I have striven to be well behaved. For reasons that have to do with the nature of our own times—particularly with the tendency of all academic subjects to become isolated and specialized, philosophy among them—I have tended in my own professional career to adopt a deliberately *antiformalist* stance. Here, by contrast, I have put the formalist tradition in the center of the picture, as having played (at least historically) a dominant role in the development of philosophical modes of argument from classical Athens on. At the same time, I have not disguised my opinion that the philosophical skepticism which has played almost as large a part in that historical development is merely the inevitable mirror image of formalism—the price philosophers have paid for taking too seriously the exaggerated claims originally made on behalf of geometry and formal logic. (We can surely be grateful enough to Plato for all that he did, e.g., in his roles as the great-great-great-godfather of theoretical physics and political science, not to feel traitorous in conceding

that he failed—as everyone before the eighteenth century A.D. failed—to recognise the limitations of geometry, both as a science of nature and as an exemplar of human knowledge!)

In other respects, I have let my own feelings and preferences become apparent wherever they have helped the argument along. Since they are largely undisguised, the reader will be able to discount them for himself, where they are not congenial to his own. The map the book provides is intended as a first rough map of the territory of philosophy, and it will justify itself if it helps the reader to find his way around the subject. The coloring of the map, however, is my own.

The conception of this book is owed largely to discussions with Ken Scott of Macmillan. In the early planning stages, I was greatly helped by discussions with Nancy Baker. I must however take full responsibility for the text, as it stands. It needs improving in all sorts of ways (as I know very well), but the time has come to let it go into the world and make its own way. If it helps others to find their way within the strange world of technical philosophical debate, and yet to retain the sense of being in touch with the problems that drew them toward philosophy in the first place, it will have succeeded in doing all that I hoped it might.

Chicago

Stephen Toulmin

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I

Introduction:  
What  
Are We  
to Make  
of Ourselves ?

# I Wonder, Puzzlement, and Perplexity

When I was a child the family used to go for holidays to a cottage in the country, some fifty miles northeast of London. In the normal way, I used to sleep in a tiny attic room, the only room on the top floor, with a bare dormer window looking out across the fields in front of the house. Yet on one occasion (as I recall) I found myself using the front bedroom, which was normally my elder sister's room and had a fine pair of heavy deep-red curtains across the window. Sitting up in the unaccustomed bed, I was intrigued by something about those richly colored curtains. What color were they? What was their color, *exactly*? I closed each eye in turn and found to my perplexity that they looked slightly different when I was using my left eye alone—a fraction richer, deeper, more saturated—than they did when I was using my right eye alone. As I moved my head around, the changes were even more marked. The play of the candlelight on the falling folds of the drapery and the texture of the pile gave the curtains, seen from this way or that, a variety of appearances that were clearly beyond my own power to describe, and were, perhaps, wholly indescribable. Yet the oddest thing of all remained the differ-

ence between the ways the curtains looked to each of my two eyes separately. I simply did not know what to make of *that*. If those two natural allies—my two eyes—gave such different testimony, I just did not know *what* to believe. What color *did* the curtains have, really and truly?

Forty years later I am still not wholly clear about the answer to that question, or even whether the question has any straightforward answer at all. Indeed it seems to me now quite as important to understand how the question arose for me initially—how I came to ask it in the first place—as to answer it. For there is something peculiar to be noticed about *reflective* questions such as this—questions like: “What is involved in recognizing the colors of things?” “How does the way things *look* tie up with the way they *really are*?” “If colors are primarily something we see, how can there be any difference between the way things look and the way they really are?” “How do we come to have a system of names for colors at all?” (After all, Adam had to give names not only to animals but also to colors, shapes, smells, and the rest!) The things that come to light when we reflect about such questions can lead us quite as much to a better understanding of ourselves as to a better understanding of the world around us. With the help of questions like these, we can look (so to say) into a mirror that shows us the workings of our own minds. And to do that is to do *philosophy*.

Why is this? Why were the questions that I asked myself at the age of nine or ten reflective and philosophical questions, rather than being perfectly straightforward, factual questions entitled to equally straightforward, factual answers? As to that, notice one thing. There was simply no clear, established procedure by which those questions could have been answered, and even—as some would argue—no clear meaning to the questions themselves. Of course, the curtains did *have* a definite color. If my mother had wanted more fabric, of the identical color, to make another set of similar curtains, there were practical things she could have done to ensure that result; for example, she could have discovered the technical name used

for this precise shade of fabric, she could have taken one of the existing curtains as a sample to match against the new fabric, she could have consulted expert lighting engineers—maybe even have had a spectrographic analysis done—and in these ways she could have carried as far as possible the straightforwardly factual and scientific component in my question, “What is the *real* color of the curtains?” But that would still have left unresolved the deeper part of the question—the part I found truly perplexing: namely, what the shade of color I saw with my left eye alone had to do with the shade I saw with my right eye alone, and what either of these had to do with the curtains themselves. At that stage, the very tests for deciding what one should *say* was the “real” color of the curtains—the *criteria* for deciding this, as the jargon puts it—were quite unclear; in consequence, my initial perplexity was not merely unresolved, but unresolvable.

Let me connect this experience up with the concerns of traditional philosophy. More than two thousand years ago one of the men who did most to establish our modern traditions of intellectual inquiry—not only philosophical inquiry but also scientific and political, aesthetic and ethical—traced the origins of philosophy back to a *sense of wonder* natural in human beings. The habits of questioning, arguing, reflecting, investigating, criticizing, deliberating, reconsidering, correcting, starting afresh—these habits of rational inquiry were, in his view, not just the property of exceptionally inquisitive or bookish academicians, “long-haired intellectuals” or their ancient Greek equivalents. On the contrary, the roots of philosophical debate, like those of scientific investigation, moral reflection, political theory, and artistic criticism, were to be discovered in the lives of all men alike. Yet Aristotle’s epigram, to the effect that *Philosophy is the product of wonder*, leaves one thing unexplained. How is philosophical wonder to be told apart from scientific or aesthetic wonder, say? Just how many different things, indeed, does that term “wonder” include? In 400 B.C. the word “philosophy” was still a very general, comprehensive term covering most of what we ourselves would call physics,

ethics, psychology, and theology, and even parts of politics—not merely logic, theory of knowledge, and those other areas that remain philosophical to this day. What, then, was Aristotle referring to? By “wonder”, did he mean those exploratory feelings of curiosity and puzzlement that may eventually lead a man into, say, physics or physiology? Would he include also the sense of awe and mystery at the very existence of a world, and of ourselves, that marks off the budding theologian? Or was he in fact speaking as a “philosopher” in the narrower twentieth-century sense of the term? If so, something needs to be added to his epigram. Philosophy may be one product of wonder, but it is only one among others; in addition, we must be ready to ask further about the connections—and differences—between the exploratory, inquisitive, puzzled wonder that gives birth to natural science, the delighted, creative wonder that expresses itself through the arts, the mystified, grateful yet apprehensive wonder underlying theology, and the reflective, self-critical, perplexed wonder that remains the driving force of philosophy today.

Still, about philosophy, quite as much as about science and politics, something in what Aristotle said remains fundamentally true. If we come to philosophy from the right direction, we shall discover that it is not alien, recondite, elitist, scholastic, hostile. Like it or not, we are all of us “born” philosophers, just as we are “born” art critics, moralists, political thinkers, and even scientists. It may take much talk about the movies before we can handle aesthetic questions in an articulate manner, just as it may take an exceptional political situation (a Vietnam war, a Watergate, or whatever) to bring out the political theorists in us all. Yet, if we look back at our childhood with the right questions in mind, many of us will rediscover moments in our own early experience—like that moment of mine in the family weekend cottage—that represent the first clear stirrings of authentically *philosophical* perplexity.

How are we to deal with this newborn perplexity, and with the reflections and questions to which it gives rise? What are we to make of it? How can we, from these beginnings, build an effective, secure structure of self-understanding? The aim of this book is to provide a first, rough, overall blueprint for this construction—not an outline “philosophical system” in itself, but rather a sketch map indicating how we can find our way around the too-often mystifying territory of philosophy. In Chapter 3 I shall be setting out as our central topic one sample philosophical problem, for which we can all find an active, lively feeling today. This problem will serve as a thread on which we can keep a firm hold when we subsequently plunge, Theseus-like, into the philosophical labyrinth. But before taking that step, let us spend a little longer time walking around the outside of philosophy, and identify a few more of the pathways by which we may be led to enter into its territory. Lingered awhile in childhood, we shall find within ourselves the starting points of half-a-dozen such pathways.

A few years later on—I must have been thirteen or fourteen—I embarked voraciously on a diet of books with titles like *The Restless Universe*. Some onlookers may have seen in this an indication that I was “a physicist in the making”; and yet, though it was at one stage touch and go, that is not how matters turned out. Rightly so, as I see in retrospect, since my motives for digesting all those books of popular physics and cosmology were less scientific than philosophical. If I had possessed the genuinely outward-looking curiosity that might eventually have made an astronomer or a particle physicist of me, that would already have shown itself in an appetite for factual details, mathematical ingenuities, and theoretical refinements, of a kind I lacked even in those days.<sup>1</sup> Instead, the questions

<sup>1</sup> This is not to say that the questions of physics can always be cut off from those of philosophy in any hard-and-fast way. On the contrary, several of the most significant steps in the development of physics and philosophy have been taken at the same time and in double harness; while some branches of physics—notably, cosmology—retain a serious philosophical component to this day.

that sprang up in my mind and took command of my inquisitiveness were, for instance:

. . . And what if *fish* did science? Living in water instead of air, experiencing buoyancy instead of gravity—finding themselves always having to thrust against a resisting fluid, instead of being free to move around—might not fish end up with a view of the natural world totally unlike our own? Or must some common route of inquiry—some shared procedure for dealing with the total body of accessible facts—carry both them and us eventually through to the same fundamental theories and ideas?

In the spirit in which I was asking it, of course, this was not really a question about *fish*—not an “ichthyological” question, at all. Suppose the focus of my interest had really been the intellectual capacities of fish, simply regarded as fish, my later life would once again have gone differently. In that case I might have ended up in, say, one of those contemporary research teams studying the mental powers of dolphins.<sup>2</sup> But my actual concerns were quite different. In wondering “What if fish did science?” my perplexity embraced dolphins, chimpanzees, and Martians alike, that is, any conceivable group of investigators capable in imagination of studying Nature from a scientific starting point other than our own. To introduce an ugly but useful word, the point of my question was an “epistemological” one; my fundamental interest was to understand better

<sup>2</sup> Once again, there is no absolute, hard-and-fast line to be drawn in this case between scientific and philosophical curiosity. Anyone drawn into comparative studies of animal behavior is soon faced not only by questions of the form “What things can dolphins *in fact* do?” but also by questions of the form “How far do these things count as ‘thinking’, ‘problem-solving’, ‘using language’, and so on?” These latter questions—being once again questions about the *criteria* for calling something, say, *thinking*—are as much reflective and philosophical as they are exploratory and scientific.

what our scientific “knowledge” really is—how we come by it, what claims can be made on its behalf, how much freedom of choice we, or any other investigators, would have in developing a picture of the natural world.

Does the fact that, as human scientists, we start from a specifically human situation and work ahead from there leave enduring traces on the science we build up as a result? Or must any “correct” or “valid” picture of Nature possess an absolute, anonymous neutrality that would be recognizable equally in the science of Martians, chimpanzees, and even dolphins?

So it was no accident that I pursued my original curiosity into the theory of knowledge (“epistemology”) rather than ending up in animal behavior research and, in particular, that I became preoccupied with a whole string of questions about the nature and justification of scientific ideas and theories. If this fact seems odd—if it seems odd that a question about *fish* turned out to be the cover for questions about *knowledge*—that is simply one more thing we can bear in mind as we move more deeply into the terrain of philosophy. In philosophy as in psychoanalysis, the forms of questions, problems, and images can be misleading. Very often we have to ignore the manifest, apparent content of questions or problems, and dig more deeply. Why! The very first philosophical question I remember asking, about the *color* of the curtains, itself turns out to disguise some deeper questions about visual perception and its relation to language.

So much by way of autobiography. For others, the starting points of reflective philosophical thought lie elsewhere; yet the reasons for identifying their childhood reflections, too, as “philosophical” are the same as before. Thus a friend of mine recalls walking down a street at the age of four, wondering how it would have been if her parents had never met and married: “Would I still have been ‘I’?” This recollection is

still so vivid, she reports, that it colors all her memories of what it was like to *be* four years old. Now, a psychologist might pick on this vividness as a sign that the remembered experience was some kind of emotional "mask", veiling deeper, concealed anxieties; yet that would be to leave the manifest, philosophical content of the reflection untouched. For philosophical it surely is, in at least two respects. In the first place, it poses quite squarely the problem of *personal identity*, which remains a source of perplexities today as much as ever. (Perhaps more so today than ever before, since the more we find out about the psychiatric states of "split personality" and about the ways in which brain injury or disease can lead to the dissociation of our senses and our language, the harder it becomes to articulate any simple and straightforward account of the things that make a person a "unity", either at a moment in time or over a longer period.) In the second place, the crucial source of perplexity in the four-year-old child's experience was once again the lack of well-established *criteria*:

Would I still have been "I"? How on earth are we to say? What conceivable tests could possibly serve to decide that this was—or was not—the "same" child as might in fact have been born to other parents in a different world?

In tough-minded moods and moments, we may even be tempted to doubt whether such questions as this one really have any meaning at all. *Yet even that doubt is itself philosophical*. For, at the outset, nearly all of us will surely understand perfectly well what the four-year-old child was asking. And how could that be so if the question itself were—strictly speaking—meaningless? Yet, supposing that we follow along this road; we shall find ourselves wondering before long whether we do, after all, have any clear and satisfactory tests or criteria for deciding what does, or does not, have a genuine "meaning". The problem about personal identity will not have been resolved; it will simply have been traded in for a prior problem about language.

Let us move along and explore some other pathways into philosophy. Here are three more children. One of them, a three-year-old boy, is weeping quietly to himself in the night. His mother asks him what he is weeping about. Answer: he has just realized that there is no largest number because, however large a number he imagined, he could always construct still larger numbers by adding to it. Why the weeping? "Surely," a psychologist might say, "some extraneous sense of loss must be finding expression through this perplexity." Yet, in itself, the philosophical perplexity is authentic enough. For even a three-year-old, at any rate one destined to become himself a talented mathematician, can see that the idea of *number* carries some built-in difficulties—a sequence that has a beginning, we naturally presume, should also be capable of having an end. If we can anchor down the start of the number sequence at 0 or 1, how come that it apparently unrolls endlessly at the other extremity? Yet, on the other hand, what would *count* as an end? What criteria could there possibly be for deciding, "Yes, *this* is where the sequence of numbers ends"?

The second child feels a similar perplexity about time. Yesterday I can understand, and last year, and even the time before my grandfather was born. But when did Time itself begin? And what happened before that?

In their own way, the difficulties built into the idea of *time* are as acute as those involved in *number*. Again, we find it natural to visualize the passage of time as the unrolling of a tape. Let us fasten it down with a thumbtack at *now*, then trace it backwards into the past. We get into equally severe difficulties, it seems, whether we imagine the tape going on forever, without limit, or coming to an abrupt, arbitrary stop—beyond which, what? (This is one of those points at which physical cosmology ceases to be purely scientific, and must come to grips with philosophical issues. Immanuel Kant, the eighteenth-century German philosopher, worked on cosmology in his younger days

but later turned to confront the philosophical difficulties that he had earlier been ignoring. The whole attempt to argue in terms of, say, a "beginning of time", he argued, precipitates us into *inescapable* perplexities. Whether we choose to say that Time does have a beginning, or that it does not, the result is a kind of *Catch-22*. We are caught out either way.)

The third child is at a different place. The television set is turned on, and on the screen four old men can be seen playing stringed instruments. From time to time the picture switches to show the faces of the audience. These display a sequence of emotions as striking as the sweep of the violinist's arm, or the thrust of the cellist's bow. So, we might say, the audience itself represents a symphony of feelings. Ah, yes; but that is the point. The sound is turned down, so all that the child is aware of are the sight of the quartet, the visual spectacle of the audience, and the evident harmony between them. "Why are those people alternately so happy and so sad?" Let us talk to him on the assumption that his puzzle is a psychological one, about the *changes* of mood. We may then explain how different kinds of music and different passages in music have the power to move people now one way, now another. Yet he may still be dissatisfied. The problem for him lies not in the differences or changes of mood but in the fact that there are *any* "moods" to be observed at all. Those four elderly men working away at their strings—and that great mass of people seated in semidarkness—how can there be any such relationship between them at all? If music *is* possible at all, then different pieces of music will no doubt elicit different reactions. But just *look*—turn the sound off, and simply use your *eyes*. What is going on, so that the noises from stringed instruments have the power to affect people in this way?

Notice, once again, the generality of this problem. If the question at issue were simply, "Why does *this* kind of music make people happy and *that* kind make them sad?" there need be nothing specially philosophical about the problem; and so we might turn to the music critic or the psychologist, or both, for theories about the character of music and the hearer's re-

sponse. The child seated before the silent television set, however, has a different and deeper preoccupation. The question for him is, how *any* music whatever comes to have *any* such effect on people. And here again we may briefly refer to Kant, who had a masterly eye for issues of this general form. As he saw clearly, one specific task for the philosopher is to look behind all particular questions—questions about this natural effect or that, which may be dependent upon these conditions or those—and to bring to light other deeper aspects of human life and experience, which are entirely general yet often mysterious. "How is the whole business of *musical expression* possible at all?" That, in effect, is what the child is asking. And, once again, the philosophical nature of his initial bewilderment shows itself in the entirely general character of his question.

These first instances are authentic enough, but they have one defect; they may give the impression that philosophers are concerned with an odd ragbag of fragmentary intellectual conundrums generated by a failure to understand our own abstractions. To be candid: That is one familiar, and by now almost respectable, view of philosophy. There are indeed people who begin by scrutinizing philosophical arguments and issues with genuine care and concern, yet who end by turning away from them in disgust. Philosophers, in their view, are just logic-choppers and paradox-mongers who trade on the confusions produced by playing word games with tricky abstract nouns; hence their claim to achieve profound insights, whether into the nature of the world or into the workings of people's minds, is simply presumptuous rubbish. They ought, rather, to leave the material cosmos to the physicists, mental activities to the psychologists, and keep their pointless word games to themselves.

Now, it is true—as we shall see again and again—that *paradoxes* play a significant part in philosophical discussion. Yet we need to be clear from the start just *why* these paradoxes are so important. As to that, let me for the moment simply drop

a hint. Compare the situation in psychoanalysis; there, such things as contradictions, resistances, and evasions may not be so much interesting in themselves—that is, for their manifest content—as for the indication they provide of where the analyst should dig further, that is, of where conflicts and confusions are distorting the individual's capacity to recognize and deal with his own situation. So too in philosophy. Paradox-mongering is of no serious philosophical value in itself—for the perverse pleasure of contradictoriness alone—but only for the indication that paradoxes can provide of where we should dig further, that is, of where significant intellectual bodies are buried.<sup>3</sup> If we are clear in our own minds about our psychic perceptions and reactions, there need be no occasion for emotional confusion to trap us into resistance or evasion. Likewise, if we are clear in our own minds about our general ideas and conceptual relationships, there need be no occasion for intellectual confusion to find expression through paradox. Rather than being word games, philosophical paradoxes are thus symptoms, survey marks, and/or signposts that point beyond themselves to deeper intellectual perplexities.

Nor should we be misled by the fragmentary character of our examples. Up to this point we have been looking at philosophy merely from the outside. Once inside the labyrinth we shall soon discover just how teasingly the different problems of philosophy interlock and react back onto one another. So, any individual may enter philosophy with his own particular perplexity: about perception, or knowledge, or personal identity, or number, or time, or musical expression. But once he starts pursuing the sources of that perplexity systematically, he will quickly become entangled in other problems too—questions about “cause”, questions about “knowing”, questions about “acting”, “freedom”, “reality”, or “mind”. The further we go

<sup>3</sup> Clarifying our conceptions, and so resolving our philosophical paradoxes, may even be important for the purposes of science or mathematics, say. Thus Zeno's famous paradoxes about motion expressed conceptual difficulties that could not be laid to rest without the development of the “calculus” as a branch of mathematics.

with any one of these, the more all the others begin to be carried along in its train; for it is almost impossible to detach any single philosophical problem surgically from the surrounding tissue of the others. And this difficulty helps to explain our feeling that philosophy is indeed a labyrinth—a dark maze of interlinked passages and blank walls from which only the clearest-headed can hope to emerge unscathed!

Before we finally set aside these “intimations of philosophy from recollections of early childhood,” let us quickly look at one last case. This is intended to avoid the defects of our initial examples—by reflecting the complexity of real-life situations and indicating how the different problems to which they give rise can interlock. We may take it in the form of a story.

[A young man finds himself caught in a violent family quarrel.] As his father rose from the kitchen table and advanced on him down the passage, Jim was overcome by a sense of constriction. The low beams in the back hall pressed down on his head, and he made good his escape onto the terrace behind the house, overlooking the garden and the stream. His father came and stood squarely in the doorway, trembling and muttering, occasionally gesticulating with an impotent fist. For the first time in his life, Jim looked at the figure blocking the doorway, and saw not his father but simply a man—a stranger—showing an intruder off his property. He felt only a slight disgust, and the feeling was for once undiluted by pity. “The old watchdog,” he thought inwardly, “guarding his territory.”

For the moment there was nothing to be done. If he had chosen, he could have forced his way back into the house; yet, as things stood, the older man was clearly in a mood to resist him, feeble and dangerous though that resistance might

be. Jim turned away and crossed the bridge over the stream, pausing to glance back at the trembling, gesticulating figure. As he turned, his father burst into a final denunciation. By now, the breach was evidently complete. Instead of responding to the play of those undammed emotions with the unthinking sympathy that had linked father and son hitherto, Jim suddenly felt his entire body surrounded by some transparent globe, so that he could at last stand firm on his own ground and view the older man's anger from outside, as a spectator.

With that, a new thought entered his mind. Was it really *anger* at all? There seemed no longer any way of telling for sure. It was not that Jim suspected his father of pretending to be angry, or putting it on. Whatever was going on in the old man's mind, there was no pretense about it—no question of his suddenly stopping, breaking into a smile and saying, "Don't worry, I didn't mean it, it was all a joke." Rather, the whole sense of the man's behavior was falling apart, and becoming uninterpretable. Secure behind his glass shield, Jim found himself observing the suffusion of blood into the old man's eyes and cheeks as though it were some kind of natural phenomenon—a sort of lurid, stormy sunset which could evoke a human response in him only in the way an electrical storm produces a tingling of the skin.

His father continued shouting from the doorway—*barking* at him, Jim thought, until he cleared right off. The words struck lightly against his transparent shield, like small pebbles. They still had the power to sting, but they could no longer move him. It was as though the words themselves had broken loose from all

genuine feeling and were rattling around in the air like handfuls of thrown gravel.

Jim turned and walked a few steps farther down the path, toward the field. "Just what is going on here?" he asked himself. "Just what is this relationship that gives one man *authority* over another?" From now on, he would be his own man, coming and going as he pleased. In depriving himself of sympathy, his father had, inadvertently, robbed himself of power also.

It was getting dark. Jim hesitated a moment longer, then turned and struck out across the field toward the village. His father's gruff barks followed him through the dusk, but by now, the words had lost their sense even more profoundly. The old man had never been taciturn at the best of times, and now in his fury he gathered his powers together and declaimed a ringing malediction at his son's retreating back. But Jim was beyond understanding. Language had gone the way of authority and feeling. Stripped of meaning, the malediction rushed past his ears like the blustering of the wind. As he climbed the gate into the lane, the neuter phrase "auditory inputs" flitted across his mind. He turned toward the village and paused for a moment under a tree. "Well, here I am on my own," he reflected. The world was full of noises. Some of these—full of pressures and appeals and attractions and manipulations—passed themselves off as language, and professed to have "significance". Some of them—full of adrenalin and estrogen, alpha-rhythms and visual stimuli, blushes and handwaves and cries and whispers—made formal claims for themselves, and donned the robes of status and "authority". Yet what all those things might mean in terms

of feelings, he was for the moment entirely unable to see. . . .

Three distinct themes can be recognized in this passage. In each case, Jim's new state of mind carries him halfway toward a genuinely "philosophical" detachment—though he will achieve that standpoint only later, with the recollection of past emotion.

1. To begin with, there is the theme of *feelings*. In itself the question, "Is Father really as angry as he seems, or is he pretending, exaggerating, playing it up?" has nothing philosophical about it. So long as we remain on a practical, particular level, there will be ways of finding out what is *in fact* the case. Stick around a while, and see how long it takes Father to simmer down; overhear what he says to Mother when he calls her long distance this evening; get back on speaking terms with him tomorrow and see what he says then. But that is only a beginning. Once the entirely general question is raised—namely, the question of what sort of evidence gestures, words, flushed cheeks, and so on, provide about a man's "feelings" at all—that is a different matter. So long as we are actively involved in dealing with close acquaintances from minute to minute, we evidently *do* know how to read each other's feelings reliably enough for practical purposes. And the more general issue—namely, whether we really *can* tell a man's feelings from his words and bodily movements—is left unexamined. Yet there are moments in life when we find ourselves doubting this, and doubting it in an entirely general manner—moments when it seems to us, paradoxically, as though what we have in point of fact been doing from minute to minute over so long a time cannot be done at all. In supposing that we could read the minds of our fellows, we had all along been like sleepwalkers. Gestures and words are one thing, feelings another; and there is no magic bridge by which we can cross from one to the other. (Notice how easily paradox enters in. What *cannot* be done in principle, it seems, we unthinkingly succeed in doing *in fact*. Here, too, the appearance of paradox is a symptom of

misunderstanding. An adequate philosophical account of the matter must explain both what it means to talk of recognizing "feelings" in fact and why this task is so easily made to seem impossible.)

2. Jim's second theme has to do with the notion of *authority*. Why should one call this a "philosophical" problem? Once again, the generality of the issue is crucial. We do not see Jim wondering whether he should bow to his father or, rather, acknowledge the authority of somebody else. It is not as though the priest or the doctor or the family lawyer has counseled him to act in a way that his father bitterly opposes, so that he is faced with a conflict of duties. ("Should I do what he says or what Dr. Collins says? . . .") No. The shock of the quarrel has precipitated Jim into a position of absolute autonomy, or detachment, in which he finds himself—for once—questioning the idea that any one person is entitled to direct or command the behavior of any other. Instead of a choice between this man's authority and that, he has an all-embracing doubt about the entire notion of "authority" itself. (To pose a paradox again: "People *do in fact* claim, every day, an authority over each other's affairs which, properly speaking, they *cannot possibly* claim.") And this problem about "authority" is just as much a general, philosophical problem as the previous problem about "feelings". How can any exercise of authority—any such ideas as moral, political and/or social subordination and superordination—play a part in human life at all? What basis and justification can they have? How is it that we can either claim any authority over others or pay attention when they claim authority over us?

3. Finally, we see Jim moving into a position of extreme philosophical skepticism about *language*. (This form of skepticism made its appearance in the history of philosophy even before the time of Plato, and it has repeatedly provoked major constructive efforts by philosophers designed to counter it.) That happens when Jim at last turns away and finds that he is no longer even hearing his father's words as "language" at all. Beyond this point the question is no longer whether he heard

and understood "correctly" what his father was saying, or, rather, "misheard" or "misunderstood" it. On the contrary. As things now stand, all questions of "correctness" and "incorrectness" have lost their sense for him. The noise of his father's voice has become like the rushing of the wind; and the wind, however audible, is not something that we can either "hear correctly" or "mishear". To suppose otherwise would involve supposing that the noise had a "meaning" of a linguistic kind, which we could either succeed or fail in catching on to. And, for Jim, all distinction between language and mere noise has suddenly been called in question.

So, all three of Jim's successive doubts have the kind of generality that is characteristic of philosophy, and all three point to topics having an enduring place in philosophical debate. "How do we know what people are feeling, really?" "What basis can anyone have for claiming authority over anyone else?" "How can there be any such thing as a meaningful language at all?" All three questions are long-standing problems for philosophical discussion, and we shall be meeting them again in the chapters that follow.

## 2 "Know Thyself"

This quick tour around the outside of the territory of philosophy has identified some of the directions from which we may unknowingly enter into it in childhood and youth. It has also given us some first sense of our whereabouts—of the things that mark off philosophical problems from, say, scientific, political, or technical problems, and of the special kind of perplexity that expresses itself through philosophical questions. As a result, we are ready to go further and clear away some of the doubts and confusions we all feel, from time to time, about the legitimacy of the whole philosophical enterprise.

While some people are irritated by the philosophers' preoccupation with paradoxes and their tendency to "play with words", others can be equally critical of their seeming failure to mark off some definite body of subject matter as their professional area of concern. "So," they complain, "what is philosophy *about*? This, that, the other, anything, everything . . . Where are we to draw the line?" From a certain point of view, of course, this question is a fair one. Yet, if we are to introduce people to the territory of philosophy and give them a real sense of what goes on within it, we must not talk as

though it were the "science" of this, that, or anything-in-particular. Philosophy is not, as one might say, "anything-ology", it is not even "everything-ology". If we were forced to give a straight answer to the question, "What is philosophy about?" we might perhaps be most tempted to answer, "Everything." But even that answer can be seriously misleading.

True, in the early days of philosophy that is just the kind of answer philosophers tended to give. At the very beginning, they handled the problems of philosophy by organizing them around a theory of *cosmology*—looking for a picture of "the totality of things", that is, the Universe as a whole—or else for some universal theory about the common properties of all things—for example, about "matter" and "form". In our own day, by contrast, neither of these approaches has any continuing validity. Cosmology, in one respect or another, is the concern of both astronomers and theologians, and in both these respects it can still be a source of philosophical problems; the boundaries of Space, and the End of temporal Creation, alike involve built-in philosophical perplexities. Yet, in the late twentieth century the science of "the universe-as-a-whole" is no more central to philosophy than any other branch of science. Nor are the fundamental theories about matter and the development of form; the study of elementary particles and of morphogenesis are, rather, recognized subdivisions of physics and biology. There are, no doubt, philosophical problems about causality in quantum physics in the one case, and about the reducibility of physiological explanations to biochemical ones in the other; yet neither matter theory nor the physiology of morphogenesis has the central significance for philosophy it appeared to have in classical Greece. Philosophy is no more the science of "universal properties" than it is the science of "the entire universe".

In fact the only acceptable answer to the question, "What is philosophy about?" is, probably, "Anything." And this is no real answer, since it turns back the question by refusing to accept any limits on the subject matter of philosophical reflection. This is as it should be because what is characteristic of

philosophy is, precisely, *not* its special subject matter. We are therefore compelled to take up the next question: "If it is not the subject matter of philosophy that marks it off from other kinds of inquiry, what is it? What are the indications that any topic, subject matter, or problem is one for *philosophical concern*?"

We may look for these indications, first, in the peculiar reflexivity of philosophical issues, and in the detachment involved in standing aside and looking on at the general character of any situation from an external, philosophical standpoint. This reflexive detachment has the effect of turning our subsequent inquiries into the search for a special kind of *self-knowledge*, and gives point to the maxim commonly attributed to Socrates, "Know Thyself!" In our final example, for instance, we saw Jim standing outside himself—so to say—and looking at his own situation with the eyes of a mere onlooker. ("What is this fellow doing, letting those noises from the man in the doorway convey meaning to him, stir him up, arouse in him sympathy, guilt, and feelings of authority?") Yet even the doctrine that philosophy is concerned with self-knowledge needs to be sharpened up further. Not every kind of "self-knowledge" is philosophical, any more than every kind of "wonder", and we still have to find some way of marking off philosophical self-knowledge from other kinds.

For a start we might say, "Philosophical self-knowledge is a general, collective kind of self-knowledge." From behind his newly acquired shield of philosophical detachment, Jim does not ask himself how he comes to see his father's particular flushed cheeks and violent gestures as evidences of anger. Or how he can justify submitting to his father's particular authority. Or how he comes to hear the sounds from his father's mouth as having some particular meaning or other, rather than being mere noise. Particular feelings, obligations, and meanings are not the business of philosophy. The question, "What makes this particular eyebrow twitch a sign of Father's extreme anger?" is a psychological question. The question, "How did this particular phoneme come to serve as a curse?" is one for his-

torical linguistics. The question, "On just what grounds could my father claim to overrule my wishes in this particular situation?" is a matter for the law, or perhaps for moral theory. No. Jim's questions are entirely general ones. "How can words and gestures ever be evidence of feelings, for anyone in any situation?" "How can any one person under any circumstances either claim authority or submit to authority in his relations to any other person?" "How can the sounds from people's vocal apparatus, and the marks they make on paper or stone, have a linguistic significance that distinguishes them from mere noises, inkblots, and chip marks?" The typically *philosophical* questions in any situation are thus entirely general questions: "How can there be any question of anybody's (e.g.) reading feelings from behavior, exercising authority, or understanding sounds as meaningful, *at all?*"

The possible modes of "self-knowledge" cover, in fact, a very wide range. At one extreme—that of individual psychology—there are things that I can discover about myself which distinguish me from other individual people—on account of my being the particular person I am, belonging to this family rather than to that, having had these infantile experiences rather than those, possessing academic rather than athletic gifts, musical rather than literary tastes, and so on. And individual psychology may succeed in establishing certain generalizations (e.g., children doing better at algebra than geometry tend also to prefer music to the visual arts) that can help us to recognize how the different aspects of any individual's personality come to form a consistent whole.

On a less particular level, again, there are half-a-dozen kinds of things that I can learn about myself which hold good, not as personal idiosyncrasies, but for sociological, anthropological, linguistic, or even neurophysiological reasons. I am as I am on account of my professional-class, not working-class, upbringing; in consequence of growing up in England, and later settling in the United States; in virtue of speaking an Indo-European, not a Dravidian language; because of my fifty-year-old liver

or defective short-range vision. . . . And all such insights into my own background and makeup can come under the general heading of "self-knowledge", for both theoretical and practical purposes.

Yet all these modes of inquiry, and the resulting kinds of self-knowledge, differ from *philosophical* reflection and understanding in one crucial respect. The individual psychologist may explain why I am personally more vulnerable than other people in some respect by pointing out the long-term significance and effects of some childhood episode in my particular life. The sociologist, the linguist, or the neurophysiologist may likewise explain the specific reasons for my particular abilities, characteristics, and failings. But the various "human sciences" are all of them concerned—quite properly—with the *differences* between different individual men, or between men of different societies, cultures, linguistic groups, and physical types. Each of these sciences inquires into the particular conditions on which we find certain types of men, say, acting in a neurotically defensive rather than an authoritarian manner, thinking visually rather than verbally, proving unusually sensitive to alcohol, failing to tell red from green, or whatever. And these specific modes of inquiry, which call for outward-looking scientific investigation, are in contrast to another group of inquiries, which call rather for reflective—and reflexive—analysis.

These reflective, analytical questions go behind all the specific causes and relations of the human sciences. They ask instead, first, how such activities as recognizing colors, objects, or feelings, using meaningful language, producing scientific theories or works of art, and acting responsibly are *possible at all*; and second—given the possibility of these activities—what they *comprise and involve*. Whatever else he may have to do along the way in order to solve problems, resolve paradoxes, relieve perplexities, or develop logical systems, the philosopher will at any rate be aiming to produce a general sketch map of the different kinds of cognitive performance, creative activity, rational enterprise, and so on.

What is the general status of art, science and language, moral responsibility and political authority, color perception and object recognition, or whatever? On what conditions are such things possible at all, and how are these activities and enterprises related together within the fabric of life and experience?

This last question is, in fact, a double one: How *are they* related, and how *ought they be* related? The task of "knowing ourselves", the goal of philosophical self-knowledge, requires both discovery and decision. Finding out "what we are to make of ourselves" involves both "understanding our own natures"—acknowledging those things that are true of us all, in virtue of being human beings in general, and therefore thinkers, agents, and language users—and "knowing our own minds," that is, learning to fashion a manner of life that relates all these activities and enterprises in a consistent, effective and rational way. Therefore, in philosophical theory as much as in practical affairs, the twin tasks of *understanding* our lives and *fashioning* them go hand in hand. On an individual level what I "make of myself" diagnostically, by coming to understand the sources of some personal vulnerability, will be a preliminary to deciding what I am to "make of myself" constructively, by moderating, dealing with, or at least coming to terms with that failing. So equally on the collective level. What we "make of ourselves" intellectually—how we see, understand, and think about all the creative activities, rational enterprises, and so on, that make up our lives and experiences—is the necessary preface to what we "make of ourselves" practically, that is, how we decide to take charge of, modify, or at least come to terms with the relations between all these things.

Is this a seemingly easy task? Should there apparently be some straightforward way of arriving at the necessary "collective self-knowledge"—at a clear and consistent account of what our own natures and activities are, and might become? If that

were so, the task of philosophy would not be nearly as difficult as it has proved. In fact, the problem of understanding what we are and what we do, in terms that will stand up to a moment's reflective and critical analysis, remains almost as hard today as it has ever been. This is not to say that the philosophical enterprise is a hopeless one. However inconclusive and incomplete its results, in the course of 2500 years it has made real progress. Yet the history of philosophy could never be told as an uninterrupted success story; there is no such striking tale to be reported, of ancient problems solved and novel entities discovered, as in particle physics or molecular biology. At best, it is a story of deep, complex, and entangled difficulties partially and patiently unraveled; with another body of equally deep, complex, and entangled difficulties still waiting to be tackled.

Just how far we are from any final position or from possessing the "clear and consistent account" we need of our natures and activities as thinkers and agents will be clear from the central problem of this book, to which we are now ready to turn. As we shall see, the moment we begin discussing, in entirely general terms, how the various contemporary "human sciences" connect together, and how they are relevant to our practical lives and experience, some typical and intolerable philosophical paradoxes come to the surface. As always, these paradoxes should be regarded as symptoms, indicating how far we all yet are—psychologists, sociologists, and physiologists, as much as the rest of us—from the general, philosophical self-knowledge we need, and how much we are all still liable to misconceive some crucial features of human nature and action. To bring these unresolved paradoxes to light, we shall have to plunge to the very heart of the philosophical labyrinth. Then, by looking at the different programs that philosophers have adopted for tackling the resulting problems, we shall produce that first sketch map of the philosophical terrain which is the chief goal of this book. But at any rate, like Theseus, we shall have that indispensable thread by which we can eventually

bring ourselves back to the outer world, just so long as we continue to insist that intolerable paradoxes are indeed intolerable, and cannot be lived with in passive complacency.

### 3 Fatalism and Its Paradoxes

We can begin the statement of our central problem of fatalism and its paradoxes most conveniently by contrasting two rather similar attitudes which may be referred to as "fatalism" and "pessimism", respectively. Every decade, every generation, every century finds its own excuses for self-doubt, and the grounds of this want of confidence can be of two kinds. At some times, and for some people, this feeling of incapacity springs from a recognition of the practical limits by which all human life is bounded, and the burdens that these limits can place on us. Fire and plague, overpopulation and natural disaster, poverty, sickness and squalor, loss of parental love and inconsistent emotional demands—in different ways, all of these can break people's souls and leave them feeling, in desperation, that they can do nothing to help themselves. Often, indeed, we may have to admit that this pessimism is well grounded—that is, that anyone who gives way to this desperation can be excused for doing so, since economic, medical, or psychological pressures have pushed him beyond reasonable limits. On the other hand, just because the pressures in question are specific and practical, there is nothing absolute or ineluctable about them. However

late in the day it may be, it is clear enough in each case what might be done or might have been done in order to overcome them.

There are many people today (I suppose) who genuinely view the future of humanity in this kind of pessimistic spirit, sincerely believing that whatever might have been done in the past to save the human race from some apocalyptic episode of starvation or self-destruction, the time for effective action is past, and there is nothing left to do but brace ourselves for catastrophe. If held in a pure form, the argument for this kind of practical pessimism can be met only by equally practical counterarguments. Maybe the argument depends on exaggerated projections of population growth, maybe the actual hopes for international order are somewhat better than it assumes, maybe famine and disease will prove to be more easily mastered than the pessimist suggests.

In practice, however, this attitude of pessimism is rarely held in an entirely pure form. More commonly it is associated with its twin sister, fatalism. So our first task here is to define and characterize this other, fatalistic, attitude. For the pure fatalist the grounds of self-doubt are more general, more theoretical, and also more puzzling than those on which the pure pessimist relies. The fatalist's desperation springs not just from contemplating temporary shortages of food, current imbalances in population growth, or local dangers of war and epidemic—all of which happen to be affecting us here and now. Rather he sees, in the way the world works, certain essential features of our minds and bodies, or of the interaction between ourselves and our world, that foredoom all our efforts to take charge of our lives and to act in an effective, rational way. We believe ourselves to be taking decisions, finding good reasons to act, even putting our decisions into effect, but this impression (the fatalist asserts) is mere self-deception. Either we are caught up in a "world machine" that is too strong for us or we are ourselves no more than psychophysiological "machines". Either way, our hands are tied. This is so, not because of particular practical difficulties, of a kind that might in principle be cir-

cumvented and so prove temporary. It is so for general, theoretical reasons, of a kind that cannot (it seems) be overcome, so that nothing can apparently be done to justify, or restore, our sense of autonomy and self-direction. We can hold ourselves responsible for our fate and our future only to the extent that we can help what we do. According to the fatalist, therefore, the world being as it is, we can in the nature of the case do nothing to help ourselves!

The fatalist's arguments may be overabstract, perplexing, and even paradoxical; but they can without doubt be very disheartening. In their own way, indeed, they are even more disheartening than the conclusions of the pessimist, about which—at the very least—we can see what might conceivably have been done before now, given time and effort, to preserve us from the doom he forecasts. Faced with the fatalist's arguments, by contrast, we seem to be without hope of any kind. In what follows, we may allow the fatalist all the rope he needs—letting him entice us into the maze of his theoretical arguments and following him all the way to the final point—at which he concludes that we can do nothing to help ourselves. Meanwhile, however, let us keep our eyes peeled for intellectual danger signals, namely, for those telltale paradoxes that indicate to us that something is not quite right about his argument. Finally, let us try to identify the questions that need to be answered, and the misconceptions that need to be corrected if we are to extricate ourselves from those paradoxes and so escape from the varieties of fatalism with which they are inextricably associated.

In the late twentieth century, the most attractive arguments for fatalism are advanced from three different intellectual directions. All three kinds of argument assert that the decisions we make and the things we do—for which we have been prepared to take responsibility and believed ourselves to be entitled to credit or blame—are in one or another respect *causally determined*, and so "really" the products of "forces" external to the

supposed decisions and independent of them. (In the first case, the factors appealed to are historical and sociological, in the second psychological and biographical, in the third physiological. But in each case the effect is the same.) All three kinds of argument imply that the "reasons" for which we think and act are mere "rationalizations"—verbal froth-bubbles carried along on the surface of deeper causal undercurrents. Although we may seem to ourselves to be choosing, and choosing "for good reasons", we shall always in fact end up by acting in ways that are settled, regardless of our supposed "choices" and "reasons", by factors outside our control. On the extreme view, indeed, all human choices and decisions whatever are—strictly speaking—settled by outside forces, regardless of other appearances; so that any discussion of thought, action, and belief as "rational", with its implication that our "choices" and "reasons" are something more than surface phenomena, is delusive. The sociohistorical, psychobiographical, and/or physiological factors—the exact choice or combination varies from fatalist to fatalist—will determine what we in fact end up by doing in any situation, and all question of our "helping ourselves" is beside the point.

In late twentieth-century arguments for fatalism (I have said) the threat to "rationality" comes from the *causal* influence of external factors that determine our responses to all situations, so to say, behind our backs. At other times, and in other cultures, the limitations on rationality have been seen as coming from other directions, for instance, from logic or theology. Thus in classical Athens, arguments from formal logic seemed to discredit our power to change the future. (Aristotle produced a famous argument about a sea battle. We must, it seems, suppose either that there will be a sea battle tomorrow, or that there will not. And, presumably, it is either true or false to say now—that is, *today*—that this battle will in fact take place tomorrow. If there is in fact going to be such a sea battle, we cannot prevent it; and, if there is not in fact going to be one, then we do not need to prevent it. These truths are both matters of logical necessity. On either assumption, it is hard to see

what we can do to affect the occurrence of the battle.) In the Middle Ages, the arguments for fatalism came not from the logical but from the theological direction. If God is all-knowing, then surely we are predestined to act in ways whose outcome He can already foresee. And there seems to be something ironical about our taking responsibility for acting in just those ways God already knows we will do! Only since the seventeenth century, when natural science began to displace theology and logic as providing the most authoritative account of the world, has causal determinism replaced necessity and predestination as the most damaging source of arguments against the efficacy of our "rational decisions".

Accordingly, there is no unique or single doctrine of fatalism based on a permanent view about the factors that preclude the possibility of rational decision. Rather, there is a whole family of fatalistic views, whose supporting arguments come from different sources. Which arguments are most convincing to the men of any given culture and generation depend on the local and current prestige of the different fields of knowledge. In a theologically minded age, predestination poses the main threat; in a period whose intellectual debates are dominated by geometry and logic, the threat comes rather from formal necessity; in the heyday of physical science, it comes from mechanistic determinism. At the present time the imaginations of intellectual people are dominated by the *human sciences*—partial and inadequate though their results may yet be. We see ourselves caught up in a web of historical, social, and economic causes; with personalities shaped by family background and childhood experience; perceiving and acting upon the world through our sense organs, brains, and other neural mechanisms. So, nowadays, the powerful and topical forms of fatalism, the forms that carry the greatest conviction with us, appeal to the theories and discoveries of these human sciences.

Following are three classes of arguments advanced by the fatalists: (1) historical and sociological, (2) psychological and biographical, and (3) physiological.

## Arguments

### CLASS 1 (HISTORICAL AND SOCIOLOGICAL)

One set of arguments points to social, historical, economic, and cultural factors as accounting for all our actions and beliefs. On this view, we think and act as we do because we live our lives in the particular societies, cultures, and epochs we do. These shape our forms of life, our modes of thought, our beliefs and tastes, purchasing habits, and the rest; so the "reasons" we offer to justify our beliefs and actions are less an indication that we ourselves can *cause changes* in our socio-economic situation than signs of the *effects* that the situation has on us.

In this respect the "reasons" for which anyone claims to think and act are to be regarded as surface froth, or "epiphenomena". The "reason" why someone wants to buy a Pontiac instead of a Buick is *of course* the fact that "those wide-track people have a way with cars." This is just the "reason" he has been conditioned to give. But why on earth does this slogan seem to be a *reason* at all? If it really influences our purchasing habits, that is merely evidence of the causal power of television commercials. What contemporary social factors achieve in one case can be the effect of historical factors in another. The "reason" why someone ends up by revering the Stars and Stripes, rather than the Red Flag, is to be explained as a comparative effect of the histories of the United States and Russia. In that case, being born historically where and when he was imposes on him a particular pattern of actions, beliefs, and "reasons", which once again reflect the influence of the situation upon him, rather than indicating how he himself influences the situation. Viewed from the extreme sociohistorical standpoint, as a result, all the "reasons" for our beliefs and actions appear to be mere rationalizations of positions we adopt as direct effects of social, economic, and cultural pressures.

### CLASS 2 (PSYCHOLOGICAL)

The second class of arguments, based on biography and psychology, effectively reinforces social and historical arguments (Class 1). As a result of twentieth-century advances in psychology, we apparently understand better than ever before how such social and cultural factors *become* influential on us—how they acquire a causal power over us, so that we get into the habit of citing as "reasons" the rationalizations current in our particular culture and epoch. By now, too, we understand well enough how infantile experiences affect our adult characters and personalities and work themselves out in our subsequent responses and behavior; this psychological insight merely reinforces the impression that appeals to "reasons" and "rationality" are empty talk. On this second account, we think and act as we do because we are born with a certain innate mental equipment into particular family situations, and because the subsequent experiences of infancy and adolescence shape our characters and habits as they do.

So, once again, our "reasons" become epiphenomenal froth carried along by deeper psychological currents. And the general form of this argument fits equally well the views of several different psychological schools. (Whether we consider the views of Skinner, who describes childhood learning and character formation in terms of "conditioning" and "reinforcement", or those of Freud, who would speak rather of "traumas", "repression", and "acting out", the resulting account of the effects that early experience have on adult character can be—and has been—appealed to in support of a fatalist position.) The "reason" why someone loves Frances rather than Frieda is *of course* the fact that Frances' frank, self-confident manner toward him is congenial and encouraging. This is just the sort of personality to which he has learned to respond. But why on earth does that fact seem to him to be a *reason* at all? Evidently childhood traumas have established a pattern of dependency and left him in need of external encouragement from the women in his life.

To go to the heart of the matter: His feelings for Frances are just a replay of reactions that were built into him in the nursery, when his elder sister was seven and he was four. He has "fallen in love," he says, and as a result thinks to himself, "I am free, self-creative, able to do great new things because of her . . ."; whereas the actual fact is that he has fallen into that emotional abyss that men call "being in love", wandered into a morass of dependency, and so lost his individual autonomy. Viewed from the extreme psychobiographical point of view, even more than from that of sociology, all the "reasons" by which we characterize our actions and beliefs thus appear surface rationalizations of positions that our infancy and education have drilled into us.

### CLASS 3 (PHYSIOLOGICAL)

Worse is to come. All that has been said here about socio-historical factors and about the psychological processes that give them a hold over us is even further strengthened by the arguments in Class 3, which point to brain physiology and the neurosciences. For the conditioning processes of infancy and adolescence do not act on us only in some vague, "mental" way, whose causal efficacy is mysterious and uncertain. Rather, they lead to the establishment of efficacious causal mechanisms in our brains and central nervous systems. On this third view, accordingly, we think and act as we do because the electrophysiological and biochemical operation of our brains and nerves is governed by rigorous causal laws and so generates both our beliefs and actions, and also the associated "reasons", as straightforward physicochemical effects.

In this case, too, the cogency of the fatalist's argument does not hang on the correctness of one or another alternative neurophysiological theory. All that matters is our readiness to suppose that causal mechanisms of some kind or other serve to determine the operations of the nervous system. The "reason" someone has for jumping back onto the sidewalk is *of course* the fact that he sees a car unexpectedly coming round the corner.

That is simply the effect of early training. But what, then, does it mean to say that the sight of that car gives him a *reason* at all? Evidently the sight of the car is a stimulus to his action because his cerebral cortex possesses—thank God!—the structure and programming it does. What he has learned to do in situations like this is thus represented in his brain and nervous system, so that similar occasions in the future trigger off all the appropriate thoughts and reactions—not least, the verbal reaction of producing the corresponding "reasons". From the psychological and sociological standpoints, those words may well seem epiphenomena; but when viewed from the extreme physiological point of view, the avowed "reasons" for our thoughts and actions must appear even more forcibly to be surface by-products of deeper neurological causes.

Using arguments like these, the contemporary fatalist attempts to get a triple armlock on us. As he moves from historical and cultural, to psychological and biographical, to physiological factors and mechanisms, he places increasingly severe limits on our seeming capacity for rational, individual choice and belief, action and creativity. By the time he has finished deploying all three sets of arguments against us, it begins to look as though we *are* no more than what we have *become*, as though we *act and think* simply as we have been *conditioned or traumatized* into doing, and as though our entire mental repertoire is merely the automatic "output" of brains programmed long since, computerwise, to deal with specific "inputs" according to deterministic "routines".

There is a story of a French aristocrat in the days before the Revolution of 1789, whose life was so meticulously governed by Court routine that a friend asked him whether he did not ever long to do a little living of his own. "Living?" he replied. "Our valets do that for us!" ("*Vivre? Nos valets le font pour nous.*") If the fatalist has his way with us, we shall end up in a similar position with regard to all our thinking: "*Penser? Nos cerveaux le font pour nous!*"—"Thinking? Our brains do that for us!"

We have followed the fatalist into the heart of his argument and let him paint as gloomy a picture as he can, quite deliberately. There are two reasons for doing so. First, in spite of all the reservations we may feel—all our sense that there *must* be something wrong with his arguments, however elusive the fallacies may be—it is important to acknowledge the full force of his case. And, in addition, it is only by giving the fatalist his head and letting him pursue his arguments to extreme conclusions that we can bring to light the paradoxes and difficulties built into the fabric of his position. For only when his case is set out in full, with all its implications, can we locate the points in his position at which these paradoxes become unavoidable.

Now, however, the time has come for us to turn and counter-attack. Instead of submitting tamely to the fatalist's conclusions, let us scrutinize the way in which he reaches his final position and make explicit the assumptions on which alone he can give his conclusions their cogency. This means looking at them not just in isolation but in relation to their intellectual foundations; and, in particular, considering how the conclusions themselves threaten to react on the soundness of their own foundations. As we shall see, the more enthusiastically one adopts the fatalist's final position, the more drastically its foundations are undercut. By advancing his conclusions in extreme terms, the fatalist cannot avoid digging away the rational ground from under his own feet, or sawing off the intellectual limb on which he himself is sitting. And this curious feature of his position shows up in the form of *paradoxes* of an essentially philosophical kind.

## Paradoxes

The first task is to get these paradoxes stated. After that, we can try to identify the points at which better "self-understanding" is needed if we are to avoid the confusions from which they spring. We can put the crucial point in a nutshell. All three classes of argument (whether sociological, psychological,

or physiological) are—and *make a point* of being—highly sophisticated end-products of that very "rationality" they claim to discredit. And all three classes of argument carry weight with us, only for so long as we remain "rational", in ways that the fatalist's own conclusions allegedly prove impossible!

### CLASS 3 (PHYSIOLOGICAL)

In order to see exactly how the fatalist's reliance on the rationality of his own arguments undermines his attack on "reasoning" and "rationality", let us reverse the order of the arguments, and consider first how it affects the physiological arguments for fatalism.

I recall hearing the relevant paradox stated in the mid 1960s, by Professor Charles Townes, the Nobel Prize winner and inventor of the laser. As he expounded it, we need to read it slowly and with care, since the fatal sting resides in the very tip of the tail:

"Some day very soon [he argued] scientists will demonstrate convincingly that specific physical and chemical brain-processes underlie all our thoughts, arguments and other intellectual activities, including the intellectual activity of demonstrating that specific physical and chemical processes underlie all our thoughts, arguments and other intellectual activities. . . ."

(Note: So far, there is nothing paradoxical here. Quite the contrary, up to this point everything seems to be going the fatalist's way!)

". . . and, when they have succeeded in doing this, those same scientists will *take great credit* for that demonstration."

What is there paradoxical about this statement? Take it entirely by itself and the answer is, Nothing. If neuroscientists

did all that Charles Townes supposes, they would indeed want to take great credit for having done so. Nor is his description of this supposed achievement inherently unrealizable or self-refuting. (True, there was a time when scientists genuinely doubted whether neurophysiology would ever get off the ground, since there seemed to be something inconceivable about the notion of a nervous system figuring out how a nervous system operated, but those doubts have long ceased to be active.) The point of the paradox becomes apparent only when we reflect on the implications of Townes's very last sentence. For, if the scientists in question are to be *entitled* to great credit for their demonstration, the intellectual activity in which they have been engaged—that is, investigating the brain mechanisms associated with our higher mental functions—must itself be a *rational* activity. They must themselves have, at the very least, authentic “reasons” to justify their conclusions; and these reasons, at any rate, cannot just be “rationalizations”, that is, passive by-products of socioeconomic pressures, infantile traumas, or electrophysiological discharges. Viewed from this alternative direction, the implications of Townes's statement are just the opposite of what the fatalist suggests. Setting neurological causality and scientific reasoning against each other is a false opposition. Far from the success of neurophysiology demonstrating that all of our vaunted “acting for reasons” is so much self-deceptive rationalization, the scientific character of neurophysiological discoveries depends on the assumption that “rationality” is *not* a myth; that we can in fact think and act “for reasons”, and are genuinely entitled to “credit” for the resulting achievements. So the fatalist can quote neurophysiology to discredit our rationality only by assuming—paradoxically—the direct opposite of what he sets out to prove!

Similar paradoxes arise over the other two classes of arguments, and they arise in the same way.

#### CLASS 2 (PSYCHOLOGICAL)

Consider, for instance, the clinical goals of the entire psychoanalytic enterprise. The more firmly a psychoanalyst is con-

vinced that his adult patients' personality structures and motives are products of their relationships and experiences in infancy and adolescence, the more convinced he will also be that those patients can increase their “autonomy” in the present by recognizing the power of those early relationships and experiences. Furthermore, our chief ground for regarding the psychoanalytic account of personality development as generally sound lies in the clinical fact that such self-recognition improves many patients' discrimination and autonomy in their subsequent lives. By contrast, the fatalist would have us believe that the truth of psychoanalytic theories about the childhood origins of adult behavior patterns discredits all claims to “rationality” or “autonomy” on the adult's behalf.

The clinical origins of the analytic evidence indicate, once again, that this is a false opposition. In order to be genuinely rational or autonomous, our behavior does not have to be psychoanalytically inexplicable or unintelligible. Quite the contrary. The distinction between “autonomous” and “compulsive” behavior must draw a line between two modes of behavior both of which are intelligible, and the rationality of the analyst's own clinical insights stands or falls with the possibility of drawing such a distinction. Certainly practicing analysts do not think of themselves as manifesting, in their own day-to-day practice, nothing more than compulsive behavior patterns rooted in infantile traumas! Once again, therefore, the success of psychoanalysis would testify as much as that of neurophysiology to the opposite of what the fatalist suggests. If psychoanalysis is to prove anything, then some adult behavior at the very least must be genuinely rational and autonomous—namely, the behavior in which psychoanalysts are themselves professionally engaged—and, once that exception is allowed, why should this not be true of much more also?

We end up in the same position if we take other kinds of psychologists and psychological explanations as our example. B. F. Skinner and his “behaviorist” followers, for instance, write about the whole business of interpersonal relationships and education—including the giving and taking of *credit* in the form of grades and prizes, rewards and penalties—as the “social

mechanism" by which adolescents and adults are brought into conformity with the collective order of society. Skinner himself exhorts us—in the style of a fatalist—to set aside "human dignity" and "freedom of decision" as misleading phantasms or mirages which can gratify our imaginations only for so long as we ignore the underlying psychosocial mechanisms. As many of Skinner's critics have pointed out, however, his own behavior is scarcely consistent with these claims. Certainly he seems to regard his own activity, in arguing against the traditional notions of "rationality" and "freedom", as nothing less than "free" and "rational"; nor does he seem to view the praise that he would himself happily receive for those arguments as merely a further incentive, or "carrot", drawing him more closely into the social order. Such counterarguments are not directed against B. F. Skinner personally. The point is not to demonstrate that B. F. Skinner trips himself up, if indeed he does. Rather, it is to remind ourselves that if any comprehensive theory of learning is to be entitled to serious attention, then some adult activities at the very least must be rational and autonomous—namely, those by which the validity of that psychological theory is established—and, once that exception is allowed, many others are presumably also allowed.

#### CLASS I (HISTORICAL AND SOCIOLOGICAL)

By now, the counterargument to the fatalistic use of historical and sociological evidence will be clear enough. This variety of fatalism, too, can convince us only at the price of paradox. The fatalist's assumption is that any kind of conduct for which a full "causal explanation" can be given—this time, in historical or sociological terms—must on this account alone lose all claim to be "rational" or "autonomous", as well as any claim to "credit" or "discredit". Yet in actual practical affairs, the relation between these issues is assumed to be just the opposite. The very same people who believe most firmly that human affairs (whether social, economic, or cultural) can be understood causally, in terms of sociohistorical factors, also believe that

this understanding can be applied to yield better ("more rational") social, economic, and cultural *policies*. Indeed the practical success of those policies—for example, the Keynesian economic policy of countering business depressions by artificially stimulating demand—is one of our chief grounds for regarding such causal analyses as well founded.

We are, of course, tempted to think of a causal "science of human affairs" as being strictly analogous to, say, the science of planetary astronomy. On that basis the task of understanding the sociohistorical mechanisms involved seems to be directly associated with our capacity to make downright predictions. In practice, however, the possibility of using a realistic "social science" to frame effective policies directly *limits* the scope for such predictions. The accuracy of sociohistorical forecasting depends not just on our power to make mathematical projections of previous historical trends but also on our understanding the policies of the social agents involved. Still, one thing is certain. If historians and sociologists are ever to establish a satisfactory account of the causal factors responsible for our behavior, they must assume that, at the very least, some human activities are rational, autonomous, and entitled to credit, namely, their own research activities. If that is so, then presumably the same is also true of many others.

# 4 The Divided Image of Human Nature

It is time to grasp the nettle. All the sciences on which the contemporary arguments for fatalism rely are themselves "rational enterprises" of the human intellect. As such, all of them—brain physiology, developmental psychology, economics, or whatever—are *possible at all* only on condition that the "causal explanations" to which they lead do not discredit totally the possibility that human thought and action can be "rational". And, since the fatalist appeals to such causal explanations in the hope of excluding the "rationality" of thought and action *entirely and in principle*, his claim that neurophysiology, psychoanalysis, or sociology discredits "rationality" ends by being highly paradoxical.

But it is not enough merely to point out these paradoxes and shrug our shoulders. The very fact that the fatalists' arguments are so persuasive—for all their paradoxes—is itself one symptom of a fundamental philosophical problem:

In a world of sociohistorical, psychological, and physiological causality, how are rational thought and action—specifically, the rational

thought and action of the historian, psychologist, and physiologist—possible in the first place?

This remains a problem for philosophy, and a source of philosophical perplexity, because we are still unclear about the relationship between the ideas of *rationality* and *causality*—between what is involved in discovering the "causes" influencing a person's thoughts or actions and the "reasons" he had for thinking and acting as he did. The successive attempts to clarify this relationship have been one continuous preoccupation of philosophers throughout the history of their discussions. This topic will be the main theme for our entire subsequent discussion here.

For the moment, one brief digression is needed, out of simple justice to the totally committed fatalist. So long as he does not try to convince others—or even himself—that his position has a secure intellectual foundation, the fatalist cannot be refuted. A purely personal attitude of quietism and resignation, which abdicates responsibility for choice, influence, and action, need not offer any particular self-justification. Paradox enters in only when quietism becomes an intellectual position and begins to claim a rational justification for itself. In this section I have been arguing only against the latter, intellectual position; but a quietism that seeks no "rational justification" puts itself beyond direct criticism. So we certainly can use the successes of brain physiology, psychology, and/or social history as a pretext, and retreat into quietism as a personal refuge:

We are what we have become; we act and think as we have learned to do; our thought is the output of a programmed cortex processing sensory inputs . . . That is our *kharma*.  
So be it!

Yet even this quietism can be successfully maintained only at the price of certain further oddities. If, for instance, we take it fully seriously, we shall have finally to suspend all questions

of praise, blame, credit, and the rest. Maybe God used Werner Heisenberg's brain as His vehicle for bringing quantum mechanics into existence. But that is an indication, not of Heisenberg's achievement, merely of his destiny. So from now on, all Nobel Prizes must be awarded to God. Nobody else can possibly deserve them.

If an absolute quietism is irrefutable, that is because it carries us beyond the point at which we still care about the coherence or incoherence of our views. (In this, absolute quietism is like absolute solipsism—the philosophical view that I have no reason to suppose that anybody or anything exists besides myself. Such a position is hard to maintain consistently so long as one still has dealings with the world—as, witness, the person who said to Bertrand Russell, "I'm a solipsist, and I can't understand why everyone else isn't, too!") If the fatalist treats absolute quietism as an *intellectual* refuge or asylum, then he will no longer have any genuine "reason" to trust the results of the sciences, and so no intellectual "reason" to justify adopting quietism itself. By the time he has reached this point, of course, he may no longer care. The sciences were only the ladder the fatalist used to climb up onto his isolated pillar. Now he can happily throw the ladder away.

For the rest of us, the more arduous intellectual task remains. Clearly the human sciences—whether sociohistorical, psychological, or neurophysiological—are here to stay. Evidently, any fear that their success in discovering the "causes" operative in human affairs may undercut the significance of "reasons" and "rationality" is a will-o'-the-wisp or bugaboo. Still, the constructive task remains to be faced, namely, the task of locating—*within* the categories and causal patterns of those sciences—those areas in which there is a genuine empirical contrast to be drawn between what we can and cannot help thinking or doing; or between the things that we think or do for good and effective reasons, rather than compulsively, by a mere reflex, or out of blind habit, and so on. How do the brain processes associated with "rational" thinking or conduct differ, in fact, from those involved in purely reflex or automatic behavior? What clinical

indications mark off the compulsive features of neurotic behavior, in fact, from those over which a patient retains autonomous control? And how are we to tell the occasions when social or historical influences are in fact carrying us away, against our better judgment, from those when they are reinforcing our capacity to think and act for ourselves? We shall arrive at a proper understanding of the relationship between "reasons" and "causes"—not just as a point of abstract, philosophical theory but also with an eye to the genuine implications of the human sciences themselves—only if we can show how "rational thought or action" and "causal explanation" can be reconciled through such empirical distinctions.

In the chapters that follow we shall be looking at some of the ways in which philosophers have attempted—and still attempt—to give an account of "reasons" and "rationality", and to resolve our perplexities and misconceptions about the relationship between rationality and causality. So, despite the very elementary starting point of this book, we are by this stage already close to the heart of the traditional philosophical debate. More than two thousand years ago Aristotle was already insisting on *rationality* as the crucial mark differentiating human beings from other animals. (Although for purposes of mere classification, it might be possible to distinguish the human species as comprising the only "featherless bipeds"—who says Aristotle never had his tongue in his cheek?—any attempt to understand the really significant capacities of the species required us to define *Man* as "the rational animal".) Yet throughout intellectual history, considerations have again and again arisen that have called our understanding of this rationality in question. As a result, the problem of refining our ideas about reasons and rationality has again and again reappeared on the philosophical agenda, either because earlier accounts proved to be internally defective or because the notion has come under attack from fresh external directions.

The underlying source of our difficulties can be summarized

as follows. We have fallen into the habit of operating with two quite different Images of Human Nature, depending on whether we regard ourselves as "subjects" or "objects". When we think of ourselves as active observers or agents, we quite naturally talk about ourselves, report our intentions, discuss our plans, our beliefs, and the rest, in the language of *rationality*. Ask a man why he is saving so much money, and he will reply by giving his "reason"—for example, he and his wife are planning to go to India for their next vacation. When we think of ourselves, by contrast, as passive objects of observation, on the receiving end of forces and actions, chances and misfortunes, we view ourselves, equally naturally, in terms of the notion of *causality*. Ask a man why his body temperature is so high, or his bank balance so low, and he will reply by telling you the "cause"—for example, he is suffering from a chest infection, or has just settled a large tax demand.

When, however, it comes to explaining how the "rational" terms in which we think and act, in our capacity as observers or agents, are related to the "causal" terms in which we describe ourselves, in our alternative role as objects of observation or action, we quickly end up in confusion. We still find it as difficult as ever to reconcile our concepts of rationality—with all their apparent implications about autonomy, active choice, and so forth—and our concepts of causality, with all their apparent implications about the limitations on our choices and actions. In what follows, we should assume that these difficulties, and the paradoxes through which they are expressed, are signs that we are still plagued by misconceptions—misconceptions about the nature of causal explanation, about the nature of rational belief and action, about the relationship between causal influences and rational conduct, or—very likely—about all three.

If this is the case, it is not just because we are still ignorant about important psychological or sociological facts whose discovery will remove our difficulties; for these difficulties arise at a level deeper than that at which psychological and sociological questions can even be posed. The very existence of the human sciences takes for granted the legitimacy of applying "causal"

terms and questions to the lives of human beings, just as the habits and practices of practical life take for granted the legitimacy of employing "rational" terms and modes of speech. This is not a situation in which we can hope to make progress by simply abolishing either causal or rational methods of thought. Instead, we need to eliminate the fallacious opposition between them and overcome the corresponding split between the causal and rational Images of Human Nature.

The chapters that follow will accordingly be organized around a single linking theme, namely, the question:

What do philosophers of different inclinations tell us about the nature of *reasons* and *reasoning*? How do they approach the problem of explaining what it means to *have a reason* for believing this rather than that, or for acting in this way rather than that?

The exposition falls into two main sections. In Parts II, III, and IV, we shall concentrate on the accounts that different philosophers have given of "reasons for thinking (saying/believing/claiming to know)" the things we do. There are at least three distinct approaches to this problem, which involve correspondingly different views of the philosophical task itself. Finally, in Part V, we shall turn to look at the accounts philosophers have given of "reasons for doing (deciding/acting/taking stands about)" the things we do. Here again, philosophers of different inclination adopt strikingly different approaches, and display markedly different views about the philosopher's aim and function.

It is not the purpose of this book to reach *answers* to these central philosophical questions. Rather, we shall hope to recognize the nature of the questions themselves and the attractions of the traditional approaches to them. To begin with, we shall pose the question, "How are we to think about ourselves as creatures capable of holding 'rational' beliefs?"—that is, as capable of *believing* things "for good reasons"—and contrast

the ways in which different philosophers have tackled that question. Later, we shall pose the related question, "How are we to think about ourselves as creatures capable of performing 'rational' actions?"—that is, as capable of *doing* things "for good reasons"—and compare the ways in which different philosophers have tackled that second question. In this way, we may hope to go beyond our divided Image of Human Nature—as active rational "subjects" or as passive causal "objects", but not both at once—and develop attitudes toward ourselves that escape the earlier paradoxes and conflicts between the causal and the rational aspects of human experience.

## II

# The Philosopher as Geometer

# 5

## The Claims of Logic

*Man is the rational animal.* Faced with Aristotle's epigram, the casual reader today may retort: "Rational? What with wars, riots, battered babies, office politics, street violence—what sort of a 'rational animal' do philosophers take us for?"

This response springs from a pardonable misunderstanding. For Aristotle was not interested in claiming anything that is obviously untrue—that pink is blue, or that pigs lay eggs, or that human beings always in fact succeed in thinking and acting rationally. On the contrary, like all philosophers he was concerned not with what is *always in fact* the case but rather with what is *possible at all*. And it is a significant thing about human beings that they are able, at any rate sometimes, to think and act "for good reasons"—whatever that phrase may turn out to mean. In ways that mark them off from sticks and stones, germs and geraniums, and possibly also from dogs and dolphins, humans have the capacity to work problems out, to think questions through, to deliberate about their courses of action beforehand, and to explain the reasons for them afterwards. There are times, of course, when they fail to exercise this capacity—when they jump to conclusions, act unthinkingly, or let their

feelings get the better of their judgments in ways that are also "only human". But the crucial feature of our common humanity is just this alternation of the rational and the nonrational. Human beings are not—like stones that simply roll, bacteria that simply multiply, and lower animals whose behavior conforms overwhelmingly to fixed patterns and drives—wholly stereotyped in their conduct. Instead of being confined to passive reactions and blind automatisms, they alternate between acting on impulse and behaving in carefully thought-out ways, between following their prejudices and thinking out the grounds for their beliefs.

In much of our everyday human experience, we swim in a sea of "reasons" and "reason-giving". So much is this so, that it comes as a shock if we lose control of our bodies and are plunged into a situation of pure cause and effect. If I am walking along a sidewalk and a passerby knocks me flying, or if I am staggering drunk, I may discover what it is like to move like a simple material object—falling under the influence of gravity and coming to a violent stop. For most of the time, our experience is quite different. Even though we are not forever giving *explicit* reasons for the things we think and do, we are continually acting in ways for which reasons might be given: recognizing objects and people around us, coming to one conclusion rather than another, taking the right-hand turn rather than the left, attending a concert rather than a lecture, admiring this person and disapproving of that one. All these choices and decisions, conclusions and attitudes are reached, at least, for *implicit* reasons. Choosing one of two things is not just falling for it; deciding to take one particular road is not just turning the corner blindly; objecting to someone's behavior is not just feeling one's gorge rise at it. (Watching surgery makes me personally feel queasy, but this has no bearing on my respect for the surgeon.) In the case of any genuine choice or route selection, preference or disapproval, the agent can spell out for us the significance that it has for him by telling us the "reasons" or "considerations" behind this position, whether or not he actually called those considerations to mind at the time he made his choice.

This whole business of reason-having and reason-giving involves one whole area of experience particularly closely, namely, the use of *language*. In the course of everyday experience, our sense of spontaneity is probably greatest when we talk. Leaving aside the rare cases when, for example, emotion overcomes us and we blurt out something unintentionally, we have very little feeling of compulsion when we use speech; and behavioristic attempts to explain away the rational status of speech as a simple "effect" of social "conditioning" strike the outsider as particularly unconvincing. From the earliest days of philosophy, therefore, questions about the nature and scope of Reason, have been tied in with questions about the nature and scope of Language. (We find Plato seriously discussing whether "thinking" may not be the same as "talking to ourselves", and this remains a legitimate question even today.) At the very least, learning to talk and learning to think are intimately related, so that Language is both one of the prime instruments of rational thought and conduct and one of the prime objects of philosophical scrutiny. Giving "reasons" for our actions and beliefs, correspondingly, consists in a special kind of verbal commentary that we provide about our own conduct; and understanding the nature of the reasons for our thoughts or actions involves understanding the relationship between this running commentary and the thoughts or actions themselves.

What does it mean, therefore, to "have reasons" for the things we do or believe? And why do the reason-backed aspects of our lives seem so different to us, as *agents*, from the things that simply happen to us causally, as *passive objects*? In this central phase of our inquiry, we shall concentrate on questions about thoughts and beliefs, rather than choices and actions, considering the answers that philosophers have given to questions of the following form:

What is it to have good reasons for believing the things we do? What is it to know something? And how can claims to knowledge, or well-founded belief, be defended rationally against challenge?

The need to give a proper account of rationality has repeatedly brought philosophers face-to-face with such questions, and in the chapters that follow we shall look in turn at three general directions from which they have been attacked. This will give us a first rough map of the philosophers' territory, and allow us to recognize where the different lines of attack have taken us—on what fronts they have made progress, at what points they are still blocked, and in what respects they have complemented or frustrated one another.

## Approaches to Philosophy

At first sight, these three classes of approaches to philosophy will require us to focus on quite different topics and problems: (1) for one group of philosophers, the thing that makes rational discussion and agreement possible at all is the Nature of the World; (2) for a second group, it is the Structure of Human Thought; (3) for a third group, it is the conditions—and interactions—that ensure an adaptation or harmony between Thought and the World.

### CLASS 1 (NATURE OF THE WORLD)

For the first group, the rational task depends ultimately on our capacity to recognize certain permanent and necessary (or "objective") features and relations, existing quite independently of all human thought and choice. The business of giving reasons for our beliefs then requires us to produce objectively rigorous arguments in which "solid evidence" is used to provide "firm support" for our beliefs. (From this first point of view, the crucial philosophical question is, "By what standards are we to judge when our arguments are really rigorous?")

### CLASS 2 (STRUCTURE OF HUMAN THOUGHT)

For the second group, the rational task depends, rather, on a general consensus between human beings, which unites all

human thought and action in ways that conform to certain general and universal (or "intersubjective") patterns or principles. The business of giving reasons then involves relating our own experiences to intellectual preconceptions that are congenial to the great majority of our hearers, that is, to the established corpus of human ideas and beliefs. (The crucial question then becomes, "How do certain patterns of ideas become established, and so prove convincing to any experienced audience?")

### CLASS 3 (THOUGHT AND THE WORLD)

For the third group, the context within which we can act and think in a rational manner is set by the modes of interaction between human thought and the world. Giving reasons then involves locating ourselves and our hearers jointly in a common world of perceived objects and problems. ("What is it then, about the world, about ourselves, and about the problems created by their interaction that makes the activity of 'giving reasons' what it is?")

Given these very different approaches and preoccupations, we find philosophers presenting philosophical arguments and doctrines of correspondingly distinct *styles*—even adopting quite distinct conceptions of philosophy itself. One group sees philosophy as a technical discipline, whose formal, quasi-mathematical methods and concerns overlap those of geometry and logic. Another sees it as demanding, rather, a discursive study of human nature, whose descriptive, quasi-scientific concerns and methods are allied more closely to those of cultural anthropology and cognitive psychology. The third sees it differently again—as a critical, quasi-judicial enterprise concerned with the rights and wrongs of intellectual conduct in the same way that law is concerned with social conduct, and morality with personal conduct.

Those differences of style, though marked, need not be seen as evidence of inconsistency or confusion. They are signs, rather, that the full agenda of philosophy is richer and more complex than any one of the three approaches can encompass by itself.

And the best way to feel our way into each of the three approaches will be to start by reconstructing the initial contexts—intellectual, cultural, and social—within which they first carried charm and conviction. We may begin with the outward-looking or “objective” approach.

Historically speaking, the invention of philosophy was part of a larger shift in people’s ways of ordering their thoughts and their lives. In the great Middle Eastern empires of Egypt, Persia, and Mesopotamia, as they developed over two thousand years and more from around 3000 B.C., the twin orders of Society and Nature were accepted, unquestioned, taken as given—normally, as given by the gods. The ruling picture of the natural world accordingly took the form of a traditional mythology, and none but a few priestly initiates had any opportunity to inquire about its intellectual basis and origins. The accepted structure of society, equally, was sanctified by custom and antiquity, and none but a few men of political power had any opportunity to participate in its decisions or to question its justice.

These two orders or structures were commonly seen as reflecting and supporting each other, even as being parts of a single whole. The natural order, or *cosmos*, as the Greeks called it, reflected a society of divine powers and agencies; the discussions and negotiations between the different gods of Olympus in Homer’s *Iliad*, for instance, are carried on in the language of politics and diplomacy. Meanwhile the human *polis*, or social order, was modeled on—and seemingly derived authority from its resemblance to—that larger-scale cosmic order. For the great majority of people during this period, therefore, questioning the natural order would have meant presumptuously attempting to read the divine mind; challenging the social order would have meant impiously opposing the divine will.

We can first clearly observe the crucial shift in people’s beliefs around 600 B.C., among the Hellenes of Greece, the Aegean coastlands, and southern Italy. From certain viewpoints, this

shift looks small enough. The world was still the scene of divine action; the *cosmos* and the *polis* were still reflections of each other; even the individual human soul (the microcosmos) operated, in miniature, according to the same general principles as the larger world, or macrocosmos. But there was one detailed change which, even though its primary significance was probably social, in due course had vast intellectual ramifications. The principles of the *cosmos* and *polis* were no longer mysterious, arbitrary decrees to which initiates alone could have access. Instead they were open to human investigation and discussion. So the natural world was no longer seen as merely god-given, that is, as a product of divine pleasure, whim, or fiat, whose *raison d’être* was simply, “God saw that it was good.” Rather—or so the Greeks speculated—the divine fashioning of the world had taken place as it did “for good reasons”. The *cosmos* was thus a product of intelligent choice, design, or action. The divine plan for the world was rational, and therefore intelligible to human beings, so no presumptuousness or impiety was involved in seeking to fathom its principles.

Similarly, the god-given character of the *polis* no longer conferred an unchallengeable authority, or divine right, on the supreme ruler of an entire empire—Pharaoh, King of Kings, or whatever his title. During those few remarkable centuries that ended around 350 B.C., with the creation of Philip and Alexander’s Macedonian Empire, the Hellenic lands were divided up among some two dozen small, autonomous cities; and in each of these cities the right to participate in political discussion and decision was shared, if not by all the inhabitants, at any rate by a substantial body of male citizens. As a result the rulers were no longer set apart from their fellow citizens, any more than the priests were, and this shift toward the political forms of “democracy” carried with it a change in the language of political discourse. Just as the cosmic order became a matter of reasons and principles, rather than divine decrees, so the language of political affairs became secular, colloquial, demythologized.

Parallel to this dispersion of political authority, another sig-

nificant change was taking place, namely, a more general spread of literacy, together with the adoption of written records in place of oral traditions. In the ancient empires the use of writing had been largely confined to very small religious and political elites; as in Medieval Europe, few but "clerics" were "clerks". Even among the Hellenes themselves, the legends and traditions that were the foci of civic identity had formerly been passed on from generation to generation by word of mouth.<sup>1</sup> This change was accompanied by a great improvement in the techniques and efficiency of writing itself. The clumsier and more complex ideographic systems of earlier times, for instance, were rapidly displaced by the alphabetic systems pioneered by the Phoenicians.

This mixture of literacy and democracy was a radical combination. The discussion of political affairs became common property, just at the same stage that language detached itself from the mouths and ears of individual speech users and became embodied in permanent, independent written form. So, the secularization and democratization of thought provided the new activity of "philosophy" with its subject matter—namely, the rational principles of ethics, politics, and cosmology—while at the same time the shift from speech to writing—from "it is said that . . ." to "it is written that . . ."—was helping to shape its methods. Once committed to writing and given an independent existence as records, "facts" ceased to be merely authoritative sayings and acquired a new reality and permanence of their own. Similarly "arguments" ceased to be merely oral disputations between rival speakers, and became independent objects of contemplation and rational criticism, namely, sequences of recorded propositions laying claim to some inner connection and coherence. (Recall the continued ambiguity, even today, in the uses of the term, *argument*. Contrast, for instance, "I was sitting in a bar when I got drawn into this

<sup>1</sup> There are peoples in Africa today whose collective history for the last six hundred years is, similarly, embodied in the oral traditions of the tribal "remembrancers"; and we find Socrates himself reportedly complaining that the spread of writing was spoiling people's memories.

argument," where the argument is a human interchange, with "Pythagoras' theorem depends on the following argument," where the argument is a connected sequence of propositions.)

Taken together, these changes created a new, and potentially universal *forum of discussion*; much of our traditional thought about rationality is associated with the idea of this universal Forum of Reason. On the one hand, political debate was taken out from behind the closed doors of the Imperial Palace and brought down into the *agora*, or marketplace.<sup>2</sup> On the other hand, written records and arguments were open to scrutiny and criticism by all alike, employing standards of judgment applicable by all humans equally. As a result, neither human nor divine affairs could remain any longer above criticism. The existing order of the natural world and the current pattern of social structure alike manifested intelligible laws or principles.

In each case, human beings at last appeared free to construct general arguments, or "theories", which would show what principles were manifested in the actual operations of nature, or what standards were relevant to a rational criticism of society. Those arguments also had a new "objectivity". They could be divorced from the plausible or authoritative tongues of particular speakers, set out on paper for all to consider, and judged for what they were worth, in their own right. Finally, this same kind of "rational criticism" could be applied, not just to the workings of the world and of societies, but also, reflexively, to the lives of individuals. In this way philosophers became launched, almost from the start, on their characteristic task of self-examination, and a road was opened which led, not just to physics and political theory, but also to ethics, to pure mathematics, and eventually to formal logic.

So the invention of philosophy in classical Greece was the intellectual aspect of a broader historical change by which human beings began to accept a critical responsibility for them-

<sup>2</sup> The Athenian *agora*, like the Roman *forum*, was the central area of the city within which all citizens could meet and discuss together on the same level; thus it became a symbol of equality before the ideals of law, social ethics, and rationality.

selves—for the conduct of their personal lives, for the justice of their political arrangements, and for the stories of creation in terms of which they tried to make the natural order intelligible.

If we examine this historical context more closely, we can also see why the newly invented enterprise of philosophy started off in the particular directions it did—why the first natural approach to its problems was “objective”, and its initial program logicomathematical—or, more exactly, “geometrical”. For the formal procedures of Greek philosophy were devised in order to meet some quite specific needs, and they drew their inspiration from the simultaneous discovery of a new method for presenting and analyzing arguments through which the science of *geometry* became the prime example of a “rational” body of knowledge. As a result the philosophers of classical Athens—notably, Socrates and Plato—put into circulation certain “formal” ideals that have affected all subsequent human theorizing.

By adopting formal geometry as a general model for other areas of knowledge and experience, they could apparently satisfy three different sets of intellectual needs at once. As well as showing how one might replace the traditional mythologies by more “rational” accounts, both of the cosmos (natural science) and of the polis (social theory), this method also pointed a way of escape from certain paradoxes about knowledge and language by which philosophers were—not surprisingly—afflicted from the very beginning of their enterprise. Let us consider these three sorts of needs in turn.

#### THE BEGINNING OF SOCIAL THEORY

Politically speaking, then, during the hundred and fifty or so years before 450 B.C. (as we noted) the city of Athens was working its way toward a novel, democratic form of government by which all those people who qualified as “citizens”—embracing a favored fraction of the male inhabitants of the

city—were able to take part in public debates and decisions on the political issues facing the city. The forms of that debate were determined early on through the constitutional innovations of Solon and his successors, but how Solon’s constitution was to function effectively in actual experience was another matter. The practical question was: Could the Athenians learn to handle the tasks of debating and legislating justly, equitably, and impartially? Once they set aside the traditional commitment to a divinely authorized king, pharaoh, or tyrant, the first effect might simply have been to remove the last focus of loyalty, and so to surrender to partisanship, pressure groups, and power plays, with the threat of a new tyrant always in the background. Could the new democratic institutions be alternatively operated, then, out of a common loyalty to the City itself, or even to some more general ideal of humanity or rationality? Behind that practical question there also lay a theoretical question: namely, the question, “What is required in order for political and social questions to become genuinely *rational*—appealing not just to limited interests but to general principles binding on all human beings and, if possible, of permanent, universal validity?” That question was one of the starting points for the systematic development of the philosophical tradition as inaugurated by Plato’s teacher, Socrates.

What sort of man was Socrates? Much of our evidence about him comes from Plato’s *Dialogues*, in which the ideas of both men are run together and presented in a highly conscious literary form. As a result it is hard to be sure just where “Socrates” ends and Plato begins. So far as we can tell from our distance, Socrates himself was first and foremost a social and moral critic—a man who scrutinized the political and ethical rhetoric of his time, and challenged his fellow citizens to account for their opinions in terms capable of measuring up against the severest intellectual standards. In his youth his curiosity had been stimulated by the more cosmologically minded natural philosophers of Ionia and Italy—Thales, Pythagoras, and the rest—so, for a time, he was intrigued by scientific questions about the Heavens and other natural phenomena. (The poet

Aristophanes in his anti-intellectual comedy, *The Clouds*, caricatured him as unduly interested in astronomy.) After a while, however, Socrates despaired of achieving any rational agreement on the physical constitution of the Universe because all the objects or processes visible in the Heavens were out of human reach, so that their nature could only be a matter for irresolvable speculation. From that time on, he concentrated entirely on ethics, politics, and similar matters of direct human concern. Subjects like astrophysics, geology, and physiology might be enticing, but in Socrates' view they were of no immediate relevance to the problems of human life. For himself, he believed—with Michel de Montaigne and Alexander Pope much later—that “the proper study of mankind is Man”. As a result, philosophy must be concerned above all with the principles of human reasoning, social life, and personal conduct.

What does it mean, then, to take a political decision out of loyalty, not to the commands of a supreme ruler, but rather to ideals of humanity or rationality? In Socrates' view this required the citizen to act always in ways that could be justified in terms of *general principles*, that is, to be able to relate particular decisions or policies to an entirely general view of human life and the purposes of society. Ideally the specific goals of particular decisions could then be justified by relating them to the general goals of ethics and politics. Specific justifications were to be *deduced* from the general principles of a valid political philosophy in the form of particular instances. The supposition was that the “deductive link” between general principles and particular cases in politics can be presented in as strict and unquestionable a form as that between, say, the general belief (or principle) that *All men are mortal* and the particular belief (or instance) that *Socrates—being a man—is mortal*.

In practice, of course, practical life in classical Athens was carried on in a less theoretical or intellectual manner than Socrates demanded, and his insistence on subjecting political actions and beliefs to a philosophical critique struck some of his fellow citizens as “radical troublemaking”. As he himself saw the task

of social criticism, entire groups and societies often displayed the same confused aims and uncritical assumptions as individuals; and unless people were compelled to face, in an explicit and critical manner, the question of what they really wanted or what they really believed, the whole political debate would remain sordid and confused. So, for instance, interested parties would be able to drum up support for decisions that would be recognized as indefensible in a cooler and more rational context.

The process of political self-criticism was not, of course, easy or painless. It can be just as agonizing for people to reappraise their collective goals and policies within assemblies and institutions as it is for them to face with honesty the confusion and sloppy-mindedness of their individual lives. So demands for self-examination can be quite as threatening to groups as to individuals; and, as Socrates found to his cost, they were capable of provoking an equally violent resistance. (The story of his accusation, condemnation, and execution on a charge of “corrupting the minds of the young” has become part of the Western tradition through the account given in Plato's dialogues, *The Apology* and *Phaedo*.) Still, the effort to uncover the general principles, or presuppositions, underlying our beliefs and policies must be beneficial in the long run. There was no other way to break the spell of established concepts or assumptions, and so oblige people to consider the whole range of policies available in their actual situations. (This “Socratic method” is no less relevant today. To give just one topical example: Think about the damaging effect on political debate in our own time of leaving uncriticized the assumptions built into such concepts as “gross national product” and “economic growth”.)

Above all, for Socrates and his followers a *rational* discussion of political issues meant an *impartial* discussion. At their hands, all the topics of rational criticism—arguments, principles, logical connections, questions of truth and validity, and so on—took on a life and existence of their own, and became matters for public criticism independently of the particular individuals advocating one view or another. Again, this step was not—and still is not—easily taken. It is one thing to recognize the desir-

ability of separating our personal egos from our arguments in theory, but many people still find this as hard as ever to do in practice. Still, from the time of Socrates on, "truth" and "validity" had to be distinguished from whatever a glib or persuasive speaker could make convincing, quite as much as "justice" had to be separated from whatever men of power could impose upon their fellow citizens. Questions like "Are there in fact *good reasons* for this policy?" and "Does that conclusion really *follow from* what was agreed before?" must be debated and settled in a forum within which everyone had equal rights. Either such-and-such a conclusion really did follow from such-and-such a principle, in point of fact, or else it did not; either satisfactory arguments could in fact be advanced to support such-and-such a belief, or else they did not; . . . Rhetoric and power were beside the point. A genuine philosopher had to look and see *what was in fact the case*.

Thus, there came into circulation a new picture of "logical" entities and relations—truths, implications, contradictions, and the rest—as occupying not the physical world of tastes and feelings, preferences and opinions, but a "Third World"<sup>3</sup> of independent, self-subsisting rational creations. These logical entities and relations stood by themselves, apart from their creators, quite as much as statues, paintings, and other works of art. As such, they could be viewed and criticized for themselves, in their own terms, regardless of the intentions and wishes of their proponents. Only by exposing them to public criticism in the impartial forum of a common Human Reason—Socrates believed—could we have any real confidence in their basis and strength.

Today this notion of a rational forum for impartial criticism seems all too obvious and familiar; yet its invention some 2500 years ago was a notable and hard-won victory. Nor was it an irreversible victory, about which we can afford to be complacent. Nowadays as much as ever, doctrinaire prejudice and

<sup>3</sup> This phrase is a modern one, introduced by Karl Popper; but the underlying idea is an old one.

individual caprice have their advocates. In many areas of morals, politics, and art, there are still people who would gladly reverse Socrates' achievement by misleading appeals to "decent feelings", "good taste", "personal liberty", or "the national interest". As a matter of theory, the need for impartial, objective procedures of ethical, aesthetic, and political discussion may be generally admitted, but the actual practice of rational criticism still remains contentious. If Socrates were alive at the present time, he would undoubtedly become involved in public debates about education or obscenity or capital punishment or the welfare system; and if he did so he would probably have as hard a time with our contemporaries as he did in his own lifetime when he challenged the intellectual habits of his fellow citizens in classical Athens.

#### THE BEGINNINGS OF EXACT SCIENCE

During this same period the first important steps were being taken toward the development of a "scientific" picture of the natural world. In southern Italy, the followers of Pythagoras were making discoveries in geometry; in Ionia, on the western coast of Asia Minor, Eudoxus was elaborating a mathematical theory of harmonies and proportions; in Sicily, Empedocles was working out a first account of the different forms of matter; and all these new ideas were entering into the intellectual discussion at Athens. Indeed, the subject we ourselves know as "geometry"—regarded as an exact branch of mathematics, rather than as the practical art of "land-measurement", or surveying—first took on a coherent shape and method in the newly founded Academy of Athens, under the direction of Plato himself. There, Theaetetus presented the first really powerful and original modern geometrical theorem when he proved by a rigorous argument that there are only five convex "regular solids".<sup>4</sup> Meanwhile, a group of Plato's other associates, led

<sup>4</sup> "Regular solids" are three-dimensional bodies, such as the cube, having equilateral (equal sided) figures as faces. The cube has six squares as its faces; the dodecahedron has 12 pentagons as its faces; while equilateral

by Eudoxus and Heraclides, launched a systematic attack on the problem that was to dominate astronomical theory right up to A.D. 1550—the problem of combining simple circular movements in such a way as to account for the observed motions of the sun, the moon, and the planets.

Knowing the intellectual power of geometry, Plato could not stand aloof from mathematics and scientific theory, as Socrates had done. Quite the reverse. In his eyes, the new mathematical enterprises of geometry, astronomy, and harmonic theory provided strong support and inspiration, not just to natural philosophy, but to philosophy in general. The discoveries of men like Pythagoras, Eudoxus, and Theaetetus had shown how much we might hope to do, within a strictly “rational” science, to derive strikingly unexpected results in a rigorous logical manner, from self-evidently valid assumptions. Nor was this achievement (in Plato’s view) merely a formal and abstract one, confined to pure mathematics. The mathematical theories of three-dimensional geometry were the key to a physical understanding of planetary astronomy, while Theaetetus’ theory of the regular solids might very possibly open the door also to explaining the differences between different material substances. Furthermore, the formal strength and interconnectedness of geometry made it a model, or example, indicating what form our standards of rational criticism should take more generally. For example, the procedures by which Socrates had criticized the political assumptions of his contemporaries might likewise be treated as exercises in formal analysis. There, as in any field of argument, the task was to make explicit the formal relations between general principles and particular applications; and those links should then be as unbreakable as the connexions between the “axioms”, or initial assumptions, of formal geometry and the

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triangles form the faces of the tetrahedron (4 faces), the octahedron (8 faces), and the icosahedron (20 faces). As Theaetetus showed, one can demonstrate by a very single argument that only these five forms are possible.

“theorems” deduced from them.<sup>5</sup> In this way, the science of geometry came to play a central part in the philosophical enterprise of Plato and the early Academy.

Notice carefully that the Greek enterprise of organizing geometrical knowledge into a “formal system” in which fundamental assumptions and derived theorems were linked by deductive arguments—the kind of system that served Plato as a model of “rational knowledge”, or *episteme*—was an entirely novel one. Elsewhere, as in Babylonia and Egypt, geometrical knowledge had consisted only in collections of practical rules of thumb for use in land-measuring (“geo-metry”). As such, it represented not “theoretical understanding”, or *episteme* but rather *techné*, or “practical know-how”. The Greeks alone discovered how the formulas of geometry could be linked together in a single, formal or logical system. As a result, they were able to connect back the varied properties of different geometrical figures, step by step, to more general theorems and axioms; and the “validity” of those theorems was confirmed by the absolute rigor of the resulting deductive arguments. Soon, indeed, philosophers came to regard the pragmatic utility of the practical, rule-of-thumb formulas used by earlier “geometers” (i.e., surveyors) as a pale shadow of their new theoretical conception of “formal validity”. Rough empirical estimates of geometrical relations (e.g., the fraction  $22/7$  for  $\pi$ , the ratio of the circumference of a circle to its diameter) gave way for theoretical purposes to exact calculations within a formal system of axioms and theorems, according to which no straightforward fraction could ever serve to give an exact value for  $\pi$ .<sup>6</sup>

<sup>5</sup> The full presentation of classical geometry, in explicitly axiomatic form, was given only after Plato’s death, in Euclid’s *Elements*; but the individual theorems and proofs collected together by Euclid in many cases dated back to Plato’s time or before.

<sup>6</sup> This quantity can be expressed numerically only by an unending series of decimals, beginning 3.14159 . . . . The estimated value  $22/7 = 3.14285 . . .$ , remained a perfectly adequate approximation for most practical purposes, being correct to 1 part in 2500.

Thus, Plato's philosophical ideal of "rational knowledge" was born. This ideal had a clear enough application to geometry itself. There, all the valid theorems were "entailed by" the initial axioms of the system; that is, they were linked back to those axioms by formally rigorous deductions, so that accepting earlier axioms or theorems committed one logically to accepting also all the theorems that could be validly deduced from them. (Correspondingly, any doubt that arose about a later, derived theorem reflected back doubt, also, either onto the rigor of the arguments by which it was proved, or onto the axioms themselves.) In this way, the formal science of geometry became an intellectual construction whose internal articulation was absolutely sound and secure.

As for the basic axioms that were the ultimate foundations of that construction: these appeared to comprise a series of truisms, and so to be "self-evident", or completely transparent to the intellect. Who, for instance, could reasonably doubt that adding equal magnitudes to other equal magnitudes would give equal totals? Or, that any two straight nonparallel lines drawn in the same unbounded plane would intersect at one-and-only-one point? Thus, at one and the same time, the new science of formal geometry apparently possessed two separate and crucial requirements for absolute certainty and validity. Its theorems were all strictly deduced from the initial axioms of the system, and those axioms themselves were unchallengeable. (Only after A.D. 1700 was the status of the second truism, about the intersection of lines in an unbounded plane—the so-called "axiom of parallels"—successfully called in question.) As a result, the mathematicians of classical Greece seemed to have succeeded in erecting an absolutely sound intellectual structure on absolutely firm foundations. Given this brand-new example, it is no wonder that Plato saw in geometry the model for any rational, self-respecting body of knowledge. And it is no wonder that for students at the Academy a grasp of geometry reputedly became a prerequisite for all other branches of knowledge.

From this new, formal point of view, the professional phi-

losopher had two concerns. In his role as a critic his task was to check the validity of the arguments that people use to support their various beliefs. In this respect, the hope was that arguments in physics and politics, say, could eventually meet the same rigorous standards as those in geometrical theory.<sup>7</sup> This meant replacing the practical idea of utility as a measure of validity—in physics and politics, as in surveying—by the theoretical notion of "rigorous provability"; and showing how the substantive conclusions of those subjects could be formally related back to self-evident fundamental principles. Meanwhile, in his other role as an ethical, political, or scientific teacher, the philosopher's task was to expound the general principles from which all genuinely valid knowledge is to be deduced. In this respect the hope was that eventually the perceptive philosopher might somehow—by reflection, analysis, and/or insight—recognize the general truths which could provide politics and astronomy, physiology and aesthetics, with foundations as firm and unchallengeable as those of geometry itself.

The general art of criticizing deductive arguments in all fields by the same demanding standards as those of geometry was accordingly made the concern of a further newly invented formal science, which was given the name of "logic". Whatever the *content* of any arguments, their validity was from now on to be criticized in the same general terms, in terms of their *form*. All rigorous deductive arguments (it was supposed) would prove to be valid or invalid, acceptable or unacceptable, for the same kinds of formal reasons. Thus, by a masterly stroke of abstraction, Plato and his colleagues transformed the whole problem of "good reasons" and "rationality". The task of establishing that beliefs were "well founded"—securely connected back to firm foundations—was thus divided into two separate, and supposedly simpler, tasks. First, it was necessary to identify

<sup>7</sup> In his dialogue, the *Republic*, Plato quite explicitly holds up the relationship between the formal geometry of three dimensions and the empirical science of planetary astronomy, in which its theorems are applied, as an example to would-be political and social theorists.

the *self-evident principles* at the base of any field of inquiry, and then to check the *formal validity* of the arguments linking the beliefs in question to the basic principles of the field.

#### THE PARADOX OF KNOWLEDGE AND LANGUAGE

Third, we may look at the formal program in philosophy as a way of escaping from certain *philosophical paradoxes*—specifically, paradoxes about rationality and knowledge, belief and language—and see what attractions the geometrical model of “rational knowledge” possessed from this standpoint too. The questions that gave rise to the most teasing perplexities and paradoxes still occupy the center of our own intellectual stage today: namely, “How can there be such a thing as an *intelligible language* at all?”

The difficulties over this question were first made clear by Cratylus, a pupil of Heraclitus of Ephesus. They naturally expressed themselves in the form of paradoxes, for the same general reasons that we identified in Chapters 3 and 4. We saw there how easy it is to be misled into the paradoxical postures of fatalism, as a result of misconceiving the relations between, say, explaining and justifying, recognizing effects and giving credit, guessing at causes and giving reasons. So also, at the very outset of philosophy, the ideas of knowledge and language gave rise to philosophical problems. The relations between believing and knowing, seeing and understanding, having sensory experiences and talking about the world of which we have experience, are subtle and complex. It is easy to misconceive just what those relations are and, having done so, to be driven into paradoxical conclusions. Let us see how this happened for the immediate predecessors of Socrates and Plato: first Heraclitus, then Cratylus himself.

Heraclitus had emphasized that all our empirical beliefs about the everyday world rest ultimately on the testimony of the various senses. We believe what we do about the world because of all the things that we can see, hear, feel, smell, and taste. So he had posed the question, “What sort of validity can such

empirical beliefs possess?” In particular, he asked, can we ever really claim that we have any knowledge that goes beyond our current sensory experience—here and now—and achieves any kind of permanent, general, or even necessary truth? If the five senses are our sole source for knowledge of any kind, the right answer to that question—Heraclitus apparently argued—was, No. Sensory observations always hold good for particular, specific times and places. All our resulting knowledge—all that we can *prove* to be the case, given only that knowledge—must, as a result, be correspondingly “contingent”, as the philosophical jargon puts it—that is, local, transitory, and conditional in its scope and validity.

Suppose that I look out the window and see that the sun is shining. Whatever I discover in this way must, strictly speaking, be expressed in statements of the form, “My sense of sight tells me that the sun is (*here and now*) shining”; and any such statement, taken by itself, can be used to *prove* nothing further about, for example, the weather at any other place or time.<sup>8</sup> In the nature of things, Heraclitus argued, the same “contingent” status attaches to *all* our sensory knowledge of the world. The evidence of our senses being what it is, there is no way of deducing strict conclusions about the state of affairs at one place and time from sensory observations made at any other place or time. Such arguments will be valid only if we can guarantee them by appeal to “necessary connections” (laws, or universal regularities) linking the occurrence of similar events in different situations. Yet how can our senses alone ever provide us with any such links or guarantees? As creatures dependent on sensory experience, we apparently live in a *world of contingencies*. So Heraclitus formulated his much-quoted epigram, *Panta rhei*, “Everything is in flux.” The world, as we know it from sensory experience alone, is a jumble of disconnected and contingent facts.

<sup>8</sup> For practice, ask yourself, “What does the word ‘prove’ mean in this context?” Is it a natural, or even correct, term to apply in such a practical situation?

So far, nothing specially paradoxical has emerged from Heraclitus' argument. The person who underlined its perplexing consequences for the theory of language was Cratylus. Supposing that we take Heraclitus' argument entirely to heart, he retorted, we shall have to conclude that intelligible language is impossible. For language is part of the world of the senses, and our beliefs about language are just as dependent upon the senses—notably, on sight and hearing—as all our other beliefs about the world. How can we find out what (say) the word "scarlet" means? Evidently, we can do so only by listening to a man using the English language and watching what he does with it. So our linguistic knowledge, our knowledge of what words mean, lies within the bounds of the same contingency that Heraclitus had very properly laid down for all sensory knowledge.

Suppose we observe a particular man using the word "scarlet" to indicate some specific shade of red. All that this observation strictly entitles us to say is, "Our senses tell us that the word 'scarlet' indicates (to him, here and now) this exact shade of red." Once again, this statement, taken by itself, can be used to prove nothing further about, for example, what the same word means to anybody else, at any other time or place. Still less does it justify us in leaping to the general, necessary conclusion, "Scarlet is a shade of red." That conclusion would overstep the legitimate bounds of experience, implying that *scarlet* is not merely—contingently—a specific shade of red to a particular person at a particular time and place, but must be the same thing permanently, everywhere—even necessarily—for anybody at any time.

On the other hand—as Cratylus noted wryly—failing general and stable "meanings" language is apparently unintelligible. How can two people communicate with each other linguistically at all unless, at the very least, their words mean the same to both parties throughout their conversation? If all that anyone can strictly say is, for example, "At 10 A.M., on November 30, 1973, in Chicago, Illinois, 'scarlet' indicates this shade of red

for me," that will scarcely provide the stable basis we need before we can use the same word in communicating with other people, at other times and places.

Cratylus was one of the first martyrs to philosophical consistency. Having reached this conclusion, Aristotle tells us, he did his best to live in accordance with it, and from then on he declined to *say* anything but merely wagged his finger! Even so, was he completely consistent? Should he not, rather, have given up *all* attempts to communicate with his fellow men? On his own argument, signs and gestures were no better off than words; he had no way of knowing that his finger-wagging would *mean* the same, both to himself now, and to someone else next week, tomorrow, or even in a minute. So the "flux" of Heraclitus apparently destroyed the possibility, not of purely sensory knowledge alone, nor merely of verbal language, but of all symbol systems whatever.

Notice that Cratylus lands us in *the same kind of perplexity* as the fatalists. They claim to give us good reasons to believe that we can never believe anything for good reasons, whereas Cratylus uses intelligible language to explain why intelligible language is impossible. Thus the argument to discredit language seemingly undercut itself. Yet where in Cratylus' sequence of steps could one find a fault? The whole argument apparently hung together well enough. Faced with this impasse, Plato concluded that nothing else could be done except to stand the entire argument on its head.

The original sequence of steps had gone as follows:

All of our knowledge of the world comes  
by way of the five senses;

So, all of our knowledge of the world is contingent;

So, we can make no necessary or permanent  
assertions about anything in the world—even  
about words and their meanings;

So, language is "in flux"—from place to place and moment to moment—like everything else;

So, we cannot use language intelligibly.

On the other hand, nothing was more obvious and undeniable than the fact that we *do* use language intelligibly. Although all of Cratylus' individual steps were apparently valid, his conclusion was just as obviously false. That left only one alternative: to challenge the starting point of the argument. Reversing the sequence of steps:

We do use language intelligibly;

So, language cannot be entirely "in flux";

So, we can make some necessary or permanent assertions about the meanings of words;

So, not all of our knowledge of the world is contingent;

So, not all of our knowledge of the world comes by way of the five senses alone.

We may put the two extreme statements alongside one another: the fact that language can be used in a shared, stable, intelligible way implies (according to Plato) that we possess some further source of knowledge about the world besides the five senses.

What is this alternative source of knowledge? Plato's immediate answer was: *Intellectual insight*. And what example do we have of "necessary truths" that are arrived at in this way? Once again Plato had an immediate answer: *Geometrical knowledge*. If, for example, I recognize that the three angles of a triangle add up to 180 degrees, I am not merely reporting

some local, contingent, and transitory piece of sensory information. For in that event, I could only prove that they added up to 180 degrees for, say, one particular triangle at Chicago on November 30, 1973. Yet, evidently, the truths of geometry are quite general and are not concerned with particular times and places—with some triangle in Chicago, rather than in Cairo or in Peking—with A.D. 1973, rather than A.D. 44 or 2500 B.C. About the well-established theorems of formal geometry, therefore, the Heraclitean issue of "contingency" does not arise. Well-established theorems derive their validity less from local sensory observations than from their places in the formal framework of geometrical theory. We prove that the three angles of *any* plane triangle *must* add up to 180 degrees by rigorous deduction, without having to observe or measure any actual triangle, in any carefully drawn diagram, however perfect; while sensory observation of such an actual diagram could, by itself, never establish what the sum of those angles *must be*, only what it *in fact is*.<sup>9</sup>

What held good for the truths of geometry held good, in Plato's view, for the truths about language also. We can confirm the statement that scarlet is a shade of red without having to find actual scarlet objects, observe them with care, and check the truth again and again—as we should be obliged to do if this were really a contingent, sensory truth. Once we have properly grasped the concepts (or "ideas") of *scarlet* and *red*, the interrelatedness of the two ideas is quite evidently a necessary and general matter, not a contingent or here-and-now affair. There is no risk of our subsequently discovering some sneaky counter-example: some actual object that contrives to be *scarlet* without being *red*. (What would such a thing be?) Therefore, despite all Heraclitus' warnings, we can confidently

<sup>9</sup> With this last remark, we can put on record one of the central—and continuously puzzling—distinctions of philosophy: namely, the distinction between "necessary" and "contingent" truths, e.g., between "The angles of a triangle add up to 180 degrees" and "The sun is now shining." How can any truths be necessary? And how can we *know* anything about such necessary truths? About those questions, the debate continues.

assert—as a necessary truth—“Anything that is scarlet *must* be red.”

In this way, the geometrical ideal of *episteme* (or “systematic rational knowledge”) became central to Plato’s account of knowledge and language, as well as politics and geometry. The “absolutely true knowledge” that we have of geometry is not to be achieved by accumulating sensory observations of actual triangles, circles, and the rest, but comes from reflecting on the properties of certain intellectual ideals—the *perfect* triangle, circle, etc.—which are independent of actual material objects. As for the more or less “triangular” and “circular” objects and figures that we can handle, draw, manufacture and/or observe with our senses—these are, at best, approximations to the underlying ideals. . . . The same intellectual insight is evidently required—on Plato’s view—if we are to share a common intelligible language. If the words of that language are to have enduring meanings for all of us, we must grasp these meanings intellectually, as we do the ideas of pure mathematics. . . . At this point, we have arrived not just at Plato’s geometrical ideal of knowledge but at the threshold to his most famous doctrine, the so-called “Theory of Ideas”.

For the members of the Academy, therefore, the formal program characteristic of Plato’s philosophy—the program that treats geometry as the ideal of rational knowledge and links “giving reasons” with “proving”—had attractions of at least three different kinds. To say this is not to imply that those attractions were “culture bound”, that is, restricted to the specific context of the Academy, or of classical Athens. On the contrary, once the new problems of philosophy had been raised in that particular context, they remained to be dealt with, and the merits of different lines of attack on them were largely independent of cultural differences. The moment we attempt to move away from purely mythological accounts of the cosmos and the polis, and give our ideas about nature and society some more universal basis, we shall have to take the proposals of

Socrates and Plato seriously. Similarly, the moment we seek to give any clear account of the relationship between (say) knowledge, sense experience, and language, we shall be confronted by Cratylus’ challenge and Plato’s response. By throwing up our hands and returning to a pretheoretical or mythological stance, we can perhaps turn our back on these philosophical problems and ideas. Otherwise, they remain to be tackled head on.

In point of history, then, the formal program initiated by Socrates and Plato has occupied a central position in philosophy ever since. So it is no surprise to find similar ideas being argued for once again in the seventeenth century A.D., at a time when the intellectual foundations of modern science were being laid down. Many scholars would argue, indeed, that Plato was in effect one of the godfathers of modern physics. For the basic pattern of physical theory, as a system of axioms and deductions to be matched up against experimental observation—the pattern followed, for instance, in Isaac Newton’s classic *Mathematical Principles of Natural Philosophy* of 1687—had been advocated some fifty years earlier by René Descartes for reasons very similar to Plato’s own; and, however far Newton dissociated himself from Descartes’ central scientific notions, he substantially followed Descartes’ methods of theory construction.

Both Socrates and Montaigne (we remarked) ended by being skeptical about the possibility of a rational physics or cosmology. In sixteenth-century France and Italy, as in fifth-century B.C. Athens, there had been a multitude of rival theories about the natural world, yet no apparent way of deciding between them. So the only modest, human conclusion, it seemed, was to set natural philosophy aside in favor of more “humane” topics. Although no authentic knowledge could be hoped for about the constitution of the Heavens, or the general laws of nature, much else remained to be investigated in human life, closer at hand. This, at any rate, was the proposal of such “humanists” as Montaigne, who reiterated for his own contemporaries the advice that Socrates had given some two thousand years earlier. Yet Descartes, in the next generation, was as unhappy about this skeptical posture as Plato had been at the earlier stage.

Our ideas about the world were not pure Babel, as the humanists suggested. In geometry, at any rate, we had a subject that could be expounded in a formal, systematic manner, acceptable to all men alike whatever their other intellectual commitments. So, like Plato before him, Descartes saw geometry as an instrument of intellectual construction—a universal template, or model, against which we might test out other would-be bodies of knowledge.

Granted, the results of physics could not initially hope for the absolute formal certainty of mathematics but, rather would be hypothetical. For instance, a geometrical theory about the shapes of the atoms of different material substances (such as that which Plato had expounded in the *Timaeus*) was at best a “likely story”—a “decipherment” of the symbolism of Nature having at most, in Descartes’ phrase, “moral certainty”; or, as we ourselves would put it, a theory having a certain degree of verisimilitude, or probability. All the same, we might in the long run hope to confer the same “rational” status on the fundamental concepts and principles of physics that had been achieved for geometrical figures and relationships by Pythagoras and Plato, Theaetetus and Euclid. The initial axioms and postulates of geometry, as Descartes saw them, captured those “clear and distinct” ideas about spatial magnitudes and relations that God has given all men in common. Accordingly, they provided a uniquely firm ground on which to construct rational hypotheses about the physical world, while the formal rigor characteristic of all strict mathematical arguments gave them also the kind of strength needed by any well-constructed theory.

Certainly, there was no clear alternative route for arriving at a picture of Nature whose concepts and principles could command general assent. The internal coherence of geometry was unquestioned, and it was built on seemingly rock-hard intellectual ground. The task was, presumably, to work from there outward and to develop physical theories of mechanics, heat, matter, and the rest that would serve as straightforward extensions of this geometrical core. (Something of this ideal has remained operative in all subsequent physical theory. Think, for

instance, about the ways in which Newton, Maxwell, Einstein, and the other great architects of physical theory have kept before their eyes the vision of a comprehensive and unified mathematical science.)

Among the seventeenth- and eighteenth-century philosophers, it is true, there were some sharp differences of opinion about the basic axioms, postulates, or data from which the rest of our knowledge was to be constructed, proved, or deduced. Once we go a step or two into their actual debate, we shall as a result find matters becoming very complex, with rival schools of “empiricists”, “rationalists”, and so on, matching the same geometrical model of knowledge against different aspects of human experience in quite different ways. Yet the philosophers’ common loyalty to the formal program is at least as important as their subsequent differences. Spinoza in his *Ethics*, Leibniz in his *Theodicy*, even Hume in his *Treatise*—all of them take it for granted that we can give a *good reason* (or “rational justification”) for our beliefs, adequate by philosophical standards, only if we relate those beliefs back by formally rigorous deductive arguments to “firm ground”, of whatever kind they themselves accept.

So much, then, for the historical context within which the formal program for philosophy first showed its attractions. We shall shortly turn and see how it works out, as applied to some sample philosophical problems. But, first, a brief digression is indicated: to identify one curious and characteristic assumption underlying this formal or “objective” approach to philosophy.

# 6 Philosophy and the City of Truth

An elaborate and pervasive metaphor has grown up around this initial "geometrical" approach to philosophy, and "reasoning". The resulting imagery runs unnoticed and uncriticized through our everyday thought and speech. This metaphor comes from the world of architecture, engineering, and building construction. It depicts the goal of rational inquiry as the construction of an Eternal City of well-founded truths. Our various beliefs are man-made edifices, like so many houses or parts of a building. Some of these constructions are strongly built, and so intellectually safe. Others are more ramshackle, and we inhabit them at our own risk. The success of our inquiries is measured by the strength of the resulting constructions, and the final ambition of the human reason is to arrive at a complete and permanent collection of secure beliefs—what we might call "the City of Truth".

From this point of view, intellectual safety imposes two separate demands. Our beliefs and arguments must be both *rigidly structured* and *anchored to firm ground*. However strong our arguments may be, if we allow the resulting beliefs to rest on

questionable assumptions we are building on sand. Correspondingly, if our structure of arguments is not rigorously connected together, the building may collapse around us however firm may be the ground on which it stands.

In any field of inquiry where the results can be set out in a formal manner, like those of geometry, there are clear enough procedures for checking the security of our beliefs. The basic axioms and postulates of such a formal system provide the necessary "firm ground"; the deductive steps linking axioms and theorems provide the "rigid structure"; between them, they give any validly deduced theorem all the intellectual guarantees we could apparently ask.<sup>1</sup> In this way, the philosophers' initial acceptance of a geometrical model for theory and knowledge was regarded as setting a pattern for all intellectual criticism; and the whole terminology of logical discussion has, as a result, been shot through with architectural analogies. Reliable beliefs are "well founded", so that they put us on "solid ground". Data are "hard" or "soft", so that they will support more or less "weight". Trustworthy theories are built on "firm foundations", and the "rigidity" of their "structures" enables them to give corresponding "support" to their conclusions. Other arguments, by contrast, are "shaky" or "ill constructed". (Notice that their failings, or sources of "weakness", can thus be described in *structural* terms quite as much as their virtues.)

The hold this architectural metaphor has on our ways of thought is a tribute to the metaphysical charm of its associated imagery. Individual items of secure belief, or knowledge, resemble particular rooms or buildings—in spectacular cases, individual skyscrapers. Well-organized theories resemble complexes of buildings whose different rooms or structures lend each other support, so that we can move with ease from one to another. Meanwhile, the ultimate totality of collective human knowledge

<sup>1</sup> Whether *every* valid theorem in such a system can be *proved* to be valid is another matter. Since the work of Gödel, most twentieth-century mathematicians have reservations about this.

floats on the horizon as an ideal, like some Eternal City, made up of none but well-attested truths. (Is this City of Truth a reality, or is it a mirage? Who can tell?)

As for human rationality: from the present point of view, this is the capacity to arrive at secure, strong, well-founded knowledge. It works with two complementary instruments, experience and logic. Experience determines the site on which the House of Knowledge is to be built, and procures bricks and mortar, lumber and roofing materials. Logic checks the design of the skeleton or "framework" (another building metaphor!) from which the House gains its strength. And the specific "reasons" we give in defense of particular beliefs demonstrate that we know our way around within the House; that is, we show that a particular belief is "well founded"—we *prove* it—by pointing out just where in the entire construction it is located, and how it obtains the necessary firm support.

The influence of this imagery is already clear in the classical Greek philosophers' discussions of knowledge, belief, and truth. What is it, for instance, to have "reasons" for your beliefs? Or, to ask a stronger question, What is it to "know" something? From the present point of view, all such notions as well-founded belief, knowledge, and rationality refer, either directly or indirectly, to the *formal arguments* by which we would justify our claims to knowledge or rational belief. In a sentence: "To know something is to believe it, because we can support that belief with a conclusive argument."

This account dates back to Plato himself. We find him discussing at length a proposed definition to the effect that *knowledge* is the same as "true belief" combined with a *logos*, or "verbal reckoning". Claims to knowledge or well-founded belief are to be established (using a somewhat different metaphor) by a kind of "intellectual accountancy"; and our claims stand or fall on the merits of the resulting intellectual balance sheets. Having good reasons for our beliefs, correspondingly, means being able to prove the soundness of those beliefs, that is, to show that they are well based because the supporting arguments and grounds are sufficiently valid and strong. From the

standpoint of this ancient tradition, "giving reasons" is the same as *proving*, "having good reasons" is the same as *being able to prove*, and the "rationality" of our thoughts and beliefs is measured by the strength and solidity of the *formal proofs* and *grounds* on which they rest.

Still, despite their familiarity, these architectural metaphors and images have nothing *compulsory* about them. On the contrary, their plausibility and charm depend on our making an initial assumption: namely, that "arguments", in the logical sense—regarded as the outcome or product of the activities of arguing, justifying, and/or giving reasons—can be considered quite separately from those activities themselves, that is, from "arguments", in the alternative, human sense. As we remarked earlier, the colloquial term "argument" embodies both of these senses. There is the *human activity* sense, in which arguments can be cool or heated, swift or protracted, and can end in enthusiastic agreement or tears; and there is also the *intellectual outcome* sense, in which we can begin identifying and considering any "argument" only after it has been made explicit, that is, only after it is presented as a sequence of propositions, preferably in writing, whose validity or fallaciousness, support or lack of support, can be directly investigated. (For a hundred reasons, of course, *human* arguments may end in agreement or disagreement, regardless of the intellectual merits of the *formal* arguments implicit in them. Valid, well-founded reasoning may fail to move a hearer; well-phrased fallacies may carry the day.)

The preliminary question then arises: *How far is this assumption legitimate?* How far can "arguments" (considered as intellectual constructions or creations) be legitimately isolated and analyzed independently of the "arguments" (considered as human transactions or interchanges) that provide their context or forum? Evidently the formal, logical or geometrical approach to philosophy—particularly to the problem of "good reasons"—will be open to us, *only to the extent that this assumption is legitimate.*

Granted, the history of serious philosophizing began with just this abstraction. As a result, the products of our rational inquiries came to be treated as "mental works of art"—as objects existing in their own right, standing on their own feet, needing to be judged in their own terms—as *formal arguments*—quite aside from all questions about *human arguers*. Granted, also, a great many subsequent philosophers have adopted the same formal approach. They have dismissed all questions about arguing and persuading, investigating and speculating, as "empirical" matters for study by psychologists or sociologists. They have concentrated instead on the Third World of "intellectual entities"—data and arguments, inferences and principles—whose merits they have regarded as independent of all the chances and idiosyncrasies of human history. All the same, in exploring the philosophical consequences of the logicogeometrical approach, and its problems, we should keep in mind (even if only at the back of our minds) both the historical circumstances of its introduction and the assumptions that restrict its application.

As we go along, we shall find that other approaches are, at the very least, *possible*. Instead of dissociating formal arguments from active arguing, for instance, we might alternatively begin by viewing "arguing" as a function, or performance, which people undertake with certain general purposes in mind. And we might then develop a terminology for discussing people's performances as "arguers" in *functional* terms, rather than in *structural* ones. In other words, we might begin, not by asking about firm foundations and strong support, but rather by asking how one can argue for a belief with complete effectiveness, or present a properly convincing case. To do this would of course launch our discussion in a very different direction from before—toward *rhetoric* rather than *formal logic*—and, indeed, in discussions of rhetoric and debate, the functional criticism of arguments is entirely familiar. Thus the classical tradition in philosophy started (we might say) by making a *threefold* distinction: "arguments" were abstracted from "arguing", "logic" was differentiated from "rhetoric", and "formal structure" was separated from "substantive function".

We can in fact go further; for, as we shall see in due course, alternative approaches to philosophy are not only *possible* but *necessary*. Although the metaphysical charm of the architectural, or structural, style may be unquestionable, it is a style that can also give rise to metaphysical difficulties. For what right have we to assume that there can be any "knowledge" (in this architectural sense) at all? Why should human beings imagine that they have the power to construct an Eternal City of well-attested truths; or even that such a "city" is really conceivable? Considered as a human activity, we know about "arguing" from firsthand experience; considered as independently existing intellectual entities, divorced from that activity, "arguments" are problematic, hypothetical, open to skeptical questioning. Perhaps this initial, threefold abstraction can be justified—at any rate, on appropriate conditions—perhaps it cannot. As we explore the consequences of the structural approach here, we must be careful not to overlook a deeper question:

To what extent, on what conditions, and in what types of case (if any) can the results of our experience, thought, and argument really be ordered in permanent *structures* of knowledge, so that our beliefs can be thought of as anchored back to secure *foundations*, and our reasons as providing us with *safe footing* on *firm ground*?

In point of history (we shall find) it is no accident that the formal approach to philosophy has repeatedly led philosophers—at the end of the day—into skepticism; that is, the doctrine that *no* reasons, in practice, can ever quite meet the strictest standards. This fact is simply a sign that a formal analysis can tell, at best, only part of the story about knowledge, belief, and "reasons"; while other parts of the story can be made intelligible only by returning to the attack, subsequently, from other directions also. One thing at least is clear enough. Some

avored fields of experience, together with their associated arguments, lend themselves to structural analysis much better than others. If the City of Truth is to be built at all, it may thus turn out to accommodate only these favored, "well-fitting" human activities and enterprises; while other, more "ill-fitting" ones elude satisfactory description in architectural terms.

Any resulting system of philosophy will, naturally enough, tend to focus attention on the well-fitting fields of experience at the expense of the others. The more the products of our intellectual activities appear "objective" and "certain", by structural standards, the more seriously philosophers will tend to take those activities. And certainly, if we do think of "human knowledge" as an enduring architectural construction—whether as a single vast ziggurat or skyscraper, or as a growing accumulation of separate buildings—that image will impose one specific division of labor between science and philosophy and place corresponding limits on the philosopher's work and concerns; for the intellectual value of human reasoning and belief will, in that event, spring entirely from the contribution they make to the permanent Edifice of Knowledge. Beliefs that are collective, permanent, and general will be accepted as "solid" or "objective". By contrast, views and attitudes that are personal, transitory, and particular will appear "merely subjective"; and this will tend to be so, even in cases (e.g., aesthetic preferences) over which we are accustomed to giving highly articulate "reasons".

True, objective knowledge—public, permanent, and general knowledge—will then be embodied in clear, well-founded and certain, or "scientific", principles—principles that are applicable to the relevant kinds of experiences and phenomena by any rational thinker, at all places and all times. The different sciences may be more or less compartmentalized, concerning themselves (so to say) with different "apartments" or "suites" in the entire "edifice" of Human Knowledge; but they will all be the outcome of a common and universal Human Reason, engaged in adding extra wings to the existing structure. By contrast, the business of philosophy will be to consider, not any separate

corner of the resulting structure, but rather how all its different parts are connected together—what gives them their inherent strength, and how they are anchored back to their foundations.

On this view, then, the philosopher has a triple task. His responsibilities are, first, to spell out the basic assumptions current in different areas of thought and belief; next, to make explicit the structures of argument from which different kinds of belief draw their strength; and finally, to criticize the resulting arguments by universal, public standards.

What exactly are those public and universal standards? The answer to that question shows clearly the central thrust of the architectural metaphor, and of the formal approach to philosophy with which it is associated:

We "know" something (in the full and strict sense of the term) if-and-only-if we have a *well-founded belief* in it; our belief in it is well-founded if-and-only-if we can produce *good reasons* in its support; and our reasons are really "good" (by the strictest philosophical standards) if-and-only-if we can produce a "conclusive", or *formally-valid* argument, linking that belief back to an *unchallenged* (and *preferably unchallengeable*) starting point.

tics or twitches than hunger does is still a problem, not for philosophical analysis, but for psychological theory.) The point at issue will become truly "philosophical" only when we move to a completely general level—when we ask, for example, how it is that any overt, public signs or utterances can serve as indicators of people's inner, personal states of mind at all.

Our first general style of philosophical answer (as we have seen) links the notion of "good reasons" to that of "valid, well-founded inferences". According to this thesis, while all kinds of belief rest on correspondingly different sorts of reasons, *the relations between* our beliefs and those supportive reasons will have certain quite general features, of a formal kind; and it is these formal features that make the reasons philosophically acceptable or unacceptable, that is, that make them by philosophical standards "good" reasons for the belief in question. Specifically, reasons will be "good", on this view, provided that they can lead us back, by a sequence of formally valid deductive steps, from the belief in question to an unquestionable starting point.

This philosophical requirement is, of course, a theoretical ideal rather than a practical reality. Our colloquial ways of talking about beliefs—whether psychological, astronomical, or aesthetic (say), whether in everyday life or in professional debate—are understandably governed as much by pragmatic utility and economy as by logical exactitude or analytical literal-mindedness. So, those colloquial modes of speech often leave unstated the more general features that are important to philosophers; and before we can pass any sure judgment, from the standpoint of formal philosophy, on the adequacy of our reasons for believing what we do, these missing features will have to be restored. We must begin (that is) by "reconstructing", in explicit form, the chains of assumptions and inferences implicitly involved in the particular examples being considered; we must identify any generally acknowledged truths that are available to serve as a final basis ("solid ground") for the beliefs in question; and we must spell out openly any unspoken assumptions ("concealed struts and beams") that are required in order to fill out

## 7 Reasons and Inferences

The things we think, believe, and/or claim to know are of many different kinds. We can believe, equally, that human beings are mortal, that the angle in a semicircle is a right angle, that genes are macromolecules of nucleic acid, that Father is acting strangely because he is angry, that God is Love, that there will be a total eclipse of the moon later this year, that Shakespeare's *King Lear* is better constructed than Ben Jonson's *Volpone*, that the bedroom curtains are deep red, that Jim ought to spend less of his earnings on gambling, and/or that the letters on a billboard read STOP.

In each case, our belief may be challenged. If that happens, we can normally produce "reasons" for thinking, believing, and/or claiming to know the things we do. The actual substance of those reasons will, however, depend entirely on the nature of the case. So, if we simply explain what those reasons are, we shall not yet be "doing philosophy". For example: the fact that the twitch in Father's left eyebrow serves to indicate suppressed anger rather than (say) hunger will in itself be a matter, not for philosophy, but for psychology. (Even to explain, in general terms, why suppressed anger more often shows up in

those parts of the argument that would normally, that is, colloquially, go without saying.

From the time of Plato to the present day a substantial part of European philosophy has been concerned with one or another of those two tasks: either with reconstructing the "grounds" and "arguments" implicitly required to "support" our different kinds of beliefs or with considering in what respects, and on what conditions, the ultimate foundations of those beliefs can be recognized as "solid", and the associated inferences as "strong".

A comprehensive textbook of philosophy written from this standpoint would take all the major fields of knowledge and experience—scientific, artistic, and religious; individual, collective, and interpersonal—and it would show historically how, in each of these main fields, philosophers of different schools have tackled the twin problems of "solid foundations" and "valid forms of inference". The outcome could be a valuable survey of the development and current state of the philosophical enterprise, but it would be lengthy and laborious, and it would go far beyond our present territory.<sup>1</sup> Our own task is a more limited one. Rather than survey the whole area of formal philosophy itself, we have chosen to map only the approaches to that area. In this way our hope is, first, to indicate how the subsequent philosophical debates got started; second, what fields we can in general expect the formal approach to encompass most satisfactorily; and finally, at what points the obstacles to a purely formal analysis are probably insuperable.

From the formal point of view, then, our "reasons" for believing what we do may be good or bad in two independent ways:

<sup>1</sup> It would embrace, for instance, such varied topics as René Descartes on the axioms of physics, John Locke on secondary qualities, David Hume on induction, John Wisdom on other minds, Benedetto Croce and R. G. Collingwood on the principles of art, Schopenhauer on the will, Maurice Merleau-Ponty on our understanding of spatial relations, and Ludwig Wittgenstein on the recognition of symbols.

either the *grounds* they provide to support our beliefs may be firm/shaky, or the *inferences* linking those grounds to the beliefs may be strong/weak, or both. If we consider some sample beliefs from different fields of experience and ask what can be done to give those beliefs the required "structural underpinnings", we shall be able to indicate what different kinds of philosophical difficulties arise in each case—whether their source lies in the grounds, or in the connections, or in both. We shall look at four groups of cases in turn.

## Problems

### CASE 1

To begin with the least problematic examples: There are cases in which it is reasonably clear both what the grounds for our beliefs are (what we have to go on) and how these grounds are connected to the conclusions (how we get from the grounds to the beliefs). About these cases we can ask:

How solid are the grounds? And how firmly do the inferences connect them to the beliefs in question? How far, in particular, can our grounds in such cases achieve the Platonic ideal of unchallengeability, or our inferences achieve the ideal of formal, quasi-geometrical validity?

### CASE 2

Next, we may look at some examples in which the character of the arguments/inferences/connections is clear enough, but in which the exact nature of the fundamental grounds is a matter of debate. About these cases we must ask, in addition:

What kind of secure foundations do these beliefs really possess? Is it really possible to ground them firmly in our experience, or

in other less problematic beliefs, and if so, how?

## CASE 3

In other cases again, it may be reasonably clear what grounds we have for our beliefs, yet it may be hard to explain precisely how those grounds lend proper support to our beliefs. About this third group of cases, we face the question:

Given the grounds we have, what arguments or inferences, if any, can we use to connect them with the corresponding beliefs? And what kind of strength or validity can be claimed for those connections?

## CASE 4

Finally, there are cases in which both the grounds and the connections are problematic; that is, situations in which—on a practical level—we claim “good reasons” for believing what we do, yet in which—on a philosophical level—we have no clear way either of explaining our precise grounds or of demonstrating how those grounds that we have validly support the beliefs concerned. About this last group of cases, we must ask the more basic question:

Can there, after all, be legitimate beliefs, for which we have quite adequate pragmatic reasons, even though we cannot specify *either* philosophically acceptable grounds *or* formally valid inferences in their support? And, if so, what does this conclusion imply about the formal, quasi-geometrical approach to philosophy?

## Examples

## CASE 1

(1) *Predictive Arguments.* Not surprisingly, the least difficult cases are to be found in fields of experience where formal, mathematical procedures have been most consciously and deliberately applied. Consider, for instance, our “reasons” for thinking that a total eclipse of the moon will be visible in New York City on such-and-such an evening, between such-and-such times; or for believing that it will be high tide at Rockland, Maine, at 3:38 P.M. this afternoon. Beliefs of this kind, concerned with recurrent events like tides and eclipses, are arrived at by applying appropriate forecasting techniques or formulas. These formulas and techniques have been developed by accumulating accurate records of previous occurrences, analyzing the different periodic processes or components involved in those past recurrences, and projecting forward (extrapolating) the resulting “time series” into the future.

This is an essentially arithmetical procedure, which does not involve any scientific understanding of the mechanisms involved.<sup>2</sup> At the same time, it is a strictly formal procedure; that is to say, provided we have adequate records of previous eclipses or tides, the task of predicting further ones over a reasonable period of time into the future is a simple matter of calculation. Using the earlier records as “grounds”, or “data”, and the established arithmetical formulas as “principles of inference”, we can arrive by way of “conclusion” at a single, unambiguous prediction. The resulting calculation will lead us to

<sup>2</sup> As a matter of history, the art of predicting eclipses and similar celestial occurrences was already well developed, long before people had any scientific idea of what sorts of things stars and planets were, far less understanding what forces were responsible for their motions. Tidal rises and falls, similarly, were recorded and calculated long before the 1680s, when the first satisfactory theory was advanced to explain how these changes were produced.

conclude that this afternoon's high tide will be at 3:38 P.M., not 2:05 P.M. or 6:50 P.M.; or, alternatively, that the eclipse will take place tonight rather than tomorrow or the day after.

Correspondingly, if the eclipse or high tide does not take place as predicted, we are entitled to ask what went wrong with our calculation. Were our data (grounds) insufficiently full or precise? Was our formula (principle of inference) incorrect, incompletely applicable, or insufficiently detailed? Or what else led us astray? As with any other formally valid argument, we cannot accept that the conclusion is in fact false without conceding that either the initial data or the procedure of inference employed was in some respect at fault.

We can present the point in structural terms. The "foundations" on which such a tidal or astronomical prediction finally rests are provided by the accumulated records or observations of prior high and low tides, lunar eclipses, and so forth; while the "framework" of formal argument rigidly linking back the prediction to those foundations is provided by general formulas embodying the recurrent cycles or patterns found in those records.

For practical purposes, the accumulated observations can normally be accepted as unchallenged, even if not unchallengeable. If some of them have in fact been recorded or transmitted incorrectly, that may not seriously matter. Like a few soft spots in otherwise firm ground, these doubtful records need not have much weight put on them, and provided there are comparatively few of them, the foundations of our subsequent inferences will not be seriously weakened. By contrast, the status of the general formulas, or regularities, on which our calculations are based is very far from unchallengeable. Rather than making any claim to being final or absolutely certain—as the theorems of geometry did for so long—they are always subject to refinement and revision.

We rely on such formulas for the future because and only because we have found them to fit the records hitherto—that is the force of the term "extrapolating". Yet we should certainly

hesitate to claim anything like the same *necessity* for them that we might in the geometrical case. Although we might set out to prove, say, that the three angles of a triangle *must* add up to 180 degrees, without appealing to actual measurements or observations, we would hardly expect to produce a similarly "pure" argument—ignoring all the actual empirical records—proving (e.g.) that solar eclipses *must* conform to a nineteen-year cycle. Far from such cycles seeming in any way "self-evident", the fact that they recur in the astronomical or tidal records at all requires further explanation from astronomy or oceanography.

We may represent these relationships diagrammatically (see Figure 1). Provided the records are generally accurate, and the formulas have proved sufficient to forecast tidal changes ac-

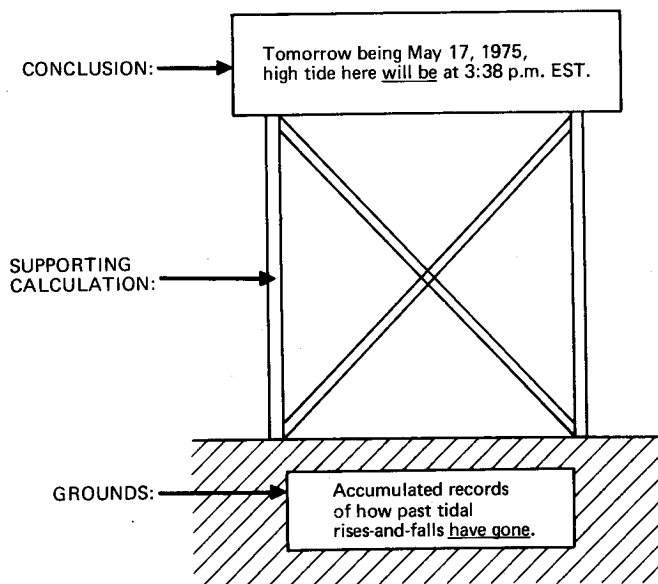


Figure 1

curately on former occasions, we have evident "reasons"—in fact all the "reasons" the nature of the case requires—to suppose that this next forecast (3:38 P.M. tomorrow) will be equally accurate. At the same time, the forecast remains a forecast, and the supposition of its accuracy remains for the time being a supposition. Although the conclusion arrived at is unambiguous ("High tide will be at 3:38 P.M."), it remains an extrapolation.

Similar considerations apply equally to many of the formal arguments discussed by traditional logicians under the title "syllogisms". Compare Figure 1, for instance, with Figure 2. In this case, too, the generalization on which the conclusion formally relies is arrived at on the basis of all relevant previous experience, whereas the current argument reapplies (extrapolates) it so as to include some further future case. While this

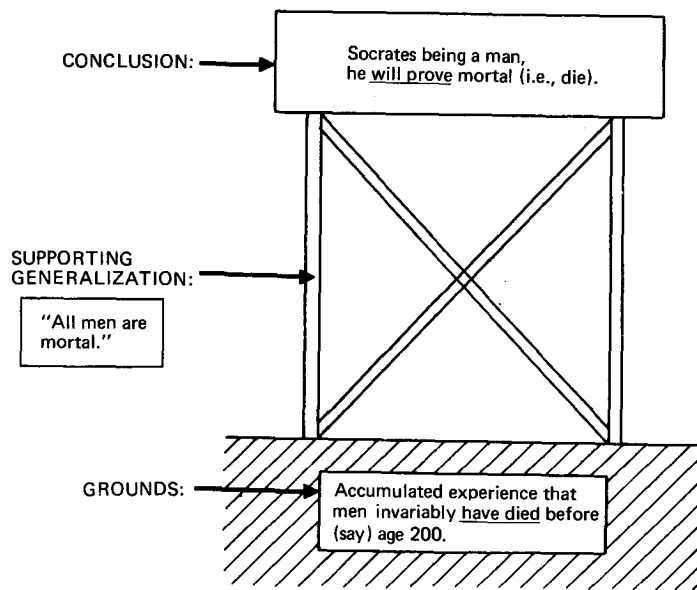


Figure 2

syllogism is also, on the surface, as formally valid an argument as any other, its conclusion too remains a supposition—a supposition for which we have all the "reasons" the nature of the case demands, but a supposition nonetheless.

It may be asked at this point: Could we not do better than this? Could we not, somehow or other, replace the purely observational (or empirical) formulas and generalizations relied on in such cases by more firmly based principles, reflecting a genuine insight into processes and mechanisms necessarily involved in life and death, eclipses, and/or tidal rises and falls? And if we did that, might we not put ourselves in a position to say, not merely that tomorrow afternoon's high tide *will in fact be* at 3:38 P.M., or that Socrates *will in fact die*, but that the events in question *must happen* as predicted? Indeed, is it not precisely the business of a valid scientific theory to provide just this kind of additional understanding and certainty?

(2) *Scientific Theories.* From the very beginning of their inquiries, these are among the central questions that philosophers have asked about the aim and outcome of natural science. And certainly, so far as the words go, we do often find scientists prepared to go beyond saying just, "So-and-so *will in fact* happen in such-and-such a way," to the stronger-sounding conclusion, "So-and-so *must* happen that way." For instance: Galileo did not only claim to have discovered, observationally, that bodies accelerating uniformly from rest *always tend to* travel four times as far after two seconds as they did after one. Rather, he set out to prove—as a matter of theory—that *any* uniformly accelerating body *must* do just that. His theory of motion (or kinematics) was thus a strictly formal analysis of the relations between the concepts, "velocity" and "acceleration", "distance" and "time", on a par with Euclid's analysis of the relations between the concepts, "line", "point", "angle", "circle", and the rest.

Subsequently, of course, Galileo was able to *apply* that formal analysis experimentally, in a way that threw light on certain vexed and long-standing empirical problems in physics and

astronomy. Thus, for example, he showed that heavy bodies falling freely near the surface of the earth do in fact accelerate uniformly; that is, do in fact move in the ways that any "uniformly accelerating" body *must* conform to on theoretical grounds. Given Galileo's theorems, this implied that a free-falling body *must* travel four times as far in two seconds from rest as it did in one; yet it implied this, not categorically and unconditionally, but only on the assumption that—and to the extent that—free-falling bodies *do in fact* accelerate at a uniform rate. (Roughly speaking, the term "free-falling" is an *empirical* designation of bodies; the term "uniformly accelerating" a *theoretical* designation. But this distinction is not a hard-and-fast one.)

The present case calls, accordingly, for a slightly more complex diagrammatic representation, as shown in Figure 3.

How far might we present in similar ways other branches of scientific theory and their applications? That question is still under discussion among philosophers of science. To make just one historical comment: Some of the most eminent eighteenth-century mathematicians and philosophers—notably, Euler and Kant—attempted to demonstrate that the whole of Newton's theoretical physics was also a formal, "necessary" science, like Galileo's kinematics and Euclid's geometry. What Euclid had done theoretically for "point" and "line", etc., and Galileo for "velocity" and "acceleration", Newton did (on this view) for "mass", "force", and the rest; that is, he recognized how they must be defined and drew the appropriate mathematical conclusions. Indeed at certain points in his writings Kant even seems to be supposing that the inverse-square law of gravitation can itself be regarded as yet one more theorem in a totally general and analytical system of cosmic dynamics. Just as any authentic triangle must have angles totaling 180 degrees (he argued), so any truly intelligible picture of the universe must conform to the inverse-square law. Nowadays most physicists would consider this comparison more misleading than helpful; still, Kant was right to draw attention *both* to the purely formal character of arguments within Newtonian dynamics

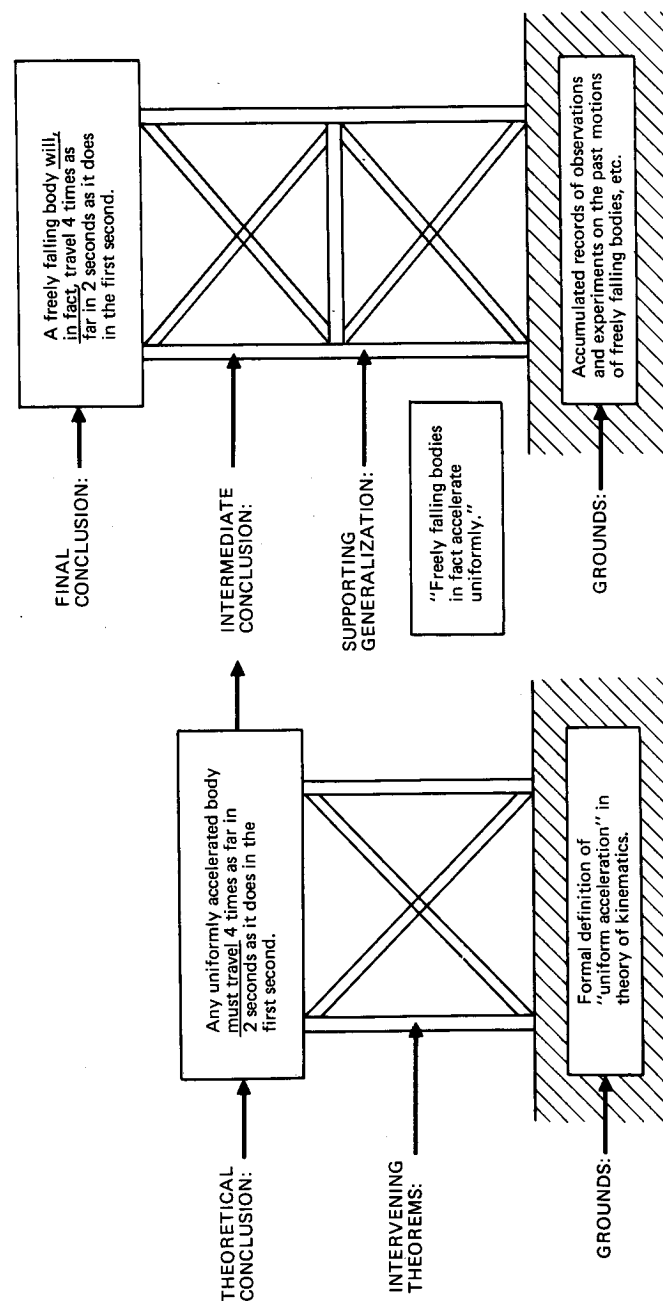


Figure 3

and to the consequential problem of explaining how we can be so confident that the resulting formal theorems apply to actual material bodies, such as the sun and the planets.

Let us make appropriate substitutions in our Galilean diagram so as to reapply it to this Newtonian example. In place of the question, "How do we know that free-falling bodies accelerate uniformly?" we can consider the question, "How do we know that the planets—Mercury, Venus, Jupiter, etc.—are moving, predominantly, under the influence of the sun's inverse-square attractive force?" Both questions will then be about what *is in fact* the case, rather than about what *must be* the case; and in both, the crucial issue is to establish that certain empirically designated objects (in the Newtonian case, the familiar, visually identifiable planets) answer also to a particular theoretical designation (e.g., as bodies acted on by a single, centrally directed inverse-square force). See Figure 4.

So all three men—Galileo and Newton, quite as much as Euclid—separated the general formal analysis (whether of geometry or kinematics or dynamics) from its empirical applications to actual physical examples. It was this in fact that gave all their theories the appearance of having a sound Platonic form. Furthermore, the three analyses were interconnected. For example, Galileo's kinematics took Euclid's geometry for granted and built upon it by adding fresh, dynamical concepts. Yet how far, as a result, could either Galileo or Newton bring physics up to the level of "true, intellectual grasp" demanded by Plato's ideal of *episteme*? For a while they seemed to have done just that. Kant, for one, was very anxious to demonstrate how it was that an empirical science, such as physics, might achieve that kind of certainty. But this happy state of affairs did not endure. Dynamics and kinematics might be as good, in this respect, as Euclid's geometry; but even geometry (as we shall see) turned out to be less "unique" and "certain" than Plato had supposed. Thus, even Galileo and Newton gave us something less than *episteme*, that is, absolutely certain understanding, based on intellectual intuition, of what "acceleration" and "force" must necessarily be.

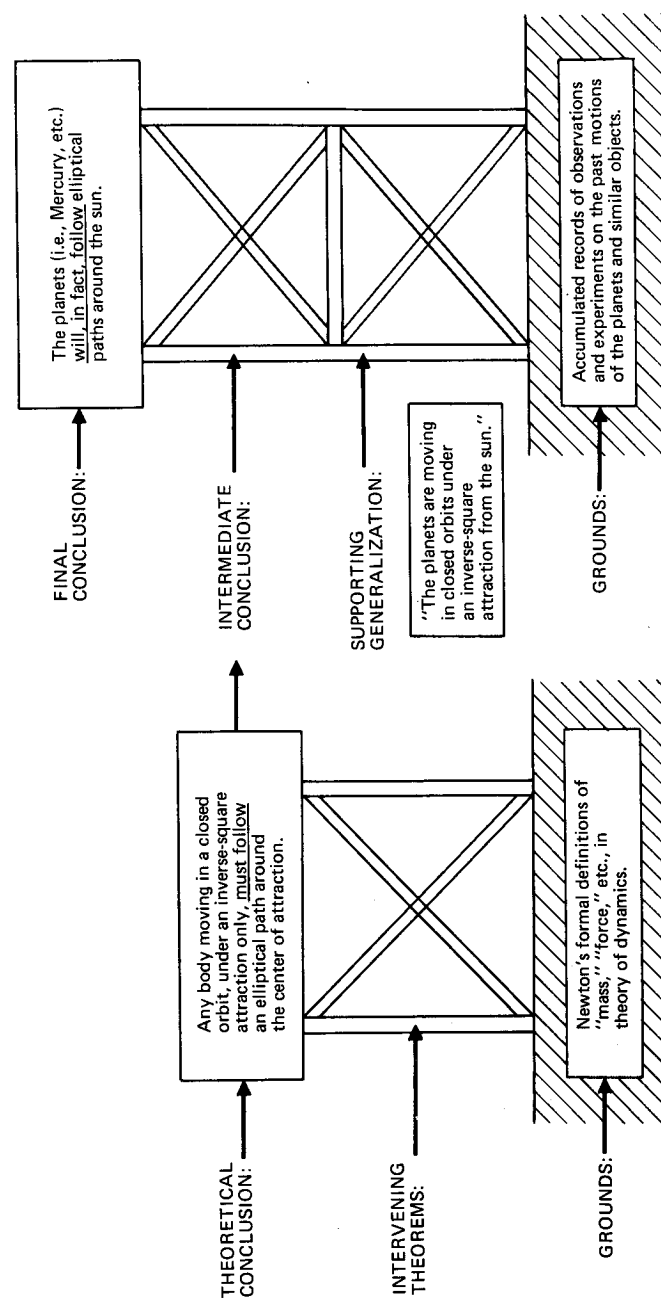


Figure 4

To sum up: Two preliminary points should be made about these first examples. On the one hand, the adequacy of any formulas for making, for example, tidal or astronomical predictions is not in itself a *philosophical* matter. The craft of forecasting tidal movements or astronomical phenomena has its own procedures and standards of judgment; the relevant formulas have been refined and improved, in the light of experience, by the professionals directly involved.<sup>3</sup> On the other hand, the arguments by which these formulas yield specific forecasts are, in point of logic, *formal deductions*. This being the case, their "validity" is not normally in doubt; any remaining uncertainties about their conclusions affect, rather, the formulas or other generalizations involved. In the same way, if the universal truth of the proposition that all men are mortal could be guaranteed absolutely, the conclusion that Socrates—being a man—is mortal would be established with "geometrical" certainty. As things stand, we remain short of the geometrical ideal even in this case because we lack any absolute assurance of that universal truth. Our confidence that the generalization will continue to hold in future instances—like our confidence in the current tidal or astronomical formulas—involves, in the nature of the case, a *residual supposition*.

Just because any such argument is strictly deductive in form, it will have the same "reversibility" as all other formally valid arguments; that is, if the conclusion proves false, something must be wrong *either* with the "grounds" or with the "linking generalization" that connects those grounds to the predictive conclusion. It nevertheless falls short of the Platonic ideal of knowledge, because the relevant linking generalizations are never *self-evidently* correct. It is for this reason that philosophers sometimes speak of arguments of this kind as "hypothetico deductive" arguments. They are "deductive" because they can be set out in a purely formal manner, and "hypothetical" be-

<sup>3</sup> It can, of course, be a philosopher's business to consider, in quite general terms, just *how* such experience gives the resulting formulas even a "pragmatic" validity.

cause the crucial generalizations (e.g., All men are mortal) are still, to however slight a degree, subject to revision and correction, rather than self-evidently true. By contrast, the theorems of geometry—the chief exemplars of true knowledge in Plato's eyes—might be labeled as "categoricodeductive"; they were supposedly connected by formally valid arguments back to self-evident axioms and principles, and their truth accordingly had an absolute guarantee.

#### CASE 2

As our second group of examples, we may consider cases in which difficulties arise over the *grounds* for our beliefs. This can happen in two distinct ways. (1) In one class of situations, we think, believe, and/or claim to know things for which we could give reasons cast in formally valid arguments, though we might find it hard, nonetheless, to demonstrate that those "grounds" are relevant and sufficient to establish the corresponding conclusions past question. (2) In the other class of situations, by contrast, we think, believe, and/or claim to know things for which we would scarcely know how to produce "grounds" at all.

*Moral Arguments.* Moral and ethical discussions can provide many examples of the first type. We may say with confidence, for instance: "Jim really ought to give up gambling." Yet when we are asked why we believe this, we may not find it easy to make the *grounds* for our belief wholly clear and convincing. If the point at issue were legal rather than moral, matters might be much easier. Suppose that Jim had gone into bankruptcy as a result of his gambling and was under a court order to desist; in that case, we could establish, formally and conclusively, that Jim ought to give up gambling—in point of law—since it would be a clear breach of the court order for him to continue. Ethical questions differ from questions of law, however, in just this respect. We possess neither such clear and decisive nor such agreed-upon ways of demonstrating what is ethically good/bad

or morally right/wrong as we do of demonstrating what is within/contrary to the law.

About the *form* of our moral arguments, there is nothing like the same difficulty. Suppose that the particular consideration that most strongly leads us to disapprove of Jim's gambling is the fact that he spends on bets money he really needs for food for his children. Once this is made clear, it is not hard to construct an argument connecting that ground to the required moral conclusion that will be "formally valid". Unfortunately it is rarely possible to demonstrate in practice either that one-and-only-one such "ground" is conclusively relevant to a moral belief or that the corresponding principle—for example, "Food for one's children ought always to have priority over diversions like gambling"—is unchallengeably strong and relevant. On the contrary, the history of ethical beliefs is a tale full of supposedly "self-evident" truths that were later discredited—for example, It is particularly wrong for *women* to smoke.

Even with those general beliefs that command something approaching a universal consensus—for example, It is a "good thing" to be physically fit, or adequately fed—their ultimate philosophical basis is not easily explained. As John Stuart Mill put it, instead of producing yet-more-general principles to support such fundamental values, all we can do is fall back on other, more discursive arguments and considerations in the hope that they will be "capable of influencing the intellect to give or withhold assent." Only in that broader sense do we have "reasons" for our most fundamental ethical beliefs; and in these cases, for lack of yet-more-general principles, our supporting arguments can no longer operate—even approximately—in the manner of geometrical "proofs".

*Arguments About Material Objects.* Alternatively, the problem about our *grounds* may be, not to demonstrate their relevance, so much as to know what we should even *call* "grounds" at all. We may take as our examples the time-honored collection of philosophical arguments having to do with the question of

how we can claim to know anything at all about the material objects in the world around us. For example: "How do we know—that is, how can we *prove*—that all the objects in the refrigerator do not go out of existence the moment we close the door, and spring into existence again the moment we reopen it?"

These problems originate from comparing everyday knowledge with predictive and scientific knowledge. If, for instance, we treat "the evidence of our senses" as supporting everyday beliefs about tables, chairs, beds, and so forth, in the same way that experiments, observations, and past records support scientific and technical beliefs about tides, eclipses, hurricanes, and so forth, it will appear reasonable and natural to assume that the same structural representation should fit both kinds of cases (see Figure 5). Yet this comparison—however natural and reasonable it seems—can itself be a source of difficulties. For how are we to match this structural diagram, which fits predictive arguments so well, to the facts of the everyday, nonscientific case? In the tide-forecasting case, there is no ambiguity, either about the "conclusion", or about the "grounds"

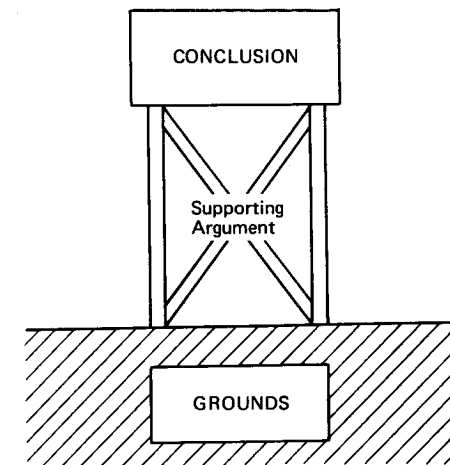


Figure 5

on which it is based, or about the general formulas or "principles" by which we extrapolate from past records to future predictions. In the case of our everyday knowledge, by contrast, nothing is clear or easy.

The "conclusion" may, for instance, be my belief that the bedroom curtains are deep red. (This is a kind of belief about which we might well have no practical doubt whatever.) How could we produce an argument in support of this belief that would be "well founded" by formal standards? If we tried to do so, what exactly could we offer, either as "grounds" or as "connecting generalizations"? And on what kinds of experience would our trust in those "generalizations" rest?

Philosophers have made two different sorts of attempts to fit such cases to the structural pattern. On the one hand, they have accepted the notion that our "senses" are capable of giving "evidence" without special criticism. (See Figure 6.) If, however, we do take this course—if our *ground* for concluding that the curtains are deep red is simply the fact that our eyes tell us so—what need do we have of any "connecting formulas" or generalizations? The question then is, "Do we believe our eyes?" If our eyes can straightforwardly confirm the initial belief, that is that, and no argument arises unless we have specific reason for distrusting them.

To borrow a term from the law: The way things look, feel,

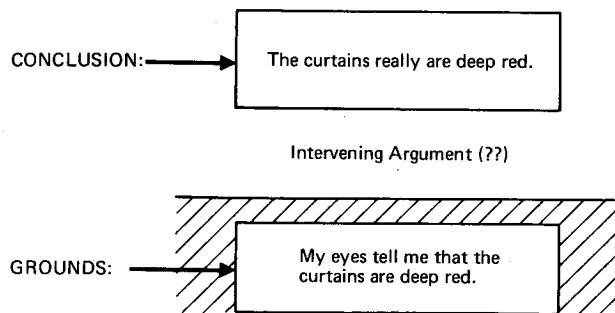


Figure 6

smell, and so forth, seems to create a "presumption" about how they in fact are. Failing any special reasons for doubt, we take the way material objects look, feel, smell, and so forth, as evidence about how they "presumably" are. The senses simply function as instruments for finding out how the world is. We rely on them as we do because they are instruments we have learned to use effectively, and we need specific reasons for suspicion before we are justified in dismissing what they tell us. If we take this particular direction, accordingly, the structural pattern is simply irrelevant. We believe (e.g.) that the curtains are deep red, not because we have a *supporting argument*, but merely because we have no specific grounds for questioning what our senses tell us.

Alternatively, philosophers have taken quite a different approach. Rather than accept any general presumption in favor of the testimony of our senses, they have separated the "mental" contents of our sensory fields (visual, tactile, auditory, etc.) from the "material" states of affairs about which they are supposed to provide evidence and marked them off as being essentially personal. (See Figure 7.) If we follow this alternative course, we encounter two obstinate groups of problems. Consider, first, the "rules of inference" or "connecting generalizations" that will be required to justify any step from "grounds"

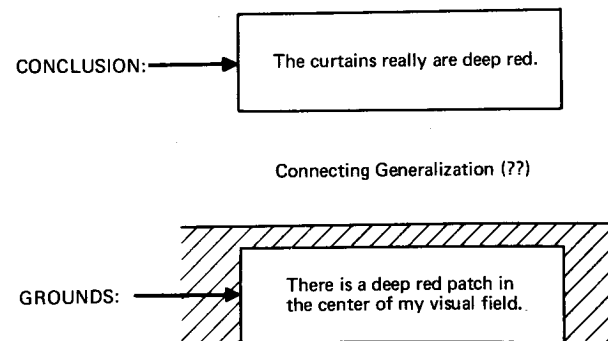


Figure 7

about our sensory fields to "conclusions" about the material world (for example, "A deep-red *patch* in my visual field is a reliable indication of a deep-red *object* in the material world"). As compared with scientific formulas and generalizations, these will be universal truths for which no obvious supporting experience is available. And, second, consider the difficulties raised by Cratylus: Once we have separated our private, mental sensory fields from the public, material world, it at once becomes unclear how we can ever develop a language for speaking about those sensory fields at all.

We may begin with the difficulty over our "rules of inference". If we take the general formulas by which reports about past eclipses, say, are used to support predictions about future ones, it is clear that their reliability can be established progressively as time goes on; whereas the generalizations linking our sensory fields to the supposed properties of material things are, by comparison, untestable. For what could possibly count as "supporting experience" in their favor? If the only things our senses directly tell us about are, say, deep-red *visual patches*, there will be no way of checking that these patches are in fact regularly associated with independent deep-red *material objects*. (On this interpretation, the material objects themselves will remain—so to say—forever "out of sight".) Even if any such generalizations could be stated, therefore, we would never have the experience needed as evidence of their reliability.

Again, if we think of our "sensory fields" as separate from the material world, how are we to *say* anything intelligible about them? The connections between sensory experience, knowledge, and language have never been easy to make explicit. But dissociating the "inner" or "mental" things we directly see, feel, and hear from the "external" world of "material" objects multiplies those difficulties. Regarded as private, mental objects, my visual, auditory, and tactile fields are *mine*; your sensory fields are *yours*—and there is no evident way, either of comparing how things look with how they in fact are, or of comparing how they look to me with how they look to other people. (To

do that, I should have to inspect your private, mental fields, or you mine.) Still less, in that case, is there any evident way of checking that you and I both use, for example, the phrase "deep red" to refer to the same thing. So, strictly speaking, no common, public language will be available for saying anything whatever about the contents of our sensory fields.

Notice that philosophical paradox is once again in the offing. Clearly enough, we *do* possess a common, public language in which we can in practice compare notes about the way things look, feel, and sound to us both. Yet this second approach to the problem of "sensory evidence" seemingly makes it impossible for there to be any such common, public language. The very notions of "sensory evidence", "sense fields", and "saying how things look", still—it appears—embody unresolved confusions; therefore, the relations between them remain active topics of philosophical discussion.

We face difficulties equally, then, whether we treat "sensory evidence" as giving us direct testimony about material objects, or whether we think of it as concerned only with private sensory fields. Either way, it is quite unclear how we are to match our sensory knowledge about material objects to the structural pattern of "grounds", "supporting generalizations", and "conclusions". On the one hand, if "how things look" is exactly the same as "how they presumably are", no formal inferences are needed to justify the transition from one to the other. On the other hand, if these are two distinct and separate things, no reliable generalizations can be established, or even meaningfully stated, to justify that transition. On either interpretation the notion of "grounds" becomes highly problematical, and the suggestion that the testimony of our senses serves as "supporting evidence" in a formal "proof" creates as many problems as it solves.

Does this mean—as many philosophers have concluded—that we *lack* the grounds we properly need for saying anything about the objects in the world around us? Does it mean, that is to say, that our senses are intrinsically likely to delude us

about the world in which we live? Or does it mean, rather, that the geometrical, or structural model of argument is inappropriate for analyzing such cases as these? At this point we are at the entrance to a very long and subtle philosophical debate.

## CASE 3

So much for cases in which the structural model of argument runs into difficulty over the notion of "grounds". In other cases, the grounds for our case are clear enough, but the nature of the arguments that connect them to our resulting beliefs is not clear. When we look for some "connecting generalization" or "rule of inference" to make a rigorous link between the two, no such general principle seems to be available. Once again, we may consider two groups of cases that give rise to difficulty in this way.

*Psychological Diagnoses.* To begin with, consider how we come to hold the beliefs we do about other people's states of mind. In particular, consider who we would set about justifying those beliefs. I may be decidedly certain, for instance, that Father is furious about the things I said to him last night, and when asked why I am so certain (what reasons I have for believing this), I may have no difficulty in pointing to my "grounds" for this belief; for example, his words, behavior, and appearance—what he said at the time, his subsequent silences, his flushed face, dismissive gestures, and abrupt way of moving. In a practical situation, for practical purposes, this evidence may be accepted as quite sufficient. (Would he be acting in this way if he were not angry?) For the theoretical purposes of formal philosophy, more is needed. Given only these particular indications, geometrically minded philosophers will have to ask in reply:

But *how* do these facts support your belief?  
What general principles *justify* you in reading  
these indications as signifying "anger"?

How can all these observations about words and behavior *prove* that Father is angry?  
What sort of *valid argument* do they provide?

This challenge faces us with a dilemma. On the one hand, sensitive and sympathetic people are good enough in practice at judging the feelings and intentions, moods and reactions, of the people they are dealing with; they can recognize quite subtle responses, or changes of attitude, and they evidently do so, to a large extent, through picking up slight but observable cues in the behavior, manner, and speech of the people concerned. So we may say, metaphorically, that they become good at "reading" people's minds, since they need apparently make no more effort to puzzle out these states of mind than it takes to recognize familiar words on a page or a billboard.

On the other hand, the demand for a rigorous, formally valid argument, "proving" that we are reading such states of mind correctly, is hard to meet. However reliable they may be for practical purposes, those "readings" rest neither on formal, mathematical calculations, as in the case of eclipse predictions, nor on the application of scientific theories. Rather, they depend on a kind of pattern recognition, analogous to that by which physicians diagnose their patients' diseases. If we accept the formal pattern of mathematical and scientific theory as the only acceptable varieties of "rational demonstration", therefore, we shall be driven to the paradoxical conclusion that the best of us do not really "know" what other people's states of mind really are, even in the most favorable situations.

By a similar argument, however, we might equally conclude that, even in the most favorable situations, the best of physicians do not really "know" what diseases their patients are suffering from. This is so, primarily, because our judgments about people's thoughts and feelings, like medical diagnoses, are always arrived at *in a context*. There is hardly a single sign or symptom, word or gesture, which can by itself be taken in only one way; that is, which universally indicates one particular disease, or state of mind, regardless of differences in context. A flush of

the cheeks (for instance) can be a flush of pleasure or of anger or of embarrassment; a gruff tone of voice can be the expression of irritation or impatience or modesty; a mottled rash can be a sign of measles or of simple heat irritation. How we take any isolated indication of this sort will depend on the rest of the surrounding context. If there is nothing to be embarrassed about in a situation, we shall be less likely to see someone's flushed cheeks as a sign of embarrassment; if the rest of his behavior appears unembarrassed, likewise, we shall "read" the flushed cheeks in some other way, and so on. Given all the possible ways of "reading" isolated words, gestures, or signs, we shall look in vain for rigorous, universal "connecting generalizations" linking individual items of behavior to specific "states of mind". (See Figure 8.)

What makes it hard to give a "formal" justification of our psychological beliefs, accordingly, is the ambiguity of all individual signs and features when taken *separately*. This happens also in (say) medicine or botany when we interpret one sign or symptom apart from others. ("Is this rash on the back a sign of measles, or is it only a heat rash?" Or, "Is this single blossom a small primrose or a large cowslip?") In the medical and taxonomic cases, however, we are spared an additional difficulty—namely, the possibility of deceit or concealment—that inescapably complicates the psychological case.

There is no question of a measles rash *pretending* to be a

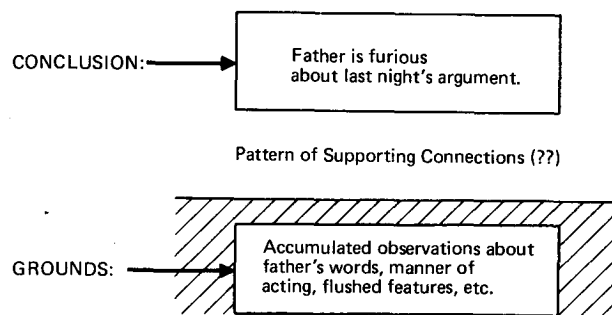


Figure 8

heat rash, or of a primrose consciously *mimicking* a cowslip. In those cases, we are not faced with the problem of "seeing past" visible but deceptive indications to a more "honest" state of affairs behind them. In the psychological case, by contrast, the possibility of pretense may always complicate our reading of the indications. In actual practice the consequences of this possibility are limited. (Many of our states of mind are so hard to conceal or dissimulate that only the most brilliant actors could deceive.) But, as a matter of theory, the bare possibility of deceit by itself gives philosophers the handle for opening up a further kind of doubt. If we cannot "prove" that a man is angry by remarking on the gruffness of his voice—since a gruff voice may mean other things also—neither can we "prove" that he is impatient or overcome by modesty by remarking on the gruffness of his voice because he may be affecting that tone of voice deliberately, with intent to deceive. However well we may read such patterns of indications, however well we may penetrate defenses and disguises, a geometrical-type "proof" increasingly eludes us.

At this point we are exposed to a further philosophical temptation, namely, to interpret the problem over other people's "states of mind" as springing entirely from their "internal" character. Just as I seemingly cannot inspect your visual field in order to check that the bedroom curtains look deep-red to us both, so (on this view) I cannot put myself inside Father's head in order to check that it is in fact *anger* he is manifesting. In this way, a spatial gulf appears to open up between the world of material things "outside" us and the world of mental things "within". So considered, the physical world of objects and processes, gestures and spoken words, presents itself to us as "public" and "external", while the mental world of feelings and psychological states, hidden desires, and unspoken thoughts, presents itself by contrast as "private" and "internal". As a result, the quite genuine problem of reading each other's minds comes to be thought of as arising directly from the quasi-spatial impossibility of "getting into" another person's private mental world.

Arguments in the philosophy of mind have thus become highly

complex, running together issues of several distinct kinds. After all, we do often enough have unspoken desires and thoughts and do our best to avoid showing them, so that other people may find our reserve hard to "penetrate". (Notice how the spatial metaphor pervades even our colloquial speech: a problem of *interpretation* presents itself to us as a problem about "getting inside".) Yet this kind of reserve, or concealment, is by no means the source of *all* our difficulties about other people's minds. Frequently we are quite confident that someone is behaving in an entirely candid way; yet we shall find it impossible to "prove"—in a formal or geometrical manner—that he is (say) angry, rather than embarrassed. In this branch of philosophy above all, it is important to be on the lookout and be careful not to confuse the different kinds of issues involved—not to confuse, for instance, the general problems about "formal proof" that arise in all cases of pattern recognition, with the further, special problems that reserve, pretense, deceit, and the like create in the psychological case.

*Aesthetic Judgments.* So much for one class of examples in which we seem to have adequate "connecting generalizations" to link our beliefs back to their supporting "reasons". Comparable difficulties arise also in the field of aesthetics. Here again, we are accustomed to giving "reasons" for our attitudes and beliefs in actual practice. Despite all the high-flown waffling about Art we meet with in the Sunday press, nearly everyone uses aesthetic language and categories with confidence and fluency in discussing media and styles they understand well at first hand. We feel some understandable reserve about the music of Stockhausen or the paintings of Warhol; but we have nothing like the same hesitations when it comes to the movies, or pop music, or the houses we actually live in, or other things that are built into our regular lives. In those firsthand areas, we accumulate experience and develop our powers of discrimination. So, we quickly learn to tell with confidence the serious from the trivial, the better from the worse, and readily support our judgments by giving "reasons" of kinds that we expect other experienced people to understand.

About these judgments and reasons, indeed, we expect not only *understanding* but some good measure of public agreement. Who among us, for instance, really sees nothing more to aesthetic disagreements about different movies, and movie directors, than our "subjective" or "personal" reactions to them? Who really supposes that there can be no solid "reasons" for considering the Beatles superior to some back-street pop group; or for preferring Berlioz to Chausson; or some meticulously drawn *mandala* over a child's daub? Over artistic subject matter we know well, the task of "reasoning" in support of our preferences raises no grave philosophical problems. We put forward our opinions about (say) some new Traffaut film or Beatles record and are ready to back them up, if challenged, by pointing out features that are directly relevant to our judgment. Further, we normally find it quite possible to talk, at length, about the aesthetic issues involved—with mutual understanding, and even agreement—to other people who know the field as well as we do ourselves.

Yet, once again, if we abandon the *practical* in favor of the *theoretical* point of view, aesthetic discussions may easily come to appear "nonrational". Once again, that is, we may lose confidence in our ability to talk aesthetic sense because we are at a loss to say—in philosophical terms—exactly how our aesthetic opinions are to be "proved". Although we can indicate, easily enough, the specific points about movies, guitar players, or whatever, that constitute the "grounds" for our opinions, it is far harder to explain in general terms how those grounds come to be *relevant*, that is, what exact "formal connections" exist between the specific technical features we point to in particular works and the artistic superiority we claim on their behalf. For instance, if I tell you my reasons for considering Bergman's *Cries and Whispers* a finer film than *Gone with the Wind*, these will certainly pick on perfectly objective ("public") features of the movies in question. Yet if those "grounds" are interpreted logically as "data" or "premises", and the aesthetic opinion as a "conclusion", it is no easier to find "connecting principles" capable of sustaining a formally valid or quasi-geometrical "proof" than it is in the psychological case.

As in that case, the difficulty is partly a matter of *context*. Some feature that we pick on as a strong point when comparing the construction of two movies, A and B (e.g., the director's use of flashback in movie A), may be quite irrelevant when comparing two other movies, C and D; while, as between movies E and F, it may actually represent a defect. (The formal symmetry achieved by the flashback might be classically satisfying in the context of one film, yet strike all experienced moviegoers as stagey and artificial in another.) In aesthetics, that is to say, the details of particular cases and contexts are of crucial importance. Just what kind of film is this? Just what did the director aim at achieving? How exactly were the techniques used appropriate to the director's aims and how far exactly do different features contribute to the resulting success or failure?

Correspondingly, we show our experience and discrimination, in practice, not by our verbal command of general aesthetic principles, but by our ability to recognize the *specific* features relevant to the construction of this or that *particular* movie. If any implicit generalizations determine the relevance of such specific features—as some would claim—they have to be, at best, very subtle, complex, and continually open to new exceptions. Aesthetics, as a result, is a field in which it is especially hard to satisfy the demand that our judgments should be linked back to their supporting "grounds" by formally valid deductive arguments. Whereas our confidence in (say) particular astronomical or tidal predictions is derived from the broader confidence we feel in the general formulas used to generate those forecasts, the situation in aesthetics is reversed; there, the confidence with which we hold our particular aesthetic opinions is commonly greater than that we would have in any aesthetic generalizations.

Thus, the field of aesthetics is sharply marked off from the fields of geometry, astronomy, and the law. Elsewhere, the demand that the "reasons" for our beliefs should be regularized and certified by appeal to firmly established principles and universal generalizations may be a realistic one. But in artistic matters the relevance of different considerations is so much a

matter of context that generalization becomes well-nigh impossible. To explain why a particular flashback, or balance of episodes, is "masterly" in the context of this particular film, we can hardly produce a universal argument presented in formal terms. There exists no well-established generalization to "prove" that all movies containing such-and-such a flashback are well constructed, and nothing less than that could give our aesthetic arguments the kind of formal "validity" that the geometrical program for philosophy demands.

What does this imply for aesthetics, as a field for formal philosophy? Does it mean that here *reasoning* is out of the question? No. Does it mean that our aesthetic opinions merely express personal *preferences*? No. It means, rather, that aesthetic reasoning and argument can—in the nature of the case—place little weight on generalizations, as such. We recognize what a film director is aiming at; we get the hang of the techniques adopted for that purpose; we consider how efficacious those techniques were for achieving that aim. But this still leaves us far short of formulating universal principles or general formulas with whose help we can transform our aesthetic arguments into formal, quasi-geometrical "proofs".

#### CASE 4

*Linguistic Recognition.* Finally, we should look at some examples of beliefs that are, for practical purposes, entirely well founded, even though both the "grounds" and the "connecting generalizations" are, from the philosophical point of view, quite problematic. Ironically—or understandably, if we recall the earlier, inconclusive dispute between Cratylus and Plato—the best examples for this purpose come from our knowledge of language, which is implicated more or less directly in *all* articulate knowledge.

The things that we hear close at hand, in our native language, we normally understand without difficulty—indeed, without having to stop and think for a moment. After all, we *know* what the words "mean". Yet what exactly does that knowledge

involve? And how might we rationally justify the claim that we do know (or have "well-founded beliefs about") the meaning of what is being said? What kinds of "reasons" could we offer in support of such beliefs, and what principles give these reasons their force and relevance? Our capacity to understand the linguistic "meaning" of spoken words or written signs is evidently fundamental for all rational understanding, yet how can the "recognition of meaning" itself be supported by formal proofs?

If we reflect on this question a little, we shall find that the problems raised by Heraclitus and Cratylus have still not been finally settled. We see chalk marks written with care on a blackboard; or a large, clearly painted warning notice; or calligraphic writing on a parchment. We hear carefully enunciated speech, or a friendly conversation, or the tones of a familiar voice. We watch a sequence of deaf-mute signs, or feel out the raised pattern on an impressed page of Braille type. Provided that the language and script (or signaling system) are familiar, we in each case "know" what is meant at once. Painted or shouted, hand-signed or printed in Braille, for instance, the word STOP calls for no interpretations, hypotheses, or speculations. Either we know what the word means or we do not, and if we do, that is that. If pressed for our "grounds", we can only gesture toward the word itself; if challenged for a general principle of inference, we can only recoil in mystification.

Suppose, for instance, that a philosopher points at a road sign and asks us to *prove* that it says "STOP." How are we to take his question? Given the sign to look at, what further evidence or argument can he be demanding? In this kind of case, seeing is surely believing, and knowledge scarcely requires any formal "proof". Either you can read, or you can't. Either you see what the sign says, or you don't. Either you know what it means, or you are some kind of foreigner, or an infant, or dyslexic, or otherwise handicapped. As to *proving* what it says, or presenting a formal justification for the belief that it says "STOP"—all such suggestions are beside the point.

This final class of cases is important for two reasons. In the first place, although the architectural model of knowledge and belief—with its careful, systematic structure of "grounds", "connecting principles", etc.—is seemingly irrelevant to our linguistic knowledge, this surely does not affect either our confidence that we know our native tongues perfectly well or our conviction that we have every reason (every "reason" that the nature of the case admits of) for believing that the words we see and hear mean what they evidently do mean. This is so because we learn to understand language in normal cases directly and immediately—at a glance, or whatever—without having to think things out, calculate, or infer what the meaning must be.<sup>4</sup> Thus, one familiar kind of knowledge/well-founded belief/type of "reasons", at least, completely eludes the formal, geometrical type of analysis.

In the second place, as Cratylus insisted at the outset of philosophy, just because our understanding of language is fundamental to so many other intellectual capacities—just because so many of those faculties take, in fact, an explicitly linguistic form—any *genuine* intellectual shortcomings at this point would have far-reaching implications for the rest of philosophy. We can "prove" in a strictly formal manner that the angles of a triangle "must" add up to 180 degrees; yet we cannot apparently "prove", with anything like the same rigor, that we understand the meaning of any English words or sentences—including that conclusion and the argument on which it depends. ("What formal proof can you give that the word *triangle* means what you take it to mean?") So if we were really obliged to give formal proofs of *everything* that we could legitimately claim to "know", or to "believe with good reason", the question would very soon arise whether—strictly speaking—we can prove/know/have well-founded beliefs about *anything whatever*. If we follow the formal program for philosophy through

<sup>4</sup> In exceptional cases, of course, we may have to "figure out" what some word or phrase means, as when I infer that the word "Crow" is being used to refer to an Indian tribe, not to a bird.

unhesitatingly, all the way to this point, we shall accordingly find ourselves already headed down one of the roads toward complete philosophical skepticism.

## 8 The Roads to Skepticism

In this phase of our discussion, we have set out to show just how many philosophical questions are generated by the formal or geometrical program for philosophy as originally initiated by Socrates and Plato. All the problems brought to light in the preceding chapter represent, in fact, standard topics of philosophical debate. The philosophy of science takes the assumptions that underlie all "predicting" as one of its central topics, the nature and functions of scientific theories as another. Our knowledge of material objects, or the so-called "external world", is a chief preoccupation of general epistemology. The problem of other minds, or the so-called "internal world" of the mind, is a similar preoccupation of philosophical psychology, and so on. Even in fields like aesthetics and the philosophy of language, where Plato's quasi-geometrical model fits least well, the formal program still has merit of highlighting recurrent perplexities about the nature of artistic taste and linguistic understanding. (At the very least, the absence of general aesthetic proofs and principles, and the difficulty of providing any explicit justification for our knowledge of language, indicate the need to analyze our experiences of art and language more

deeply.) In all these different ways, pursuing the Socratic ideals of *the examined life* and *the criticized belief* with the full rigor of formal mathematics and logic has yielded a fruitful harvest of philosophical insight and ideas.

Yet this pursuit has also yielded a harvest of thistles. The more consistently philosophers have obeyed Socrates' injunction—that we should discover and face *all* the hitherto concealed presuppositions of our beliefs—the more uncertain it has become whether—by the strict, formal standards of that philosophical program—*any* of those beliefs are genuinely “well founded”. As a mental discipline, the Socratic approach is fine. But, as an exercise in epistemology—for showing what types of beliefs/knowledge/reasons actually come up to the philosopher's standards—its eventual outcome would surely be something of a disappointment, even to Plato himself. Again and again, the more rigorously and uncompromisingly philosophers have adhered to the formalism of their initial program, the more inexorably they have been driven toward an equally uncompromising skepticism.

Leave aside the linguistic skepticism of Cratylus and his modern successors. Several other lines of argument lead in the same general direction. They meet at two central and complementary points, which we shall look at in this chapter. (1) Suppose we interpret the Platonic ideal of “rational understanding” (*episteme*) with all possible strictness; it turns out, in retrospect, to have been an unrealistic ideal to apply, *even in the case of geometrical knowledge*. That being so, it is beside the point to criticize *other* kinds of belief as “ill-founded”, simply for failing to measure up to that standard. On a strict interpretation of the standard, *nothing* can measure up to them, not even geometry itself. (2) For an adequate philosophical treatment of reasons, knowledge, and belief, we should look at something more than the formal arguments supporting our claims to knowledge and belief and place those arguments in a wider human context. Thus, at the very least, we should consider also the general “concepts”—the points of view, patterns of interpretation, etc.—that we have already accepted when we first

formulate our beliefs, that is, the “concepts” whose relevance and adequacy are assumed in framing the very questions to which those beliefs are answers.

People who see the sky as a solid, two-dimensional dome or vault, for instance, will not even ask the same astronomical questions as people who see it is boundless, three-dimensional space. Far from being in a position to *agree or disagree* about astronomy, as a result, the two groups will not even share each other's *concepts and problems*. So, on a deep enough level, a shared understanding or body of knowledge presupposes a common point of view, a common pattern of interpretation and body of concepts. Any philosophical thesis that all men have access to certain universal, “necessary” truths (e.g., the truths of Euclidean geometry) takes for granted, therefore, the further thesis that all men must necessarily employ the same basic (e.g., geometrical) concepts.

Let us take up each of these two points in turn. To begin with, then, the philosophical problems we have been considering share certain quite general features. In one way or another, all are concerned with *type-jumps* and *trans-type* inferences, that is, with arguments in which a “conclusion” of one kind is supported by appealing to “grounds” of another kind.

In Case 1(1), for instance, we made predictions about *future* eclipses or tides, and backed them up by referring to the pattern of events in the *past*. In general, we had accordingly to ask, “How is such predicting or forecasting possible at all?” and the formal program interprets this problem as meaning, “How can arguments from the past to the future achieve any strict, quasi-geometrical validity?” In Case 1(2), we presented scientific doctrines in novel *theoretical* terms, and backed them up by observations reported in *everyday* language. How can such everyday experiences be used to justify novel scientific theories? More specifically, Can there be any strict, quasi-geometrical arguments from statements in everyday language (considered as “grounds”) to novel theoretical doctrines (considered as “conclusions”)? In Case 2(1), again, how can we justify the transition from facts about what an agent's situation *is* to ethical

assertions about what that agent *ought* to do? Alternatively, in the other cases, we recognized Father's anger or the real color of the curtains or the merits of a Hitchcock movie or the meaning of a printed word, and we cited as supporting "grounds" facts of other types—Father's flushed cheeks and gruff voice, how the curtains looked to my eyes in the candlelight, etc., etc.; and the formalist philosopher can at once respond with the general question, "On what conditions are such type-transitions possible at all?"

Taken by itself, the question "How is a particular human capacity—for aesthetic discrimination, forecasting, linguistic understanding, or whatever—possible at all?" need not, of course, be interpreted as a question about the formal validity of the associated arguments. (We shall be looking at some alternative interpretations in subsequent parts of this book.) But if we *do* take the question in this way, it has some characteristic and unavoidable consequences which throw a good deal of light on the roots of philosophical skepticism.

The classical statement of this connection is by the early eighteenth-century Scottish philosopher David Hume. Hume made the point with special reference to ethics. Ethical beliefs (he argued) all have to do with what *ought* to be done/to be the case/to be preferred . . . ; whereas the grounds we use to support those beliefs all have to do with what *is* the case. And how, pray, do we make this transition from *is* to *ought*? All too often, instead of making explicit the principles by which they justify this step, people jump from factual grounds to ethical beliefs, from "is" to "ought", without saying how they are doing so. Yet, within the limits of a formalist philosophy, what valid ways of crossing that gap are available?

Hume is often taken to have asked this question in an ironical, even rhetorical tone. People understand him to imply that no such formal justification could *conceivably* be given. (How could any set of factual, "is" statements ever *entail* an ethical, "ought" conclusion?) Alternatively, however, it is worth facing the question head on—as Hume very likely intended us to—and

asking ourselves just what sorts of "connecting principles" might be invoked to justify making such a step. Certainly, in making familiar, everyday ethical claims—whether about right or wrong, good or bad, praise or blame—we are in the habit of appealing to circumstantial facts, and take these facts to be *relevant* to the ethical conclusion:

"Jim ought not to spend so much on gambling"

"Why?"

"The way things are now, he can't even pay for his children's food" . . .

At a first, practical level, we would establish the relevance of those facts by citing everyday maxims and principles, for example, a general rule that providing for one's family ought to take priority over luxuries and pastimes. Yet what if a philosopher challenges those everyday maxims? How is any further, more solid foundation to be provided? The formalist program implies that ethical beliefs can gain further support only from some even more general, abstract and universal "super-principle", which can underpin not just this particular maxim but the entirety of ethics. From this point of view, particular moral beliefs are only as secure as the general philosophical ground on which they rest; and the central question for philosophical ethics then becomes, What confidence can we have in the validity of any such super-principle?

Unfortunately no single philosophical super-principle for ethics has won any general acceptance. From Socrates to Sartre, from Epicurus to Erikson, many different doctrines have been advanced to justify our ethical interpretations of experience. Some of these have been stated in terms of consequences, for example, the famous "utilitarian" principle, that the ultimate justification of all ethical judgments must refer to "the greatest happiness of the greatest number". Sometimes, they have been stated in formal terms, as with Kant's principle of the "categorical imperative"; sometimes, in psychological terms, con-

cerned with the "realization of the self"; sometimes in theological terms, that link beliefs about what we "ought" to do to the divinely decreed "function" of humanity.

Given all these rival super-principles, how are we to choose between them? How can we hope to establish any one of them as absolutely and universally correct? In Plato's eyes, the true Nature of the Good must appear as self-evident to perceptive philosophers as the basic axioms of geometry; but today this kind of appeal to self-evidence—in ethics, of all fields—is no longer convincing. Alternatively, we may be exhorted to take one particular super-principle on trust, or on faith, but this can be done only at the price of shifting our skepticism from philosophical ethics into moral theology. How, for instance, are we to know for certain exactly what function God intended for Humanity? Does the move to theology make our "grounds" any more secure than they were beforehand in ethics? All told, it seems too much to hope that ethical beliefs can be based on rigorous, demonstrative arguments that satisfy geometrical standards of validity and also possess unchallengeably secure foundations.

Historically speaking, it is no accident that this kind of argument first proved attractive in philosophical ethics. Many people have found it quite unsurprising to be told that ethical conclusions are *formally unprovable* by appeal to any collection of facts, however large. (After all, they were already half-inclined to suppose that ethical beliefs were "subjective", that is, personal matters, lacking any firm foundation in fact.) Yet, from an entirely general point of view, the formal situation is not really any better elsewhere, not even in natural science, which is reputed to be "objective" in a way that ethics can never be. For the difficulties that arise about type-jumps have to do, not merely with the step from "is" to "ought", but with all similar steps. To give only one instance: how are we to demonstrate anything at all about the *future*, seeing that all the evidence for our forecasts has to do with the *present and past*? Skeptical arguments formally parallel to Hume's arguments about ethics can quickly drive us back again onto philosophical

"super-principles", and agreement about these super-principles is no more unanimous in the philosophy of science than it is in ethics.

Evidently, if our forecasting techniques have been put to the test—as, in the nature of the case, they must have been—only in the past and present, we cannot hope to "prove" anything about the future in a strict Platonic geometrical manner. For, if we simply take for granted without examination the continued efficacy of those beliefs, future as well as past, this will simply make all the resulting "proofs" circular and so formally invalid. (The continued reliability of those forecasting techniques will then be merely one further illustration of the very thing we were calling in question in the first place, that is, the general legitimacy of extrapolating from past to future.) Yet what hope have we of finding some further, philosophical super-principle—some "principle of induction" or general thesis about the "uniformity of Nature"—which can make our forecasts *rational* by Plato's standards? Formally speaking, any such general philosophical principle leaves our epistemological problem just where it was. For what assurance can we have that this very super-principle, in turn, *will continue to be trustworthy*? Are we to say that this principle is self-evident? Are we expected to take it on trust, or on faith—or what? If the principle had really been self-evident, philosophers would scarcely have spent so much time and energy arguing about it; while calling the validity of all predictive arguments a matter of faith brings its own new perplexities. (Are different ways of formulating arguments in science "rational", depending simply on what general philosophical principle you happen to accept *on faith*?)

Once we commit ourselves unreservedly to the formal program for philosophy, therefore, skepticism becomes a clear and inescapable problem, not merely in such reputedly "subjective" fields as ethics and aesthetics, but in all areas of experience other than the purest of pure mathematics. (Even there, as we shall see, it remains a problem, though not so clearly and inescapably.)

Confronted by this fact some philosophers have resorted to a further intellectual sidestep in a last hope of avoiding complete skepticism. The aim of this further move is to preserve the necessary, or "demonstrative", character of our substantive *arguments* (e.g., those by which we support predictions) at the price of reinterpreting their *conclusions*. Let us see how they do this.

Rather than taking such forecasts at their face value, namely, as genuine statements about the future, they invite us to regard them instead as disguised summaries of relevant past experience:

When we say that we have reason to believe that there "will be" a lunar eclipse tomorrow night, all that this statement really means is that corresponding regularities *have been* apparent in the past record of lunar eclipses, etc., etc.<sup>1</sup>

In this way, though at the cost of some paradox, a step from retrospective "grounds" to predictive "conclusion" is reinterpreted as a simple logical transformation. The supporting grounds in this argument are *explicitly* about the past; the conclusion also is now said to be *implicitly* about the past. As a result, the step from the past records to the misleadingly future conclusion becomes a purely *formal* one—like the arithmetical step from a collection of data about all the individual inhabitants of Chicago to a conclusion about "the average Chicagoan".

A similar, so-called "phenomenalist" move can be proposed in other cases equally, with the same aim, of escaping from the philosophical embarrassments caused by type-jumps. If we take this route as a way of explaining the justification of scien-

<sup>1</sup> Think of other cases in which a verb tense can be misleading—for example, Q: "Who is the man 'Jim' that Joan is talking about?"—A: "Oh, that *will be* Joan's brother." Here, the words "will be" could equally read "presumably is", and no reference to the future is intended.

tific theories, for instance, we shall regard theoretical statements about (e.g.) unobservably small "atoms" as roundabout, disguised summaries of our experimental data, namely, statements recording observable processes on a macroscopic scale. (This position was advanced by Ernst Mach, and has the effect of transforming the step from observations to theory, also, into a mere logical transformation.) Similarly, we can avoid the type-jump from "how things *look*" to "how they *really are*", by construing statements about the physical world of material objects as an economical way of condensing many statements about our visual, auditory, and other sensory fields. (J. S. Mill put this position epigrammatically in the words, "Matter is the permanent possibility of sensation.") In parallel ways, problematic "conclusions" about states of mind, aesthetic merits, and/or linguistic meanings can be transformed into formal consequences of their "grounds" by reinterpreting them as disguised statements about overt behavior, the structural features of artworks, and/or the shapes and arrangements of linguistic symbols.<sup>2</sup>

In all these ways, the philosophical phenomenalist sets out to *guarantee* the formal validity of his chosen arguments without the need for any philosophical "super-principle"—which would merely shift the same old problems onto a more abstract level. All the same, this phenomenalist move is at best only a delaying action, and for most people, the price it demands is a steep one. If we treat our "predictions", not as genuine statements about the future, but rather as disguised assertions about the past, *they lose their whole point*. It is the future we want to know about, not the past. Similarly in other cases: the type-jump from *is* to *ought*, like that from *past* to *future*, is a genuine one and cannot be explained away. In these other cases, also, the phenomenalist's rescue operation gives formal philosophers the strictly valid "proof" they want, only at too high a price.

<sup>2</sup> Note how far this move can be carried. Consider, for instance, the intellectual and emotional charms of arguing that (e.g.) statements about "the Fatherhood of God" really *mean the same as* some combination of related statements about "the Brotherhood of Man"!

For, surely, our moral obligations/the meanings of signs/the merits of artworks/people's personal states of mind (or whatever) are not identical with—or even mere logical transformations of—the relevant factual circumstances/the visible structures of the signs/the formal compositions of the artworks/the overt utterances and behavior of the individuals concerned.

Let the phenomenalist say what he may: *Whenever* our arguments invoke grounds of one type to support a conclusion of another type, the conclusion genuinely *goes beyond* the initial grounds and interprets them *in a new way*. And one feature of this reinterpretation is that our conclusion will always be *logically* independent of the supportive grounds, however full and complete those grounds may be. As a result—in the nature of the case—the correctness of any such reinterpretation is something which can never, by the most rigorous standards of Plato's geometry, be "demonstrably proved".

The same conclusion can be reached from a different direction also. For the question *how* we "reinterpret" our experience, in putting forward a conclusion of a new type, immediately raises the further question, What *concepts* (patterns of interpretation/points of view) do we bring to that interpretation? And that in turn immediately prompts the question, How can we ever demonstrate—what reasons can we ever have for accepting—the validity of those concepts themselves?

From the very beginning of philosophy this has been an unsolved problem, and one that the formal approach has frequently tempted people to sweep under the rug. In theory, of course, genuine rational understanding was always seen to require *both* a formally valid argument *and also* unchallenged (preferably unchallengeable) concepts or ideas as its starting point. Yet the example of geometry focussed attention almost exclusively on the formal structure of arguments in different fields, and the question of their starting point was pushed into second place. It was simply *assumed* that in certain favored fields truly unchallengeable starting points existed, to serve as foundations

for our knowledge. Even though, at the outset, philosophical insight had recognized as self-evident only the fundamental concepts and axioms of geometry, that same insight would presumably—in due course—recognize a similar self-evidence in the basic concepts and principles of other fields also.

So when, in the early seventeenth century, René Descartes once again took geometry (the theory of "extension") as the exemplar and foundation of human knowledge, he followed the same general route as before. At least in geometry, he still believed, our understanding is founded on "ideas" that the reflective mind finds perfectly "clear and distinct". Every normal human being is predisposed at birth to view the spatial aspects of the world in Euclidean terms, and the God-given "clarity and distinctness" of Euclidean geometry guarantees both our consensus about its validity, and also the "necessity" of its principles. What about other fields of experience? In some, such as physics, we could presumably analyze the basic concepts in geometrical terms, and so give them a "geometrical" validity directly. (Descartes' dictum, "The essence of Matter is Extension", meant—in practice—that the basic concepts of physics, the science of Matter, were to be redefined in terms drawn from geometry, the science of Extension.) In others, careful reflection would presumably enable us to identify further "clear and distinct ideas" having a similar self-evident validity and necessity—for example, *God* and *self*—and these would serve in turn as the foundations of, say, a truly "rational" theology and psychology.

That, at any rate, was the formalist dream. The awakening began around the middle of the eighteenth century, when it was at last—grudgingly—recognized that Euclidean geometry itself is not mathematically unique; that the fundamental Euclidean axioms and concepts are not, after all, "self-evidently valid", or otherwise guaranteed by appearing "clear and distinct" to the intellectual insight. On the contrary, alternative systems of formal geometry can be constructed mathematically whose logical coherence and validity are neither more or less complete and certain than that of Euclid's geometry. If the

Euclidean ideas can claim any special authority in practice, this authority is to be derived neither from their apparent "self-evidence" nor from their "formal validity" alone. Some other considerations must be found. Toward the end of the century, therefore, we find Kant embarking on one final attempt to demonstrate *a priori* that one-and-only-one system of spatial magnitudes and relations (viz., the Euclidean system) is appropriate to the rational organization of actual experience. Any rational thinker was bound to structure his experience in ways conforming to the Euclidean spatial categories—or so Kant hoped to show—but a century later physicists were finding scientific applications for the new non-Euclidean geometries. So, by now, few people would still claim any wholly unique status for Euclid's system, either within pure mathematics or in practical application.

Yet if this change is definitive and final, it has drastic implications for our present, formal approach to philosophy. Once the validity of geometry—the original exemplar of *episteme*—is called in question, the whole ideal of *episteme* itself comes in doubt. At this point, accordingly, we face a basic ambiguity. Discrediting and demolishing Plato's own beloved geometry as the exemplar and paradigm of true rational understanding could be seen, on the one hand, as sweeping away the last barriers and so leading to the skeptic's final triumph. If we do not strictly speaking "know" anything, even about geometry, what then *can* we claim to know? Even in geometry we evidently lack the demonstrative proofs ("well-constructed buildings") based on self-evident basic concepts and axioms ("absolutely firm ground") that the formal program has led us to expect, so we apparently have no further defense left against the skeptic's attacks. *By those standards, we evidently know nothing.*

On the other hand, instead of surrendering to the skeptic, we can use this same discovery to turn the tables on him. After all, the demonstrable certainty and necessity of geometrical knowledge provided, all along, the fulcrum on which the skeptic was himself dependent for leverage when criticizing our claims in other fields. If we could not "prove" our conclusions in

science, in everyday experience, in ethics, or in aesthetics with *geometrical* validity, how then could we claim knowledge, well-founded belief and/or "good reasons" in those areas? Once that fulcrum is removed the leverage that gives skepticism its force disappears. At the end of the day, it seems, we have no choice. The discrediting of geometry as *episteme* compels us to be skeptical *even about philosophical skepticism itself!*

Once the formal program for philosophy is pushed through to the bitter end, then, it leaves us in a double-edged skepticism, not knowing which way to turn. Should we take this outcome seriously? Or should we laugh it off? We no longer have any clear way of judging. One thing alone is evident: Whether or no we take the skeptic's particular conclusion seriously, the general consequences of his whole argument are highly paradoxical.

We may react to these paradoxes in a number of different ways. We may remain in philosophical shock, and contemplate them with a merely theoretical perplexity. We may try to think up even more ingenious logical devices, to circumvent them, and re-establish the validity of knowledge and arguments in other fields of experience. We may (like hard-nosed scientists) make them an excuse for ignoring philosophy entirely; or we may use them (like the storyteller Borges) as vehicles of literary fantasy. But one crucial thing we cannot do. We cannot take them at their face value, or accept their conclusions as having any serious practical relevance to our other purposes and affairs.

David Hume captured this point, likewise, very neatly. So long as we are writing and thinking in abstract terms, in the study, we can take a view of "reasoning", "rationality" and "knowledge" that, in the last resort, makes skepticism inescapable. But when we leave the study and go out into the practical world, the demands of everyday life force quite a different view upon us. Within the study, it may do no harm to say—purely in the abstract—"I don't really know what the true color of the curtains is, or what my father is feeling, or whether the

sun will rise tomorrow, or that I ought not to gamble away my entire earnings . . . "; nor will it do any harm to defend those skeptical claims by contrasting the formal validity of geometrical proofs with the psychological force of other, less rigorous considerations. But let us sit down to eat dinner or play cards with philosophically unsophisticated friends, and these same claims will become terribly misleading. Supposing that we repeat all these abstract disclaimers in a real, practical context, our hearers will naturally and properly react with shock and surprise: "What? Do the curtains leave you totally color-blind? Are you quite insensitive to your father's anger? Have you no confidence at all in astronomical computations? Are you totally devoid of normal moral feelings? . . ." Theoretical skepticism—David Hume thus concluded—is evidently one thing. Genuine practical doubt is quite another.

However much Hume may persuade us, in point of abstract theory, that all arguments in ethics (or science, or aesthetics, or whatever) are technically "invalid", therefore, for practical purposes that conclusion is—on Hume's own testimony—quite immaterial. In practice, we still face the task of deciding what kinds of ethical arguments are *more or less* satisfactory, what kinds of scientific argument carry *more or less* weight, what kinds of features in an artwork are *more or less* relevant to its aesthetic merits, and so on. These are questions that geometrically minded philosophers can give us very little help with. The formal program (as it turns out) consistently distracts us from the question of how we are to discriminate between *better and worse* arguments within the same field of experience, and invites us to concentrate rather on drawing contrasts between the *totality* of "reasons" and "arguments" in different fields. By pitting the totality of mathematical arguments against the totality of arguments in physics (ethics, aesthetics, etc.), the formal approach generates a philosophical Order of Merit, in which *entire areas of experience* are judged to be more or less "knowable", more or less serious, more or less within the sphere of genuine "rationality".

Naturally enough, pure geometry—as such—is automatically

labeled "more rational than" natural science. Geometry, as the ideal of *episteme*, is in any case *hors concours*; and the need for scientific beliefs to refer to the actual world of Nature exposes scientific arguments to uncertainties that arguments in pure mathematics escape. (Descartes himself acknowledged that physics, being *applied* mathematics, can give us only a "moral certainty".) But, from the same point of view, arguments in theoretical physics will nonetheless be allowed a kind of approximate "validity", or probability, or "moral certainty"—just because of their formal, systematic character—of a kind that is lacking in other, more "subjective" areas of experience. Correspondingly, though both ethics and aesthetics rate rather low by these standards, ethical arguments will make a somewhat better show of being "reasoned" than aesthetic arguments; since they frequently appeal to genuinely universal considerations, whereas aesthetic considerations vary from case to case, and so on.

Yet the ground rules of this abstract beauty contest are open to challenge, and should provoke critical questions about the entire Platonic, or geometrical ideal. Should the formal philosopher's preference for systematic, quasi-geometrical structures carry unqualified weight with us *regardless of context and purpose*? Are arguments having such systematic formal structures necessarily sounder and more powerful than others, *in all contexts and for all purposes*? Or should we, rather, begin by accepting the human purposes embodied in particular fields of experience as our starting point, and then consider how those purposes enable better and worse arguments to be discriminated *within* any one such field? We are thoroughly familiar, in practice, with ways of criticizing movies, recognizing each other's feelings, discussing the rights and wrongs of actions, and so on, that are intelligible to all experienced hearers among our fellows; and, as a result, we engage without embarrassment—outside the study—in a dozen intellectual activities that abstract philosophical skepticism dismisses as "nonrational", if not downright impossible. Instead of being too beguiled by the formal philosopher's beauty contest, therefore, we should postpone judgment

on the "validity" of arguments in other nongeometrical fields of experience until we have seen just what the nature and purposes of the fields in question require.

Where our experience can, in the nature of the case, be codified into systematic "bodies of knowledge"—that is, in the exact sciences, law, and a few other fields—we can perhaps use the Platonic ideal of knowledge as the City of Truth, comprising "well-constructed buildings" erected on "firm grounds", to throw useful light on the nature of "reasons" and "reasoning". Elsewhere, this model seems to throw darkness rather than light. (It only increases the obscurity surrounding, for instance, our capacity to interpret signs, to discuss works of art, to recognize each other's feelings, and so on.) If we are to view those other fields in a proper perspective, therefore, we shall have to re-enter the philosophical labyrinth from a different direction. Instead of asking:

"What forms of argument need to be employed,  
if we are to have genuine 'reasons' for believing  
what we do?"

we must step back, put those forms of arguments in a context, and ask instead—more generally—

"What kinds of justificatory activities must we  
engage in, if we are to convince our fellows that  
these beliefs are based on good 'reasons'?"

Rather than linking the idea of "good reasons" rigidly to that of *valid arguments*, that is to say, we should look more broadly at the connections between "reasoning" and the presenting of *acceptable justifications*. If we take on this broader task, it will mean following David Hume out of the study—where only verbal arguments and inferences are available for scrutiny—into the wider world of human activities, of which "justificatory" activities are simply one aspect.

How do all the intellectual activities collectively embraced

under the heading of "justifying"—the giving of reasons in support of scientific theories, in defense against legal charges, in explanation of aesthetic preferences, etc.—fit into the broader patterns of human life and activity? To tackle this question will mean approaching philosophy from an entirely new direction: treating the subject, not as a formal science—as an extension of logic and geometry—but as a human discipline, allied more closely (perhaps) to cultural anthropology. And, as Hume implied, this entrance to philosophy will lead us into the subject, not by way of the study, but rather by way of all the different practical forums, or contexts, in which "reasoning" and "justifying" go on: the art gallery, the law courts and the scientific laboratory, the familiar world of conversation and debate, of everyday feelings, political controversy, practicality—in short, the world of *common sense*.

III

The  
Philosopher  
as Anthropologist

## 9 The Claims of Common Sense

Let us pick up the historical threads again. If philosophy as we know it bears the marks of its origin in Classical Greece, so too the circumstances of its rebirth in seventeenth- and eighteenth-century Europe have left visible effects to this day. In some respects these circumstances closely resembled those surrounding the work of Socrates, Plato, and their contemporaries. In France and Britain, Germany, Holland, and Italy alike, the sixteenth century saw a great secularization of learning, together with a new spread of literacy.

As a result, for the first time since antiquity educated people at large developed the feeling that they had the power to take command of their fates. This liberation transformed the political and religious sides of life quite as much as it did the works of the intellect. It helped to generate not just the ideals of Western democracy and liberalism but the very notion of constitutional government; not just Protestantism and the rise of national churches but the very idea of religious freedom. Meanwhile, new economic techniques—first, of organization and distribution, subsequently of production as well—were making it possible for people to lift their hands from their plows and

grindstones, swords and saddles, and to recognize how new inventions and techniques might enrich and transform the material side of human life.

As to the secularization of learning, throughout the Middle Ages European scholars had been almost exclusively "clerics", which meant both literate men and men of the Church. (Not many other people had much use for literacy.) As scholars, these churchmen could be subtle, original, brilliant. They could take the intellectual problems left unsolved by Aristotle and his immediate successors (e.g., the nature and measure of accelerated changes) and make major advances toward their final solution; they could develop the art and theory of logic to a new level of sophistication; and they could recreate, in a new form, the great body of classical learning that had gone into cold storage after the decline of the Roman Empire. Yet they did so, always, within a predetermined religious framework. Of itself, that framework did not necessarily constrict the intellectual originality of medieval scholars, still less prevent it. Yet it did much to direct their imaginations, and it imposed on them a spirit of humility and self-limitation, in sharp contrast to the wild, sometimes even brash, attitudes of independence that were to develop from around A.D. 1500 on.

For medieval thinkers, philosophy, science, and other intellectual enterprises were accordingly content to be "handmaidens of theology". All human wisdom was, presumably, a product of Divine illumination. Where the Light of God did not shine, the human intellect was inevitably blind. So there was little to be gained by pursuing the classic philosophical problem of knowledge beyond a certain point. How was it possible to guarantee the unaided human intellect rationality, knowledge, or true belief? The assurance of a perfectly benevolent Deity could put an end to such questions, for such a guarantee could come only from God. (At the final hurdle, even René Descartes circumvented the logical difficulties of his position by this traditional device.) A renewal of the philosophical debate in its pure form required a new faith in the autonomous powers of the human intellect. So long as scholarly learning and debate survived pre-

dominantly under the wing of the Church, that could scarcely happen.

The necessary changes began in the city-states of Italy, and quickly spread to northern Europe following the Protestant Reformation. In Florence and Pisa, Padua and Venice, local rulers achieved a new political independence, while at the same time they had both the wealth and the taste to patronize artists and writers, scholars and scientists, frequently outside the traditional structure of universities and monastic orders. On the one hand, this development led to a new concern with "the humanities". The ecclesiastical learning of the Middle Ages had concentrated on those aspects of the Greek and Roman traditions that served their own purposes: Greek logic and metaphysics, Roman law, together with certain parts of medicine, astronomy, and other practical arts. By contrast, the writings of Plutarch and Aeschylus, Aesop and Lucretius, had largely fallen out of sight: all thought about "the human condition" had to be carried on within specifically Christian terms of reference. Now, with secular-minded rulers patronising independent scholars, the playwrights and poets, historians and biographers of Greece and Rome could at last be appreciated at their true value.

On the other hand, the scientific debate—which had never been totally lost but had continued, even though slowly, throughout the Middle Ages—picked up new momentum in the sixteenth century. It was no accident that such men as Galileo and Vesalius were able to work most effectively within the new North Italian setting. Something similar was possible, also, in the Protestant countries of northern Europe, notably Holland and Britain. This is not to say that Protestant theologians as such were any more liberal-minded than Catholic ones, still less that they themselves had a secular outlook. But those very same social and political circumstances that permitted the mercantile powers around the Baltic and the North Sea to escape the ecclesiastical dominance of the Roman Church also loosened the ties within those countries between religion and learning. So, for all that *religious ideas* remained powerful and influen-

tial, the power of *ecclesiastical authority* was irretrievably weakened.

One of the crucial circumstances that made possible both the Protestant breakaway and the secularization of learning was the development of printing. Humanism and literature alike depended on a sufficient degree of general literacy. The traditional culture of the monasteries and the schools had made do with manuscripts: the new secular learning was made possible by the supply of printed books, and helped in turn to swell the market for them by encouraging the art of reading. In this way, general literacy, the book trade, and secular learning developed as three aspects of a single historical change; and all of them were to be found growing up most vigorously in those states where manufacture, commerce, and overseas trade had created the economic basis for political independence.

Although in these respects the circumstances of the European Renaissance resembled those of classical antiquity, in others the later situation was quite new. Ironically, one of the things that had made it possible for the Hellenes to do what they did for human thought was their *arrogance*. Whether or not the new science of geometry really exemplified the "true" method of rational argument, the Greek philosophers were firmly convinced that rationality had one-and-only-one proper method, and that it was their privilege—as Hellenes—to have discovered and formulated that unique method. The Medes and Persians, Egyptians and Babylonians, might have had great and ancient empires, but their ideas were superstitious and mythological; while other less notable "barbarian" peoples lacked both culture and civilization. So, in practice, human reason meant for them *Hellenic* reason. They did not seriously consider the possibility that intellectual authority might have multiple sources, but inquired always about "the" Form of "the" Good, or about "the" Nature of "the" State.

In the *Republic*, for instance, we never find Plato seriously considering the notion that people in different cultures or epochs might quite reasonably organize their political affairs on basi-

cally different principles. At most, the differences between rationally ordered societies at different places and times were, for him, so many variations on the common themes of a single "rational" political theory. (That is one natural consequence of describing the *social* relations between individuals and institutions on the analogy of the *functional* relations between the organs and parts of the living body. Such analogies tempt us to sidestep the question of whether parallel institutions in different societies can ever resemble one another as closely as—say—different people's hearts or kidneys.) True, a few major historians in classical Greece developed a healthy sense of the actual variety of peoples and customs—notably, Herodotus. Yet much more typical was the attitude of Thucydides, for whom history was the record of universal human character or personality, displaying its virtues and vices in the face of great events.

In sixteenth- and seventeenth-century Europe intellectual curiosity started from quite a different place. By this time historians had a much longer and broader perspective and, as a result, variety was built into their experience on every level: social and political, cultural and religious. The classical Greeks could go back only a few centuries to the Trojan War, and this was itself already the stuff of myth and legend as much as of authentic history. By contrast, the Europeans of the Renaissance were heirs and inheritors of two far longer traditions: seeing themselves in relation both to the biblical record, from Abraham on, and to the classical Greeks and Romans. Indeed, one basic issue dividing seventeenth-century thinkers was the respective merits of the Ancients and the Moderns. Did the artistic and intellectual achievements of classical times surpass anything that could be aimed at in their own era? Or did human progress hold out the possibility of still greater achievements for the present and future? (The very *duality* of this historical inheritance was an additional challenge. It was one thing for medieval Christian orthodoxy to reconcile the law of Moses with the teachings of Jesus; it was something yet again to bring both of these into proper relation with Roman law, Aristotle's political theories, and the rest.)

Familiarity with the world of their own times reinforced this

sense of human variety. Although European writers might compare themselves favorably—as “civilized” peoples—with the “primitive” peoples of earlier times and other continents, this contrast cut nothing like as cleanly as the earlier contrast between “Hellenes” and “barbarians”. In the first place, the inferior category of primitive peoples included many of their own ancestors (e.g., the Ancient Britons), and there was a continuous gradation from those rude times to their own. In addition, the origins and attitudes of their contemporaries were very varied. London and Cracow, Naples and Stockholm, might in many respects be parts of a single culture and continent, but Poles and Englishmen, Swedes and Neapolitans, were much more conscious of their own differences than, say, the classical Spartans and Athenians had been.

In part, indeed, the Protestant Reformation was a reaction against any attempt to impose an artificial uniformity on the religious minds of Europe; in part, it became in its turn a source for increased awareness of cultural variety and political diversity. From now on, there was no longer a single, acknowledged source of spiritual and religious authority, centered unambiguously in Rome. As a result, a whole new set of questions became active, about the grounds for preferring this Church to that, this set of beliefs to that; and these new choices confronted the intellectual and religious consciences, not just of communities, but of individuals.

The likenesses and differences between classical Greece and Renaissance Europe are apparent in the new directions taken by philosophy from A.D. 1600 on. The relations between the natural sciences and the humanities, in particular, were quite transformed. Seventeenth-century natural scientists—despite their conviction of being true innovators, with an entirely novel mathematical and experimental philosophy of nature—quickly established an intellectual program for physics continuous with that of classical natural philosophy. Isaac Newton, for instance, had no doubt that he was bringing to light “the” laws and prin-

ciples of the natural world; and the overall vision of natural necessities and universal laws, established originally in Plato’s *Timaeus*, inspired equally the “new philosophy” of Galileo and Descartes, Newton and Leibniz. By contrast, when scholars turned to study human history, laws, and customs, there was room for a novel sense of multiplicity. Beginning in law, urgent practical problems compelled historians and jurists to recognize that the principles of Roman law could not, after all, possess the kind of uniqueness and universality the Medievals had been tempted to claim. Instead, they had to ask whether systems of law did not depend inescapably on modes of life—whether different peoples in different epochs might not require different customs, institutions, and codes of law, so that the very fabric of human society and institutions would legitimately vary from one place and time to another.

This same sense of multiplicity was sharpened as a result of the “expansion” of Europe. With the establishment of trade routes to India, China, and the Americas, it had to be recognized that other ancient and venerable cultures, animated by different religions, principles, and systems of ideas, had flourished in distant parts of the world throughout the whole course of recorded history. If the main themes of classical philosophy had been uniqueness and universality, the seventeenth and eighteenth centuries were thus compelled—beginning in jurisprudence and ethnography—to come to terms with a new theme of human diversity.

If we compare the ways in which the philosophical tradition developed on its first appearance in classical Greece, and after its rebirth in modern Europe, we find one further curious and striking contrast. For the Greeks natural philosophy set an example to social and moral thought, but in modern Europe it has been the other way around. In Plato’s *Republic*, for example, Socrates asks whether we have any assurance that the affairs of the *polis* can be governed by universal patterns and principles and finds the guarantee he seeks by pointing to the stable, law-governed order in the astronomical *cosmos* as an example and inspiration. (The same insistence on the harmony

between the *cosmos* and the *polis* is to be found in most of classical Greek philosophy.) In modern Europe the argument has gone the other way. The fundamental fact of diversity was first recognized in the human sphere. Far from law, morality, and politics conforming universally and at all times to a unique set of rational principles, different sets of fundamental concepts and principles apparently operated in different milieux; so any suggestion that social arrangements in Protestant Holland and Muslim Persia, Confucian China and Aztec Mexico, must be rationally judged by the same principles and criteria was called in question. On the contrary, the burden of proof seemed now to be reversed; instead of our *presupposing* the universality of rational principles in ethics and politics, any such universality had to be clearly *proved*.

Failing such a clear proof, the initial presumption was now that different epochs and cultures could legitimately adopt alternative sets of institutions and customs, depending on the facts of history, religion, climate, and so on. And in due course natural philosophy (or "science") finally began to move in the same direction—finally began, that is, to take seriously the possibility that, in different historical epochs and different cultural situations, scientists themselves might quite legitimately have based their work on different sets of fundamental concepts and principles. But this has happened seriously only during the last hundred years. At the outset, natural philosophy and social thought in Modern Europe pushed in opposite directions. For Descartes and Newton, as for Plato earlier, ideal knowledge was still exemplified by Euclidean geometry. Descartes' hope still was that all serious branches of intellectual inquiry would eventually achieve the timeless, demonstrative and "necessary" character of geometry. (Indeed, for Descartes, no field of intellectual inquiry could yet make any serious claim to "rationality" until it had shown its power to move in that direction.) By contrast, for Giambattista Vico, who was the prophet of modern social and historical inquiries, the vaunted "necessity" of Descartes' geometry was a mere artifact. If geometrical propositions and relations present themselves to us

as *absolutely* true, that is because the whole system of geometry—together with all its constituent "truths"—is something of our own making. (*Certum quod factum*: we can achieve "self-evident" understanding only about the products of our own handiwork.)

To find an example of true outward-looking understanding or knowledge, Vico argued, we must seek this rather in the sphere of human affairs—in the laws, customs, and institutions that people living at different times and places have fashioned as alternative responses to the common problems of human life. If we find ourselves able to fathom the institutions of classical China, Pre-Colombian Mexico, or ancient Egypt at all, that can only be because the general similarities in human nature and human life—people's needs, and the institutions they have developed in the course of learning to deal with those needs—have created a shared basis of "common sense" sufficient to make such an understanding possible. So, for Vico, true certainty, knowledge and understanding, came to be exemplified less by formal geometry and the claims of logic than by history or social theory—and so by the claims of "common sense". What entitles us to confidence in the universal validity of our arguments is not their logical, quasi-geometrical rigor; rather, it is the shared human consensus that underlies the adoption of similar means—technical, political, and/or intellectual—to meet similar problems, and thereby guarantees their applicability. In Part II, geometry and the claims of formal validity were our dominant theme. Our leading theme here, in Part III, is "common sense" and the conditions on which people can achieve "agreements in concepts and points of view".

Having acknowledged the legitimate diversity in human customs and societies, European thinkers dealt with it—and with its implications for ideas about rationality—in a number of ways. Their first important insight, indeed, just was the fact that this discovery had "rational" implications at all. When the classical Greeks drew a sharp distinction between Hellenes and bar-

barians, this had not been mere parochialism or chauvinism. They were, to the best of their knowledge, the first and only people to have taken the step onward beyond mythology to philosophy. Thus, for the time being, the choice really was one between the rational methods of Greek thought and the mythological systems of other people, not one between alternative systems of law and morality, science and art, all which could equally claim to have a rational foundation.

In modern Europe all of that was changed, and no one people or epoch could claim unique "rationality". This fact was apparent, first of all, in the field of law and institutions. Despite the political decline of the Roman Empire, the ideas and practices of Roman law, as codified by Constantine, Justinian, Theodosius, and others, had retained much of their authority. In that form they served as the basis for juridical practice in much of Western Europe, and were thought of as being—potentially, at least—of universal relevance and application. (Even today, they preserve something of this authority as far afield as South Africa, where the legal principles and institutions are based on so-called "Roman-Dutch" law.) By the sixteenth century any assumption that the principles of Roman law were adapted to all the problems of human life and society was beginning to create acute difficulties. In many cases, the very words in which the Roman code was drafted (e.g., "consul") referred to offices and institutions that had been abandoned or transformed over the centuries. Therefore, it had become doubtful whether any code of law could really be framed in terms directly relevant to societies and periods remote from its origins; the next question was how to recognize the changes needed to modify such a code so as to meet the needs of a fresh epoch or culture without losing its original spirit. This became a major topic of intellectual debate among legal scholars in western Europe, with men like Bodin, Grotius, and Seldon attempting to spell out the procedures by which the legal tradition was to be adapted to the needs of new peoples and new ages.

Alongside these practical problems in the law, the work of travelers and explorers was prompting other more speculative

questions. From the time of Prince Henry the Navigator, the Portuguese—followed later by the Dutch, the British, and the French—had been establishing trade routes around Africa to the Far East. These new contacts helped the Europeans to become far more aware of exotic peoples and distant cultures. By the middle of the eighteenth century the map of the globe was approaching closure. Cook and Bougainville were filling in the empty spaces of the Pacific Ocean, and bringing to people's attention an apparently idyllic life in the South Sea Islands. (This unsuspected paradise particularly caught the imagination of Europeans. If, instead of the life of nature being "nasty, brutish and short", *savagery* after all comprised sun bathing, sexual freedom, and peaceable coexistence, what was the special virtue of *civilization*?) In a dozen ways, as a result, the Europeans' growing familiarity with distant peoples and cultures brought in question traditional assumptions about their own modes of life; and social criticism found expression, either through exotic novels about (say) Abyssinia, or through fictitious commentaries on European life by imaginary visitors from other cultures.

Consequently, the thinkers of the European Renaissance had reliable information both about a far greater span of historical time and about a far greater variety of peoples and cultures than the philosophers of antiquity had had. Far from being able to regard all the varied laws and customs, institutions and beliefs, of different peoples as mere variations on a single "rational" pattern, they had to accept some basic variety and diversity as inescapable. The evidence of history and ethnography could no longer be set aside as irrelevant to questions about the "rational" organization of politics and society. Instead, they turned to face the consequent questions: about the deeper causes and relationships underlying this variety, and about the processes of historical development that can transform the modes of life (and reasoning) of a nation or people. Thus, a brand-new set of ideas entered social philosophy. Every historical period or cultural milieu came to be seen as having its own distinctive character, so that on every level of life one could recognize features that were either "typical" or "exotic", either

"ahead of their time" or "anachronistic". To understand a culture meant developing a feel for the ways in which these features hung together so as to form a consistent pattern. Stirrups and armor, serfdom and feudalism, undercapitalization and illiteracy, all went together at one place and time; trade, liberalism, stovepipe hats and hansom cabs at another.

Going more deeply, people began asking what underlying factors combined to generate this variety in human life, and whether any consistent and general process of historical change brought forth different outcomes in regular succession. Did the character of any particular culture and period, with its peculiar institutions, habits, and tastes, represent—as Montesquieu speculated—one particular equilibrium between the dozen or so different types of social variables? Or was there—as G. B. Vico believed—a recurrent sequence of divine (or poetic), heroic, and human (or rationalistic) phases, through which all aspects of human life developed historically in different nations and cultures?

Here again, a vast literature has accumulated since the early eighteenth century, and we could all too easily be sucked down into a morass of detail. What matters most for our present purpose is to sift out the central philosophical *questions* that were formulated in response to this recognition of diversity. To chronicle even in outline the *answers* given to those questions by eighteenth- and nineteenth-century writers would confuse matters. At times, something like the old unitary ideal showed signs of reasserting itself. Some nineteenth-century German philosophers, for instance, saw their own countrymen as the "Hellenes" of the modern world, whose well-organized State embodied the Rational Ideal, toward which the Tide of History had at last brought the previously disorderly conduct of human affairs. Elsewhere, the sense of variety and diversity fragmented still further. Maybe, the authority of different ethical values was limited not just to the individual community but to the individual person, so that each human being was individually responsible for his own standards of "rationality". If human beings, as such, had no necessary and universal—or "essential"

—nature, the basis for values could apparently be found only in the day-to-day—or "existential"—experience of each person's own life.

One way or another, it became seemingly impossible to impose absolute or universal standards, or principles, on problems and situations arising in different periods and places. This problem remains very much alive for us today. So much is this so, that many twentieth-century anthropologists have adopted an entirely "egalitarian" attitude toward peoples and cultures. As they see it, we have no business raising questions about the comparative rightness or wrongness, desirability or undesirability, rationality or irrationality, of customs, institutions, and practices in different cultures. Each culture defines a separate "world", with its own idiosyncratic mode of life, and it is question-begging to suppose that parallel institutions having the "same" function can always be found in different cultures. The twentieth-century British constitutional monarchy can be defined only in terms of its relations to the remainder of contemporary British life; the function of headhunting in a nineteenth-century Papuan tribe can similarly be understood only in terms of its relations to that milieu, and so on. So, the old Latin tag, *cuius regio eius lex*—"every country can apply its own system of law"—has been extended to embrace the whole variety of human habits and practices in different historical and cultural milieux. These must be accepted just as they are; the very standards of "reasoning" and "rationality" current in different communities must be understood specifically in relation to the particular place and time under investigation. (We shall return at the end of this part to the fundamental problems created by this view.)

At the outset, then, this argument about the diversity of human life—and its implications for the rationality of human values—was active only within the so-called "humanities". History, ethnography, and anthropology first of all made people aware that laws, institutions, and social customs had been

ordered in very different ways. Almost all natural scientists, by contrast, proceeded along the "classical" lines laid down by Descartes and Newton, toward a supposedly unitary and universal endpoint. If we could arrive at a complete and accurate account of the natural world, they assumed, this would bring to light "the" universal principles exemplified in all phenomena of nature and show how, at all places and times, those phenomena arose from the working together of the units or "elements" governed by those universal principles.

This Cartesian program for physics (as we saw) revived and revived the classical Greek ideals for natural philosophy; and, initially, Descartes even supposed that the basic concepts of a "true" physics would share the *self-evidence* of geometrical ideas. (Had this turned out to be so, of course, there would have been only one "rational" system of theoretical physics, as of geometry—for it could hardly have been "rational" in either case to disregard uniquely "self-evident" concepts!) A half century later, from the time of Newton on, this claim to self-evident basic concepts had lost its first charm, though it lingered on with qualifications at least until the time of Kant. Still, even those physical scientists who insisted that the fundamental laws of their science could be brought to light only painfully, as the result of trial and error—by positing them as hypotheses and checking out their consequences empirically—were nonetheless convinced that there was in fact some one, uniquely correct set of basic laws and concepts to be discovered. If we were ever fortunate enough to hit on these laws and concepts, then presumably they must serve as the foundations for *any* "rational" interpretation of Nature. In this way—even if only *as an ideal*—the dream of the single, unique and universal system of concepts and principles has continued ever since to influence the intellectual development of the natural sciences.

Methods of thinking and acting that *would be* rational, if *only* a certain ideal had been fulfilled, may be of little help and relevance, however, to those who are still struggling along in an imperfect or incomplete state of things. So here: philoso-

phers who have kept their eyes fixed on the ultimate goal of natural science have been distracted from the practical issues facing working scientists here and now. Once the Platonic claims to absolute uniqueness had been withdrawn even in the case of Euclidean geometry, it became a necessary question to ask:

"How are we to decide what concepts and principles it is most 'rational' to employ, *for the time being*, as we work our way toward the intellectual goals of (say) geometry, or theoretical physics, or animal biology?"

Once this point was reached, the "rational diversity" already familiar in the humanities could no longer be kept out of natural science. It had at last to be conceded that, in different cultures and at different times, people had *legitimately* organized their beliefs about the natural world around different sets of concepts and principles, so that—at least in principle—there could be as much diversity and variety in the concepts and practices of science as in those of law, morality, and the rest. To put the point at its very weakest: if no basic set of concepts could serve *automatically and self-evidently* as the intellectual foundation even for geometry—if it was impossible to establish the "necessity" (i.e., practical obligation) of adopting some chosen set of basic concepts and axioms, even there, with the same kind of rigor as the "necessity" (i.e., formal provability) of the theorems deduced from those axioms—then some quite other way must be found of doing so. Some other way must be found, that is, of demonstrating, in *substantial* rather than *formal* terms, how we can—all of us alike—be under a practical obligation to operate with a common set of basic mathematical or scientific concepts.

There still remains, of course, a temptation to view our own modern science and mathematics with the kind of parochial attitude that we have long since given up in other areas of

human experience. We have learned to accept the bark paintings of the Australian aborigines, the ragas of Indian music, the dances of African tribes, and the novels of tenth-century Japan, as the expression and products of alternative human standpoints and modes of life, having—at least, on the face of it—a legitimacy comparable to our own. But, when we turn to the cosmological ideas so often illustrated in the aborigines' bark paintings, or to other systems of "magical" or "mythical" belief, we do not find the same patience and tolerance easy to display. The earlier exaggerated claims of Plato and Descartes may have been abandoned; historical development may have brought about basic changes in the principles of our own natural philosophy; yet we do still tend to behave, in practice, as though the cosmological and scientific ideas of other cultures were intellectually negligible, and as though modern Western science were the work of men who shared a single, uniquely valid and rational "point of view". No single concept in theoretical physics may have survived unmodified the century between 1870 and 1970, yet we continue to see both sets of concepts—those of the 1870s, and those of the 1970s—as products of a single unified tradition in "physics", and retain our confidence that this tradition is at any rate moving *along the right lines*.

Now, this attitude of ours may in fact be *justifiable*. But the nature of that "justification" is certainly no longer self-evident, so that our practical confidence does still need to be *justified*. In one way or another, as a result, much twentieth-century philosophy of science has been concerned to show in what respects the activity of studying nature "scientifically"—from the points of view developed during the three centuries of modern Western science—can legitimately claim to be more "rational" than the activity of (say) African witch doctors, aboriginal cosmologists, and the mythologists of contemporary Amazonia or the ancient Near East.

In point of history, the vigor displayed by the philosophy of science during the present century—the effort to demonstrate

why our confidence in modern science is justified—was largely a response to changes within natural science itself of a kind that might otherwise have tended to undermine that confidence. It had been one thing to concede that Euclidean geometry was not mathematically unique, simply as a matter of formal analysis; by itself, that concession did not threaten the unique authority Euclidean ideas and methods seemed to possess in practice. But the work of Einstein, Minkowski, and others, in the first years of the twentieth century, showed that alternative, non-Euclidean concepts might need to be put to actual work in scientific practice also. And then it was time to wake up. By the late 1920s, when quantum mechanics was calling in question similarly, basic ideas about causality and continuity that scientists had quietly taken for granted ever since the seventeenth century, the philosophical alarm bells were thoroughly ringing. Where philosophers had earlier been prepared to admit, in the abstract, that the absolute primacy of those basic ideas was questionable, they now found that primacy *actively questioned*.

So a lively debate was inaugurated which still goes on today. Granted that Euclidean geometry and Newtonian physics can make no *formal* claim for the unique superiority of their intellectual standpoints, methods, and concepts, what *substantive* considerations are relevant to the rational choice of particular standpoints, methods, and concepts? Conformity to the facts?—But what we can recognize as "facts" are the answers to empirical questions, which we can state only in terms of agreed concepts. Where two groups of scientists do not even share basic theoretical concepts, it is not easy to see just what "facts" can be relevant to the choice between their basic ideas. Coherence and simplicity?—But, when we are faced by two alternative theories based on different sets of concepts, there may be no common measure of "simplicity" applicable to them both; so that something that appears "simple" from the standpoint of one system may well appear "complex" in terms of the other. Fruitfulness of new explanations?—But what we will

acknowledge as an "explanation" depends, not least, on our basic concepts and points of view. Here again, the debate continues.

If the first major phase in philosophy focused attention on the *structure* of knowledge—that is, on the *formal* characteristics of the arguments and systems of propositions in which our beliefs are embodied—the second phase has had a very different focus, and a complementary one. The central weakness of the earlier, formal approach (as we saw) was that it took its basic concepts for granted, and claimed on their behalf a "self-evidence" that has not stood up to criticism. This distracted attention from crucial questions about the relevance of those concepts to human life and experience: what it is in human life and experience that accounts for this *appearance* of "self-evidence". It is not obvious why the fundamental beliefs toward which our "intellectual intuition" inclines us here and now should be either necessarily true or unanimously shared by all. Since there is in fact a fair degree of consensus among human beings about spatial concepts—that is, about the terms in which it is natural and fruitful to organize thinking about spatial magnitudes and relations—the existence of this consensus is itself something that requires explaining. To claim that, out of His Divine Benevolence, God implanted "clear and distinct ideas" in the minds of all human beings (including the standard "ideas" of geometry) no longer carries conviction as the whole story about the validity of geometry.

The existence of any such consensus is, on the contrary, important and puzzling. It is a precondition for our working and talking together with our fellows in the application of geometrical concepts, without having every time to go through a preliminary process of agreeing to some conventionally shared spatial point of view. So, in due course, philosophers have to tackle these deeper questions, namely, on what factors this consensus—such as it is—ultimately depends, and from what in human life and experience it springs. Still, even before we

go on to the deeper questions, there is a good deal of philosophical mileage to be gained from recognizing the very need for consensus. And there is much in the philosophical tradition that explores this intermediate territory. For it will be clear by now that the possibility of knowledge, well-founded belief, "good reasons", and the rest, depends on the assurance of some consensus—some kind of shared "common sense"—about the concepts that we bring to the aspect of life under consideration.

Alongside the *formal* approach to philosophy—with all the problems it raises about the fundamental propositions (or "truths") on which knowledge or rational beliefs supposedly rest—there is, accordingly, an alternative and parallel *common-sense* approach, which concentrates rather on problems about the basic concepts (or "ideas") in terms of which our beliefs are framed—and, indeed, have to be framed, before they can either qualify or fail to qualify as "truths" at all. And what Vico originally said about human customs and social institutions turns out to be true for human concepts and intellectual procedures also. If we have any kind of shared certainties, in mathematics, science, or elsewhere, these reflect not merely what is shared in our experience but also the shared concepts and points of view with which we confront that experience.

How does this "necessary" (i.e., indispensable) degree of consensus about our basic concepts—this "common sense"—come about, and how is it assured? How for that matter (we might reply) is that sympathy or "common sense" assured on which, as Vico insisted, our historical and anthropological understanding depends? This remains one of the ultimate questions for philosophy. Vico himself gave an elaborate account of the successive steps by which men supposedly came to live in families, in settled communities, in civil societies, etc. etc.—so creating those common patterns through which our understandings can reach across the gulfs dividing contemporary culture from other historical epochs. In many of its details his account strikingly resembles that to be found in the writings of such classical writers as Epicurus and Lucretius, yet its fundamental terms are quite different from those employed by the

Epicureans. What had previously been attributed to the operations of some deep historical Necessity, Vico sees as the workings of an inscrutable Providence. On the Epicurean account, all the general structures and features shared by different modes of human life, together with the associated features of "common sense", came into existence in the natural course of events and without any conscious human contrivance. On Vico's account, the same things again took place without conscious human contrivance; but they did so through the superior wisdom of the Divine Creator, who fashioned human beings "providentially", in such a way that they responded to crises by adopting social forms of kinds that they could never have conceived or designed for themselves, as deliberate ways of improving life.

Still, whatever the historical origin of these shared modes of life, or of the commonsense ideas associated with them, it appears beyond question that in many areas of human experience we can in fact rely upon a very substantial initial consensus—on a general point of view, shared concepts, a common pattern of experience and interpretation. Given this degree of community in our standpoints and basic concepts, all kinds of shared understanding become possible, in areas where the sheer diversity of humanity and its modes of life might otherwise defeat us. Thus, we find ourselves at the starting point for an alternative attack on the problems of "rationality" and "good reasons"—one that looks for the basis of this rationality not *outward*, in the supposedly universal structure of the world with which we deal, but *inward*, in the shared characteristics of human nature, experience, and "forms of life". Let us now turn to this alternative approach to see how it works out, and what fresh philosophical problems are generated in the course of its development.

## 10 Philosophy and the Human Standpoint

The formal approach to philosophy carries with it one particular image of human knowledge, and its relations to belief, truth, and rationality. This is the structural, or architectural image, whose influence on our general, idiomatic ways of thinking is preserved in the language of "grounds", "foundations", and "logical connections". (Seen from this point of view, an "argument" is a ladder or network of propositions, connecting claims to knowledge back to their ultimate supporting ground. An argument makes a claim secure, to the extent that the propositional network is itself "rigorously valid", and the ground onto which it is anchored is "solid".) The alternative, commonsense approach to philosophy—with which we are now concerned—implies a quite different image of "arguments", and a quite different view about the manner in which they carry conviction. (Notice that we must now say "carry conviction", rather than "carry weight"; it is buildings that carry weight—one further illustration of the ways in which our thinking about logical relations falls naturally into architectural idioms.)

From this second point of view, an "argument" is not just a sequence of propositions put forward for scrutiny in the

course of a discussion or debate. On the contrary, "arguments", in this narrower, logical sense, have a significance for us only to the extent that they play a part in "arguments", in a wider, human activities sense—that is, debates, disagreements, and/or exchanges of view. So let us now adopt that wider view; and let us see what we can learn by putting our *justificatory forms of words* (as considered in Part II) back into the context of those *justificatory activities* that are their natural habitual setting.

For our present purposes it is not sufficient to characterize arguments in terms of their constituent propositions, and the formal relations between them. Instead, we must consider the procedural interactions between the parties involved. As a result, the fundamental question about knowledge, reasons, and well-established beliefs, ceases to be,

How can we achieve formal rigor in our logical connections, and absolute certainty in our fundamental grounds, so as to yield geometrical certainty?

and becomes instead,

How can we establish the common standpoint and shared experience required in order to achieve general and warranted agreement?

At this point we are once again treading the boundary line separating logic from rhetoric. If the manner in which arguments (discussions) are conducted is to be "rational", we must no doubt ensure that any arguments (proofs) presented in the course of them are sound and solid. But, whatever the formal properties of those proofs, the things we say and do by way of argument must, in the last resort, be capable of convincing other impartial and experienced people.

It is worth recalling just why it is not merely *possible*, but

*necessary*, to consider this second, alternative program for philosophy—and its implications for the "rationality" of arguments. As we saw, if we press the formalist's geometrical demands to the limit the result is to drive us into skepticism, since there is no sure way of guaranteeing the *necessary* "validity" of our basic concepts and principles, even within geometry itself, to say nothing of other fields. And there is a very good reason why this should be so. For the whole business of formal logic—checking proofs, validating inferences, searching for inconsistencies, etc.—can start up only *after* a crucial preliminary stage has been passed—only after we have ensured that the various parties view the matters at issue from congruent points to view, that is, in terms of concepts whose relevance they can both recognize. Once all parties concerned are clearly agreed, in this preliminary way, that the point at issue truly lies within (say) Euclidean geometry or classical physics, molecular biochemistry or the law of tort, the ground is cleared for the formal scrutiny of claims, supporting propositions, and logical relations. But until this preliminary *agreement in concepts* has been secured, no question of *agreement in beliefs* can even be raised. At this stage the formal scrutiny of logical connections between propositions is premature, since there is no way of deciding *what* propositions are meaningful or relevant.

In practice, this preliminary "agreement in concepts" is most easily and obviously arrived at in areas of experience embodying clearly recognized collective professional procedures and standards of judgment, that is, in the better-developed natural sciences, in the law courts, and so on. So it is in these areas that the business of arguing can most quickly and easily be formalized and subjected to logical scrutiny. Elsewhere, the task of establishing "common ground" between different parties—that is, getting the points at issue between them stated in questions and concepts they can all accept—often forms the larger part of the argument. And once we have agreed what the real question at issue is, there may be no need for a formal "argument", since that question may well answer itself. (Once you

understand what I am saying, do I really have to *prove* to you that a road sign reads STOP?) So, we now find ourselves faced with the further question:

How can the parties to any argument be confident of bringing each other to a common starting point—even to the extent required to accept one another's *questions*, to say nothing of their *answers*?

Approaching philosophy from this new direction, our account of "rationality" and "reasons" will be chiefly concerned with human beings and their activities—notably, with the "procedures" characteristic of our many and varied *rational enterprises*. We shall be concerned, that is to say, less with the reports of evidence and formal demonstrations used to support conclusions in, say, *physics*, than with the explanatory activities of *physicists*; less with the logical character of ascriptions, rebuttals, etc., in the *law* than with the procedures of indictment, cross-examination, etc., that are the responsibility of *judges and lawyers*, and so on.

In a sense, we shall still be concerned with questions of "form", but the forms in question, too, will be procedural rather than logical. For the terms "form", "formal", and the rest have a variety of uses—not to say, ambiguities—similar to those of the term "argument". Was a criminal trial, a scientific experiment, or a parliamentary debate conducted "in proper form"? Were the rules of order respected? Was the defendant's attorney given an opportunity to recall witnesses for reexamination? Were all necessary experimental precautions taken to ensure the stability and repeatability of the observations? All of these questions have to do with the procedural "form" of our arguments—in the human activities sense of the term—rather than with the logical "form" of the specific propositional argument adduced in the course of them.

Once again, these questions about procedure are evidently prior to any questions about conclusions or agreements. If a

criminal trial is improperly conducted, in point of order and procedure, it will be premature to ask whether the evidence really justifies the verdict. If scientific experiments have been sloppily performed, the question of what conclusions the resulting observations support becomes an academic one. In such cases there can be no legitimate conclusion. (That, we might say, "stands to reason".) Questions about *proof*—about the "forms" of "arguments", in the logical sense of those words—can thus arise, only where no prior doubt exists about *procedure*—about the "form" of the relevant "argument", in the broader, human activity sense.

Suppose, for instance, we view the spatial concepts and relations that are the concern of Euclidean geometry, not just as elements in a formal system of axioms and deductions, but also with an eye to practical contexts and activities from which the ideas of formal geometry were originally abstracted: surveying, carpentry, and the like. We must then be prepared to look (e.g.) at the procedures by which "plane surfaces" are identified and handled in the physical world, at the manner in which different "figures"—planes, conic sections, spherical triangles, regular hexagons, etc.—are recognized and/or constructed, and so on. We must be prepared, that is to say, to examine not just the formal definitions and interrelations of formal geometry but also the procedures by which the concepts and relationships of formal geometry are associated with the world of physical objects and human activities.<sup>1</sup> Similarly in the case of *non-Euclidean geometries*: we must now be prepared to examine not only the alternative formal axiom systems which they embody, but also the physical "operations" by which they find an empirical application in (e.g.) modern astrophysics. The operations by which astronomers identify "straight lines" (or "geodesics")

<sup>1</sup> These procedures are better referred to as "operations", rather than "definitions". During the 1930s the phrase "operational definition" had a certain philosophical vogue. But it had the disadvantage of confusing two quite different sorts of thing: the linguistic relations between words and words—"definitions", in the strict sense—and the procedural relations linking language to other, nonlinguistic aspects of life and the world.

in dealing with astrophysical problems depart considerably from those by which a carpenter, say, marks out a "straight line" on plywood, or a surveyor plots out a "straight line" across a stretch of countryside. Since it is physically impracticable to extend the standard procedures of terrestrial surveying to an astronomical scale, the geometry-using procedures and operations of astrophysics are not strictly congruent with the geometry-using activities of everyday terrestrial life. As a result, the *common ground* needed for a direct comparison of judgments and opinions cannot be universally assumed even in the field of geometry.

Considering "arguments" as human activities and procedures, then, rational agreement involves something more than comparing "arguments" in the narrower, propositional sense. First of all, the parties to any argument must establish the common ground—shared concepts, point of view, etc.—without which each other's propositional "arguments" will not even be relevant. So the primary task for anyone who wishes to explain the nature of "rationality" will, from this standpoint, be to demonstrate what is comprised in reaching common ground and/or agreeing on concepts. And it is not the arguments but the arguers themselves that have to stand on this common ground. The parties to any rational discussion have, so to say, to find an agreed forum, or ring, within which they can confront one another with a shared purpose; and the task of explaining what *this* involves—of explaining how specific human activities provide meaningful contexts for rational inquiry and argument—is one that begins to look more like cultural anthropology than like pure geometry.

There is in fact more to knowing/believing/having reasons for our beliefs than any formal philosophy can encompass. We lay claim to knowledge or assert what we believe and, if challenged, we respond by giving reasons as the way of justifying those claims and assertions. But all these activities take place in natural contexts. This is most obvious in the field of law,

where the very layout of the courtroom reflects the adversary procedures of challenge and justification. Yet in other fields of experience, also, the context can in a less formal way show "what is going on". Presenting or criticizing a scientific paper, performing or analyzing a new symphony, advocating a new political policy in Congress or before the public—in these activities too our feelings for what is *said* come in practice from recognizing how those words fit into the *context* of their utterance.

Working as philosophical anthropologists, then, we may try to relate the intellectual claims that people make—that they have "good reasons", and/or "knowledge", and/or "true beliefs"—to the characteristic contexts within which those claims are naturally at home. To understand a claim in (say) law, or science, or ethics, we have to understand not just the words of the claim but also their relevance to the corresponding aspects of life, that is, what is involved in having a legal system, in arriving at scientific explanations, or in criticizing people's conduct. And it is possible for different people to arrive at *common concepts*, and so establish the *common ground* for constructive and mutually intelligible discussion, only to the extent that they have a similar understanding—whether overt or tacit—about the character of the *human activities* in question. Even in law and science, where formal arguments can be ordered tidily and systematically, the parties to any dispute must share a common understanding—an understanding about the common aim of discussion, and about what will *count* as a "justification" or "explanation"—if they are to avoid fruitless cross-purposes. Correspondingly, appeals to "common sense" as a basis for knowledge or certainty claim, as the guarantee of our knowledge, not certain supposedly transparent ("clear and distinct") concepts and principles but, rather, the practical outcome of general human experience—on this view, all who share our common human standpoint will find certain aspects of their experience working themselves out in the same general ways.

Throughout the development of this "commonsense" tradition, as a result, much has turned on individual philosophers'

ability to identify the "manifest or obvious truths" guaranteed by this common experience. For Vico, all the most important rules of individual conduct and social organization, though presenting themselves at the outset in the "poetical" form of myths, aphorisms, and tales about divine powers, grew quite naturally out of the common life of humanity. At the end of the eighteenth century Thomas Reid argued similarly that a general human "common sense" underlies our acceptance of such notions as causality, material substance, and the uniformity of natural phenomena, and that without this basis, we would not be justified in interpreting sense experience as showing us a world of physical objects interacting in a regular manner. At the beginning of the twentieth century, again, it was an obvious and indubitable axiom for G. E. Moore, *both* that the experiences of personal friendship and the contemplation of beautiful objects must appear "intrinsically good" to any reflective observer, *and also* that the existence of real material objects could be put beyond the reach of skepticism by anyone who held up his hand before his own face. On this view such fundamental truths as these do not require any further support or demonstration. Common sense and common language attest to their truth. As such, they are harder to doubt than to believe. "If I hold my hand before my face and look at it clearly, then I certainly *know* that at least *one* material object exists, and do so in a way that I *cannot possibly* doubt."<sup>2</sup>

The formal program for philosophy thus focuses attention

<sup>2</sup> The actual success of such appeals to "common sense" in carrying conviction with hearers, depends also, of course, on the particular philosopher's ability to transmit his own sense of indubitability—or to evoke a similar sense in others—and so establish the consensus required in building an agreed system of philosophical ethics or epistemology on such foundations. J. M. Keynes has recalled the "accents of infallibility" in which G. E. Moore—a tiny, sharp-featured man, with piercing blue eyes and a cherubic smile—would deliver his "obvious" insights to a philosophical audience; and the catastrophic manner in which he would bear down on opponents who challenged their "obviousness". He would turn toward the objector, his jaw would drop, his eyes would pop out of his head, and he would retort, "I just *don't* see *how* you can *possibly* say that (so-and-so and so-and-so) . . ." More often than not, he got away with it.

on two groups of questions about the "reasons" we use to justify our beliefs: (1) questions about the "grounds" to which those beliefs are ultimately anchored back, and (2) questions about the "connecting generalizations" by which the beliefs are securely linked back to those grounds. The commonsense program for philosophy, similarly, focuses attention on two distinct groups of questions about the kinds of "reason-giving" involved in "justifying" our claims, beliefs, and the rest. Since this new program is concerned with human activities rather than with logical relations, those questions have to deal with the *procedural* characteristics of a fruitful, constructive, and/or "rational" human discussion, rather than with the *formal* characteristics of the "logical" arguments connecting the data, inferences, generalizations, etc., appealed to by the parties to that discussion.

The first group of questions (1) has to do with the preliminary task: establishing "common ground" between the parties to the discussion, not in the more superficial sense, of establishing an initial set of propositions about whose *truth* they already agree, but in the deeper sense, of arriving at a common viewpoint and shared *concepts* so that they can come to an understanding about the questions at issue between them. The second group of questions (2) has to do with the subsequent task; establishing a shared body of relevant *experience* sufficient to settle the matter. A "rational discussion" will then be one in which the twin procedures of establishing, *first*, shared concepts and, *subsequently*, shared experiences can lead to a genuinely critical agreement.

Yet in what cases, on what conditions, and to what extent can we reasonably hope to reach such a result? In what areas of life, and within what limits, can we expect to arrive at a "rational consensus" between rival parties to an argument? Just how far can appeals to "common sense" really take us? Those are the general philosophical issues opened up by this second program. Now, let us turn our attention to the more specific kinds of philosophical problems that arise when we approach different areas of human life and experience from this fresh direction.

# 11

## Reasons and Consensus

In Chapter 7, we remarked on the great variety in our kinds of knowledge and belief—predictive, scientific, ethical, aesthetic, everyday, religious, linguistic, geometrical—and in the sorts of “reasons” that we correspondingly use to justify our beliefs. At that stage we treated this variety as affecting primarily the *propositions* we have occasion to believe, and the *grounds* by which we lend those propositions support. Yet we could, instead, have taken a broader view of that variety. For the diversity in our thoughts, beliefs, and kinds of knowledge extends much further; and the very propositions in which our beliefs are expressed are intelligible only to those who can share—at least, imaginatively or in sympathy—an understanding of the activities that give them a significant context. These activities, together with the associated points of view and concepts, are as varied and diverse as the propositions whose intelligibility depends upon them. It is not just the propositions expressing our “thoughts”, “beliefs”, and kinds of “knowledge”, that are of many different kinds; equally, it is our modes of “thinking”, “believing”, and “knowing”. In order to believe that the angle in a semicircle is a right angle, and understand what

kinds of reasons are relevant to that belief, one must already be familiar—at least, in outline—with *what it is to do geometry*. To have a reasoned opinion about the dramatic construction of *Lear* and *Volpone*, one must have experience—at any rate, in essentials—of *what is involved in a dramatic presentation*.<sup>1</sup> In order to know what the letters on a billboard say, one must also know what *reading and writing are*. And so on, and so on . . . Only a person with at least a rudimentary religious life can understand what it means to declare that God is Love; only someone with at least the beginnings of an experience with human beings can have well-founded beliefs about other people’s feelings; and likewise in other cases. The *sentences* in which we express what we think, believe, and/or know have the significance they do because of the *context and activities* within which they acquire a recognizable meaning. And a shared understanding of those activities is an important part of the “common ground” on which the possibility of rational discussion depends.

In reconsidering here the samples that we introduced in Chapter 7, we must therefore broaden our view. In particular, we must look to see how far, and on what conditions, it is possible to achieve the common ground, or consensus, involved in this shared understanding. If we take a variety of different fields of experience, then, to what extent can an initial consensus be established, about the *concepts*—and so the *questions*—that are relevant in that field? And to what extent can one subsequently go on and establish the further consensus, or common experience, about the *facts* required for agreement over the *answers* to those questions, also?

It is once again worth considering four classes of cases.

<sup>1</sup> A wonderful story by Borges depicts Averroes fruitlessly discussing with his friends the meaning of Aristotle’s distinction between “tragedy” and “comedy”. Since the Islamic culture with which they are familiar entirely lacks all *stage representation*, they cannot make head or tail of the terms involved, and when a visiting traveler attempts to describe a play that he has seen at a theater in China, Averroes and his friends are quite unable to take his account seriously.

## Problems

### CASE 1

In some fields, it is reasonably clear, both how we come to share a common enterprise, point of view, and so *questions*, and also what shared experience makes it possible for us to reach agreed *answers*.

### CASE 2

In some other fields the task of explaining how we can arrive at shared concepts gives rise to real problems, even though it is not so hard to recognize how we come to share relevant experience.

### CASE 3

In others, by contrast, the idea of "shared experience" creates more problems than that of shared concepts.

### CASE 4

Finally, there are those cases that give rise to difficulties and confusions on both levels. Let us run through these different kinds of cases in turn and see what philosophical problems arise for each class.

One preliminary ambiguity needs to be cleared up. This has to do with the term *experience*. On the one hand, that term is used colloquially, in a broad sense, to cover the whole range of procedures and activities in the context of which we learn to talk and act, sharpen up our skills, develop our sense of meaning and significance, and so on and so on. In this broad sense an airline pilot, an astronomer, or an attorney will have "experience" of (say) bad-weather flying, telescopic observation, and/or prosecuting. Men who have shared the same "experience", in this sense, will normally possess much of the common ground required for the rational interpretation and comparison

of their beliefs. In this sense, for example, two physicians will compare professional notes about their "experience" with some new antibiotic. On the other hand, the term has acquired a narrower use also, especially at the hands of empiricist philosophers. As they use the word every uninterpreted sensation we receive from our senses constitutes a separate piece of "sense experience", and the epistemological problem is to see how the totality of these "sense experiences" relates to the beliefs they are supposed to support. When we ask how far there can be shared concepts and experience in different fields, we need not tie ourselves to this second, narrower sense. Our present approach is concerned more with *activities* than with *propositions*, so the question is, how far different parties can share the procedures and activities—not the "sensory testimony"—required for rational understanding and agreement.<sup>2</sup>

## Examples

### CASE 1

*Forecasting.* Let us begin by considering the business of *forecasting* future occurrences, for example, tides and eclipses. No great philosophical mystery arises here, either about the "common ground" on which mutual understanding relies or about the "shared experience" mobilized in arriving at forecasts that can combine general acceptance.

As to the first: A desire to anticipate the future is one of the universal roots of human curiosity, and in all settled communities—particularly, agricultural ones, which are at the mercy of changes in the weather—this desire has become a downright need, around which institutions, techniques, and rituals have developed. From palmists and augurs to meteorologists and

<sup>2</sup> The further question, just how far the implications of "experience", in this broader sense, can be accounted for in terms of sensory "experiences", in the narrower sense, is another matter, and one that raises some highly debatable questions in technical philosophy.

hydrographers, a dozen professions have grown up to serve this human need to foresee future events of grave significance to the individual or the state. As a result, when people are involved in discussions about the future, there is commonly little ground for any basic misunderstandings about what is at issue. There may well be, of course, differences of opinion, especially about political or economic developments, that are difficult to forecast. Yet, however much people's actual predictions may diverge, it will normally be quite clear to all concerned *what* they are disagreeing *about*; in this respect, they will find themselves securely on "common ground".

As to the second question, What kinds of "experience" are directly relevant to a particular forecast?, here again there may be room for disagreement, but the points at issue will normally be clear enough for practical purposes. In any case the actual disagreements will normally be *technical*, rather than *philosophical*, in character. Suppose, for instance, that the flow of fresh water is scouring the sea bed around a river mouth, and so changing its shape. How should this fact be allowed for, in forecasting tidal flows in the neighborhood of the river? That is a technical question for professional oceanographers, about the special factors and variables operative in this particular case, and does not in itself raise general philosophical difficulties. Just how will the rate of change in the U.S. gross national product during the late 1970s be affected by changes in international oil prices? Different economists resort to different sets of data, and make their calculations in different ways; yet, despite all the differences in their procedures, there is no ambiguity about the object of their forecasts. The experience on which they draw is the common property of all economists. If they mobilize it in different ways, that is because up to now no single forecasting procedure has proved unquestionably more reliable than its rivals.

So by now, the whole business of *making forecasts* can, rationally speaking, be put on a more or less satisfactory basis. There remain many areas of life in which we cannot "see into the future" however much we would like to do so, yet even

in these areas we understand pretty well why such forecasting is impracticable, or even downright impossible. In due course, no doubt, we shall discover how to extend our forecasting into a few of these areas. It seems well within the bounds of possibility, for instance, that geologists should discover how to predict earthquakes. Despite all its practical limitations, therefore, the enterprise of forecasting remains in itself unambiguous enough, so that all of us share enough common ground to understand, within very broad limits, what that enterprise involves and implies.

*Doing Natural Science.* It is not so easy to say the same thing with any confidence about the enterprise of *natural science*. True, there are quite a number of philosophers of science who will argue that the prime intellectual task of science itself is to develop formal systems for generating "successful predictions". If this were the whole story, it should make the scientific enterprise as straightforward and unambiguous as the technique of forecasting itself. But that is only one of a number of alternative philosophical views, and it glosses over some very real difficulties. For instance, simple tidal forecasts and the like employ purely arithmetical formulas for extrapolating from the past records to conclusions about the future. These formulas involve no problems of theoretical interpretation. But scientific explanations can normally be squared with the facts only at the price of reinterpreting those facts in terms of fresh theoretical concepts.

To recall two quite elementary illustrations: Galileo accounts for the motion of a ball rolling down an inclined plane by identifying it—in theoretical terms—as a "uniformly accelerating body"; Newton explains the elliptical orbits of the planets—Mercury, Venus, Jupiter—by classifying them theoretically as "bodies moving under a single centrally directed inverse-square force only", and so on. Before theoretical physics can achieve the clarity and lack of ambiguity characteristic of straightforward forecasting, there must be consensus about the relevant theoretical concepts. How far and on what conditions can this

consensus be obtained? Is there any guarantee of the "common ground" that is needed if different scientists are to agree upon the meaning and relevance of one another's questions? And is there a clear body of "shared experience" that all concerned will recognize as capable of yielding answers to those agreed-upon questions?

During the heyday of classical physics, philosophers tended to assume the existence of such common ground and shared experience without much criticism. And there are still people who take for granted that the proper application of a general and universal "scientific method" will lead us as securely to well-founded explanations of natural phenomena, as careful employment of the forecaster's craft will lead him to reliable formulas and predictions. Yet the question remains open, whether any such universal "method" really exists, or *could* exist. Other philosophers argue, on the contrary, that the step to a new theory always involves a creative "leap of the mind", with the introduction of fresh concepts and points of view whose validity is never self-evident. Rather, new theories must carry conviction through being progressively applied over a period of time to the reinterpretation of the relevant experience; and there will always be room at the outset for legitimate differences about this reinterpretation, of kinds that are not open to any conclusive proof or test.

For example, was Newton's system of dynamics—expressed in terms of new concepts of "force", "mass", "momentum", and "universal gravitation"—securely established by the use of a rational "method" from the word Go? If that had been the case there could scarcely have been so prolonged and bitter a debate about its acceptability. Rather, the virtues of the Newtonian system became generally apparent only gradually as eighteenth-century scientists used it to get novel interpretations of known phenomena, and so filled in the details of Newton's original outline world picture. Was it "irrational" to remain an Aristotelian or a Cartesian in the face of Newton's arguments? Were there in fact considerations that should from the beginning have carried weight with "all considering men", and convinced

them about the new theory? That general topic is at the center of the philosophical debate about science even today.

At one extreme there are those who see the common ground of all natural science as lending itself to "demarcation", in terms of a general "method", or other criterion of scientific significance. At the other extreme there are those who see a much narrower scope for this common ground. Who would argue, for instance, that the only people who can fully understand one another's scientific questions are other scientists working in the same scientific discipline, and then only within a single historical phase of that discipline. Periodically (this latter argument runs) the foundations of any science are reconstructed so radically that its theoretical questions must be entirely restated, and when this happens the respective points of view of the older and newer theories will be so far apart that the scientists involved will no longer have enough common ground for any effective rational discussion. In such "revolutionary" situations there will correspondingly be no consensus about the shared experiences that could serve to answer the central questions of the science concerned. Meanwhile the points of view of different disciplines will define quite distinct sets of questions, and these will be the concern of other groups of professional scientists whose specific tasks are to pursue those sets of questions in competitive collaboration.

However one tackles these issues, our present approach at any rate makes one thing clear. The "common ground" from which scientific questions are raised, and on which scientific discussion depends, is not marked out and guaranteed as securely as it is in the case of straightforward forecasting. On the contrary, a good deal of intellectual imagination was required, first in classical Greece and later in seventeenth-century Europe, to recognize the *possibility* of "doing science" at all; and the exact intellectual territory on which any natural science operates is still something that the apprentice scientist learns only gradually as he finds his way into his field of study. For to do this involves recognizing not just the specific *subject matter* of the science in question—that it is the science con-

cerned, say, with shells rather than flowering plants, stars, or the weather—but also the *questions and problems* that this subject matter poses in our present state of understanding—questions about geographical distribution of those shells, say, rather than about their chemical composition. Similarly, the questions about “atoms” that arise for a particle physicist in the 1970s, say, will be very different from those arising for a Rutherford around 1910, or for a Maxwell in the 1870s. Changing concepts and changing problems are continually re-defined the territory of the sciences in a way that also changes the common ground from which specialists in that discipline take their start.<sup>3</sup>

This much we can say. The more narrowly we define the time period and problems at issue, the more consensus we shall tend to find about the issues for debate in the natural sciences—both about the point of view (concepts and questions) to be adopted in thinking about any given subject matter and about the experiences (observations, experiments, or records) that would provide agreed-upon answers to the outstanding questions. Given a sufficiently well-defined point of view, the critical rigor of scientific debate will then help to ensure agreement about the relevance of different kinds of “experience”. This is what makes the methods of science appear so impartial and “objective”. But the task of arriving at this common point of view remains a problematic one. Any particular branch of science has developed (one might say) through a “rational history”; and the present domain, territory, and point of view of that science represent the current outcome of that development. How far, and for what kind of reasons, it is possible to achieve any unanimity about those things—how far there can be the same “objectivity” in framing the concepts and questions of a science, as there is in arriving at its answers—thus remains a

<sup>3</sup> Whether these changes can themselves be accounted for always in “rational” terms, or whether the historical development of science sometimes involves “revolutionary” discontinuities, is itself an unresolved issue. The case for believing in discontinuous “scientific revolutions” is most familiar from the widely read book by Thomas S. Kuhn.

vexed question for philosophers of science, and one over which they are deeply divided.

The *reasons why* there is any substantial consensus, within a given science, over the concepts and questions relevant to its subject matter are therefore hard to make precise. The *fact that* such a consensus frequently exists—at any rate in the physical and biological sciences—is in less doubt. To that extent, the conditions for rational debate and argument exist in those sciences, and this shared ground, point of view, and basic concepts form the joint body of “common sense” that permits the scientists concerned to carry on a mutually intelligible debate.

#### CASE 2

*Taking Ethical Stands.* In both these two initial activities—forecasting and doing science—the *existence* of a common ground for rational debate springs from our common humanity, while its exact *location* is determined by considerations of culture and history. In some degree, we all need to anticipate the future and understand how the world works, though just how we are to set about these tasks in a “rational” manner depends on where and when we start. So in neither case is there much ambiguity about the character of this common ground. In other kinds of cases the situation is less clear. What are we to say, for instance, about *ethical* issues? In a general kind of way, the habits of moral striving and shame, admiration and disapproval, seem to come naturally to human beings, and so to form a common element in “human nature”. Yet this tendency finds expression among different peoples and at different times in very different ways, and has given rise to very different points of view and concepts. Where men already share a common moral point of view, and operate with the same basic ethical concepts, the further step—of arriving at a common understanding of the facts and experiences relevant to actual moral judgments—presents comparatively little difficulty. With the best will in the world, however, the problem of establishing a common fundamental point of view in ethics remains both practically difficult and philosophically contentious.

On the one hand, the difficulties involved do not look insurmountable. If human beings are much the same the world over, and have not changed in fundamental respects throughout recorded history, it is not unreasonable that they should end by dealing with the problems of their interpersonal lives in comparable, if not identical, ways. So, just as there is a continuity between Aristotle's physics and that of Einstein by way of medieval mechanics and Newtonian physics, and just as the astronomical forecasting techniques of the Babylonians and the Mayas can be rationally compared, should not people with different moral standpoints be able to appreciate each other's concepts and points of view, recognize them as so many honest, alternative ways of tackling common human problems, and in this way learn from one another's experience?

In practice, this is more easily said than done and agreement is hard to reach, on the abstract philosophical level quite as much as in actual practice. Different groups apparently define the common goals of "human nature" in very different ways. Are all the varied ethical beliefs of different communities so many ways of achieving "the greatest happiness of the greatest number"? Are they alternative means of guaranteeing the survival of the community? Are they the instruments of self-expression and self-fulfillment? Philosophers depict the relationship between our common nature as human beings and the consequent practices of moral life and judgment in many rival ways; and the differences between their perspectives are not formal, but highly substantive. Some philosophers—notably, the "existentialists"—even challenge the idea that human beings share, in this respect, any common or "essential" human nature at all. Rocks and planets, trees and fish, may, on this view, be thought of as being fixed "essences", and as a result we can explain just how such things will "naturally" behave in different circumstances. Human beings, by contrast, are forever engaged in "making themselves", and have the power to determine not just what their "nature" *is* but what it *shall be*. That is just what makes human conduct "ethical" at all; and, since "human nature" is from this point of view no longer universal

or determinate, there can be no question of its imposing a single, unambiguous ethical standpoint on us. (We shall return to this topic in Part V of this book.)

Still, the view that all human beings share substantially common natures and problems remains attractive. This view requires us to explain how, given that common inheritance, our different ethical points of view can represent alternative expressions of these same problems. As a result, ethics is a branch of philosophy in which appeals to "common sense" are particularly frequent and plausible. These appeals are of many different kinds and qualities. At one extreme, they imply broad anthropological generalizations about the operation of human groups and societies, as with Vico's original argument that through the action of Divine Providence the different gentile peoples generated similar laws and customs quite independently of one another. At the other extreme, they focus on the individual agent, suggesting, for example, that all honest and reflective observers who define a moral issue with sufficient care and exactitude must end by seeing it the same way, in the light of a general, shared "moral sense" or "intuition". Whatever the focus of these appeals may be, however, the central and difficult task remains, of explaining in a convincing way *how* the independent agents and/or communities can be sure of recognizing the conceptions and viewpoints that have an authentic basis in this "common ethical sense".

*Identifying Familiar Objects.* Parallel difficulties arise in another class of cases, namely, over our everyday experience of familiar material objects in the world around us. Recall our initial example, namely, my belief that the bedroom curtains are dark-red in color. Instead of asking what kind of *grounds* I can produce to "support" that belief, we can ask here what kind of *activities* are involved in classifying and recognizing the "colors" of everyday objects. What assurances do we have, in particular, that different people will carry out these activities in the same way, sharing the same points of view and concepts? These questions—it turns out—are almost as difficult

to deal with satisfactorily as the corresponding questions about ethics.

On the one hand, we might be tempted to suppose that physiological similarities in our own eyes and brains guaranteed a general harmony in our judgments of color. And, indeed, there are some general respects in which our capacities for color perception apparently spring from the limits of physiological acuity. Individuals from all over the world, for instance, have very similar powers to discriminate closely similar shades of color. We might be tempted, as a result, to argue that the "common ground" required for consensus in our judgments about material objects was neurologically guaranteed. On the other hand, this can hardly be the whole story. It is one thing to *discriminate* neighboring shades of color; it is something quite else to *classify and name* them. By now, there is a substantial body of evidence that people in other cultures, with very different backgrounds and experiences from our own, classify (and even "see") colors very differently from us. Among us, for instance, green and light brown may be thought of, and seen, as totally different colors; elsewhere, they are viewed as neighboring shades of a single common color—"grass color"—being perceived, so to say, as the spring and summer appearances of grass. To the extent that different cultures introduce their children to incongruous sets of color concepts and categories, accordingly, the necessary "common ground" for rational discussion is almost as hard to establish in this case as it is in the case of ethical concepts and categories. Thus in this case also, the relationship between our common "human nature" and the possibility of shared viewpoints remains uncertain and speculative. Within any given culture and language group, the current practices of color classification and recognition may in fact be shared very largely in common. As a result, members of the culture can appeal with confidence to the "common sense" of other members as a way of invoking this common ground. ("Don't you see? It's an unusual shade of *blue*.") How far beyond the limits of a single culture we can hope to establish a general consensus about such perceptions and classifications re-

mains quite obscure. Despite their evident solidity and stability, therefore, material objects resist unambiguous and certain description, for what guarantee do we have that people in all cultures will use the same *systems* of description?

To the extent that different groups of people do apply similar systems of descriptive concepts, our brains and nerves certainly appear more than adequate to the purpose. (We can discriminate visually far more shades of color than there exist separate names for, in any system of color words.) Thus, if I have learned what the phrase "deep red" means in my particular language community, I can normally tell at a glance what particular objects qualify for that description. Hence the charm of appealing to "common sense" as a way of conferring *philosophical* "certainty" on our everyday knowledge. It is no accident that G. E. Moore chose ethics and sense perception as the two fields in which he could make this appeal most persuasively. (In either case, it was Moore's practice to confront his opponents with as near as possible to a "pure" example for the application, in current English, of some descriptive or ethical term; next, to challenge them to raise some genuine, substantive doubt about the matter in question; and then to use the difficulty of doing so as an indication that such everyday perceptual or ethical matters can be "known for certain", without any need for evidence other than "bare sight" or "moral intuition". Given that the real philosophical difficulties in both cases arise over the acceptance of a given set of shared concepts, not over their application once accepted, this kind of argument was hard to counter.)

Granted the system of color distinctions and color words current in our language community, there may be little problem about recognizing the actual colors of objects. But what makes just this particular system *acceptable*, rather than some alternative system? We can easily imagine a culture in which all the things we call "deep red" would normally be lumped together with brown and purple ones, rather than with scarlet and pink ones, or at the very least seen as having a borderline color. (One might then say about them, "I don't know whether they

are really *ross* or *bron*," as we ourselves sometimes say about turquoise objects, "I don't know whether it is really *blue* or *green*." In another culture, similarly, people might not think of the human body as divided up into the same parts. They might, for instance, treat fingers as distinct limbs while seeing palms as continuous with the lower arms, and so have no distinct concept corresponding to our concept of "hands". (That being the case, they would not even be able to *translate* Moore's claim that I can know for certain the truth of the statement "I have a hand", far less be certain of it for themselves.) Similarly with ethics: There may be widespread consensus within particular subcultures about the application of the highly specific value terms used to express their characteristic ethical attitudes—about what is/is not "sporting", or "socially permissible", or "really cool", or "contrary to due process"—yet just how much scope is there for consensus when we move across the boundaries between different cultural groups?

Whether in ethics or the theory of perception, therefore, philosophical appeals to *common sense* as a source of certainty always run up against the response, *Common to whom?* The argument that "anyone who knows what the words mean" must acknowledge the ethical or perceptual truth in question is impressive on first hearing, but it does not take us very far. It takes us, to be exact, just as far as the boundaries of the particular language community; and, before we can go beyond them, or universalize the argument, we shall need some guarantee that the "common ground" involved does indeed extend to all people, rather than being limited to members of the particular culture or subculture. This is a challenge that different philosophers seek to meet in different ways, but general agreement is still beyond us.

### CASE 3

*Discussing Aesthetic Merits.* So much for cases in which it is harder to establish common points of view and shared concepts than it is to apply them, once established. In some other cases, however, the difficulties are reversed. There, it is easier

to get agreement about the relevant concepts in the first place than it is to concur about their application. Once again, aesthetics and psychology will serve as two useful sources of examples.

One preliminary remark about aesthetics: Philosophers often discuss ethical and aesthetic topics in the same breath, under the heading "evaluation", taking it for granted that essentially similar problems arise in both fields of experience. Yet, in actual practice, this is not wholly the case. Differences in ethical standpoints—between French *gloire* and Spanish *honra*, Greek *philotimo* and Sicilian *omerta*, Persian *ta'arof*, and English *self-respect*—can give rise to cross-cultural incomprehension of the rights and wrongs of someone's conduct. Members of different cultures may well bring quite different ethical attitudes to the same situation, and so disagree on the merits of any particular piece of conduct. (The sight of a farmer beating his donkey may rouse an Englishman to moral indignation, but leave a Moroccan cold.) Over aesthetic matters, however, the springs of complexity and disagreement lie elsewhere. Given a particular literary, musical, or artistic work, people having any real degree of informed experience about the genre in question can establish quickly enough the common ground they need for a critical discussion. The difficulties normally begin only after this point.

If you know nothing at all about (say) hard rock, or the Petrarchan sonnet, or the techniques of drypoint engraving, you will of course be disqualified from reasoned discussions of particular works in these genres. You may say, "All I know about hard rock is that I don't like it," if you please; but that is not to make any kind of *aesthetic* comment. To *understand* the genre is thus to be in a position to discuss it in terms that are intelligible to other informed critics. This preliminary *agreement in concepts* should not be surprising. Human "works of art" are, after all, what their name implies—products of *work*—and the task of appraising them is closely connected with understanding what thought, intelligence, imagination, and technique went into the work of producing them. This is not to say that aesthetic discussions must be confined to questions about tech-

nique; though Picasso is said to have deflated a specially fatuous art critic by insisting that the only kind of thing *real* artists talk about is "where they can buy the best turpentine." Still, informed critics cannot afford to ignore questions about the available techniques, the existing repertory of formal devices, the accepted symbolic conventions, customary interpretations, and so forth; and these considerations may in some cases—by a kind of "argument from precedent"—carry us quite a long way toward *agreement in belief* also. ("Just look at the formal subtleties in this sonnet of Gerard Manley Hopkins—at the internal rhyming, the verbal assonances, the careful balance of lines . . . given all of that, how could anyone deny that it is a masterly production?")

At the same time, though better understanding may carry us a long way toward such agreement, we can rarely arrive at final unanimity. Even where the parties to a critical discussion are clearly arguing on the same ground, their debate will not often have any natural closure. In ethical cases we can sometimes declare, with justification, "His behavior was unforgivable, and that's that!" In most aesthetic cases, by contrast, there can be no "that's that" since *there is always more that could be said*. How could we hope to exhaust, in words, the formal elaboration of any major artwork, for example, the first movement of Beethoven's *Eroica* Symphony? Despite all that is said and written about such works, future generations find new subtleties and relationships that have escaped critical attention hitherto. Thus the critical literature about Homer's *Iliad*, or Sophocles' *Electra*, or Shakespeare's *Othello* flows unchecked, even without the critics necessarily having different, incongruous points of view and personal tastes. Shakespearean scholars today have little difficulty, for instance, in *understanding* Samuel Johnson's critical essays. His criticisms appear to them deficient, rather, in being partial, one-sided, and incomplete. And it is the same thing in other cases. Because there is always more that could be said, different critics will commonly apply their shared repertory of critical language and concepts to different effect: shifting their emphasis, highlighting different aspects of

a work, focusing on different formal strengths and weaknesses, pointing out different tonal crudities or subtleties, or whatever.

The other side of the coin is equally clear. Critical differences of this kind rarely amount to direct contradictions. Rather, they are complementary, giving us alternative views of the same work (so to say) from different angles, under different lights. These alternative views may, of course, be more or less revealing, or balanced, or detailed; they may accordingly give us a more or less adequate sense of what there is to be recognized in the work. Correspondingly, defective criticism rarely contains any downright false assertions; its typical weaknesses will be a lack of subtlety or proportion, a failure to perceive technical problems or inner complexities, and the like. Once again, the questions at issue in aesthetics are very different from those that face us in ethical contexts. Over questions of conduct, we are often called on to determine, categorically, whether or not somebody "acted rightly"—not to appreciate the "significance" of his actions in a hypothetical spirit, with every possible subtlety and in every detail. (This latter task is the province of the agent's psychiatrist or biographer, rather than his fellow citizens.) Aesthetics, by contrast, is a reflective, not an active field of experience; in it, emotion is not a spur to action, but is "recollected in tranquility". Consider, for instance, the attitudes we would adopt if we were to encounter, in real life, some of the "characters" we accept happily enough in novels or plays. In the security of our armchairs we can savor the motives of men and women whom it would be intolerable to deal with in practice.

*Recognizing States of Mind.* Some of the same complexity holds, equally, in psychology, over the problem of recognizing and characterizing "states of mind". There again we can normally establish—at any rate, on a general level—the common ground and shared concepts required for *understanding* the questions at issue. People from all nations and cultures are much alike in their basic feelings and motives; in straightforward cases, joy and sorrow, pride and anger, curiosity and hu-

miliation seem to be much the same for everyone.<sup>4</sup> The problems start the moment we leave obvious, straightforward cases, and apply our repertory of psychological terms to subtler and more complex situations.

The basic difficulty over "states of mind" is, accordingly, not one about the *validity* of our psychological concepts, but one about their *application*. However difficult it may be to give an explicit philosophical account of terms like "friendly" and "inquisitive", "angry" and "jealous", children normally find it a straightforward matter to learn what these terms mean in typical cases; and there are strong grounds for believing that such terms can be applied, with equal intelligibility, in all cultures and periods.<sup>5</sup> Despite this "common ground", however, final agreement about people's state of mind very often eludes us. If we go beyond the crudest characterizations, and aim at any subtlety of description, closure becomes impossible; once again, as in aesthetics, there is always "more that could be said". We may set an agent's behavior in a fresh context, and so throw further light on it, by helping people to understand more fully the broader implications and motives involved; and each such revelation, or perspective, will justify a correspondingly different psychological description. ("O.K., he was jealous; but you have to understand the significance of this jealousy—his self-esteem was threatened, because . . .") From a certain point of view, indeed, the difficulties in arriving at final agreement in

<sup>4</sup> This is more nearly the case, the more concretely we specify the feelings and motives in question. The differences between the more abstract classifications current in different cultures are more marked, so that terms like "personality" and "character", "person" and "self", are much harder to translate into other languages than, say, "enjoy" and "angry", "inquisitive" and "jealous".

<sup>5</sup> Agamemnon would not have understood what we mean by saying that Achilles was behaving in an "ungentlemanly" way, since the very notion of *gentlemanliness* involves a whole pattern of ethical and psychological attitudes characteristic of late nineteenth-century Britain, which would have been entirely unfamiliar to Greeks and Trojans of the Homeric Age. There was no such difficulty, by contrast, over describing Achilles as "angry" or "wrathful".

aesthetic and psychological cases are not merely *similar*; they are the *same*. When a novelist depicts a subtle and complex character in a way that carries deep conviction, his achievement can be viewed either as one of literary mastery, or as one of psychological subtlety; and in either case the reasons will be the same, namely, his success in conveying concisely a many-faceted, all-around sense of this particular human individual—temperament, motives, and all.

If there is always "more that could be said" about people's states of mind *now*, this is not just because of the multiplicity of possible perspectives that we can bring to their description. It is always possible, in addition, that we may have occasion to review and reconsider our descriptions in the light of subsequent developments which may require us to modify or add to our description. (About characters in novels, all the evidence is already in; about real-life people and their actions, that is never so.) Even so, the similarity between aesthetic and psychological appraisals extends to this point: that such revisions rarely involve withdrawing or contradicting our previous judgments absolutely. It may happen, of course, that we were simply misled about somebody's state of mind, or deliberately deceived, and so have to correct ourselves: "I see now that he was not really jealous at all—it was pure embarrassment." More typically, however, the value of hindsight is that it puts us in a position to speak about the behavior in question more perceptively and discriminatingly, just as distance and the passage of time permit us to judge a contentious work of art more discriminatingly and perceptively.

Approaching psychological issues from this second, common-sense direction, accordingly, we end with a different set of philosophical problems from those spotlighted by the formal approach. What makes it so difficult to "say the last word" about anyone's state of mind is no longer simply the *formal* possibility that he is deliberately concealing his feelings and intentions. Rather, it is the *substantive* possibility that we are failing to recognize the broader contexts within which the fuller significance of his conduct needs to be judged, and so are fail-

ing to see the whole picture. ("What you have to realize is that he has unusually strong religious scruples . . . / he was put out to foster-parents at the age of two-and-a-half, etc. . . .") The philosophical doubts and difficulties that arise in this way are, as a result, not the purely formal and general doubts of the skeptic; they are the substantial and specific hesitations and reservations that properly hedge around the interpretations that one human being places on another's feelings and actions in practice.

Suppose that we adopt this second, commonsense approach to philosophy. What accounts can we then give of the parts played by "reasons" and "reasoning" in the context of aesthetic appreciation and psychological description? Plainly, these "reasons" will have little to do in practice with the construction of formal, quasi-geometrical deductions connecting evidential "grounds" to hypothetical "conclusions". Rather, the business of carrying conviction/achieving consensus/justifying our beliefs about such matters involves drawing attention to significant and revealing signs or symptoms, marks or features, that is, those indications that we can legitimately "read" as characteristic of, say, a truly angry man or a particularly well-constructed sonnet. As we saw earlier, the task of justifying a particular view about a work of art, or about someone's "state of mind", is like that of substantiating a medical diagnosis, or botanical identification, rather than like that of supporting a novel scientific theory. (Father's flushed cheeks and hoarse oaths are *diagnostic signs* of his anger, rather than *empirical evidence* for a hypothetical but hidden feeling.)

Behind the patterns of "reasoning" and "justification" relevant to aesthetics and personal relations, accordingly, there lies not some eternal, quasi-mathematical structure of formal principles and inferences but, rather, a shared body of understanding, experience, and reactions. When physicians compare diagnostic notes about a patient, they rely on a common body of medical training and clinical experience to give "significance" to their remarks. Similarly, in discussing people's feelings, intentions, and other states of mind, we depend on a certain

common ability to recognize the psychological "significance" of their actions and utterances. Where does this common ability come from? That is quite another issue, and we shall be turning to it later on. In part, it may well be inherited, or "instinctive"; on the most basic level, an infant scarcely has to *learn* to recognize love, or fear, or threats. In part, it is certainly learned; most adults recognize, and react appropriately to, a great many more or less stylized gestures and conventional expressions that are peculiar to their cultures. In either case, the nature of the particular context determines at the outset the range of possible interpretations that need to be considered seriously by any experienced onlooker; and we then go on to pick out as "reasons" those particular features that enable us to decide between these "real possibilities".

What makes the reasons advanced in particular cases acceptable, strong, or convincing is the extent to which they succeed, either in marking off the cases in question as typical of some familiar "state of mind", or in elucidating the mixed motives and feelings underlying the oddities of some particular, hybrid case. At one extreme, we all know sheer terror when we see it; even where we do not observe it for ourselves, a few well-chosen words will carry conviction. At the other extreme, it may require quite exceptional human perceptiveness to recognize subtle and unusual conflicts of emotion, let alone describe them. Therefore, we cannot expect to find any single pattern of "reasons" and "justifications" appropriate alike to all psychological characterizations. In some cases, our task may simply be to give a straightforward label to an unambiguous pattern of conduct and reactions. In others, it may be the trickier task of disentangling the various intertwined strands/elements/motives involved in some bizarre or idiosyncratic action or utterance. In either type of case, however, the goal of "argument"—the human activity within which "reasoning" and "justifying" are at home—is the same, namely, to arrive at an agreed interpretation of the problematic gestures, actions and/or utterances, to read their significance, and so to recognize where they belong in our "taxonomy" of intelligible states of mind.

In aesthetics, the situation is somewhat more complex, but for our present purposes the difference is only one of degree. There is only a very limited range of artworks to which people of all cultures and classes, with much experience or none, will respond aesthetically in a direct and articulate way—certainly, this range is more limited than the range of states of mind that are recognizable directly and universally. This being so, people can in practice exchange aesthetic views with mutual understanding only if they share substantial experience of the genre in question. Here again, however, the important thing to note is that the chief points at issue are matters for *perception* rather than *inference*. If I encounter the works of a new, unfamiliar painter, composer, or dramatist, the first questions I need to ask will be, for example, "What should I be looking for? What is there to discover in his work?" The purpose of the subsequent aesthetic discussions may go far beyond mere diagnosis and classification, but their structure will initially be very like that found in medical diagnoses, taxonomic identifications, and psychological descriptions.

At the outset, we need to be told what to look out for in the new kind of painting, composition, or play—its characteristic features, its constituent elements, the way in which these parts are fitted together, and so on. Only when we are reasonably familiar with these aspects of the new genre shall we be ready to start discussing aesthetic merits, that is, to tell when the elements of any particular work fit together in a particularly striking, eloquent, and effective manner. To recognize a sonnet, a sonata movement, or an impressionist landscape merely for what it is, some experience is required. Substantially more experience and a capacity for reflective comparison are needed before we can hope to recognize better- or worse-constructed landscapes, or movements, or poems. Our judgments will, in this respect, make satisfactory sense only if we are really drawing on such experience. In aesthetics, even more than elsewhere, uninformed judgments tend to be so much pretentious rubbish. (Even at this stage, however, aesthetics does not entirely lose touch with the taxonomic and diagnostic sciences. A physician may describe a patient's illness as an absolutely "classic" case

of diphtheria, or a field naturalist draw attention to a particularly "striking" specimen of mountain laurel, and use the terminology of aesthetics in doing so. For, over and above the everyday business of diagnostic or taxonomic skill, the experienced physician or botanist naturally develops an artistic feel, or appreciation, for the characteristics of his cases and specimens.)

What makes these considerations "reasons" at all? What gives force to the "arguments" by which we appeal to them as justifying our psychological or aesthetic judgments? Approaching aesthetics and psychology from the commonsense direction, we can take these questions only a certain distance. Having explained what is customarily involved in recognizing and responding to (say) *anger* or *curiosity*, can we not say anything more? Having shown how informed critics normally set about analyzing and appraising the structures and merits of (say) *fugues* or *sonnets*, is any further justification called for? Looked at from this point of view, the line between "recognition" and "empathy", or between "understanding" and "appreciation", is a very thin one. Yet, if there were nothing more to be said, this result would not be entirely satisfactory, for it would apparently leave us at the mercy of any arbitrary consensus. Is a lily merely whatever botanists *choose* to call a "lily"? Is anger whatever people in general *happen* to respond to as "anger"? Are the merits of a sonnet whatever features established and widely read critics *acclaim* as "meritorious"? These questions all invite the answer, "Surely not." But to press them at this point would be to run ahead of ourselves. Quite as much as the formal approach, the commonsense approach to philosophy is useful only up to a certain point; beyond that point its powers of illumination are very limited. (This is another topic to which we shall return shortly.)

#### CASE 4

*Reading and Understanding Language.* From the formal standpoint, the types of beliefs and/or knowledge that give rise to

the most serious problems are those having to do with *language*. Suppose that I believe that a particular road sign reads STOP. If my belief is challenged, I may be at a loss to know how to defend it. By logical standards such beliefs seem to lack all real "support". I may gesture toward the road sign in the hope of evoking some agreement about it, but I can offer no additional facts or evidence as "grounds" for my belief, still less present a well-structured propositional argument, with "supporting evidence", "connecting generalizations", and all.

From the commonsense standpoint, by contrast, our knowledge of language can appear entirely *unproblematic*. All the "common ground" two people need in order to understand each other, in the case of a road sign, is that they should both be language users in general, and users of one and the same language (say, English) in particular. Once they do both understand what question is being asked, they will both know what kinds of "experience" are relevant to "knowing" what the road sign reads; so there is normally no problem about reaching consensus. Anyone who can read English will, presumably, see at a glance that it reads STOP; and this fact need not be put down to some "intellectual intuition", or other mysterious in-born capacity, like that which guaranteed for Plato our knowledge of the basic geometrical axioms. On the contrary, we can do this simply because we have *learned* to do it. Nor is there any need to claim for the meanings of signs any of the "necessity" that has traditionally been claimed for the truths of geometry. To recognize what a road sign "means" is, accordingly, to recognize what it means *given the conventions of our language community*. And this is something that anybody who is even slightly familiar with our modes of life will have learned to do.<sup>6</sup>

On a deeper level, however, our familiarity with language is

<sup>6</sup> A number of detailed qualifications could have been inserted at this point; for example, to allow for the existence of *partial* English users, such as illiterate or brain-damaged people, who can comprehend or converse but not read. These would needlessly complicate the issue of our present discussion without affecting the central point.

not entirely without difficulties, even from the commonsense point of view. If our beliefs about the "meanings" of the things we hear and read—together with our "reasons" for holding those beliefs—depend for their validity entirely on the habits of one particular language community, then we shall have no answer to Cratylus. For, in that case, we shall be able to make the claims we do only *for and among* contemporary English users. In Burma, Uruguay, or Bulgaria, for instance, some quite other kind of road sign may well read STOP. In this respect, the very *content* of our language knowledge is evidently *relative to* the corresponding "language community". Only in the context of the appropriate language community are such "rational claims" about language intelligible at all; and then only for so long as the words in question retain stable meanings.

If it applied to language knowledge alone, we might perhaps learn to live with this state of affairs; yet, as Plato saw, it is quite a different matter to generalize it. For, surely, *some* things in the range of our experience must be capable of being known, thought and/or believed with good reason, by and for anyone, at any time and place. There must be *some* beliefs whose basis is more secure and unchanging than the linguistic conventions of a particular community—beliefs that are intelligible, equally, to men of all cultures and in all historical epochs.

If we set our first two philosophical agendas—formalist and commonsense—alongside one another, it may seem to us that we are looking at the problems of "reason" and "knowledge" down opposite ends of a telescope. The kinds of knowledge and reasoning, thoughts and beliefs that are most puzzling when approached from each direction appear most straightforward when viewed from the other. At one extreme, mathematics and scientific theory have all the *formal* virtues; yet, when it comes to explaining how it is we can bring (say) shared geometrical and/or physicochemical concepts to bear on our experience, the nature of the common ground required is not easy to identify.

At the other extreme, our knowledge of language presents no difficulties to *common sense*, but it has posed intractable formal problems from Heraclitus and Plato right up to the present day.

Thus the limitations of the formal approach show up the strengths of the commonsense approach; while the limitations of the commonsense approach remind us, in turn, of the attractions of the formalist program. The very existence of "language knowledge", about which the formal philosopher has little to say, is a clear and transparent matter for the commonsense philosopher; yet the apparent conventionality of that knowledge—the fact that it seemingly holds good only *relative to* the current practices of a given language community—makes it an unsuitable starting point for any general account of knowledge, belief, and "reason". Plato's alternative choice of formal geometry as the exemplar of *episteme*, or "true knowledge", may in its own way have been quite extreme and unfortunate. Still, what drove him to make this choice in the first place was, precisely, the need to escape from Cratylus's extreme "conventionalism" or "relativism".

The point at issue here is a general one. If we approach knowledge and belief from the formal direction, and insist on achieving Plato's standards of certainty and proof at all cost, we put ourselves in perpetual danger of skepticism, since on a strict interpretation no kinds of knowledge or belief—not even geometrical—will measure up to Plato's demands. Yet, if we approach the same topics from the commonsense direction, and pursue its implications to their extreme in turn, we expose ourselves to a corresponding danger; since the "common ground" required for any kind of general understanding can be defined—it seems—only relative to the group of human beings currently using the language and/or concepts in question. On this account, for instance, aesthetic arguments carry conviction only for those familiar with the corresponding genre of artworks; microbiological arguments are accessible only to the relevant generation of microbiologists; only those familiar with the cultural conventions of a particular code can even recognize (say) examples of "gentlemanly" or "ungentlemanly" behavior; while

propositions and arguments set forth in (say) English are intelligible only to users of that language. We must therefore end Part III by looking to see why relativism is as much of a threat to the commonsense approach as skepticism is to the formal approach.

# 12 The Roads to Relativism

From the beginning, in fact, our description of the “commonsense” program carried with it the implicit threat of relativism. As we put the point earlier: Two persons can conduct a discussion in a “rational” manner—the “reasons” given by one can legitimately convince the other—only if they have established a shared set of concepts, and a point of view intelligible to them both, to serve as the “common ground” for that discussion. Otherwise, they will be like two football teams that turn up at different grounds for the same match—in no position to come to grips either with one another, or with any well-defined issue at all.

Questions of aesthetics, for instance, are open to “reasoned” debate only between people of “informed taste”, all of whom understand the genre to which the artworks in question belong. Medical diagnoses can likewise be “justified” fully and clearly only as between experienced physicians, who appreciate the relevance of particular signs or symptoms to alternative possible syndromes. The “implications” of some novel experiment in biochemistry for molecular genetics can be fruitfully argued

only by those who grasp the current concepts and problems of molecular biology, and so on, and so on. In each case, if “common ground” is lacking, the parties will be unable to compare notes about the questions at issue, the appropriateness of this or that concept, the relevance of different arguments, or the adequacy of the reasons for different positions.

All of this, taken together, serves to focus our attention on one particular group of questions:

Just *who* are the people who have to share a particular set of concepts and/or points of view, in order for a question to be meaningful? Just *what* group of human beings do we implicitly refer to when we consider the adequacy of this or that “reason” or “justification”? Just *how widely* does our “common ground” have to be acknowledged and shared if it is to serve as the basis for rational discussion of questions in ethics/formal geometry/everyday psychology/ . . . ?

Behind these questions there lies a deeper and more intractable problem:

If the questions that arise in all these fields depend for their *intelligibility and meaningfulness* on the existence of an appropriate group of informed, experienced individuals, do the answers to those questions also depend on a corresponding reference group for their *truth*?

If what goes for “meaning” and “intelligibility” goes also for “truth” and “validity”, we are going to end in a very uncomfortable position. For, in that case, we shall apparently have to conclude that beliefs are true, reasons are good, arguments are sound and convincing . . . depending entirely on *for whom*

they are said to be true/good/sound/convincing. And this runs the risk of putting Truth and Validity, along with Beauty, in the eye of the beholder.

When put as baldly as this, the relativist conclusion is unattractive enough. We may sometimes be ready to say, in a rhetorical spirit, "Nothing is either good or bad, but thinking makes it so," or, more debatably, "Nothing is either meaningful or nonsense, but talking makes it so"; yet no one can be happy to say—certainly, in quite *general* terms—"Nothing is either true or false, but believing makes it so." Still, though this general conclusion may be unattractive, plenty of philosophers have been tempted to accept this conclusion in *particular* fields of experience.

In ethics and aesthetics, this conclusion is familiar enough. Beginning from worthy maxims like "When in Rome, do as the Romans do," some people infer that all value questions are lacking in "objectivity"; so that our opinions about right and wrong or about beauty and ugliness, and our reasons for holding those opinions, depend entirely on *who* and *where* we are. But similar conclusions are put forward by others even in fields that at first sight involve totally "objective" issues wherever alternative concepts and points of view are available. Two people may agree, for instance, that a blow on the head "caused" a particular man's death or, alternatively, that the "sky" is cloudy today; about such simple matters of fact, we may feel, no ambiguity need surely arise. Yet is this really so? On the contrary, some will reply. The term *cause* is a complex and sophisticated one whose meaning has radically shifted from one historical period to another, so that for all their apparent agreement the two people in question may not even *mean* the same thing when speaking of the blow as the "cause" of death. Similarly, one group of men may think of the *sky* as a finite hemispherical dome above our heads, whereas another group sees it as an infinite boundless space. So, once again, they may *mean* different things by saying that the "sky" is cloudy. Even in such elementary factual cases, as a result, we may be forced to say that what we can know, have reasons for thinking, or

believe to be true depends on who we are, when we are living, and what concepts are current in our time and cultural group.

What cultural group? The answer to that question varies from field to field. In scientific matters, it will be a professional group; the scientist's ideas about "causality" or about the patterns of explanation appropriate to a given subject matter will depend on his intellectual affiliations. To that extent (it is argued) different physical hypotheses, experiments, and explanations will *make sense* to physicists working in the Aristotelian, Cartesian, classical Newtonian, and relativistic Einsteinian traditions. In aesthetic matters, it will be a particular group of informed critics and connoisseurs. Those who have a taste for and are well-informed about (say) action-painting, or Wagnerian opera, or the sixteenth-century English lyric can engage in a common, constructive conversation; those whose tastes and experience lie too far apart cannot. In ethical matters, the group may at any time comprise much of a given nation; in politics, it may embrace predominantly members of a particular social or economic class; in matters of religious belief and ultimate commitment, the size of the class may even be as small as one. (In such matters as these, existential philosophers have claimed, each one of us must choose to think in his own way, and lay binding laws on himself.)

Much as we might like to formulate scientific principles, ethical maxims, canons of taste, political goals and/or rules of life capable of holding good for all men, in all cultures and at all times in history—much as we might like to identify a universal "pattern of human thought" operative in all cultures and periods—this appears at best an ideal, and an unrealizable ideal at that. Not merely over value questions, but also over scientific and factual matters, the ways in which people think, the concepts they bring to experience, the questions that make sense to them will all depend—sometimes in small ways, at other times in more major ways—on who is doing the thinking, and where, and when. Every idea and/or proposition (on this view) must make sense *to* someone, be intelligible *to* someone. There may be a million "truths" in Newtonian *physics*. But

even before their truth or falsity can be asked about, those same propositions must be stated in terms intelligible to Newtonian *physicists*—and by the same token the use of Newtonian terms can make the propositions in question *unintelligible* to Aristotelians or Einsteinians, to say nothing of Aztecs, Babylonians, and medieval Chinese Taoists. When in Rome (it seems) we must not merely *act* like Romans but also *think and talk* as they do.

How should philosophers react to this conclusion? In its own way this extreme relativism is as paradoxical as the skepticism that lies at the end of the formalist road. It is bad enough to be told that strictly speaking we *know nothing*; but it is little improvement to be told that all our beliefs are *meaningful only for some particular group*—whether pop-music fans, or Calvinists, or astrophysicists, or late twentieth-century Middle Westerners. To go this far in the relativist direction is in effect to concede that all ways of thinking and talking are equally open to us; that we are entirely free to choose between viewing the world through different spectacles—as Taoists or Aristotelians or Einsteinians—and that the limits of *intelligibility* are equally the limits of *truth*.

Once again, however, we must be careful not to take this conclusion too tragically, *just because* it is so paradoxical. As has been well said, philosophical theories are nourished on a diet of one-sided examples; and here, as before, the reason we have ended up in paradox is that we have been following out one particular agenda for philosophy by itself, in isolation from all alternative possibilities. The single-minded formalist dreams of an ultimate body of knowledge comprising only truths that are totally “objective” and changeless and, having scrutinized the beliefs available in actual experience, he finds nothing answering to this dream and so opens himself to skepticism. The consistent commonsense philosopher, for his part, insists that the truths comprised in our “knowledge” must at least be rationally accessible to actual human beings; yet he finds little

guarantee that there exist terms for stating those “truths” that are intelligible to men of all cultures, faiths and tastes, professions, epochs and temperaments. Therefore, he is apparently stuck with as many different collections of “truths” as there are distinct groups of concept users!

Faced with this unwelcome choice, we may be tempted to wash our hands of both approaches. But this course of action is needlessly desperate. It is more constructive to look and see why these first two approaches both end by landing us in paradox *if pursued in isolation*, and to recognize that their legitimate goals are not so much competitive as complementary. We are indeed entitled to demand that any general philosophical account of knowledge and belief shall do two distinct things for us. On the one hand, it must show how the things we know and/or believe can have some kind of “objective reality”, independent of human whim and choice. On the other hand, it must show how “objective reality” can be captured and expressed in language intelligible to human beings. These two demands are not easily satisfied by a single account, as the stand-off between Cratylus and Plato witnesses. In consequence, some philosophers have concentrated on the first task, some on the second; and the resulting difficulties have at times made the two aims appear irreconcilable. We find Bergson, for example, arguing that human language *inevitably* distorts “truth”, so that nothing that we can *say* is ever more than an approximation to reality—or, as T. S. Eliot puts it,

. . . a raid on the inarticulate  
With shabby equipment always deteriorating . . .\*

Behind the skepticism that comes from attempting to explain how we can *know* anything at all, there thus lies a deeper and more radical skepticism—one that comes from attempting to explain how we can even *say* anything about the world of a kind that is objective, meaningful, and generally intelligible.

\* East Coker, V, 8-9.

As a result, at some point or other in his work, every philosopher finds himself exclaiming in near-desperation, "If only I could tell the truth without having to use words!"

So let us take care to renounce the paradoxes of both skepticism and relativism. Within its own limits, the commonsense approach gives us an authentic way of attacking the philosophical problem of "reasons", whose results complement and clarify those of the formal approach. But we cannot merely suppose that "human nature" provides us *by chance* with the common ground we need for rational discussion, thought, and belief. It is not mere cultural happenstance that reasons are good or bad, arguments valid or invalid, beliefs justified or baseless. Certainly any adequate account of the procedures by which (e.g.) scientific theories are tested, political stands justified, or literary criticisms made good must make sense in terms of the actual standpoints from which the scientists, politicians, and critics in question actually put forward and defend their views. But the mere assurance that this is "the done thing"—the manner in which *in fact* scientific reasoning, political advocacy, and literary criticism are currently done—is scarcely enough. For the question of *how* these things are currently done is less a question for philosophy than it is for the history of contemporary ideas. The philosopher, by contrast, needs to know also—more fundamentally—on what conditions such activities are *possible and justifiable at all*.

What concerns the philosopher, in short, is not just the *actual historical and cultural conditions* of rational argument in different fields of experience; rather, it is the *general preconditions*, without which there could be no such argument. To see what this means, we must turn to the third and last of our general approaches: the "critical" or "transcendental" approach to philosophy.

# IV

## The Philosopher as Critic

# 13 The Claims of Function

If the years around A.D. 1600 formed a watershed in philosophical and scientific thought, the transition from the eighteenth to the nineteenth century represents another, of almost equal significance. The period we know as the European Renaissance saw free intellectual inquiry revive—outside the framework of ecclesiastical learning and the administrative structure of the Church—to meet the secular needs and interests of a new, literate professional class. Within this new situation (as we saw) it was possible to develop lines of investigation that were not immediately directed toward theological goals, even though most of the individual writers considered themselves, in Robert Boyle's phrase, "*Christian virtuosi*"—that is, scholars who applied their religious devotion to questions of "natural philosophy". Still, the new seventeenth-century spirit of inquiry did little to transform people's actual picture of the natural world, or of the relationship between Man and Nature, entirely or at once. Until late in the eighteenth century, in particular, many European thinkers still took it for granted that the cosmos formed a tidy, stable system, established by God a mere five or ten thousand years back with all its chief present-

day features already in place. (Newton and Vico were only two of many scholars who made it their business to collect together the surviving records about the earliest historical times and to fit them within a chronological scheme founded on a Divine Creation somewhere between 4000 and 4500 B.C.)

Within a cosmic picture so limited in its time scale, the structure and operations of nature were inevitably seen as being governed by static, divinely ordained principles ("laws"), and the history of Nature as demonstrating a harmonious, providential equilibrium. In the solar system, gravitational forces of attraction drawing the planets toward the sun neatly counterbalanced centrifugal forces driving them away from the sun. In the structure of the earth, the continual erosion of mountains and uplands by weather and running water was canceled out by the constructive, elevating effects of volcanic and seismic forces, while similar equilibria maintained the structure and workings of human and animal bodies. Toward the end of the eighteenth century speculative theories about the origin of the earth and the planetary system began to make this traditional six-thousand-year chronology appear questionable; but a truly dynamic historical or evolutionary picture of cosmic development required a chronology many millions of years in length, and it was the middle of the nineteenth century before such an expansion of the cosmic time scale was widely accepted.

So despite all their other disagreements, for example, about the significance of history, both Descartes and Vico operated within a common chronological framework—one that marks off the thought of their age very sharply from that of our own. As a result, Descartes could distinguish in an absolute way between the "mental" (or "rational") operations of the human intellect and the "physical" (or "causal") mechanisms of the material world. Mind, as such, was not caught up in, or directly affected by, the workings of Matter; rather, human thinkers looked on at Nature from the independent posture of rational observers and passed judgment on it according to unchanging principles. Even Vico, despite his sense of change and diversity in human life and affairs, saw all this variety as alternative

manifestations of a single, providentially ordained "human nature"—as a historical sequence of variations on a theme, rather than as a source of radical novelties. The primitive sky-myths, heroic legends, tyrannies, popular constitutions and monarchies of different peoples, followed one another out according to certain standard human patterns; and the common goal of these processes, in all the different gentile cultures, was a human society in which the basic laws of social living revealed to the Hebrews by the Prophets were acknowledged—in the light of an explicit common philosophical analysis—as the proper outcome of this common human nature. On the other hand, basic *philosophical* principles—whether geometrical, scientific, or ethical in their content—were not regarded as historical or cultural variables, in the way that the myths, legends, and institutions of different peoples might be.

So matters still stood in the 1770s and 1780s, when the American and French Revolutions launched mankind into the social and historical convulsions that have largely preoccupied subsequent human thought and practice. They occurred just as Immanuel Kant was attempting the last great *a-historical* synthesis of human thought and experience. As Kant saw matters, Euclid had achieved the final and "necessary" system of geometrical concepts and theorems, Newton had presented the corresponding system from mechanics, and a similarly "categorical" theory of morality was within reach, in which the principles of human conduct would take their proper place within a comprehensively rational "system of nature". In each case the supposed necessity of the principles involved did not originate for Kant in any accidental empirical feature, either of the physical world or of human nature itself. Rather, a philosophical critique must demonstrate that *any* rational being—an angel or a Martian, quite as much as a terrestrial human—could organize spatial, physical, and/or moral experience coherently only by conforming to those principles. In this sense, Euclid and Newton had apparently enunciated the "rules of right reasoning" for spatial and physical matters, and Kant hoped to do the same in the moral sphere.

Kant thus saw himself as fulfilling, in his own way, the philosophical ambition of the classical Greeks: to demonstrate a necessary harmony between the fundamental laws of the *cosmos* and the *polis*. Two things in our experience (he declared) testify to the necessity of the principles that govern the operations of reason: namely, the starry heavens above and the moral law within. Built securely on its Euclidean foundation, the physics of Newton gave us the necessary structure for any coherent understanding of the physical and astronomical world. The same could be done for the moral world by the universal principles of impartial, disinterested human conduct, which were formulated explicitly by Kant himself, but were presumably implicit in the dictates of any reflective, experienced conscience.

This synthesis did not last. The more firmly the "principles of the pure and practical reason" were declared by some philosophers to provide universal and necessary patterns for the organization of human experience, the more skeptical others became about whether they were—either in fact, or as an ideal—universal and inescapable, to say nothing of "necessary". On the contrary, people now began to ask, "Should we not now restore the human Mind to its proper place *within* History and Nature? And if this were done would not even the basic forms of rational experience prove to be social, cultural, and historical variables?" Perhaps, in their different ways, both David Hume and G. B. Vico had been right in seeing the heart of philosophy as comprising a "theory of human nature". But it was no longer transparently clear that human nature, so understood, was universal and immutable. After all, why should human beings in every epoch, culture, and class have had identical desires, interests, and expectations? Why must a single set of rational principles have governed the thoughts and actions of primitive cavemen, ancient Egyptian pharaohs, medieval monks, and proletarian factory workers in (say) industrial Manchester? Far from this universal and inescapable necessity being obvious to

any reflective thinker, it was just as plausible to suppose that different people had divergent interests and preoccupations, and were subject to correspondingly different "rational principles", whether in mathematics or in natural science, in ethics or in politics.

Eighteenth-century writers had acknowledged the diversity in human cultures and institutions as significant and interesting, but the richness and variety of human history and culture became a major preoccupation of their nineteenth- and twentieth-century successors. Far from representing mere variations on the same recurring themes, this diversity was now seen as integral to the fabric of human life and history. An eighteenth-century intellectual like Voltaire might play up this human diversity for rhetorical purposes, but he would nevertheless take for granted a rational background of universal principles, distinguishing the oddities and crudities of primitive, barbarian thought and conduct from the more polished and "rational" civilization of the modern European nations. (As he put it, "There is only one Morality, as there is only one Geometry.") Beginning with Herder in the 1790s, however, later philosophers have protested against this eighteenth-century attitude as shallow and patronizing. Instead of seeing all of mathematics and science, morals and politics, as subject to a single, universal and invariant body of rational principles, we should approach the facts of history and anthropology in a spirit of greater modesty and respect, looking to see how men's problems, preoccupations, and interests—whether social or intellectual—have emerged and evolved during different periods of history and in different regions of the globe.

The first thing was to gain a thorough understanding of human history, and judge the legitimacy of different intellectual and ethical standpoints in their own proper contexts. Until that was done, we must resist all temptations to generalize prematurely, or impose a single a-historical code of rational standards on people of all nations, cultures, classes, creeds, and epochs. If a thorough analysis of the historical and anthropological evidence demonstrates that all human groups and individuals

have indeed shared certain particular goals and interests *in fact*, we may at that point be justified in recognizing that, in virtue of this fact, corresponding universal maxims may be relevant to the experience of all human beings. On the other hand, if the actual interests of different individuals and groups prove in fact to diverge, that conclusion too must be accepted and digested without any prior "universalistic" prejudices.

This was not to say that *all* accepted modes of argument are equally legitimate. In some cases and on some conditions, people can be criticized for thinking too conservatively, superstitiously, or uncritically, or for operating their social institutions too brutally, laxly, or rigorously. But such criticisms must be justified with an eye to the details of each particular case, not handed down arbitrarily, from on high, by the automatic application of universal principles. We must understand in detail what people's legitimate goals and interests in fact are—in virtue of being (say) committed Quakers, unemployed black teenagers, research biochemists, Sicilian farmers, or whatever. Only after that is done, shall we see clearly how far, and in what respects, eighteenth-century notions about a common "human nature", and universal "rational standpoints", have genuine roots in the actual facts of human life.

The nineteenth and twentieth centuries have as a result been a time, above all, for the development of "human sciences". By the late eighteenth century, the testimony of ancient authors, the Old Testament, and the accumulated records of more recent times had yielded the bare outline of human history. The physical and social characteristics of different peoples had been collected, described, and catalogued in a new descriptive "ethnography". In one or two isolated cases—notably, in linguistics—there was even some real understanding of historical development. (The first genuinely *evolutionary* ideas, about variation and selective perpetuation, were developed in order to explain the genealogical connections between the languages of Europe and South Asia. Hence we find the familiar modern term "Indo-European" being applied to this entire family tree of languages as early as the year 1814.) Yet this was about as far as things

went. For a real understanding of social or cultural, intellectual or technical development—to say nothing of historical geology and biological evolution—we must look to the mid-nineteenth century or later.

Even so, the traditional framework of biblical history and chronology yielded to our own much vaster time scale and more gradual developmental processes only slowly and grudgingly. Every step in the change was harshly contested, and at first ambiguous. In our eyes, the discoveries of modern archaeology carry back the reach of known prehistory far beyond the traditional date of Creation; yet the first archaeological results, such as Layard's discoveries at Nineveh in the late 1840s, seemed to reinforce the biblical account by revealing monuments and inscriptions of Assyrian kings (e.g., Tiglath-Pileser III) previously known only from the Old Testament. For us, similarly, the geological analysis of the earth's crust provides evidence that our planet has existed for some thousands of millions of years; yet in the 1820s and 1830s professional geologists took very seriously, for a while, the suggestion that they were uncovering traces of Noah's Flood. Meanwhile the traumas induced in other countries by the spectacle of the French Revolution provoked a highly conservative attitude toward social and political theory. Such earlier writers as Machiavelli and Hobbes fell out of favor, while contemporary reinterpretations of social and political development, as a product of its changing historical, institutional, and economic contexts, were met with grave suspicion.

Even the eventual success of the Darwinian hypothesis in accounting for the progressive transformation of organic species, including "the descent of man", was at first confined to the physiological or material aspects of organic life. If we go back any distance, our paleontological speculations must rely almost exclusively on evidence from the fossilized remains of extinct organisms. Not surprisingly these fossils can tell us directly only about the sizes, shapes, and forms of extinct species. To infer anything about their modes of life is a much trickier and more speculative task. Until very recently, as a result, many

people have shut their eyes to questions about the evolutionary ancestry of human *psychological* endowments—of our intellect, passions, social and moral sense, our capacity to make tools and to develop language.<sup>1</sup> All the same, when we take together the intellectual changes brought about since the year 1800 by the development of new historical and anthropological disciplines—social history, evolutionary biology, cultural anthropology, archeology, psycholinguistics, economics, and the rest—we can see what a transformation the last two centuries have effected in the framework of human thought and action.

Instead of an overall chronology of some five to ten *thousand* years, we now think rather in terms of five to ten *thousand million* years. In place of a static world of natural equilibria, governed by providentially designed checks and balances, we see rather a dynamic world in which the passage of unimaginable time has finally permitted the very gradual development of living creatures having social and technological, linguistic and intellectual, capacities. And the more extended the chronology and the more gradual the historical processes have become, the more essential it has become to consider alternatives to the absolute, universalistic accounts of knowledge and rationality still current in philosophy, from Descartes in the early seventeenth century up to the time of Kant in the years around 1790.

This is not to say that the new understanding of history and anthropology could *by itself* have discredited earlier philosophical efforts to demonstrate that the “pure and practical reason” conforms to universal or invariant principles, forms or concepts. Indeed, some philosophers today would argue exactly the opposite case. Just because we now know so much about the actual diversity of human modes of thought about the world of Na-

<sup>1</sup> Jane Goodall's first field reports of wild chimpanzees making and using simple tools initially generated more anxiety than delight; and, even today, claims to have taught domesticated apes to use deaf-mute language still meet opposition from some who see in human language crucial evidence of the “uniqueness” of Man.

ture, it becomes that much the more urgent (in their view) to recognize the unique “rationality” of modern science, and to analyze the general principles that ensure its particular success. What condemned the protoscientific efforts of people in other cultures and epochs to futility was their failure to recognize the significance of those principles; and if we cannot articulate the hidden wisdom of our own procedures, we ourselves are in danger of lapsing back into dogmatism, romanticism, and mythology. (The arguments of Karl Popper and his followers are relevant here.) Nor is it our purpose here to rule out the possibility that such “universal” principles may *in fact* turn out to have a place in the intellectual armory of human inquiry. Two points alone are important here. (1) Many of the new directions characteristic of philosophical thought during the nineteenth and twentieth centuries are best understood when related to other contemporaneous changes in the broader framework of human thought—notably, the new understanding of chronology and historical development. (2) The acceptance of modern ideas about the time scale and processes of historical change compelled philosophers, at the very least, to look again at the arguments supposedly justifying universal and immutable “principles of rationality”.

In this respect, the nineteenth- and twentieth-century discovery of history has given traditional philosophy, not a death-blow, but a challenge. Even as recently as 1700 human beings still appeared to form a remarkably homogeneous species, and rationality could still be viewed as a single, straightforward characteristic, of equal relevance to “civilized” and “primitive” peoples. (Presumably, the primitive peoples were trying to approximate more closely to the civilized ones, and so to become more “rational”.) By now, such simpleminded distinctions—between crude barbarians and the humane products of modernization and development—have lost their charm and plausibility. So for us today the question becomes:

How much scope remains for identifying  
“universal” needs and interests, habits and

expectations, shared by men of all cultures and periods? And how far can we, as a result, formulate general "principles of reason" applicable to human thought and conduct, regardless of time or place, style of life, or stage of development?

The philosophers of the eighteenth century—from Hume and Voltaire right up to Reid and Kant—conceived of their "theory of human nature" in quite general terms. For them, the basic modes of human reasoning, the fundamental concepts of "causality", "morality", "substance", and so on, were presumably to be judged by the same standards at all places and times. From 1800 on, this could no longer be taken for granted. If any particular feature of "human nature"—together with its associated concepts and patterns of thought—is to be pronounced absolutely general and universal, in point of theory, that universality has to be *demonstrated*. Meanwhile it is necessary to recognize that, in practice, reasoning always goes on within specific contexts, and the nature of these contexts must be defined with an eye to historical and cultural, social, economic, and psychological factors.

As a result, many nineteenth- and twentieth-century philosophers have made it their business to begin by seeking out (e.g.) structural patterns within human history, economic foundations for cultural or intellectual life, laws of psychic development in the human individual, and the like, as being indispensable for understanding the *context* of rational thought and action. The standards of judgment appropriate to "reasoning" within any specific context can then be viewed in the light of—and with an eye to—the special historical, social, economic, and/or psychological features of that context. The assumption that "human nature" is universal and invariant in all these respects was evidently too vast and flimsy. Only a detailed understanding of the factors and relationships actually operative in human life, and human reasoning, can set the scene for a proper appreciation of our "rational" standards.

In this way, the central tasks of nineteenth- and twentieth-

century philosophy became not so much *anthropological* as *critical*. The question was no longer, "How do human beings in all cultures and periods *in fact* think alike?" It became, rather, "What historical/sociocultural/psychological factors, and relationships are *presupposed* by (e.g.) 'science' as we know it?" To this we may add, as a corollary, one further question: "Just how *different* would these factors and relationships have to be, in order for (e.g.) 'science' as we know it to become impracticable and/or illegitimate?"

This was a significant shift from the position characteristic of the seventeenth and eighteenth centuries. Instead of asserting in general terms that particular modes of reasoning were universally valid, it obliged philosophers to investigate the particular scope and relevance of those modes of reasoning. There remained open the possibility that in a few cases this scope and relevance might prove, on investigation, to be entirely general and unconditional. But this was something that had to be proved. In the meanwhile, we must explore in more detail the historical and scientific, cultural, social and psychological *presuppositions* of "rational" thought and action, and the consequent limitations on their scope.

# 14 Rational Procedures and Their Functional Significance

If we are to adopt this third, "critical", approach to philosophy, we shall have to put the problem of reasoning into a yet broader context. Considered in formal terms, "arguments" are simply networks of propositions linked together by logical relations, and "reasons" are just those particular propositions which, in a given situation, provide logical support for a "conclusion". Considered in commonsense terms, "arguments" represent one class of human activities, and "giving reasons" is the phase of those activities in which one party to an argument sets out to convince the other party that his conclusion is "justifiable". The *formal validity* of an "argument", in the narrower sense, may perhaps be judged by considering logical relationships alone. But its *practical relevance* can be seen only in the context of the corresponding "argument", in the wider sense. A particular arithmetical calculation, for instance, will be a contribution to tidal forecasting (say) rather than to economics because that is the goal at issue in the broader human "argument" concerned, and so on, and so on.

However, we can hardly be content simply to collect *descriptions* of the modes of arguing employed by (say) Babylonian

prognosticators, Alexandrian alchemists, Chinese or Aztec astronomers, as though each of them provided an equally satisfactory context for "reason-giving". Instead, we should take a further step backward, and inquire about the *functional significance* of these "arguments" and "reasons", that is, their significance as procedures developed during the interactions of human beings with the world and with one another. Looked at from this point of view, the crucial questions about "reason" and "reasoning" cease to be questions either about formal relationships and validity or about consensus and conviction, and become questions about the *place, point, and meaning* of these procedures—as they relate, both to the human interests involved and to the natural world within which those interests have to be pursued.

Very early on, in Chapter 2, we remarked on the completely general character of philosophical issues; the problem for philosophy, we remarked, is not (say) "Shall we do our forecasting in *this* way or *that*?" but, rather, "How is any forecasting *possible at all*?" At this later stage, we can return and see more exactly what this kind of general issue involves. The question is one about (say) the *preconditions* of rational forecasting. If rational forecasting procedures are to have any legitimate existence and function, what kinds of creatures do human beings have to be, what kind of world do they have to inhabit, and what kinds of interactions must there be between human beings and the world? That is the general problem that arises about predicting if we approach philosophy from the critical direction and attempt to place predictive "arguments"—in both the previous senses—in their broadest context. Problems of the same form arise with equal force and cogency if we replace the phrase "rational forecasting procedures" by references to those other kinds of arguing and reason-giving, about which philosophical perplexity may arise:

If rationally defensible moral judgments/medical diagnoses/scientific theories/aesthetic appraisals/linguistic interpretations (and so on) are to

have any legitimate existence and function, what kinds of creatures do human beings have to be, what kind of world did they have to inhabit, and what kinds of interactions must there be between human beings and the world?

Before looking at philosophers' answers to such "critical" questions, however, we should spend just a little longer time on considering their *form*. And we should pay particular attention to the term "preconditions", since the meaning of that term embodies much of the characteristic point of critical philosophy.

Let us begin by distinguishing between what we may call "preconditions" and "postconditions", respectively. A few illustrations will quickly make this distinction clear. Suppose, then, that planetary astronomers are interested in calculating the orbits of asteroids, satellites, or other objects within the solar system. To make these calculations with unlimited precision, they would need to measure, and allow for, more factors and variables than it will ever be practicable to handle. For the sake of economy, therefore, they will always end by making certain assumptions. For example: The density of interplanetary dust is so low that the consequent "drag" can safely be neglected. To the extent that the reliability of their forecasts depends on the reliability of these assumptions, as a result, the forecasts themselves will be implicitly *conditional*. Strictly speaking, we should preface all the resulting forecasts with the corresponding formula: "Provided that the 'drag' from interplanetary dust remains entirely negligible, etc. etc. . . . , the planet Venus will rise at 8:36 P.M. this evening."

Physics being what it is, all categorical forecasts of future physical events—however confident we are about them—involve implicit conditions of this kind. Two things need to be noticed about these assumptions: To begin with, (1) knowing what minor factors we can *neglect* to (say) a planetary calculation is just as much a piece of "scientific" knowledge as knowing what major factors we *do* need to take into account. In addition (2) knowing what conditions make (say) planetary forecasting

practicable requires us to know something about the planetary system *in particular*. In other cases—tidal forecasting, for instance—the physical conditions that make rational forecasting practicable are quite different; they involve the comparative forces exerted by the lunar attraction and the winds, and the like. So, rational forecasting is possible in planetary astronomy on one set of conditions, in hydrography on another, and so on. All these particular scientific "conditions", which vary from case to case, can be called "postconditions". We can spell them out only *after* we have achieved a fair grasp of the particular scientific issues involved in any specific case. They come into the picture only *after* we have reached the general stage of developing effective forecasting techniques and have also achieved some theoretical understanding of the reasons for their reliability.

In both respects, these scientific *postconditions* contrast sharply with the *preconditions* that are the concern of critical philosophy. The astronomer or oceanographer, while speculating about the exact conditions and degree of reliability of his particular forecasts, commonly takes the *general* legitimacy of his procedures for granted. Yet he might alternatively have set aside all particular, scientific questions, taken a step back, and asked himself on what conditions *any* such forecasting can ever be legitimate. This step back will turn attention away from the *specific objects* of his forecasting—the planetary system, or the rise and fall of the oceans—and focus it instead on the *general activity* of forecasting. The resulting questions will not involve particular physical factors, such as interplanetary dust and wind forces, but will rather raise quite general issues about the entire enterprise of forecasting. What is it to make predictions, to back them up with evidence and calculations, and so on? What kind of interactions does this activity involve, between human beings (as "rational" creatures) and the world in which they operate (as an "object" of rational knowledge)?

If we are to deal with these general questions explicitly, we can no longer take the legitimacy of our established procedures for granted. On the contrary, the ultimate foundations of that

legitimacy are precisely what is at issue. In taking the step back from planetary or tidal forecasting in particular to forecasting in general (that is), we have moved from the terrain of science to that of philosophy. If one or another specific forecasting procedure is to be legitimate in practice, then it must already be agreed that rational forecasting in general is possible at all. And what kind of assurances do we require in order to be satisfied about that *general* legitimacy? That is the point at which the philosophical problem of *preconditions* becomes active.

The same distinction between "preconditions" and "postconditions" can be made in other cases. For instance, our ethical conclusions (e.g., Jim ought not to spend so much money on gambling) frequently turn out to take for granted certain unstated assumptions (or postconditions), such as the fact that Jim is a family man with limited earnings, rather than a wealthy bachelor with a string of race horses. Our psychological judgments (e.g., Father is extremely angry) likewise assume that he is not putting on an act, has not been suddenly attacked by high blood pressure, or whatever. Even our linguistic judgments (e.g., the place name "POCTOB" on a road sign must be read as something like "pock-tobb") take it for granted implicitly that the name is written in Roman characters, rather than (say) representing the name "Rostov" in Cyrillic letters. In each such case, our implicit assumptions serve as "postconditions" in the same way as the physical assumptions involved in planetary or tidal forecasting. The question of their relevance remains a question of the same type as that from which we started: If Jim turns out to be a rich bachelor, or Father turns out to be putting on an act, or the place name turns out to be written in Cyrillic characters, that fact is one whose significance is just as straightforwardly ethical/psychological/linguistic as the original judgment. Understanding what is wrong with Jim's gambling, and understanding why his being a bachelor would make a difference, both involve the same kind of ethical sensitivity; recognizing that Father is probably angry, and recognizing that he may be putting on an act, both

call for the same kind of psychological responsiveness; while the ability to read "POCTOB" as "Rostov", in Cyrillic characters, is an ability of the same kind as the ability to read the same sign, in Roman characters, as "Pock-tobb." In each case, the entirely general, philosophical issue—the rational legitimacy of *any* ethical conclusions, psychological descriptions and/or linguistic readings—is for the time being sidetracked.

On the other hand, we could in each case decide to step back and raise that general, philosophical issue. How is it that any facts whatever—whether about Jim's marital and family status, income, or anything else—have a bearing on the question of what he ought or ought not to do? How is it that any gestures, utterances, or expressions—flushed cheeks, shaken fists, muttered oaths, or anything else—can serve as reliable indicators of a person's feelings? How is it, for that matter, that any marks or shapes—whether painted, typewritten, penciled, or whatever—can possess any determinate pronunciation or meaning? When we take the step back to this general level, the point at issue ceases to be directly ethical/psychological/linguistic, and we have moved once again onto the terrain of philosophy. And in the process, as in the forecasting case, the issue that arises ceases to be concerned with specific *postconditions*, and becomes one about the general *preconditions* of ethical/psychological/linguistic understanding.

Considered from this third, "critical", direction, accordingly, the philosophical problems of thought, argument, and rationality take on additional complexities. The ultimate significance of our propositions and logical relations becomes clear when we place them, not just in the context of those human activities and shared interests from which they derive their practical "meaning", but when we go on to set them—in turn—in the broadest possible context and ask how all our different rational activities and enterprises come to be possible at all. In themselves, specific propositions and formal arguments epitomize the broader activities within which they are "at home"; but these broader activities themselves rely for their very possibility on further presuppositions. And those presuppositions have to do with the

most general characteristics, *either* (1) of the world in which we live, *or* (2) of our own human make-up, *or* (3) of the standard modes in which we ourselves, being as we are, interact with the world, being as it is, *or finally* (4) on relevant aspects of all three sets of factors. Our next task is to look and see what different ways the "critical" approach to philosophy gives us to attack this broader problem of *presuppositions*.

## 15 The Preconditions of Good Reasoning

Looking at the problem of "reasoning" and "good reasons" from this third direction, we find ourselves faced with this general set of questions:

- How do our different rational activities and enterprises—in the course of which it is appropriate to give "reasons"—come to have the general characteristics they do?
- What sorts of justification, or guarantee, can be claimed on behalf of their results?
- What is presupposed by engaging in these activities, and by giving and accepting "reasons" as relevant to them?
- On what do we ultimately rely for the soundness and relevance of the concepts, points of view, and/or arguments, that we apply within each activity?

The particular wording of these questions is not, of course, sacrosanct. Some philosophers, for instance, would raise their

eyebrows at the term "guarantee", and we have seen how quickly the demand for a particular kind of *geometrical* "guarantee" can drive us into skepticism. Still, clearly enough, we do need to go beyond mere anthropological reporting, about how scientists, art critics, and the rest *in fact* act and talk. We do need, at least, to recognize how and in what respects the work of such people enables them to *achieve* something substantial. In short, we need to understand, not just what forms our so-called "rational" activities habitually take, but what fruits make them *functional*, and therefore *legitimate*.

These questions may be tackled in two rather different spirits: the one exclusive and dogmatic, the other more inclusive, but also more inconclusive. On the one hand, we can ask, "In which of the three possible directions are we to seek answers to these questions: by looking to objective facts characteristic of the World independently of the human Mind, *or* by looking to the subjective experiences characteristic of Mind itself, *or* by investigating the characteristic modes of interaction between Mind and the World?" We may begin, that is, by assuming that the essential rationality of each of our enterprises depends unambiguously on truths about some *one* of these three spheres. (A satisfactory answer obtained in this way would certainly have the merit of simplicity, and would seem to hold out the prospect of a reliable guarantee: "All you have to accept is—say—the objective Uniformity of Nature, and the rational legitimacy of natural science will at once be ensured." The price we pay for this guarantee, however, is the fact that alternative answers will, in the nature of the case, also be *rival* answers. The fact that each answer is put forward dogmatically, as the one-and-only-one correct solution to the problem concerned, is liable to make the resulting debate abortive.)

On the other hand, we can proceed more tentatively and inclusively. That is to say, we can begin by accepting the likelihood that our different activities and enterprises depend for their rational legitimacy, in different respects, on considerations of all three kinds. For, surely (we may argue), the rational possibility of doing natural science, or of recognizing other people's

feelings, or of exchanging aesthetic opinions, or of using language intelligently depends not on one *single* precondition but, rather, on a number of different factors working together—in certain respects, on objective facts quite independent of our feelings and beliefs; in other respects, on the human motives and interests that we bring to our enquiries; in still other respects, on the procedures through which these motives and interests have led human agents to interact with the rest of the world. Thus, the existence of (say) a meaningful language presumably depends, in part, on a certain stability in the world; in part, on human wishes and feelings; in part, on people's ways of dealing with the world around them. There remains only the question, In just what respects it depends on each group of factors. (The price we shall pay in this case will be the converse one. By recognizing that our answers may have to be complex, we remove the necessity for rivalry. But in doing so, we risk making the resulting arguments that much the more *inconclusive*. Different philosophers will be inclined to put more or less stress on different groups of factors—one looking more to objective considerations, another to the nature of the mind, and so on. Therefore, the resulting account will hardly serve as a *legitimation* or *guarantee* of our rational activities. Yet, in reply, we might inquire: "Is it clear that we are entitled to any more?")

Once again, the force of these alternative philosophical approaches is best seen by considering how they work out if applied to different groups of examples. So let us stay with the same examples that we considered earlier (in Chapters 7 and 11) from the formal and commonsense standpoints, and see how the different possible "critical" approaches—dogmatic or tentative, objective or subjective, etc.—adapt themselves to each class of case. These examples were the activities of (1) forecasting, (2) doing natural science, (3) taking ethical stands, (4) identifying the everyday properties of material objects, (5) discussing aesthetic merits, (6) recognizing and characteriz-

ing states of mind, and (7) reading and understanding language, together with the associated types of formal arguments. These arguments we discussed, in turn, as Cases (1)–(4) in Chapter 7: The activities we dealt with, more broadly, in the corresponding sections of Chapter 11.

From the earlier points of view, we found it convenient to discuss these examples in four groups: taking together first (1) and (2)—our Case 1—next (3) and (4)—our Case 2—then (5) and (6)—our Case 3—and finally (7)—our Case 4. The present “critical” standpoint demands a different classification. For, if we begin our search for the ultimate guarantees of different rational enterprises by seeing the three alternative sources of “guarantees” as *exclusive*—either the Objective World or the Human Mind or the interactions of Mind and World—the central issue will present itself to us as a direct choice between “objectivity” and “subjectivity”. Do the ultimate roots of these different enterprises lie, in the last resort, “outside us”, in an objective world over which we have no control? Do they lie “within us”, in a subjective region of feelings, preferences, and decisions? Or are they to be found “in-between us and the world”, in the structure and texture of the operations that we perform on the world?

### The Exclusive Approach

If we take this as the primary choice, our different examples fall naturally into three fresh groups. In each case, indeed, the decision appears at first sight easy enough. In three of the seven cases, the natural first supposition is that the prime conditions of “rational inquiry” lie clearly *outside* ourselves. In order for rational forecasting to be possible at all, for instance, surely the *external world* must—first and foremost—be the way it is. Surely, there must exist in the world “objective regularities”, over which human beings have no influence, so that in predicting (say) lunar eclipses and tidal rises and falls we are merely following “external nature”. Nor can human beings

take any responsibility for the existence in the world of stable material objects with determinate characteristics. These too appear at first glance to be “objective” features of external reality, and it is our business as rational observers to describe the world in ways that are guided by those features. Similarly in natural science. Even though the concepts and theories that we bring to the scientific interpretation of Nature may be human creations, the goal of science is surely to match those ideas against “external” facts and so to arrive at an account of the natural world whose “objectivity” commands general acceptance. So the *objective* basis of examples (1), (2) and (4) seems guaranteed.

From this same point of view, by contrast, it seems equally natural to regard ethical and aesthetic views as “subjective” and to look for their ultimate roots “within ourselves”. If people did not have ethical and aesthetic feelings—if they did not feel themselves attracted or repelled by different kinds of conduct, or artistic creations—what scope would there ever have been for aesthetic argument and discussion? Must we not therefore, in these two cases, see the foundations of rational debate (if any) as located in the workings of human hearts, minds, and “tastes”? So, the seeming “objectivity” of (2) natural science and (4) the material world thrusts (3) ethical judgments and (5) aesthetic criticism into a correspondingly mental or “subjective” sphere.

As for (6) psychological diagnosis and (7) linguistic understanding: these cases form a natural third group. If we are compelled to choose between three *exclusive* alternatives, we can hardly regard our capacity to understand either linguistic signs or other people’s states of mind in a rationally defensible manner as being justified *either* by the “external” facts alone, *or* by our “internal” tastes and attitudes alone. Rather, the rational significance and intelligibility of human behavior and language alike appear to have their source in the operations by which we interact as agents with the world in which we live. Hence the intelligibility of states of mind, and the significance of language, seem to come into existence (so to say)

"in between" the human observer and that which he is observing. Or, to put the same point less misleadingly: We can recognize the rational legitimacy and justification of our beliefs, in these cases, only by paying attention to the interactions between human beings, considered as observers or agents, and the "external" objects they are observing or acting upon.

Although this first classification of our examples may be natural enough, it is by no means *compulsory*. In each type of case, there are philosophers who prefer to swim against the current, criticize our first impulsive answers as superficial, and present alternative views of the matter—sometimes even paradoxical views. There is, for instance, in the philosophy of language a long-standing tradition of treating "meanings" as objective, and so as independent of human activities and preferences. Recall Plato's reaction to Cratylus' skepticism about language. This provoked Plato to claim for the truths embodied in our linguistic understanding a status as "objective" as that which he claimed for geometrical knowledge. The problem of accounting for our knowledge of language gave rise, therefore, to a prolonged debate about "universals". Roughly speaking, the term "universal" was intended to refer to the "things" about which linguistic statements directly spoke. The statement, "Crimson is a shade of red," for instance, was held to assert the relationship between two universals, namely, *crimson* and *red*.

Of course, "universals" were not supposed to be "objects" of a tangible, physical kind like horses and dolls and rocks. Rather they resembled the idealized entities of Greek geometry—"the circle", or "the angle in a semicircle". Nor were they supposed to be mental objects, like afterimages, fleeting thoughts, or conscious intentions. The universal *crimson* was no more identical with a patch of color in Plato's mind than it was with a patch of crimson paint on the wall. (For that matter, the geometer's ideal "right-angled triangle" had never been identical with Plato's *mental* representation of such a triangle, any more than it was with any particular *physical* triangle cut out of metal sheet or drawn on paper.) In the same way as geo-

metrical entities, universals were thought of as belonging to a "Third World" of objective but nonmaterial entities, and as having "necessary" properties independently of the empirical facts, *either* about the material world *or* about human minds. At this point we are again at the beginning of a philosophical road too long to explore here. One hint only: Words like "object" and "objective" are evidently shot through with deep ambiguities, and need to be applied with the greatest care. But what is crucially at stake in the theory of universals, as in Plato's theory of geometry, is the conviction that humans do not have the power to alter the truth or validity of the beliefs in question. At most, we can change the sense in which our words are used—as if I say, for instance, "*Crimson* is a student newspaper at Harvard University," which in no way contradicts the previous statement, "*Crimson* is a shade of red."<sup>1</sup>

Similarly, in other kinds of cases we can find philosophers encouraging us to recognize elements of "subjectivity" in what we first took to be strictly "objective" matters or, alternatively, some genuine "objectivity" in what originally seemed to be "subjective" preferences. Thus, for many moral philosophers any preoccupation with personal preferences and tastes can simply mislead us into overlooking the deeper points at stake in ethical issues. Rather than "feelings"—whether individual or communal—being the heart of the matter (they argue) we should be prepared to regard moral obligations as having no less "objective" a reality than the regularities facing forecasters and natural scientists. And in aesthetics, likewise, we should perhaps acknowledge the existence of harmonies and proportions as objective, in their turn, as regularities and obligations. On this alternative view, the ultimate rational justification for ethical and aesthetic beliefs should be looked for, not "inside", but "outside" ourselves. Otherwise (it is asked) how could there

<sup>1</sup> Recall the old riddle, "If you call a dog's tail a 'leg,' how many legs does a dog have?" To which the correct answer is, "Four, since calling a tail a 'leg' doesn't make it so."

be any public, interpersonal discussion about rights and wrongs? If I merely react to a piece of conduct in one way, and you in another, what is there left to discuss?<sup>2</sup>

Yet another dissenting view about ethics and aesthetics is also possible. Perhaps we should direct our search for the ultimate grounds of ethics and aesthetics elsewhere—neither “outside” nor “inside” but “in between”.<sup>3</sup> On this argument, aesthetic discussions can be conducted in a rational way, not because artists and their audiences just happen to have the “subjective” feelings they do, or because clay, sounds, movie film, and the rest, just happen to have the “objective” properties they do but, rather, because over the centuries artists have engaged in an exploratory interaction with their media, have come to understand what can be done with clay, sounds, and the rest, and so have developed a familiar repertory of artistic activities which essentially involve *both* human beings *and* their material media. A similar move can be made in the field of ethics too. The heart of all ethical issues (it can be argued) lies neither in the “subjective” feelings we just happen to have within us nor in “objective”, impersonal obligations existing outside us but, instead, in all those interactions by which human agents have learned, over the centuries, to deal with one another in a reasonable and principled manner.

Conversely, in science and similar inquiries our initial sense that the questions at issue are securely “objective” can itself be

<sup>2</sup> This argument can continue in a number of directions. We might describe the supposedly “objective” basis for ethics and aesthetics in terms of several different analogies. Some philosophers treat *good* and *beauty* as words that, like Plato’s geometrical terms, refer to nonsensory objects in a “Third World”; others, as referring rather to a special kind of perceptible qualities—tertiary qualities, by analogy with Locke’s earlier distinction between primary and secondary qualities; still others, as a distinctive kind of properties—“nonnatural” properties. Whichever path is chosen, the crucial point at issue is the need to provide an *interpersonal* subject matter for ethical and aesthetic discussions.

<sup>3</sup> All the quotation marks are necessary because the “spatial” relations we are dealing with here are strictly *metaphorical*.

challenged in favor of a more psychological interpretation. For it is surely a mistake to assume without criticism that, in addition to the planets and ocean waters themselves, the “regularities” in their movements represent further, distinct “objective constituents” of the material world. What on earth can it mean, for instance, to say that there exist in the oceans both *water* and *regularities*? (Is this not a bad case of *zeugma*—like saying, “Mary went home in a taxicab and a flood of tears”?) The planets and the water we may accept, but surely all talk about “regularities” will be quite misleading by comparison. There are not *three* different kinds of things: planets, human beings and, in addition, “regularities”. There are merely planets and human beings and—in the light of their experience—the human beings form certain *regular expectations* about the way in which the planets are behaving. So, it is claimed, we should view this talk about “regularities” as *projecting* the regularity of our expectations onto the world, and so inventing a further, mythical kind of entities, distinct from planets and humans. Planets and water may exist independently of us in the “external” world, all right. But it is the “internal” habits of human expectations that give rise to all this mythology about “regularities”.

Similarly with the discussion of *causes*. When two billiard balls collide (David Hume remarked) we do not see *three* things—the two balls, and *also* the “cause” by which motion passes from one ball to the other.<sup>4</sup> We talk about physical causality (he argued) simply as a way of registering the habitual expectations built up in us by past conjunctions in the processes going on around us. This may happen, as Hume sometimes appears to suggest, by a kind of mental *conditioning*; or alternatively, as Kant replied, through our putting a particular cognitive *interpretation* on such conjunctions. (Notice, again: Once we begin to regard “causes” as having a genuine existence only

<sup>4</sup> Notice the rhetorical figure involved in Hume’s way of presenting this position—what we might call “pretending to count the uncountable”. The same trick is sometimes used in reverse. Recall the Chinese saying: “A husband and wife are three things—a man, a woman, and a couple.”

"inside" our minds, there are half a dozen ways that we can go on from that point.)

If the "objective" status of the basic regularities and causal processes that are the empirical subject matter of science are themselves ambiguous, how much more is this so for the "theories" of natural science! There, the contribution made by scientists themselves, as a result of their *conceptual interpretations* of experience, is evident on the surface. We can therefore easily see why Ernst Mach and others were attracted by the view that all the so-called "theoretical entities" of science are so many convenient *fictions*—compendious and economical figures of speech by which human thinkers give themselves a mental "hold" or "grip" on phenomena.<sup>5</sup>

At this point, however, we must feel a more general doubt emerging. If we are determined, at all costs, to achieve a simple solution to our philosophical perplexities, and discover a unique guarantee for each type of knowledge or well-founded belief, we shall have to choose to "locate" this guarantee in some *single locus*—either in the "external" world of physical objects, or in the "internal" world of the mind, or in the interactions "between" our minds and the world. (Forecasts can be "rational" because-and-only-because "objective" regularities exist in the world; aesthetic appraisals can be "reasoned about" because-and-only-because we bring "subjective" mental attitudes to our experience of art, and so on, and so on.) But by proceeding in this way, do we not set ourselves up for a needless and abortive debate? For what hope can there be of reaching any satisfactory agreement between, say, those who advance a straightforwardly "objective" view of science and those who reply with a "subjective" counteropinion? If the object of our search must be *either* "outside" or "inside" or "in between", and not all three, then somebody must in the long run be right, and all the others wrong.

<sup>5</sup> The German word for "concept", *Begriff*, is interesting in this context. Etymologically, it connects closely with our English word *grip*; so it calls to mind all those other, related metaphors—"grasp", "get hold of", and the like—in which we talk about cognitive capacities and skills.

## The Inclusive Approach

Given this starting point, there is little prospect of replacing barren rivalry and disputation by any richer and more subtle analysis, and there is, in any case, an alternative line of approach that is well worth exploring. This is a line of approach along which we can find contemporary philosophers moving from several different starting points. For perhaps it was always a mistake to insist on simple solutions, and uniquely localizable guarantees for our understanding. Perhaps there was a genuine wisdom in the remark that is attributed to Hegel when he was asked what he thought about Berkeley's criticism of Locke: "What was previously said to be 'outside' is now said to be 'inside', as though that helped matters!" In short, perhaps all these spatial metaphors—by which we speak of the human mind as an "inner" world, from which we look "outward" at the "external" world of material objects around us—have had not merely a suggestive effect on philosophy, but a disastrous one. Bearing this possibility in mind, accordingly, we may look at the philosophical possibilities that open up for us when we suspend the demand for simplicity and recognize that knowledge and beliefs of all kinds may well rest for their rational guarantees on subtler and more complex foundations.

Instead of demanding that "reasoning" should be as it is (validity and all) for a single, simple reason—because either the World, or the Mind, or the way in which they interact provides a *sufficient* guarantee of that validity—we can drop the "either/or" in favor of the possibility that our different modes of reasoning may be as they are (validity and all) for reasons of *all three kinds*. After all, then, factors from all three "loci" may make contributions to this "guarantee"—the World in one set of respects, the Mind in a second, their manner of interaction in a third. Does this suggestion hold out only a prospect of confusion and perplexity? For our present purposes the *complexity* of this account cannot, by itself, be enough motive for dismissing it. Rather, we shall have to relax our

demands for simplicity and uniqueness, and acknowledge the existence of this more complex and comprehensive alternative.

There is no blinking the fact that this kind of account does achieve greater comprehensiveness at the price of a real increase in complexity. Where beforehand philosophers discussed the rights and wrongs of concise formulas, such as "Shape and size are *objective* properties" and "Color is a *subjective* impression," we must now deal in more laborious statements:

The possibility of making—and backing up—statements about the colors of objects relies on *such-and-such* features of the material world, *such-and-such* features of our genetically transmitted sensory systems, together with *such-and-such* features of the classification procedures that we have developed in dealing with the material world.

(What features, in each case? That question takes long and careful answering.) Furthermore, this final type of philosophical account is not merely complex but also somewhat tentative. It is obliged, at some points, to leave room for fresh requirements and conditions whose relevance or necessity has not hitherto been fully established. (Until very recently, for instance, most people would have cited the "wavelength" of colored light as the physical precondition for our experience of color recognition and classification. But nowadays, thanks to the work of Land and Lettvin, it is beginning to appear as though the crucial physical factor is not the wavelength of the light itself so much as the "reflectance" of the colored surface, as compared with neighboring colored surfaces. So, even in physical terms, we may have been *misdescribing* the character and preconditions of color perception for many years.)

We need to spell out in detail here what such a comprehensive philosophical account would look like, in the case of just one example. The general question at issue is the following:

What preconditions must hold good—in respect of (1) the world independent of our thoughts and feelings, (2) the minds we have and the ways we use them, and (3) the standard interactions between ourselves and the world—if beliefs of any kind (say, predictions) are to be advanced and defined in a "rational" manner, that is, by producing "reasons" in clarification, support, or justification?

That question can, of course, be asked equally as well about beliefs of all kinds—not just predictions, but also scientific theories, everyday descriptions of material things, ethical appraisals, aesthetic judgments, psychological diagnoses and/or linguistic interpretations. Here we shall concentrate once again on predictions, or "forecasts".

If it is to be possible to advance and defend a forecast in a rational manner, three sets of conditions have to be satisfied: in respect of (1) the world, (2) our minds, and (3) their interactions.

1. There must exist in the world, quite independently of our ways of thinking and feeling, "regularities" of a kind that can be analyzed into simple constituent components, which can then be extrapolated and reconstituted to yield results for some subsequent time.

2. We ourselves must have the mental capacity to recognize such regularities in our experience of the world, and to handle the operations of analysis, extrapolation, and reconstitution.

3. The procedures for analyzing and reconstituting actual real-life regularities must have been developed through a historical sequence of trial-and-error stages, by being put to use, checked, and refined so as to yield increasingly reliable results.

Two immediate comments are called for. First this account does not place the *preconditions* for rational forecasting in any single "location"—the "external" world of physics, the "internal" world of the mind, or the "in-between" world of trans-

actions between minds and the world. Nor does it pretend to identify any single set of conditions from one of these three "worlds" as providing, by itself, a *sufficient* guarantee for the "rationality" of our forecasts. Rather, it cites three complementary and tentative sets of conditions, all of which are in their own ways *necessary* requirements for rational forecasting. Second, even these tentative conditions are in actual fact fulfilled partially and in particular degrees, rather than universally and absolutely. We find out, as we go along, in what actual kinds of cases it is practicable to meet these requirements at all—on what detailed conditions, with what qualifications, and to what degree of exactitude. High and low tides can be forecast on one set of conditions, with one degree of accuracy; the movements of the planets on another set of conditions, with another degree of accuracy; day-to-day changes of the weather on yet a third, and so on. Therefore, instead of guaranteeing the predictive efficacy of Human Reason, in general and absolutely, we must content ourselves—on this account—with something less: namely, a tentative understanding of the capacities and limitations that confront us when we set about developing reliable forecasting procedures in the most systematic manner possible. And if anyone demands a more rigorous analysis, we must ask, "What further kind of guarantee does the nature of the case permit?"

Similar accounts could be given in the other cases. For instance:

What is it about the world/about our minds/about their mutual interaction, that makes it possible for novel scientific theories to be advanced and supported in a "rational" manner by backing them up with appropriate "reasons"?

(Here, all the preconditions that are relevant in the case of forecasts still apply, together with new ones, concerned with the element of conceptual novelty involved in scientific interpretation.) Similarly what preconditions make it possible for

us simply to recognize and describe material objects in the world around us? (Evidently we have certain innate capacities—shared with other higher animals—to pick out and recognize persisting and significant features of our environment. In this respect the theory of *knowledge* must keep touch with the theory of *perception*, specifically with new discoveries about the nature and significance of our perceptual capacities.) Correspondingly, for the problems of philosophical ethics, any head-on dispute over the question of whether the ultimate justification of ethics lies in a realm of "objectively existing" obligations or in the "subjective" sphere of human feelings and preferences leads rapidly into deadlock. On the one hand, how could any such "objective" relationships in the external world achieve moral authority over us unless they were capable of awakening some response in our springs of action? On the other hand, how could our own states of mind have any settled ethical significance unless the world we were dealing with were itself, in the relevant respects, stable enough for us to have developed recognizable and practical ethical principles?

The general critical question as posed here thus has a clear application to ethics:

In what respects does the world have to be as it is, independently of our thoughts and feelings; in what respects must we have the kinds of minds we do, and put them to work as we do; and in what additional respects must our interactions with the world have developed as they did in order to make it possible for ethical views to be advanced and defended in a "rational" manner, by presenting and discussing appropriate "reasons" in their support?

And so on, and so on: The same form of question can easily be restated as it applies to (say) our aesthetic responses and appraisals, our capacity to recognize other people's states of mind, or our ability to understand and interpret language. After

all, it was never satisfactory to reply to (e.g.) Cratylus' skepticism about language by *merely* asserting the "objective" existence of universals or by *merely* declaring the meanings of words to be "subjective" matters for human choice and convention. Instead, philosophical linguistics gains in richness by acknowledging that "language" as we know it is possible at all, only given a highly complex combination of preconditions—involving the world outside us, our own innate, or culturally transmitted mental capacities, and also the procedures that have been developed in the course of our symbolic interactions with the world.

The tasks of "critical" philosophy as defined here can be undertaken in two different spirits. Some philosophers are content to focus on one particular field of human experience and to explore the preconditions for that "rational" activity in isolation from the rest of human experience. This makes it possible for them to specify the relevant "preconditions" with great fidelity and precision. But a certain narrowness is the resulting price. We end up with an account of (e.g.) the "moral" point of view, in abstraction from more comprehensive ideas about human experience and "points of view" in general. Other philosophers, by contrast, begin with the "critical" question in its most general form and try to show how the preconditions of rationality in any one area of experience illustrate general aspects of the world, our minds, and their interactions.

Certainly this latter was the spirit in which Immanuel Kant embarked on his own novel and remarkable series of philosophical *Critiques*. In his view, a completely general account should be given of the ways in which—in all areas of life and experience—percepts and concepts, sensory intuitions and categories, forms of experience and forms of thought, are closely interlinked. As he saw matters, "rationality" still rested on a single, uniquely authoritative set of patterns and principles; and the next best thing to a geometrical "guarantee" of rationality was to understand—in a "critical" manner—why the

"rational" mode of proceeding was the only possible and coherent one. Human beings did not work their way from one tentative equilibrium to another in each field of experience separately. Rather, the preconditions for rational thought and action—whether they have to do with the world, our minds, or with the interaction between them—must be seen as fitting together coherently in the same formal way, whatever the field of experience. These interrelations were not, of course, like "empirical" discoveries about particular aspects of experience. On the contrary, they were (in Kant's jargon) "transcendental" aspects of rationality and experience, i.e. universal and inescapable preconditions without which our empirical experiences in any field could not even be coherent.

Whether or no this particular aspect of Kant's critical program for philosophy was genuinely realistic remains a matter for debate. Certainly it risked reviving some of the more clearly unrealizable ambitions of the older formalist tradition, namely, the hope of demonstrating that one-and-only-one system of formal geometry can have any empirical application. Leaving that difficulty aside, some "middle way" still remains a serious possibility for philosophical inquiry and exploration. Without assuming that the concepts and points of view that are operative in any field of rational experience are necessarily unique, we can still try to relate the particular preconditions relevant in different fields of experience to one another, so as to yield a broader and more consistent picture of *human life in the world*.

At this point we are very close to the boundaries of current philosophical speculation. As so often at a frontier, this area is still unclear and confused. Promising-looking trails are likely to strike off into the wild, only to peter out in tangled underbrush; narrow byways suddenly open out into local clearings, from which we can get a fine view in a few directions; developed and undeveloped areas are jumbled together, and there is no single standpoint from which we can yet obtain a clear and comprehensive view. Some philosophers, for example, Heidegger, still focus on the emotional and cognitive ways in which we

deal with the world—characterizing different fields of experience as reflecting correspondingly different approaches to experience, or “ways of being in the world”. For them, perceptions, classifications, linguistic structures, standards of reasoning, and so on—all emerge as secondary products of these primary “ways of being”. Others, for example, Wittgenstein, begin instead with language, pursuing the preconditions of intelligibility back into a kind of generalized anthropology, through the activities that give language use its standard contexts (“language games”), to certain basic structures of activity and behavior (“forms of life”)—whether genetically inherited or transmitted culturally—that make those standard activities possible in the first place.

In what terms can we best hope to formulate any such general “transcendental” account of human life in the world? Indeed, does such an account lend itself to statement in language at all? The final answer to these questions is still unclear. Perhaps we are trespassing at this point on the boundaries of the unsayable. Perhaps, for our generation, this represents the same frontier that Kant recognized nearly two hundred years ago—one that our intellectual imaginations are continually tempted to overrun, for all the dangers of lapsing into incoherent nonsense. In this way, even the task of indicating the line that divides the “sayable” from the “unsayable”, the “meaningful” from the “nonsensical”—whether this line is itself a permanent fixture of all thought or whether it moves as we go along, so as to form the current “horizon” of our intellect, imagination, and language—becomes a major and central philosophical challenge.

Now, in the late twentieth century, as contrasted with Kant’s own late eighteenth century, a fully elaborated “critique” of human experience and “rationality” will carry weight only if it embodies one feature missing from Kant’s original system of transcendental philosophy. It must demonstrate the relevance of “rationality” (as we now conceive it) to the *historical* and *psychological* development of the relevant “reason-giving” enterprises.

To begin with the historical dimension: It is not just a bare fact about our present time that we now know how to use “rational procedures” to forecast tidal and planetary movements, and even to some extent the weather. Rather, this fact shows our indebtedness to all those earlier men who—by self-conscious trial and error—brought us to our present position and handed on us the responsibility for refining those procedures still further. However much philosophers may have dreamed of elevating Euclidean geometry about the flux of historical change, no such programs would be plausible in the case of forecasting procedures in hydrography, meteorology, and computational astronomy. There, we must accept as “rational” that which has *proved* rational during the historical development of human life and thought.

Similarly, with the psychological dimension: We cannot hope to understand the full significance of (say) aesthetic “taste” by considering only the activities and attitudes of *adults*. Quite aside from the historical evolution of artistic activities, goals, and tastes, a more basic question must be faced: namely, how both the creative activities of the artist and the appreciation of his audience arise—within the individual’s lifetime—out of the infant’s unsophisticated enjoyment in the handling of clay and the experiencing of sensory stimuli. William Gass, for instance, points to the psychological transition that lies at the base of aesthetics by using the admirable phrase “the stylization of desire”. It is not for nothing that our thought and language about art and its appreciation rely so heavily on the metaphor of “taste”. Although both are satisfying their hunger, the gourmet approaches his meal with capacities for aesthetic discrimination irrelevant to the infant at the breast.<sup>6</sup>

So the question, “How are aesthetic appreciation and reasoned criticism possible at all?” embraces among other things a set of subquestions about the preconditions of aesthetic ex-

<sup>6</sup> Cooking and wine-making may not seem to be prototypical “fine arts”; yet the aesthetic metaphor of *taste* draws attention to genuine analogies between the man with an “educated palate” for vintage wines and one with an educated eye or ear for, say, twentieth-century painting or chamber music.

perience, as it arises from the development of the individual's capacity for discriminating response. That is, the question, "How can a reasoned aesthetic response *be possible* at all?" must be read in part as meaning "How does such a response *come to be possible* at all?" This in turn needs to be read as meaning, "How does it become possible *for those individuals* who in fact succeed in developing it?" In other words, a man with an educated and discriminating aesthetic taste is simply a man who has cultivated in himself high-level capacities that most people are capable of cultivating on one level or another—and one who has done so in a particular historicocultural situation, marked by the particular set of artworks and traditions into which he has educated himself.

In tackling the basic questions of "critical" or "transcendental" philosophy from a twentieth-century point of view, therefore, we should remember all three major constituents—World, Mind, and their interactions—must be regarded as developing rather than static. The relevance of cosmic history and organic evolution to our capacity for knowledge and rational criticism may appear at best indirect, but the same cannot be said of the history of our mental capacities. These are clearly the product, not merely of our genetic inheritance, but of some radical, and very specific, developments during human socio-cultural history and prehistory. So, any attempt to characterize the "preconditions of rational inquiry" in timeless language or, alternatively, in terms relevant only to the present, simply cuts off our current understanding from the fruitful and valuable dimension of history. Similarly for the development of the individual: The newborn infant possesses "rationality" only potentially. This characteristic can manifest itself in "rational" thoughts and actions only progressively, through the individual's adolescence, as inborn capacities come to be expressed in actual performances through learning and practice. Hence, discussing these preconditions in terms relevant only to adult life likewise cuts off our mature understanding from its roots in psychological development.

Most clearly of all, the interactions between the human mind

and the world with which it deals inject into any critical account of "rationality" an element of both historical and psychological development. In the fields of forecasting, scientific explanation, and aesthetic discrimination—to choose only three—the question, "How are reasoned thought and action possible at all?" embodies in part the historical and psychological questions, "How do they *come to be possible* for adults today, in the particular forms that they are?" This is not to say that a "genealogy" of science/morals/forecasting, by itself, provides a *sufficient* "justification" of the activities concerned. Rather, it is to say that any contemporary justification of those activities must make sense, and carry conviction, in the light of our historical and psychological understanding about the ways in which people come—and have come—to produce rationally defensible weather forecasts, physical theories, aesthetic appraisals, or whatever.

Here we stand, then, in the late twentieth century, facing—apparently—the very same general philosophical issues that confronted Plato and Socrates more than two thousand years ago. Yet, despite this continuity, we have come a long way since their time. Behind the common forms of words lie specific, detailed questions that have been transformed several times during the historical evolution of philosophy since Greek Antiquity. While the "critical" questions that we have been considering in the present part of this book may represent one legitimate interpretation of the original Platonic questions, it is an interpretation that could never have been fully elaborated in this form until very recently. That does not necessarily mean that this present interpretation is better and clearer than its predecessors; it does mean that, in certain respects at least, it is richer, more detailed, and more explicit. It invites us to see and handle all the specific preconditions of rational thought and action in different fields of experience, in ways that reflect their distinct aims and characters. What is genuinely formal can be handled formally. What reflects the features of a specific culture can be treated with an eye to cultural differences. What rests on education, stylization, or the developing articu-

lation of individual experience can be interpreted in its historical or psychological context.

In this respect, the critical philosopher is in the same position as any other critic. It is the critic's business, in any sphere, to locate his object of criticism in all the varied contexts and sequences that can throw real light upon it, and to measure it against as many different yardsticks. Overscholastic critics, in poetry or the arts as much as in philosophy, may restrict their attention to one, or a few, of the possible contexts, and so devise a single would-be overriding canon of judgment. But here again the situation in philosophy is one and the same as that in criticism generally. A division of labor pays certain dividends. If we can mark off the study of scansion and meter (say) from other aspects of poetry, we may be able to achieve an effective mastery of those specialized aspects, and so carry the art of criticism a major stride forward; yet the study of scansion does not go the slightest distance toward *replacing* the art of criticism of which it is an integral part, and those scholars who develop an exclusive mastery of this one part of criticism, to the length of denying the whole, merely end by abandoning genuine criticism for pedantry.

Likewise, in philosophy, we can abstract out particular aspects of "rationality" that lend themselves neatly to exact, or formal analysis; and we can set aside, for the time being, complementary questions about the historical evolution of our patterns of thought, and about the cultivation of rational capacities within the lifetime of the individual. However, the mere fact that such a formal analysis *can be* handled separately does nothing to support the notion that it *should be* the exclusive concern of philosophy. That conclusion would lead us into a pedantry similar to the pedantry of the obsessional grammarian. So, assuming that the different aspects of philosophy are complementary rather than competitive, let us turn and deal with the question that arises for us as an immediate consequence: namely, just how the three approaches to philosophy considered here (formal, common sense, and critical) can connect together within a more comprehensive view of the subject.

## 16 The Three Faces of Philosophy

At the start of this survey of philosophy, we set off to walk around the territory of philosophy on the outside, and we have made a series of experimental entrances into it from three different directions. Now we can piece together the results of our three incursions to yield a first, rough map of the territory. In this way, we shall recognize the enduring concerns of the philosophical enterprise and see how, despite its widespread reputation for inconclusiveness, and even futility, philosophers have made, and are still making, genuine progress toward their own proper goals.

The three distinct approaches that we have adopted in this book led naturally on from one another in the historical development of philosophy; and they can lead naturally on from one another, also, in any outline survey of philosophy today. The invention of the "exact sciences" in classical Greece, beginning with abstract geometry, was a formidable and irreversible achievement. For the time being it captured people's intellectual imaginations and swept all before it. So, in this first phase, the tasks of explaining how the human reason operates—what makes different modes of thought more or less

sound, reliable and/or compulsory, what fields of experience best lend themselves to rational discussion, how any meaningful language is possible at all, etc., etc.—were brought into a new and apparently sharp focus. All of them were to be dealt with by articulating formal systems of propositions, logically connected by rigorous inferences. The rational adequacy of any enterprise could then be checked in two ways: by making sure, both of the “necessity” (i.e., self-evidence) of its basic principles, and of the “necessity” (i.e., formal rigor) of its constituent arguments. From the very beginning this method of doing philosophy paid important dividends. The very exercise of setting our “reasons” and “arguments” in an explicit, formal manner helped to bring to light concealed assumptions, especially in areas of direct human concerns such as ethics and politics, and so made it possible to improve the quality of criticism and debate. As a result, this formal approach has retained its charm to the present day—even to the extent of appearing, to some philosophers, to have exclusive rights to the title of “philosophy”.

Yet, all along, excessive reliance on this formal approach has tended to generate skepticism. By bringing the formal character of arguments and reasons, principles and propositions, into sharp focus (it now appears) philosophers inadvertently made the links between the “logical world” of propositions and the “practical world” of human life fuzzy, if not downright invisible. What made the damaging consequences of this preoccupation apparent was the allegedly “self-evident” status of the general principles required to validate our arguments in fields other than geometry. One after another these claims for self-evidence tumbled. Last of all, the status of formal geometry itself—which, in the ancient world, had been the very model and exemplar of *episteme*—was called into question. It became clear therefore that the formal approach to philosophy could not provide the whole story about human rationality, patterns of thought or principles of action, language, meaning, and the rest. Other, complementary ways had to be found if we were finally to avoid lapsing into a self-destructive skepticism.

The first alternative approach grew out of the historical and anthropological methods associated with the “commonsense” program for philosophy. The rise of this approach can be dated to the beginnings of the new “humanities”, from the sixteenth century on. A sense of the diversity of human societies and cultures—both at different times in history, and in different parts of the world—brought with it a recognition that any “universal” standards of rationality, either in thought or in action, must depend on correspondingly universal facts about the styles and needs, patterns and demands, of human life. The basic principles of our rational enterprises could be “self-evident”, not in any *formal* sense, but only in the sense of being *humanly inescapable*. This insight transformed the tasks of philosophy. So, David Hume and G. B. Vico launched philosophers on the search for those universal features of “human nature” which, providentially or otherwise, imposed certain unavoidable ideas about (e.g.) causality and substance, law and morality, mind, meaning, and the rest. Thus the focus shifted from the exactitude and necessity of formal geometry to general, quasi-anthropological facts about humanity, and about human ways of life and thought.

Once again, however, a price had to be paid. For, when it came to the point, very little in our human ways of living and thinking turn out to be *absolutely* universal, throughout all lands and all periods. And, on reflection, it became less and less clear that “This is the way *everybody* does it” could be accepted as proving that “This is the *right* way to do it.” Despite all its virtues, as a result, concentrating attention on the *actual* modes of life in different cultures, as called for by the commonsense approach, proved in turn to impose an intolerable kind of historical or cultural relativism. If some single way of thinking about, say, “causality” or “morality” is in fact extremely widespread among many different human groups, that fact is certainly suggestive; certainly, it provides at least preliminary grounds for confidence that this style of thought must have authentic merits. Yet, unless we can go behind the actual, recorded facts of cultural history and anthropology to

some more general understanding about the rights and wrongs of different customs, practices, and techniques, we shall be left stranded. There will be nothing more to say about, for example, ethics or the philosophy of science, beyond such statements as, "Well, this is how eighth-century Romans regarded their basic moral concepts," or "Well, this is what the idea of 'causality' means to twentieth-century physicists." While the commonsense approach is evidently one authentic way of entering into philosophy, and has the virtue of placing formal propositional systems and arguments into a broader human context, we must surely be able to do better than that!

That was Kant's original reaction to Hume, and it still has great force today. The generalization, "This is how human beings, here and now, *actually* conduct their arguments," can never serve to *justify* those arguments, on a philosophical level; we must ask, also, why it is that this turns out to be the *right*—or an inescapable/the most natural/a particularly advantageous—procedure. Just as we can recognize the "significance" of our propositional systems only by putting them into the broader human activities whose purposes they serve, so also we can recognize how such activities come to be so natural/well-adapted/even "necessary" only by putting them into a yet broader context. That defines the central task of our third, "critical" approach to philosophy. It places all our rational enterprises—ethical and aesthetic, as much as practical and scientific—into the widest possible framework and looks for the source of their "rationality" wherever it may be found. From this third point of view, understanding the significance of (say) moral arguments means not merely scrutinizing their formal validity and recognizing their roots in widespread habits of life. Now both the formal arguments and those habits of life must be viewed against the entire background of human life in the world.

The resulting "critique"—of science, art, morality, or whatever—brings us further important dividends. It helps us to recognize that the very possibility of (e.g.) rational forecasting depends on many coexisting factors or conditions in a rich and

complex way—some of them factors in Nature, others in the character of Mind, others again in the historical experience of Humanity. Unfortunately it too is liable to shortcomings of its own. Even at the best, a "critique" of (say) science in general all too easily ends up by becoming vague, sweeping, and un-specific. In particular, general remarks about the overall functions of surveying and calculation, among the inhabitants of a spherical earth more than twenty thousand miles around, do little to indicate why, for so long, the axioms of Euclidean geometry appeared uniquely "necessary" and self-evident; nor why the deductive inferences by which geometrical theorems are derived from those axioms have their peculiarly inescapable rigor. For that purpose, we must work our way back by a roundabout route—starting from our general critique, moving on to the particular enterprises in which the human experience of dealing with spatial relations has been embodied, at one or another place in time, and finally identifying the specific roles of "axioms" and "inferences" within the formal characterizations of (say) geometry.

To put the point bluntly: General statements about the *pre-conditions* of rationality, language, or concept use—whether presented in (say) Heidegger's terminology of "ways of being in the world", or Wittgenstein's "forms of life"—will get us nowhere unless we spell out, specifically and in detail, what relevance they have to the supposed necessity of the conceptual relationships in question. In a few cases, the attempt has been made to do something of this kind. The German philosopher of science Hugo Dingler, for instance, gave a striking account of the relations between the context of geometrical practice—for example, the specific operations by which carpenters and surveyors apply geometrical concepts—and the networks of abstract formulas into which mathematicians have organized the structures of those operations. The details of Dingler's account are not the immediate point; the thing is merely to see that we need both a Way Up and a Way Down. We need, that is, *both* a way of passing from naked propositions and their logical connections to the human activities that give them their sense,

and beyond those activities to the features of the world and human life within which they are at home; *and also* a reverse road, back from "forms of life" in the world to the specific activities in question, and so eventually to the original propositions again.

Instead of adopting one or another of our sample approaches to philosophy to the exclusion of the others, we therefore have an alternative option: namely, that of accepting all three as legitimate and authentic in their respective ways. Taking them in this spirit, indeed, we shall quickly find that they complement each other, rather than being an unavoidable rivalry.

For instance: In giving an account of the "rationality" of forecasting procedures, we are at liberty (1) to set out the mathematical computations used in such forecasts with all the formality we can contrive, and make explicit all the additional assumptions needed if those calculations are to come near to constituting "formally valid" deductive inferences. But we are also at liberty (2) to consider the purpose and character of the activities and enterprises—navigation and the rest—within which those formal computational "arguments" are put to use, and so find their meaning. This involves going behind the factual records (or evidence) and the specific forecasts based upon them, and bringing to life both the practical procedures used in keeping the necessary records and the purposes for which the forecasts are promulgated. Finally, going beyond both these two accounts, we can supplement them by analyzing (3) the preconditions on which predictive "arguments" are possible at all—the nature of the phenomena we have to deal with, our human ability to form recurrent expectations and develop arithmetical procedures, and lastly that historical counterpoint of World and Mind by which reliable and rational forecasting techniques have been generated.

Similarly, in our other cases, the results of the three approaches are complementary rather than competitive. How can we recognize and characterize each other's states of mind in ways for which "reasons" can be given? This question too

arises on all three levels. (1) The gestures, utterances, and other reactions to which we would point as supporting such diagnostic descriptions have certain specific logical relations to the descriptions themselves, while the assumptions involved in relating such individual items of behavior to larger syndromes or patterns can usefully be made explicit. (2) Next, we can step back and ask what exactly is involved in people's capacity to recognize each other's feelings and intentions responsively—*both* in those respects that all human beings appear to share *and* in those others that different people seem to develop to markedly different extents. (3) Finally, we can consider how such psychological powers of recognition are possible at all—*both* instinctively, as in the reciprocal responsiveness of a mother and her newborn infant, and experientially, through developing sharpened powers of personal observation. Here again, there is clearly no contradiction between the formal, commonsense, and critical accounts. On the contrary, each throws light on the other two, and gives us a richer understanding of psychological observation and responsiveness as a basic element in human nature.

Whatever specific subject matter we pick on, then, philosophy is the richer for combining the insights derived from the different approaches, rather than setting them against one another. Nor is this at all surprising. While we may choose to focus on one or another of the different approaches if that suits our particular purposes, none of them leads to wholly *self-validating* results. Analysing the cognitive outcomes of different human enterprises in explicit, propositional form, we may investigate their "formal validity"; but the formal validity of arguments is no guarantee, by itself, that they will apply in practice to empirical situations. Alternatively, we may shift our attention away from the purely propositional level to the pragmatic level of activities and operations and examine the scope and relevance of the formal arguments. On this level, we are concerned less with formal validity than with "practical soundness", that is, the capacity of the propositional relations in question to meet the pragmatic needs of the inquiries or activities within which they are put to work. Yet even this level is not the final one;

by itself, the fact that we actually do science (or art criticism, or psychological diagnosis) in the ways we currently do is no guarantee that those activities are, from the rational point of view, entirely satisfactory. For that, we must go further and recognize how the character of the world, our mental capacities and their interactions, give the corresponding procedures whatever deeper guarantee they are strictly entitled to.

Is even that guarantee enough? This is one of the great unanswered questions of philosophy. In the last resort, each philosopher may be obliged to answer it for himself according to his own temperament and perspective. At any rate, a philosophical account—whether of forecasting, or science, or psychological diagnosis, or linguistic interpretation—which does not concentrate on the formal, commonsense or critical aspects of the activity in question exclusively, but embraces them all, gives us the means of understanding the interrelatedness of propositional arguments, rational enterprises, and their human context much better than ever before.

If we take all three approaches to philosophy together and look at the relations between them from both directions, taking both the Way Up and the Way Down, we can identify also the issues that have preoccupied philosophers from the beginnings of the subjects in ancient Greece right on to the present day. From this standpoint, we can recognize in what respects the historical development of philosophy has led to very genuine achievements—even to authentic intellectual “progress”.

Ever since the classic Greek philosophers—for example, Thales, Pythagoras, and Heraclitus, followed by Socrates, Plato, and Aristotle—first defined the main themes of philosophical inquiry and debate, the same fundamental topics have been the central foci of all their analyses. These are

1. the nature of “nature”, and the conditions on which the natural world is accessible to human understanding;

2. the status of “mind”, and the conditions on which mental functioning can yield well-founded knowledge and beliefs;

3. the significance of “rationality”, and the standards by which reasoning can be judged good or bad/sound or unsound/adequate or inadequate;

4. the role of “language”, and the conditions on which human beings can employ language intelligibly for expression, communication, and/or critical debate;

5. the claims of the “good”, the “right”, and the “beautiful”, and the manner in which human aims, needs, and creative purposes bear on the soundness and acceptability of our ethical and aesthetic views, and so on, and so on.

Although these topics have been discussed within very different-looking frameworks at different stages in the history of philosophy—at one time in geometrical terms, at another theological, at another scientific, anthropological, or linguistic—this same general repertory of questions has provided the continuing, recognizable core of philosophy.

Is this a bad sign? Does it mean that no progress has been achieved? Should philosophers, like scientists, have been continually turning up new questions and moving on from older areas of inquiry into fresh terrain? This contrast can easily be overstated. Although on one level physicists, biologists, and psychologists are concerned today with questions and problems that their predecessors in antiquity could not even imagine, on another, more general level the natural sciences have had central, enduring preoccupations quite as much as philosophy. “How did the universe originate?” “What are the ultimate material constituents of the world?” “What is the difference between living and nonliving things?” “What is the nature of feelings and sensations?” “How is a rational, thinking being possible at all?” Although all these questions began as philosophical ones,

they have defined also the central strands around which—rightly—the inquiries of physics, chemistry, and biology have been organized at all stages in their development. Conversely, if it is easy to *overestimate* the extent to which the preoccupations of the sciences have changed, it is just as easy to *underestimate* the extent to which similar changes have affected the central areas of philosophy itself.

Much has in fact been achieved. If Plato and Aristotle returned to earth today, they would find it almost as hard to master the contemporary philosophical debate as to understand the principles of twentieth-century science. At the outset, they bequeathed us four disconnected things: (1) a first outline of abstract geometry as the inspiration for formal logic; (2) a speculative, qualitative way of describing the structure and processes of the physical world; (3) a critical, or “dialectical” procedure for clarifying our ideas and beliefs about feelings and personality, taste and virtue, conduct and society; and finally (4) a vexing collection of paradoxes that seemingly undercut our unthinking confidence in language, experience, and the possibility of knowledge. The initial attempts at bringing these topics together into focus gave rise (as we have seen) to the first, formal attack in the central problems of philosophy, and this attack has evidently had results. By now, for instance, formal logic is a remarkably sophisticated and well-organized intellectual discipline, so complex and differentiated that no single logician is an equal master of all its subtleties. In addition, the entirety of theoretical physics was made possible, historically, by pursuing directions first indicated by Plato and his colleagues at the Academy. And this is to say nothing of the influence of Socrates on political theory, or the continuing links between linguistics, cognitive psychology, and epistemology right up to the present day.

The whole subsequent development of philosophy—especially the enrichment of its formal analysis by elements from the commonsense and critical approaches—has resulted in other very definite achievements. True, philosophers still pose, in general terms, what look like very much the same questions as

before. Yet the resources at their disposal nowadays, when it comes to answering those questions, are formidable and still increasing. (1) On what conditions can we put mathematical formalisms to use in theories about the physical world? Instead of merely guessing about a “likely story”, as Plato had to do in the *Timaeus*, we can give a positive scientific account of those conditions, which can be stated more clearly, more adequately, and in more detail every twenty years. (2) How is a meaningful language possible at all? Instead of running from the paradoxes of Cratylus to empty formulas about the “intuition” of “universals”, we have material for a rich and complex account of the manner in which linguistic expressions are given a use within different “forms of life” and related together in coherent systems of logically connected “concepts.” (3) What is the basis of political obligation? Instead of Socratic myths about the different roles of golden, silver, and leaden men within the *polis*, we have the makings of political theories whose analytical subtlety and practical application are capable—whether they really succeed in doing so or not—of outrunning the founding documents of political thought. (4) And what is Beauty? The story of Diotima in Plato’s *Symposium* may be as charming as ever as a literary dream or vision, but if we fail to appreciate how much better we are now able to fashion a “critique” of the artist’s work and the critic’s perception, thanks to the historical sociology of art and the psychology of creative play, that is entirely our own fault.

So much, in outline, for the claim that there is no progress in philosophy. If that claim remains plausible today, this has more to do with the temperaments of philosophers than with their actual achievements. Even more than other scholars and scientists, philosophers tend to be patricides—tend (that is) to present their contributions to the philosophical debate as destructive attacks on their immediate predecessors. Here even more than elsewhere, as a result, one can easily get the impression that philosophical work has essentially negative results. Aristotle tells us what is wrong with Plato, Berkeley tells us what is wrong with Locke, Kant tells us what is wrong with

Hume, Wittgenstein tells us what is wrong with the philosophical tradition generally. Thus each generation of philosophers seems to construct its own precarious card castles, only to see them flattened by a single breath from the next generation.

This impression, however, is less an authentic record of continued failure than the outcome of a rhetorical style peculiar to philosophical writing. Even though modest and inconclusive, progress in philosophy has been definite, continuous, and cumulative; and that modesty and inconclusiveness are themselves understandable once we recognize the complexity of the problems at issue. There may be some deeper psychological reason why philosophers have so often felt a need to treat their predecessors sweepingly, violently, and scornfully, and to present their own novel insights as a new version of "the truth, the whole truth, and nothing but the truth". Yet this grandiose (not to say, narcissistic) air of rivalry and competition is—historically speaking—quite misleading. However much Aristotle may have denounced and repudiated Plato and his works, or Berkeley those of Locke, or Kant those of Hume, in each case their respective insights have *added up*. Viewed as an all-embracing theory of *universals*, Aristotle's account of "substance", "potentiality", and "actualization" may appear to be in direct contradiction to Plato's theory of "eternal ideas", "transitory objects", and "participation". Seen as an account of the fundamental methods of taxonomic or classificatory thought, by contrast, Aristotle's account complements Plato's own analysis of the parts played by idealized concepts in geometry, theoretical physics, and other exact sciences. (So, also, in other cases.)

One can, of course, always debase philosophical discussion into a frivolous intellectual game. We can then start by choosing sides—"I'm an Aristotelian," "You're an historicist," "He's a post-Hegelian absolute idealist"—and settle down to the enjoyable task of giving each a rhetorical drubbing. Or we may simply ignore the serious and unsolved problems already at issue in the writings of philosophers from classical Athens on, and treat those documents instead as having no more than a

literary or historical interest: Plato's rich and dialect-filled vocabulary, Hume's plain, historical style, the rhetoric of Nietzsche, or the role of aphorisms in Schopenhauer and Wittgenstein. Having become preoccupied with the incidental literary qualities of the classic philosophical texts, we may end by overlooking their actual subject matter.

Yet, once again, the ease with which we can be distracted from the actual progress of philosophy during its 2500 years of development is no proof that this progress is an illusion. Through at least three sequences of argument—from Plato to the Stoics, from Descartes to Hume, from Kant to the present day—philosophers have taken over their intellectual inheritance, and worked their way painfully through to new, more discriminating, and more detailed positions. There is still a long way to go. Probably there always will be. But a fashionable skepticism is no excuse for shutting our eyes to what has already been done, nor for refusing to build further on those solid foundations that our philosophical predecessors have constructed, criticized, tested out, and passed on to us in our own time.

V

Conclusion:  
On  
Knowing  
Our Own  
Minds

# 17 Philosophy and Human Nature

In order to provide survey of philosophy with a definite focus, we stated two related problems as defining our area of concentration. The first of these problems had to do with what we called the *paradoxes of fatalism*: If human beings ever came to understand completely the factors that influence their thoughts, feelings, and actions—whether from the standpoint of history and sociology, or developmental psychology, or neurophysiology—this very success would have the effect (it seemed) of discrediting the rational status of the very inquiries by which that understanding is reached. The second related problem had to do with what we called the *divided image of human nature*: We have perfectly familiar ways of talking and thinking about ourselves either as passive, responsive beings—subject to “causality” like everything else *in* the world—or alternatively as active, initiatory beings—capable of employing our “rationality” to produce effects *on* that world. Yet all kinds of difficulties arise the moment we seek to reconcile these two points of view.

From the very beginning of philosophy one of its chief goals has been to give a single, consistent picture of human nature.

Hence it is now our business to ask once again how this is to be done—how, and on what conditions, our present map of philosophy can be used to point a way toward a resolution of these two problems. What light, then, can the inquiries of philosophers—whether carried out in a formal, a commonsense, or a critical spirit—throw on the tasks of healing the division in our picture of human nature, and of escaping the paradoxes built into any completely exhaustive “science of human nature”?

Recall how we got where we did. First, as to the problem of the *divided image*: Why do the “causal” and “rational” perspectives so easily come to appear in conflict, even irreconcilable? Suppose that we set about building up a comprehensive account of human nature and behavior in which people are depicted as beings of determinate characteristics, subject to the influence of outside *causal* factors, and responding to them in virtue of built-in propensities and learning mechanisms. Given such a starting point, we shall be tempted to see any human being as merely one more type of laboratory object, or item of experimental subject matter—an “S”, as the experimental psychologists anonymously denote him—and to disregard all his claims to the possession of an active “inner life”—comprising mental images, private trains of thought, sentimental associations, wishes, decisions, and the rest—which makes him, as a *human* subject, significantly different from other subject matters, for the purposes of scientific investigation and explanation. Given such an “antimentalistic” start, many of the things traditionally claimed on behalf of “reasoning”—notably, its supposedly spontaneous and creative, or “inner” character—will strike us as perplexing, hard to accommodate, even suspect. Our feelings of “inner spontaneity” should themselves, very possibly, be regarded as just another phenomenon: a charming illusion by which we bolster ourselves against the humiliating admission that we too are totally involved in the network of causal processes—that we too behave as we do through the operation of laws and processes whose operation can be observed as publicly, and explained as scientifically, as those that govern the move-

ments of the planets across the sky or the flow of the blood along the arteries.

In direct contrast to this mechanistic view, there is an opposite, *anticausal* picture. This depicts human agents as the loci, or sources, of creative discontinuities—what mathematicians would call “singularities”—in the causal network. Just because we can think and act in a “rational” manner, on this view, we serve as the origins of new “causal sequences”, without our own decisions themselves being entirely the products of previously existing causes. Seen from this standpoint, to act “rationally” is to serve as an “uncaused cause”—not unlimitedly (it is true) since, in some respects, we are still subject to physicochemical and physiological causality—excessive drinking will still “cause” splitting headaches—but nonetheless in certain crucial respects. So, the sense of spontaneity is more than a fond illusion. When we use our intellects, think out our problems, and take careful and deliberate decisions, we can end by acting in ways that elude any exhaustive causal analysis. Or, alternatively, if any “causes” are operative in such a case, they are not causes of the familiar, material kind that operate in the physical world, and their manner of operation is totally unlike the mechanistic necessity of physical processes.

As the eighteenth-century English philosopher and moralist William Wollaston argued against John Locke and David Hartley—claiming, quite expressly, that the mind cannot be subject to material causality because it is influenced by “reasons”—

“When I begin to move myself, I do it for some reason and with respect to some end. But who can imagine matter to be moved by arguments, or ever ranked syllogisms and demonstrations among levers and pulleys?”

Evidently the factors influencing our thoughts, feelings, and other mental reactions operate in ways quite unlike the direct, inescapable influence of physical forces. In particular, *how* they

influence us depends on *how we understand them*. As Wollaston remarked:

"Do we not see, in conversation, how a pleasant thing will make people break out into laughter, a rude thing into a passion, and so on? These affections cannot be the physical effects of the words spoken because then they would have the same effect, whether they were understood or not.

It is therefore *the sense of the words*, which is an immaterial thing, that by passing through the understanding and causing that which is the subject of the intellectual faculties to influence the body, produces those motions in the spirit, blood and muscles."

Intentional, significant actions—the kinds of actions for which we have "reasons"—are thus "caused" *at most* (on Wollaston's view) by the distinctive operations of an "immaterial" spirit, or intellect, within us. The patterns of mechanistic causality characteristic of physical and physiological processes thus appear irrelevant to an understanding of our "mental"—or, at least, our "rational"—life and experience.

How are we to view this sharp opposition between "causal" and "rational", now, in the light of our threefold survey of philosophy? Certainly the existence of these opposing standpoints is a challenge to philosophers and scientists alike, and it is one to which they have traditionally responded in three different kinds of ways.

1. At one extreme, there are those who have been unable to keep the existence and legitimacy of both viewpoints in perspective, and who have reacted defensively, dismissing one or the other as fundamentally bogus or misconceived. Those psychologists who are determined to be scientists at all costs, for instance, sometimes dismiss all the contents of our inner life as so much psychic froth, drifting wherever it is carried by the underlying tidal currents of stimulus-response conditioning; any

temptation to take our "feelings of spontaneity" seriously must be sternly set aside as an impermissible concession to "mental-ism". Meanwhile, for their part, those philosophers who regard science as a threat rather than an ally set aside such "physical-istic" approaches to human behavior as grotesque products of a misplaced idealization of physics. To view all human behavior as made up of automatic responses to specific, physically characterizable stimuli, and to ignore the universal element of "understanding" and "interpretation" central to our mental life, would—in their view, as in Wollaston's—be to beg the central question entirely. Rather than being distracted by such misleading analogies, we should set aside the vision of psychology as "the physics of human behavior" and confront the problems of rationality, perception, and mental experience head on.

2. Other philosophers and psychologists, writing in a more moderate spirit, have acknowledged the division between our two self-images—causal and rational—as a regrettable fact, but have seen no way of rising above it; so they have contented themselves with attempts to codify, and legislate for, a coexistence between the two images. Perhaps (they argue) the best we can do is to acknowledge a duality in all our inquiries and experience, between the causal or "mechanistic" and the rational or "intentionalistic" points of view, to map the boundaries between the proper concerns of these two approaches, and then to live within the limitations so recognized.<sup>1</sup>

3. A very few—generally, first-rate—philosophers and psychologists have been able to respond to the direct challenge in an equally direct manner. Being reluctant to live with a permanent division whose origin and significance they could not account for—between "causes" and "reasons"/between the "physical" and the "mental"/between *Geist* and *Natur*—they

<sup>1</sup> This duality has been particularly insisted on by German-speaking philosophers, following the example of Wilhelm Dilthey. The English language has no precise equivalents for their two chief terms—*Geisteswissenschaften*, or "sciences of the spirit", and *Naturwissenschaften*, or "sciences of nature"—which set *human nature* ("spirit") and *natural nature* ("nature") in opposition to one another in a way that is possibly question-begging.

have struggled to move beyond it. Certainly nothing is to be gained (as they see it) by denying any significance to our "inner life", or by ignoring the obvious fact that human beings—unlike tape recorders—respond selectively to those messages they understand, and do so in ways that can be judged "appropriate" or "inappropriate" to their situations *as they perceive them*.<sup>2</sup> On the other hand, the fact that our responses to situations, and to other people's actions, depend on our perceptions of those situations or actions need not, by itself, put those responses outside the sphere of "causality". For, in substantial respects at least, the character of these very perceptions is itself a product of learning and experience. I cannot hope to understand a joke told in Slovak or Korean or Tamil as I can a joke told in English. But this need not be—as Wollaston claims—because the "immateriality" of the intellect places my understanding outside the sphere of causality. On the contrary, it merely reflects the causal relevance of the fact that I have *learned* English, but not the other three languages.

Of course, taking this third position raises in turn a further question: namely, how far the kinds of "learning" that are put to use in our intellectual activities and personal lives involve more or less stereotyped (or "drilled") responses—as is probably the case, in many respects, with the learning of a language—and how far they involve the development of freer and more flexible capacities that are applied in more "creative" and autonomous ways. But at any rate that question now arises, quite explicitly, as a question of degree: *how far* our learned capacities are stereotyped and *how far* they are autonomous. It no longer arises in the form of an absolute and direct opposition.

Each of these three ways of dealing with the problem of "reasons" and "causes" has been predominant in a different

<sup>2</sup> If I see a man approaching me with an upraised fist and perceive this as a threat, appropriate responses will include running away, ducking and covering my head in self-protection. Yet to the man himself, these reactions may appear inappropriate—even unintelligible—if he meant the upraised fist as a friendly greeting.

historical period. For the philosophers of Descartes' time it was as though the rational understanding operated in thin air—innocently, spontaneously, out of touch with all the messy, material world of cause and effect. From their point of view, the faculty of rationality was compelled to hold the world of material things at arm's length and to deal with it only (so to say) through its fingertips. Somewhat later, the enterprise of viewing human nature and language use as occurring within the world of material causality, rather than at a careful distance from it, led philosophers to press the opposite interpretation. So, for instance, David Hume's coat-trailing epigrams (e.g., "The Reason is, and ought to be, the Slave of the Passions") laid him open to criticism for seemingly destroying the creative autonomy of our mental life. Finally, in due course, the "critical" philosophers, beginning with Kant, attempted to hold a balance between *Geist* and *Natur*—spelling out the conditions on which rational thought and action are possible at all in a world where all "phenomena"—including the movements of our limbs, nerve impulses, and vocal cords—apparently conform to the same causal principles.

We are now in a position, therefore, to define our concluding tasks. Earlier, (in Chapters 7, 11, and 15) we saw how the three characteristically different approaches to philosophy—formal, commonsense, and critical—naturally lead on to their own distinctive accounts of "reason-giving" and "rationality". At the end of our survey (in Chapter 16) we acknowledged the further possibility that these different methods of doing philosophy are not rival, or incompatible, attitudes to philosophical problems, so much as they are complementary elements within a single, larger picture of human thought and human nature as they interact with in the world of our experience. We must now take one final look at our central problem—of reconciling the legitimate claims of "causality" and "rationality"—as it appears against the background of this larger picture, and see what guidance it gives us about possible ways to reintegrate our divided image of human beings: as *rational agents* and *causal objects*.

To recall: When the results of all three philosophical ap-

proaches are brought together into a single, consistent picture, there is no longer room to define terms like "reason" and "argument" in any simple, universal manner. Instead of a formal definition, we have now to be content with a more circumstantial and discursive account of "arguing" and "reasoning"—as general types of activity, having a whole range of different functions and employing correspondingly different symbolic representations and linguistic forms. It remains true, of course—at any rate, in appropriate kinds of cases—that an "argument" may take the form of a network of propositions connected together by logical or "formally necessary" relations. *But that will never be the whole story about arguing and arguments.* For, in practice, a formal, propositional argument can be understood only to the extent that we understand also the nature of the occasion on which it is formulated and presented, that is, the nature of the broader inquiries—scientific or theological, psychological, mathematical, or whatever—to which the presentation of the argument in question is intended to contribute and from which it derives its point and its sense.

It remains true, likewise, that we could describe the typical patterns of the activity of "arguing" in a factual and dispassionate, or "anthropological" spirit. *But that will never be the whole story about arguing and arguments, either.* Taken by itself, a descriptive account of such human activities leaves open further, crucial questions: namely, how far those activities are merely passive and responsive to external causal factors, how far they involve dealing with experience in a genuinely active and creative manner. To take that further step we must place arguing and discussing, reasoning and justifying, into an even broader context. Just as the *formal character* of logical relations can at most point toward their rational merits, rather than guaranteeing them—since a formally impeccable argument may always turn out to have been irrelevant, inappropriate, or inapplicable—so too the existence of a *general consensus* between the participants in a discussion about basic concepts and procedures of argument is itself at best an index, not a guarantee. For, when we view the entire activity of those participants

more broadly, as an element in the larger world of nature and human life, that activity too may turn out, like witch doctoring or alchemical gold making, to rest on misconceptions. A comprehensive account of the part that "arguments" play in the "rational" aspects of human life must therefore mention *all* those features of the natural world, of our own mental equipment, and of our interchanges with the world, which must be as they are in order for "rational arguing" to be possible at all.

Taking this broader approach, we may simply have to accept the *existence* of such "rational enterprises" as forecasting/doing science/talking about works of art/recognizing each other's feelings, and so on, as a fundamental and unquestioned datum of experience. Instead of tilting the balance against rationality by asking,

How can we have "reasons" for believing or doing anything, in a world dominated by causality?

we may now rephrase the central question in more evenhanded terms:

Granted that "reasons" and "reason-giving" are familiar features of our experience, how are we to see these things as related to the causal operations of nature?

What we should ask ourselves is indeed, the question, Why are we inclined to tilt the scales against "rational" belief and action in the first place? What is it about our approach to the theory of human nature that pushes us in this direction? Evidently modern science began by studying the simplest available systems and processes, and made it a point—quite legitimately—never to explain the phenomena of physics and physiology in needlessly complicated—least of all, in anthropomorphic, "intentional"—terms if a simpler, mechanical explanation would suffice. Given the resulting repertory of simple mechanisms and concepts as developed for the purposes of physics and physi-

ology, it was then tempting to inquire how some combination of those same simple and intelligible mechanisms might explain the operations of the brain and nervous system, and to conclude that we now understood the entire central nervous systems—at any rate in principle. Whatever could not be accounted for in those particular terms seemed, on that account alone, to be *impossible*. Faced with the plain evidence of experience about other, more complex “mental functions”, which eluded simple explanation, psychologists and philosophers were tempted—like the countryman confronted with a giraffe—to declare flatly, “There ain’t no sich critter!”

But this was to put the cart before the horse. In a science of human nature, as much as in any other genuinely scientific field of enquiry, the very first requirement is an honest and sufficiently rich description of the phenomena that we need to account for. And that obliges us to acknowledge that the simplest explanatory mechanisms are very likely incapable of yielding, by themselves, an exhaustive account of these phenomena. So one of the first items on the agenda for a Science of Human Nature is to collect, catalog, and classify all the “human mental functions” whose existence is evident from our most familiar experiences; the second subsequent task is to investigate how far the neural mechanisms and learning routines called into play by those functions are intelligible in terms of existing theories. To proceed in this way is not to open the door, uncritically, to wild and groundless claims. Just because of occasional, apparently “telepathic” feats of perception, for instance, we are not compelled to include telepathy among the well-authenticated human mental functions; just because newspapers pay for astrological columns, we are not obliged to concede that astrology is a well-established science. The “familiar experience” which authenticates forecasting, language use, recognition of feelings, and the rest as established types of human function and achievement, is by no means uncritical experience. There are perfectly good tests for checking it out, by which the claims of astrology, telepathy, etc., remain unproven. On the other hand, wherever the existence of familiar

“rational activities” is genuinely beyond question, our approach to *mental* philosophy should be the same as Kant’s approach to *natural* philosophy. The question is no longer, “Are such things possible?” but, rather, “On what conditions are they possible?”

The men who forecast planetary movements or the rise and fall of the tides, for instance, are prepared both to argue with one another about their forecasts and to set out the precise “reasons” for their conclusions; and by this time in human history there can no longer be any question that they are successful in doing what they do—at any rate, within well-understood limits. So there is no real occasion to be skeptical about such forecasting. Except as a philosophical paradox, the question “Is rational forecasting *possible at all?*” demands the simple answer, “Of course it is!” Instead of reviving an out-of-date skepticism, we should take the existence of rational forecasting as beyond doubt and address ourselves to the resulting questions. For example:

What is it about the world of nature that certain recurrent phenomena (planetary, tidal, etc.) lend themselves to rational forecasting, and others do not?

What is it about our native psychological equipment and needs that provides the occasion for attacking the rational problems of forecasting?

Through what interactions have men succeeded, over the centuries, in developing successful rational techniques for such forecasting?

By investigating these questions we can explain, as the critical philosopher demands, the “preconditions” on which rational forecasting is possible at all. But we can go further and ask, in addition, the questions that are relevant for the purposes of formal and commonsense philosophy as well:

What procedures and activities are involved in collecting, analyzing, and extrapolating from the empirical records for the purposes of rational forecasting; and what consensus do planetary or tidal forecasters share about the standards to be met by these procedures?

What formal structure can be found in the arguments (i.e., calculations) by which planetary or tidal forecasts are arrived at; and what logical standards of consistency and entailments are relevant to the criticism of these arguments?

Once these questions have been answered in a sufficiently full and exact manner for half-a-dozen different "rational enterprises", we shall have achieved a satisfactory general picture of the corresponding "human mental functions". Given that, we can define the problems that arise, consequently, for neurophysiology, developmental psychology, and the other sciences of human behavior. For the tasks of those sciences will now be to explain what part the central nervous system has to play *in human mental functioning as so described*; by what pathways the individual human being learns to perform—or at least to understand—the specific mental function in question, *as so described*, and so on, and so on. To those who are haunted by shades of skepticism, the resulting rational forecasts may still have some of the giraffe's unbelievable character about them. Yet, as with the giraffe, there they are—and we have to live with them. The residual question about the skepticism itself is the question, Why should thinking and talking about the future be particularly likely to generate such doubts?

Corresponding points can be made about our other types of examples by simple substitution. We do, after all, successfully recognize the color of the bedroom curtains—at any rate, in a normal light; we do succeed in developing satisfactory scientific theories—at any rate, for a wide range of natural phenomena; we do succeed in reading one another's minds—

at any rate, where special factors like play acting and neurotic distortion do not mislead us; we do succeed in discussing the merits of works of art in mutually intelligible terms—at any rate, when we have a reasonably adequate experience of the artistic genres in question, and so on, and so on.

In each case, the problem to be faced is not whether we *are able* to do all these things but rather (1) on what preconditions the possibility of doing them depends; (2) what *modus operandi* (procedures of discussion, mutual understandings, criteria of judgment, etc.) are commonly employed in such "rational activities"; and finally (3) what formal patterns and logical relations (if any) are to be found in the corresponding arguments. In all of these cases, a *merely* philosophical skepticism should by now strike us as an oddity. Instead of being carried away by the temptation to be skeptical about ethics, or aesthetics, or color perception (say) we should look and see why those particular fields of activity are especially exposed to such temptations.

Correspondingly, the task for the "sciences of mind" is not to *discredit* our experience of aesthetics, sensory perception, and the rest; rather, it is to bring to light the learning sequences and neural mechanisms *called into play* in those activities. By following out these routes we can hope to assemble a picture of human mental functioning, and "rational activities", within which developmental psychology, neuroscience, and the rest all have a legitimate role. But it will be a picture that leaves the existence and characteristics of our "rational enterprises" to be recognized and described precisely for what they are. Thus, by making this characterization the first item on our agenda, we put the *rational* aspects of human experience beyond the reach of skepticism and paradox.

First and foremost, accordingly, human beings are users of language, concepts, rational procedures, and the rest. (What was it that Aristotle said long ago, about Man being "the rational animal"?) The joint task, for philosophy and for the sciences of human nature, is no longer to treat this as a matter for serious doubt or perplexity, but to deal with the triad of

resultant questions appropriate to each type of rational activity:

What are the essential preconditions for the development of "rational enterprises" in any field of experience?

What are the leading characteristics of the intellectual procedures, modes of discussion, types of language, and concept use representative of each such "rational enterprise"?

And what scope do these procedures offer for the use of formal calculations, deductions, and other such "propositional" arguments, or for appeals to standards of "formal validity" in the analysis of those arguments?

In this way, we may hope to understand—both scientifically and philosophically—the possibility, and the actual existence, of that "agreement in concepts" and "agreement in forms of life" which are (according to Wittgenstein) the necessary bases for any community of language and rational interchange. The result may not guarantee any *permanent* stability for the "meanings" of human thought or language, such as Cratylus demanded. But it does put us in a position to recognize how, for all practical purposes, a *sufficient* stability exists to permit the common understandings on which mutually intelligible discourse and joint rational activities depend.

The resulting account will have two characteristic features. In the first place, it will embody a fresh division of labor between the *philosophical* aspects of the theory of human nature and its *scientific* aspects—a division of labor that conforms to the definition of "philosophy" we gave in Chapter 2. The philosophical aspects of any such theory will now be concerned with characterizing human activities and forms of life in entirely general terms. Given any particular "human enter-

prise", the philosopher's particular task will be to consider how the characteristic features of that activity are to be described and defined, as *general features* of human nature, life, and thought. ("What are the preconditions for such an activity? What is its essential *modus operandi*? What formal or logical patterns does its intellectual structure require?") So the philosopher will map the basic structure, and possibilities, of human existence and activity, in the world as it is.

By contrast, the "scientists" of human nature—psychologists, anthropologists, sociologists, economists, or whatever—will have the task of studying the *special conditions* that determine what specific forms these human activities will take in one situation or another. ("By what learning pathways do children develop their capacity to recognize, and to respond to, other people's states of mind? In what kinds of cultures and societies did the established methods of forecasting develop historically, and why? In what respects, if any, do the formal structures demanded of scientific theories differ from culture to culture?") Here as elsewhere, the existence and possibility of the relevant subject matter are "given" before the *scientific* work even starts; it remains a *philosophical* task to explain on what preconditions all these basic human activities are capable of existing at all.

Furthermore, once we put at the center of our picture—for both philosophical and scientific purposes—such general activities as language using, dealing with material objects, recognizing states of mind, forecasting, and the rest there is no longer the same temptation to allot one half of our "divided image" of human nature absolute priority over the other. Within the overall framework of any such activity, we have occasion to be both responsive and active—to be, on the one hand, recipients of information, targets of external influences, objects of outside pressure and, on the other hand, sources of information, initiators of new courses of action, and creators of novelty. By reintegrating our image of human nature in this way, we need *neither* deny one or other aspect of human experience—the active or the passive—*nor* feel bound to reinterpret the one as a "special case" of the other. Rather, by broadening our view

we can see all the different general aspects of human life and experience as involving an evident and inescapable alternation of passive and active/input and output/taking and giving/subjection and initiation/suffering and creation—contrast them as we will.

Closely related to this problem of the divided image was our initial problem about fatalism. So long as we thought of causality and rationality as in competition with one another—so long as we assumed that whatever human behavior can be “causally” explained cannot also be accounted for in “rational” terms, i.e., as being done deliberately/willingly/for good reasons—we were laying up trouble for ourselves. For, in that case, it seemed to follow that any 100 percent success by (say) neuroscientists in revealing the general brain processes involved in thought would discredit the “rationality” of such thought, and thus incidentally prove the neurosciences themselves impossible. (Likewise for the other human sciences: Any 100 percent success by psychoanalysis would destroy the claims of psychoanalysis itself, any 100 percent success on the part of historical sociology would make historical sociology impossible, and so on.) Yet the only other course apparently open to us seemed equally unsatisfactory: namely, that of preserving some “slack” in the causal nexus, some area for originality and creative innovation wholly exempted from discussion in terms of cause and effect. On the contrary, the very possibility of acting deliberately and effectively requires that we should be able to rely on the causal efficacy of our own actions. In a world full of “causal discontinuities”, rational, creative, and responsible action would be, not *less* difficult, but *more*.

In the light of our subsequent discussions, we now have to answer a different question: namely, “How can the *rational perspective* on human conduct be related to the *causal perspective*, and the other way around?” As to this question, the two perspectives evidently involve quite distinct kinds of issue. We may look at any piece of conduct in one of two ways: either retrospectively or prospectively.

1. We can consider it *in retrospect*, that is, in relation to its immediate context and to all the things that have gone before it—the facts that have come to the agent’s attention, his social and family background, his native intelligence, all the circumstances that have helped to shape his personality, interests, and aspirations. Given all these things, the fact that this particular agent ended by acting as he did in the given situation may well come to appear entirely intelligible/explicable/natural—one more item safely accounted for in the ledger of history and human affairs.

2. The same piece of conduct can also be viewed *prospectively*, from the agent’s own point of view, as something yet to be done—to be performed in one way or another, with an eye to all the different factors within the scope of the agent’s attention, together with their perceived significance and order of priority, in the light of all his varied tasks, needs, aspirations, professional and ethical ideals. From this second point of view, the operative questions are those that arise about (say) the true significance of the different factors within the range of his attention, the proper priorities to be given to different needs and ideals, and the relative importance of all the available goals of action.

As a result, a complete account of this “inside”/private/prospective/participant’s view of the action will be structured in terms of the agent’s “reasons for his action”, rather than of the “causes of his action” which figure in the “outside”/public/retrospective/observer’s view. Yet in each case we are concerned with *one and the same action*. On the one hand, we are not faced with the spectacle of an entirely causal, and so “nonrational”, event in the natural world; nor on the other hand, do we have to deal with a rational, and so “noncausal” interaction, in that world. In both cases we are faced with a single action that can be viewed either from the personal point of view of the particular agent or from the collective point of view of the onlookers, either prospectively or retrospectively, either from the “outside” or the “inside”—involving different perspectives, different vocabularies, and different patterns of thought in each case.

Nor are the accounts that we can give from these alternative perspectives entirely distinct or incomparable. The same "factors" or "considerations" that figure as *reasons* in the one story have a place also in the other, causal story, though not directly as *causes* of the action. What may perhaps be said to "cause" an agent to act as he does is not (e.g.) the fact to which he points as his "reason for acting", but, rather, his *perception* of that fact—his discovery that it is the case, the event that brings it to his attention, or makes it appear important to him, or whatever. A factor will be "causally efficacious" in the explanation of an action, that is to say, only to the extent that it is recognized by the agent as being relevant, appropriate, important, and so on. In this way we can see how the division between mechanistic and intentional explanation originates; "rational considerations" acquire *causal* force only when their relevance is perceived and understood. Thus—despite Wollaston's argument—the fact that an agent's attention is drawn to some consideration, and thus figures in his "reasons", does not *tell against* the causal efficacy of his deliberations; rather, it helps to *guarantee* it.

Conversely, all those causal factors that might potentially influence our actions are able to do so only to the extent that they are *perceived as* significant, relevant, appropriate and/or important. This "perception of significance" is one of the chief topics for discussion in any adequate *philosophy of action*, that is, in any adequate account of the preconditions and general forms of human action and interaction. So far as free human decisions are concerned, the only factors that have effective causal "weight" are those that we allow to "weigh with us" rationally; the only arguments that causally "compel" our acceptance are those that satisfy standards we ourselves acknowledge to be rationally "compelling"; the only considerations that causally "influence" us, or "force" themselves on us, are those whose perceived relevance makes them rationally "influential" or "forceful" in our eyes. On the other hand, once those factors *have* acquired such a perceived significance, they may become quite genuinely *causal* as well as *rational* factors. As every Iago

knows, one can drive an Othello to rash acts more surely by dropping a few well-chosen words in his ear than by all the electric shocks, rewards of candy, or other causal "reinforcements" in the world.

So, we can finally set aside the fatalists' suggestion: namely, that a 100 percent successful science of human behavior—whether concerned with historical and social, with psychological and biographical, or with neurophysiological "causes"—would cut the ground from under all discussion of rationality and autonomy, credit and responsibility. Far from rational thought and understanding, deliberation and action, being possible at all only on condition that we can find loopholes in the "chain mail" of causes and effects, the rational and causal perspectives on human conduct are simply alternative directions from which to view the same happenings. As a consequence we now have a way of avoiding fatalism and its attendant paradoxes and at the same time of overcoming the apparent split between the "active" and "passive" views of human nature. But this means setting aside as inadequate and misleading the two separate images that have dominated our thoughts about this subject.

In the first place, our "rational understanding" does not operate in a void, in absolute disconnection from our physiology and psychology, from our situation in the world and the problems to which it gives rise, from the aspirations we develop and the causal means required to put them into effect. On the contrary, all our "reasons" for thinking and believing, deciding and doing the things we do, reflect the manner in which—with progressive experience and sophistication as we pass through childhood and adolescence into adult life and maturity—we come to discriminate between alternative directions and courses of action, and so learn to channel the curiosity and wonder, sympathy and creativity, love, fear, and other "springs of action" we were originally born with. In this sense, David Hume's ironical-sounding epigram, "The Reason is, and ought to be, the Slave of the Passions", makes a very real and important point. Speaking of an action as done "for good reasons" does not imply that it was performed without exercise of any energies,

effort, or the rest; it indicates only that the energies in question were appropriate and well directed. Correspondingly, speaking of an action as having been performed "out of passion" does not merely contrast it with an effortless, unfeeling, or totally unmotivated performance; rather, it criticizes the energies involved in this particular action as inappropriate, excessive, and/or ill-directed.

Divorced from effort and affect, energy and passion, or other factors capable of operating as "motives" or "springs of action", the enterprises of reasoning and deliberation would remain formal and empty. Indeed, all the experience from which we come in the first place to understand the *significance* of "rational procedures" has to do with reasoning-in-action, that is, with deliberation put to work in the service of those activities into which our natural energies (attention and wonder, love, fear, expectation, and the rest) are channeled, now in this direction, now in that. Without expectation, forecasting has no significance; without sympathy, other people's minds are a blank; without curiosity, there would be no science; without the creative impulses, no art. As life goes on, it may be—to use Hume's terminology—that we come to employ Reason to direct our Passions with progressively greater skill, discrimination, and taste. Still, the death of all Passions would be the death of Reason too.

## 18 Individual and Collective Self-Understanding

Given an integrated "theory of human nature", embracing both its passive and its active features, we can make one further general point about the nature of philosophical "self-understanding". To recall, such self-understanding involves two distinct elements: making something of ourselves, in the sense of *observing fresh facts about ourselves*, and making something of ourselves, in the sense of *deciding what to make of ourselves*, getting the hang of our own motives, knowing our own minds. Often enough, the element of decision plays a larger part in self-knowledge than the element of self-observation and discovery. In describing a man as "not knowing his own mind", we are not normally pointing to his ignorance about the workings of his own "mental apparatus"; rather, we are criticising him for being vacillating and indecisive. So, the question is worth raising here, Just how is self-knowledge in the sense of "self-observation" related to self-knowledge in the sense of "decisiveness"? What relevance do self-observation and self-discovery have to the direction of one's conduct and self-development? And how do these two elements have to be related in a man who, in both senses of this phrase, truly "knows his own mind"?

The specific tasks proposed for *philosophy* a few pages back, within the general program of a "theory of human nature", had to do with characterizing the typical activities and enterprises of human beings in entirely general terms so as to show how forecasting, art criticism, language use and the rest are possible at all. In saying this, of course, we did not discuss the further question, whether such an account can ever be given in a final and exhaustive form. Can we, for instance, recognize and describe *here and now* some single, eternal, and unchanging character which scientific curiosity and the resulting human enterprises necessarily possess, at all epochs in the development of human culture, and among all peoples of whatever ages and origins? Or does the development of science, in certain fundamental respects, remain "open"? Is the activity of science describable in completely general philosophical terms, accordingly, only if we acknowledge the existence of alternative options for the future? In other words, ought we to conclude that scientific curiosity and its products are *not yet fully made*, even "in essence", but that in certain respects they are *still to make*? And should we entertain similar possibilities also for all the other general modes of human activity and human life?

Once these questions are brought into the open, it will be pretty clear that the possible scope for human action, activity, and rational enterprise is not yet *entirely* predetermined, or fixed. Even in its most general features, the range and character of scientific investigation, say, still remains to some extent malleable and indeterminate, open to the future and responsive to fresh demands. And likewise in some of the other cases: We should expect Art, at least, to change its essential character quite as much as Science when other aspects of human life impose unforeseen demands on the artist and critic. (How far is the same thing true of the other activities we have been discussing? That would be worth reflecting on and discussing case by case.) If this is true of the *collective* activities and enterprises in which human beings engage, it is true also of the activities and aspirations that they conceive and adopt for themselves as *individuals*. What each individual "makes of himself" in any situation de-

pends in part on the psychological equipment he was born with and on his past experience; but in other respects, it may remain quite open and to be decided.

Hence some of the confusions that arise over the idea of "identity crises". Someone who is tempted to complain, "I don't know who I *am!*", may believe that his trouble is a failure of self-perception or self-discovery, when what he really lacks is the self-confidence needed for effective decision. The task, then, is not to find out more about his own mental attributes but to make up his own mind. In certain respects, no doubt, a person's "identity" comes into existence unbidden, willy-nilly; but, in other respects, it is something that he assumes, creates, *makes of himself*, and so *makes for himself*.

With this point in mind we can recognize one of the main points insisted on by "existentialist" philosophers such as Jean-Paul Sartre. Sartre argues that the psychological understanding of human beings—notably, our self-understanding—differs in principle from the scientific understanding of sticks and stones, chemical reactions and physiological functions. Planets, rivers, jellyfish, and the rest behave in ways that can be explained scientifically because they have clear and well-defined "natures" or "essences", and the phenomena we observe, as a result, all "come naturally" to beings of these different kinds. For such things as these, their *essence* is all. Once we know what they are, in "essential" terms, all the things that happen to them in the course of their actual *existence* can presumably be made intelligible. With human beings, on the other hand, this is not the case. Human beings retain a perpetual capacity to surprise us; we even retain a perpetual capacity to surprise ourselves. Whatever our physical and physiological limitations may be, our actual courses of conduct—as manifested in actual, individual *existence*—go far beyond even the most sophisticated inferences from the common characteristics (or *essence*) of the human species. Within the limits of physical and physiological possibility, we can choose just what *kinds* of human beings we turn ourselves into. Even after all of the general—or "essential"—features of humanity have been taken into account, a vast

range of alternative possibilities is still open to us. And how exactly we shall end up depends upon quite specific and individual—or “existential”—decisions to pursue one of those possibilities, rather than another.

Knowing, for example, what a *dog* is determines for us, within very narrow limits, how it may be expected to behave in different circumstances. Even knowing, in addition, that some particular dog was Elizabeth Barrett Browning’s cocker spaniel, Flush, would add to our understanding only to the limited extent that the identity of Flush’s owner was capable of modifying its actual behavior. We begin to understand human beings seriously, however, only when we go beyond their generalized humanity to the more specific things that make their lives individual, even idiosyncratic. Thus, to say “I am a philosophy teacher” is quite different from saying “I am a human being”. A human being is something I cannot help being; and, on that account, I remain subject, like all humans, to hunger, fear, influenza, and mortality. A teacher of philosophy, on the other hand, is something I have become over the years, as the outcome of a hundred decisions and courses of action.

The totality of choices which, in this latter sense, determine what we “are”—more exactly, what *we have become*—comprises what philosophers like Sartre call “existential” decisions. The phrase “teacher of philosophy” covers a part of what I have *made of myself*. By this time, it may have become a more or less fixed part of my person and personality. But it has done so (we might say) only because it is an “essence” that I have myself chosen to *assume*—an “essence” that is consequential on my own “existential” decisions. In this way, the element of self-creation in human personality comes to be expressed, for Sartre, in the doctrine that for human beings, “Existence precedes Essence”. Or, to put the same point in our own terms, the *essential* thing about our status as individual human beings is that we *make ourselves up as we go along*.

In the life of the individual, then, the achievement of full self-knowledge involves recognizing—in the sense, both of

“acknowledging” and of “reexperiencing”—all those choices, decisions, and actions by which we have become what we now are, and so have marked ourselves off as particular, idiosyncratic individuals, differentiated from our other fellow humans. Carried through to the end, this enterprise will of course expand beyond the boundaries of philosophy, into autobiography, and even into psychoanalysis. So, we can define the special tasks of *philosophy*, with proper exactness, only by setting aside this individual, specific “self-knowledge” in favor of that more general kind of “self-understanding” we may tentatively call *the natural history of humanity*. What, then, do we need to know about our general characteristics as human beings in order to deal adequately with the problems, perplexities, and paradoxes of philosophy itself?

Although their inherited capabilities set some limits to the possibilities actually open to them (we said) human beings nonetheless remain, in many crucial respects, what they have *made of themselves*. This is not just true of those things that mark off any particular individual for what he is—a teacher of philosophy, a lover of music, a shy but sociable friend. It is equally true of those other, more general features that mark off human beings collectively, as (e.g.) knowing thinkers and agents. How is it at all possible for human beings to engage in successful forecasting/recognize the colors of objects/develop well-founded scientific theories/create and discuss works of art/recognize and respond to each others’ states of mind/share a mutually intelligible language, and so on, and so on? In part, no doubt, this is so because the world with which we deal *lends itself*—in the necessary respects—to forecasting, scientific explanation, creative manipulation, and the rest. But in part, also, it is certainly because, through both their individual and their collective self-creation, human beings take on all these tasks as essential functions of their humanity, and so turn themselves into the “rational animals” they eventually *become*.<sup>1</sup>

<sup>1</sup> A reminder: We must not be misled by the ambiguity involved in calling human beings “rational”. Describing birds as “flying vertebrates” in no way contradicts the fact that fledglings are for quite some time unable to fly. Similarly, describing human beings as “rational animals” in no way

Science is possible for adults because of the ways in which children exercise their creative curiosities and impulses toward problem-solving; art is possible for adults because children manifest sensory responsiveness, dexterity, and productive play; language is possible for adults because infants interact communicatively from the moment of birth with the humans who nurture them; a sense of rights and responsibilities is possible for adults because young children from the beginning adjust their responses to the signals of those others on whom they are dependent, and so on, and so on.

In these respects, we may speak of "rationality"—the totality of activities and enterprises that involve forming rational expectations, giving reasons for our actions and beliefs, and so on—as having an *ontogeny*. Understanding what it is for a person to be "rational" requires us to understand how individual development *comes to make possible* for him these particular activities and enterprises. How far does this ontogeny depend on our innate equipment, that is, on genetics and heredity? And how far does it depend on the individual's subsequent experiences? We currently know only a small part of the answer to this central question. Certainly in most cases both inheritance and experience play very substantial parts. On the one hand, fledgling birds of some species react instinctively by "freezing" immobile on the ground in response of the silhouette of a hawk flying overhead; and there is some evidence, by now, that human infants too can already discriminate three-dimensional objects in general, and certain types of objects in particular, immediately after birth.

On the other hand, in the human species the ability to recognize and deal appropriately with different objects is largely the product of education and experience. The teataster, the field naturalist, the bibliophile, and the racing car buff have all of them refined their discrimination of flavors and plants, of type-founts, and of automobiles, far beyond the rest of us. Similarly

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denies the obvious fact that this "rationality" is very largely unrealized in the human infant.

in other cases: William Gass's highly suggestive characterization of artistic taste and discrimination as "the stylization of desire" challenges us to trace out the vicissitudes by which primitive, undifferentiated joy and desire toward attractive objects can be progressively given a structure, made more discriminating, and transformed into a topic of rational justification and debate.

If "rationality" has an ontogeny, it has a *phylogeny* also. The fact that some form of (say) rational forecasting or art criticism is possible at all for human beings may lead us to ask about those universal features of human nature and development without which they would be impossible. Yet, often enough, looking to the ways in which individual human beings develop cannot give us the entire story, whether for philosophical or for psychological purposes. When, for instance, Kant asked how it was "possible at all" that any system of theoretical physics might combine the formal rigor of Euclidean geometry with the empirical reference of a natural science, his question was immediately directed at one specific historical product—namely, the system of dynamics, physics and planetary astronomy set out in Newton's *Principia*—and, as he posed it, the point of the question referred to that particular outcome in the history of scientific ideas. By contrast, 150 years earlier, Descartes' ideal of a quasi-geometrical natural science had been only an aspiration, while the humanist writers of the sixteenth century could still dismiss this as an unrealizable dream. Therefore, we should bear in mind that Kant's question "How can an empirical system of theoretical physics at the same time take a mathematical form?" is not just a timeless question about the eternal possibilities of the intellect, or about the permanent capacities for thought conferred on the human species by God at the original Creation. Rather, it is a question with an essentially historical dimension, about the manner in which, and the conditions on which, it *had been found possible* to cast our basic ideas about the physical world into idealized, mathematical axioms and postulates comparable to those that Euclid provided for geometry.

Thus, a proper understanding of "rationality"—that is, of the methods of discussion, argument, and justification characteristic of our reason-using and reason-giving activities and enterprises—obliges us to study issues in *intellectual phylogeny* (the development of culture, the history of science, the evolution of the fine arts, of personal relations, of moral attitudes, etc.) as well as *intellectual ontogeny* (individual psychology, cognitive growth, the development of artistic sensibility, moral discrimination, psychological perceptiveness, etc.). Nor is this "phylogenetic" aspect important only in technical fields such as mathematical physics. The rate and extent of historical change may be particularly apparent in activities like forecasting, scientific theorizing, and the like, but the situation is not essentially different in many other fields. Philosophically speaking, for instance, the history of art is not just a chronicle of styles, genres, and techniques. Over the millennia the very role of artworks in human life has significantly changed, and the scope for reasoned discussion about the whole artistic enterprise has changed correspondingly. Art as liturgy, art as entertainment, art as conspicuous consumption, as psychotherapy, as political protest—the changing relationship of art to the larger framework of human life makes a difference to the terms in which the resulting products can be relevantly discussed, and to the kinds of "reasons" that have a place in such discussions. Similarly in ethics. Even if we accept the ideal of a single, uniquely valid way of thinking about moral issues, it remains the case that in different classes, cultures, and periods the details of people's actual moral beliefs and ideas have varied considerably. To that extent, we need to develop a "genealogy of morals", as a part of the broader and more general natural history of humanity. And so on, and so on. Object recognition, psychological perceptiveness, and even linguistic understanding, have developed significantly during the cultural history of humanity.<sup>2</sup>

<sup>2</sup> Saying that they have "developed" is not, of course, the same as saying that they have "improved". We may feel that we have come to recognize the moral claims of children and animals, infidels and invalids better than some of our predecessors had. But in other respects, our moral discrimina-

As we have been speaking of it here, accordingly, the "natural history of humanity" involves an integration of ideas and discoveries in cultural anthropology, social and intellectual history, developmental psychology, and half-a-dozen related fields of inquiry. This integrated account of "human nature" must analyze the common tasks and goals around which human life is organized in different cultures and communities, the forms which the pursuit of those goals and tasks has taken at different points in human experience, and the steps by which the human individual progressively comes to engage in the resulting activities and enterprises. For it is these common needs, tasks, and goals that give rise to those common "forms of life", or "ways of being in the world", or "universal natural laws of the peoples"—different philosophers have given them different names—that underlie the various rational enterprises and activities, and give their "rational" status a significance and a foundation.

Furthermore, we should consider not only how individual human beings *succeed* in entering into such communal activities but also the various ways in which they may *fail*. The possibility of self-understanding goes hand in hand with that of "self-misunderstanding". The same psychological development whose normal, trouble-free course enables us to engage in the standard "forms of life" of our culture easily and without confusion, may also—given obstacles and vicissitudes—saddle us with emotionally loaded confusions, disablements, and misconceptions, so that we may form systematically "irrational" fears and expectations, misread other people's states of mind, embrace inappropriate ethical positions, become unreasonably dogmatic about matters of art and politics, even hallucinate about material objects in the world around us.

As a result, during the twentieth century, there has been a

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tion may equally have lost important dimensions. Still, fashionable despair should not blind us to the very *possibility* of progress in moral ideas and attitudes. (In many cultures, for instance, spastics are still regarded as figures of fun—to be ridiculed, laughed at, and caricatured on the stage.)

*rapprochement* or renewed sympathy between philosophy and psychiatry. For three hundred years, from René Descartes to Bertrand Russell, rationality and its modes of thought were discussed in general, abstract—preferably, logicogeometrical—terms, and were divorced from the actual capacities and frailties of human individuals, living and acting either in isolation or in groups. Correspondingly, failures of rationality were viewed not as throwing light on the general problems and vicissitudes of “human nature”, but as merely personal blunders and/or afflictions. By now, however, the relationship between philosophy and psychiatry can be seen in a different light; one major twentieth-century philosopher (Karl Jaspers) was himself a practicing psychiatrist. Indeed from this newer point of view the two subjects have complementary aims. Human development and/or misdevelopment, the individual’s acquisition of concepts and/or misconceptions, his establishment of personal relations on a realistic and/or fantasy-ridden basis, and so on—given a proper understanding of our different rational enterprises, in terms of which the functional significance and validity of their fundamental concepts becomes apparent, we should, in the process, recognize the possible sources and modes of confusion, misconception, and “irrationality”.

Such a natural history of humanity must, of course, be open to discussion in relation to many different sciences. We are what we are, in part, for reasons of heredity and genetics—having the kind of brains we do, with complex and well-established structures in the gyrus and frontal lobes and rich neurological connections to the subcortex, and having also the universal appetites and “springs of action” apparent in all human generations and cultures. But we are also what we are, in part, for reasons of environment and experience—being exposed both to the particular influences of family life, social interaction, and education, and to the general needs, tasks, and problems that bear down on human beings at all times and places. Such a comprehensive synthesis, or reintegration of the human sciences, will not, of course, be easy to achieve. There is no guarantee that neurology and developmental psychology, psy-

chiatry and social anthropology, linguistics and the history of science, will conveniently dovetail into a single, coherent and consistent unity. Yet this is no ground for despairing of the ideal. On the contrary, none of the disciplines in question should seek to be entirely self-contained. All the relevant branches of knowledge about humanity and human beings—neurology, criminology, psychoanalysis, social psychology, cultural history, anthropology, and the rest—share boundaries across which we should ideally move without difficulty; and to the extent that the basic concepts current in adjacent fields prove to be *incongruous* and *incomparable*, that is a legitimate reason for criticizing those concepts.

Therefore, the goals of philosophy today are no less *grandiose* than in earlier times. We aim at an all-embracing conception of human nature and human life, considered in entirely general terms, that will enable us to “locate” human beings in the larger world of which they form a part; and our ambition calls for a point of view, and an intellectual method, broad enough to encompass, and even—in principle at least—to criticize, all the natural and human sciences. So understood, the *general* nature of philosophy may seem to have changed little since Socrates enunciated the maxim, “Know thyself.” Still, the *specific* questions that philosophers ask today have come a long way since Socrates and Plato developed the first, formal analysis of “rationality”. Although the long-term ambitions of philosophy remain grandiose, something quite genuine has been achieved in 2000 years and more of argument. So, the picture that we can paint today, of Humanity confronting the Universe, is far more specific, circumstantial, and detailed than any available to us 300, 800, or 2000 years ago.

# 19 Philosophy and Action

In calling for a natural history of humanity, or for a "science" of human nature, we must take care not to be uncritically naive or overoptimistic. Philosophy is not, and never could be, merely a "superscience"; not even a super-science of "human nature". The self-understanding at which human beings aim is not just a matter of "knowing how our minds work"; in point of fact, it always includes the further, complementary element of "knowing our own minds", that is, of recognizing the general principles upon which any overall, intentional plan of life is to be founded. "What then are we to make of ourselves?" The answer to that question depends on two things: (1) what factual understanding we can achieve about human life and human nature, both general and individual, and (2) what we see, in the light of that diagnosis, as the proper direction of practical "self-creation".

Our survey of the territory of philosophy accordingly requires a "concluding, nonscientific postscript". Up to this point we have been preoccupied with the *theoretical* aspects of philosophy; we have been discussing the "rationality" of the things we *think and believe*, rather than the "rationality" of the things

that we *decide and do*. Yet the *practical* aspects of philosophy might have occupied us at nearly the same length. All the great historical philosophers have attacked issues of theoretical philosophy, not just for their own sakes, but with half an eye on their practical implications. Socrates invented political theory, very largely, from a practical concern with political criticism; Locke moved naturally and easily between human understanding and civil government; Kant planned his *Critique of Pure Reason* to match the *Critique of Practical Reason* and the *Critique of Judgment*. Of the major philosophers, indeed, only Descartes and Wittgenstein wrote no major treatises explicitly on ethical and political philosophy.<sup>1</sup>

Considered in *theoretical* terms, the nature of philosophy and the roles of philosophers can be conceived (as we saw) in many different ways. Those who react solely to the form of their questions may see philosophers as mere dealers in conundrums and paradoxes. Those who embrace the geometrical ideals of formal philosophy, from Plato up to Russell, may see them as supermathematicians. Those who approach human modes of life and thought simply in terms of history and culture, similarly, may see philosophers as glorified anthropologists; students of "presuppositions" may see them as transcendental critics; those who would reintegrate all these theoretical approaches, as a new kind of "human scientists". But there are, in addition, possible approaches to *practical* philosophy which cast the practically minded philosopher, and his work, in yet other roles.

These further, practical approaches to philosophy are still concerned with the problem of *reasons*. The "reasons" in question are not so much reasons for thinking or believing one thing rather than another, as reasons for deciding or doing one thing rather than another. One central aspect of the problem, again, is still to explain how *acting* "for a reason" is marked off from acting under some causal compulsion, for example, under the

<sup>1</sup> Even so, the importance of ethics for Wittgenstein seems entirely clear. If he did not write about it at length, that was because for him—as for Kierkegaard and Tolstoy—ethics was a field in which nothing of a general, philosophical kind could usefully be said.

influence of hypnosis or drugs. How, for example, does the influence of a third whisky on an empty stomach differ from that of an excessively strict upbringing? And if there is not any ultimate difference between openly causal and seemingly rational conduct, how can we then claim any greater responsibility or credit for the results of our mental or neural conditioning than for those of our digestive biochemistry?

Here, again, three kinds of approaches can be recognized, all of which start from the same general question: namely, "In what direction should we look for a truly rational basis of human conduct?" The first approach seeks this basis in the nature and goals of *collective* human life; the second approach looks for it in the character and development of human *individuals*; the final approach finds it in the *interactions* of individuals and groups, both with one another and with the broader context of decision.

### Collective Approach to the Philosophy of Action

Central to the first approach are the following questions: Is there, then, a uniquely "rational" aim for *collective* human action? If so, how is it to be identified? In particular, can we characterize it in *absolute* terms, holding good equally for every phase of history, every culture and community? Or does the proper aim of human action depend, in a *relative* way, on when, where, and among whom the agent happens to grow up? Thus, the same general issues arise over human actions and decisions as over human thoughts and beliefs; and we find similar considerations leading first to skepticism, then to relativism, about our reasons for *acting*, as affected our reasons for *believing*. (Recall Chapters 8 and 12.)

Socrates and Plato, in fact, inaugurated the practical aspects of political and ethical philosophy with the same "absolutist" ambitions as they brought to natural philosophy—a concern to identify *the* functions of human beings as such, and so *the* one and only Form of the Good, which alone could provide an un-

questioned justification for the moral claims of the State. Similarly, the seventeenth- and eighteenth-century invention of history and ethnography precipitated, in practical as well as in theoretical philosophy, a new "relativist" spirit of tolerance; each separate people, culture, and/or milieu now seemed to be entitled to its own ethical and political standpoint. By the early nineteenth century the first existentialist philosophers had carried this line of argument to an extreme individualism; if every human group, however defined, was entitled to develop its own moral and political concepts, then there was no final reason why the ultimate reference group should comprise more than one single individual. In Kierkegaard's eyes, therefore, each man became answerable only to himself and to God. It was impossible to base one's ethics securely on the convictions of any human group, whatever its size. If it was large, any kind of reasoned consensus was unlikely; but if it was small, the members were more likely to be ill informed or wrongheaded. In the last resort, each man must judge for himself.

Yet this absolute individualism struck many people as an abandonment of reason, which provided no common grounds or standards of criticism for moral or political discussion. Hence it was important to account for the original diversity of *actual* ethical ideas without giving up all hope of some broader system of *ideal* standards of criticism. The focus of nineteenth-century philosophical debate became, as a result, the processes of history and historical development. Granted that different peoples in different epochs have come to order their lives in different ways, can we recognize some deeper historical purpose behind that sheer factual diversity? Should the entire historical process be seen as directed toward some goal or destination in the remote future? Are the varied approaches to ethics and politics of different human groups so many intermediate "means" to some eventual cosmic "end"? Or should the direction of historical change be viewed, rather, as the successive "effects" of economic and social "mechanisms" imposing progressively more complex organization on our communal life?

In this way, a new tradition of philosophical debate was

established, commonly referred to as *historicism*. Some philosophers, for example, G. W. Hegel, regarded the overall course of history as a continuous "unfolding of the human spirit"; others, for example, Karl Marx, saw it as reflecting conflicts between subgroups or classes with different economic interests; others, again, reinterpreted traditional religious ideas, according to which History manifested the working out of Divine Providence—traditions that lay behind both the Lutheranism of Hegel and the Judaic inheritance of Karl Marx. It is particularly interesting to notice, in this connection, the views of the unorthodox Catholic theologian Teilhard de Chardin. Catholic theology has traditionally related the ultimate goals of human action not (as Teilhard does) to the historical direction of evolution, but to a divine basis lying *outside* the historical process. Certainly, for Augustine, as for Plato, the historical sequence carried no guarantee of improvement. On the contrary, both men believed that human affairs tended to go from bad to worse, so that the present historical and social order would eventually fall completely apart. (The same was true of Luther and the original Protestants also. By the mid-sixteenth century it was widely, and quite literally, believed that the End of the World was at hand; and Luther supposed that God must surely intervene, within a hundred years or so, to terminate an epoch of growing corruption, decay and sin.) For orthodox Augustinians, the goal of human existence thus lay outside Time itself. The so-called "City of God" was not some human creation, to be brought into existence as the outcome of successive changes, over future centuries, but an ultimate ideal, or standard of criticism, for all collective human life. By achieving salvation, human beings might thus participate, not in the transitory progress of temporal history, but in the divine and a-temporal world of Eternity. Only after A.D. 1600, in fact, did any serious long-term optimism about the course of human affairs enter Western philosophy; so historicism such as Teilhard's remains a recent and, from the Catholic standpoint, a somewhat heretical point of view.

What light does this *collective* approach to the philosophy of

action throw on the problem of "reasons" and "causes"? At the very least, it encourages us to restate the problem in new ways. For instance,

How far can we handle the considerations that are effective in deciding how we deal with the problems of collective life in a *rational* manner—that is, how far can we perceive them as "relevant" and as carrying more or less "compelling" weight?

How far do they achieve their effect through their *causal* power to move us, regardless of our perceptions—that is, as having a "compulsive" force on our actions, by way (say) of our economic needs and desires?

We can take this issue in any of three ways. We can insist on the rationality of the historical process by depicting all socio-political changes as resulting from explicit decisions by the human agents involved; we can present all human agents as so many puppets, whose ostensibly rational decisions are actually the effects of irresistible economic and psychological causes; or we can set about the more complex task of sorting out those aspects of history that allow effective room for human deliberation and "reasoned" decision from those that can be explained only in "causal" terms.

### Individual Approach to the Philosophy of Action

This second approach comes at the same general questions as the first approach but from a different direction. It begins by asking whether any uniquely "rational" basis can be found for *individual* human action and, if so, in what direction we should look for it. Is there some single aim or goal toward which human beings should direct all their efforts and actions, simply in virtue of their being *human* individuals? Instead of

subordinating the interests and needs of individuals to those of some larger, collective group, can we find an alternative "rational justification" for actions and decisions in (say) the basic characteristics of human personality and individuality?

This approach too has a long ancestry, though it has achieved prominence only during the last 100 or 150 years. During the early centuries A.D., for instance, it was widely believed that the nature of the Good (conceived of as the Will of God) could be properly grasped only through some ecstatic personal union with the Divine; this kind of intuitive knowledge, or *gnosis*, was best achieved through meditation and other spiritual exercises, and demanded the solitary life of a hermit. Yet, at this stage, only the *methods* of the religious life really imposed a life of solitariness. Its *goals* had nothing "individualistic" about them. Ideally, indeed, all men would share in a common goal, of personal union with the Godhead, which represented the absolute and universal expression of Ultimate Good. For a strictly individualist approach to ethics, we must turn to more recent philosophy—from the time of Kierkegaard on.

Such an approach could not, of course, remain for long on a purely relativist foundation. Claiming that everybody had the simple right to view questions of conduct entirely as he saw fit was in effect declaring that ethical issues are undiscussable—a position that only a few philosophers have been prepared to accept, and then out of motives of paradox as much as any other. Yet the *arguments* for ethical irrationalism and a-rationalism need to be taken seriously, since their weaknesses are far from obvious, and the conceptual confusions embodied in them call for careful analysis.

For the most part, as a result, individualistic approaches to ethics have attempted to "place" ethical problems within a larger and more "objective" framework of temporal development. This time, however, the development is not the *historical* development of a culture or community but, rather, the *psychological* development of the individual human personality. Therefore the motto for this second approach is some such phrase as "self-realization".

According to this kind of account, the fundamental reasons for decisions and actions must be related back to the tasks of psychic development. Just as philosophical historicism sets out to make the diversity of moral ideas in different epochs more palatable by depicting them as so many successive products of a larger historicocultural unfolding, so this parallel ethical "psychologism" sets out to make the individual diversity of ethical ideas more acceptable by relating questions of conduct to an understanding of the individual life cycle. The ancestry of this approach can be traced back at least as far as Aristotle. His preoccupation with life cycles—with the vision of organic maturation as a progressive "realization" of characteristics present in the infant organism only as "potentialities"—has clearly influenced all later views of cognitive and emotional development in childhood and adolescence. Even the contemporary theories of Chomsky about language learning, and of Piaget about psychological development, have something of this Aristotelian pattern built into them; the newborn infant is depicted as having innate capacities, "mental structures", or "schemata" that come to fruition only with the passage of years and through interaction with the world.

The common feature uniting individualistic philosophies of action, then, is their insistence that the basic "reasons" for our actions and decisions must show how they contribute to, or express, our deepest personal individualities. Doctrines of this general kind are currently popular even among people who would claim not to be "philosophers" at all. Much popular psychology, for instance, is as much ethical as scientific—as much inspirational as informative—it focuses on the need for human beings to understand and accept themselves, and learn how to adapt their modes of life to their own personal characters, needs and capacities. So what began in the nineteenth century, with T. H. Green's writings about "self-realization", has become a stream—if not a flood—of books about "self-fulfillment" or "peak experiences" or "the achievement of true identity". Meanwhile, at a more serious level, the whole theoretical development of psychoanalysis and related disciplines is concentrating atten-

tion on the same fundamental group of questions. How far (we must ask) do the inner mechanisms of our own psychic development impose ethical demands on us? How far are our crucial choices and decisions concerned, less with external, communal issues than with the effective and conflict-free achievement of personal maturity?

Here again, we are at an entrance into the territory of philosophy that has a direct appeal to ordinary nonphilosophical people quite as much as to scholars—one that opens up a large range of complex and important issues, of kinds that are rightly the focus of much contemporary debate. This is not to say that the individualistic approach either is, or could be, an *exclusive* one; even "personal maturation" is not exclusively an unveiling of characteristics already present within the individual at birth. (One mark of "maturity" is our ability to recognize, also, the ethical responses called for by different *external* situations.) Still, the dynamics of personal development and the claims of individual self-understanding certainly must be taken into account in any full and convincing theory of ethics. For the manner in which ethical claims arise for us—the manner in which our dealings with the world give rise to duties, rights, and obligations—will be that much the more relevant and operative for us if it harmonizes with the processes by which our personalities and characters are formed and expressed in the course of our individual lives. Any such theory must, accordingly, respect the vicissitudes of individual development, for example, the ways in which early psychic misadventures can distort or frustrate the achievement of self-knowledge and self-understanding. In this respect, the growth of psychoanalytic understanding during the twentieth century has added a new significance to the old saying, "To understand all is to forgive all".

All the same, when it comes to explaining the distinction between "reasons" and "causes", this psychological approach can land us in difficulties similar to those of the historicist approach. If a person is disabled by archaic panic in dealing with certain emotionally charged situations, for example, we may be inclined to point to these inhibitory factors as "the causes"

of his present behavior, rather than by proposing them as "his reasons" for acting as he does. Yet there is some doubt whether this is the correct account of the matter. For should we not say, rather, that a man who acts out of archaic, unrealistic fears is nevertheless acting for "reasons" of a special kind? (He is genuinely *in fear*, even if his fears are quite unrealistic.)

Hence, there is a certain ambiguity about the exact philosophical status of the psychoanalyst's discussion of "unconscious motives". Are these motives truly *causes* or *reasons*? In some situations, no doubt, a man acts "compulsively"; that is, he absolutely cannot help acting as he does, since the archaic fears—however unrealistic—are stronger than he can master. In other situations, however, he may act "for compelling reasons"; that is, the relevant features that he perceives in the present situation may leave only one responsible course of action open. The least we can demand of a satisfactory philosophy of individual action, at this point is a clear account of the manner in which we are to tell these two different types of situation apart. How does the individual human being recognize where some *compelling reason* indeed exists for acting in this way rather than that? And how does the relevance for *him* of such considerations differ from the influence on *him* of those factors that are *causally compulsive*?

There is one other problem that arises both for the historicist and for the psychological approach to philosophy. It is not clear that History unfolds throughout according to one-and-only-one formula or recipe, and it is not clear either that the Psyche has one-and-only-one developmental pathway. Nor, for that matter, do the demands of psychic development clearly impose on us one-and-only-one kind of problems and choices. On the contrary, different theories of individual development focus our attention on different aspects of "self-realization" and "self-fulfillment". We experience problems in the pursuit of fulfilling careers and vocations; we experience problems over our emotional and personal relations; we experience problems with religion, sexuality, and the prospect of death. The idea of the "life cycle"—what Kierkegaard called the sequence of "stages"

on life's way"—is no simple or tidy one that can be translated at once into some simple catalog of "good reasons" for conduct.

### Interaction Approach to the Philosophy of Action

These first two approaches to the philosophy of action, including the "reasons" for acting, cast the philosopher and his work in two new and very different roles. Thus historicist philosophers, who make social, cultural, and historical development the basis for their discussion of rights and wrongs, causes and reasons, ethics and politics, come to take on the appearance of *prophets*. Like Jeremiah or Isaiah, they exhort us to view our situations, and the conduct appropriate to those situations, as related to a sweeping picture of History and our Place in History. In one way or another (they tell us) we are all Chosen People, subject to ethical claims that spring from the entire pattern of historical and cultural change. Correspondingly, those philosophers who start from psychology take on the appearance of *preachers*. They exhort us to examine ourselves and our motives, to pursue honesty, purity, and self-awareness, to recoil from self-deception and bad faith, and to struggle for a Maturity of the Self which is in its own way as ethically demanding as the task of saving one's Soul. When preached or prophesied with enthusiasm, indeed, both historicist philosophy and moral psychology acquire something of a theological tone. The achievement of certain goals makes human action "reasonable" or "rational" because it fulfills a Sacred Mission, whether on behalf of History or of the Self/Soul.

The third approach, based on the *interactions* of individuals and groups, is a less grandiose one. It casts the philosopher in the role, not of a preacher or prophet, but—as Socrates put it—of a *midwife*. For it is not clear that the philosopher has anything very specific to *tell* us, about ethics or anything else. We may well be quite unaware of many facts about physics, or history, or child psychology, or art, so that we have to rely on scientists, historians, and others to improve our knowledge.

But what can the philosopher give us by way of "unsuspected facts" or "newly discovered information"? What access does he have to features of the world about which we are misinformed or underinformed? Rather than view the philosopher as an expert who can add to our store of knowledge, we shall do better (Socrates claimed) to see him as helping us to view in better proportion the different things we already know, and as enabling us to "bring to birth" unrecognized consequences for our modes of life that are already implicit in that knowledge.

Thus Socrates did not present himself as a superscientist, or as a superhistorian, or as a source of information of any other kind. Rather, he held up a mirror to his own contemporaries and invited them to contemplate—critically and reflectively—their own ways of thinking, arguing, and making decisions. Rather than claiming to tell them things they did not know, he invited them to become self-aware in a new way by acknowledging the assumptions and beliefs on which they were in fact acting.

If he were alive today, Socrates might be tempted to describe this final function for philosophy in terms of a different image. In contemporary terms, this particular role for the philosopher brings to mind not so much the activities of the midwife as those of the *psychoanalyst*. In recent years, indeed, the affiliations between philosophy and psychoanalysis have been much discussed. Both philosopher and analyst help us to see our thoughts, feelings, and actions in better proportion. Both philosopher and analyst help to bring to light concealed assumptions and repressed anxieties implicit in our attitudes, even when not properly understood. True, the roles of the two men differ in other basic ways. The repressed beliefs and fears that come to light in psychoanalysis spring from the particular individual's emotional vicissitudes and misfortunes, whereas the philosopher's task is to discover quite general presuppositions and premises, unrelated to this or that individual. Still, both men alike aim at improving our *self-knowledge* to help us see our beliefs, decisions, and actions against their true background and context.

From this final point of view, then, the business of philosophy has to do, primarily, with the *problematics* of our decisions and actions. We explain our "reasons" for acting as we do by pointing to those features of the situation that are specifically relevant to the action. Those features may refer to the collective situation—"This is late twentieth-century America, not Victorian England"—or, alternatively, to our situation as individuals—"It's my job as a university teacher/my filial duty/my obligation as a friend . . ." Then, the problem of sorting out those "reasons" and getting them in proper proportion depends on our knowing what factors to look out for, what their bearing is, and so on, and so on. To the extent that our difficulties in this task spring from *personal* sources, we may need a psychoanalyst to help us overcome them; to the extent that they spring from the *technicalities* of particular subjects (whether sciences, technologies, or crafts), they call for help from experts; but to the extent that they demand reflective understanding of the very decisions themselves, those difficulties will become once again *philosophical* difficulties.

How can I arrive at/deliver myself of/get off my chest a belief or decision that is *fully appropriate* to the situation in which I find myself—both in the light of my individual history and as a person of my own place, time, and occupation?

Whatever can be said in entirely general terms by way of an answer to that question comes very close to the heart of the philosopher's territory.

One closing word: philosophy mobilizes our *general self-understanding* in the service of both our intellectual and our practical lives. We began by considering philosophy as an extension of logic, the philosopher as a kind of conceptual mathematician or geometer. This move allowed us to focus on the

*idealized structures* of the propositional arguments in which so much of our theoretical thought and deliberation are cast; but by itself it left us an easy prey to skepticism, and the same skepticism can afflict us when we look at our practical reasons for acting. "How can I *prove* that I am not acting as I do merely because scoundrelly politicians have deceived me, because I am neurotically motivated, or because of some other external, maladaptive influence?" Once again, no idealized Platonic demonstration can do anything for us by way of "proof". In acting as we do, we can take into account only those considerations of which we are aware. But we can do a reasonable man's best to find out all we need to know before making a decision. We can make allowances for our own personal preferences and prejudices, whether healthy or neurotic. And what more can be asked of us, in this direction?

Next, we moved on to consider philosophy as the science of human nature, and the philosopher's task as a kind of generalized anthropology. This second move focused our attention on the *actual procedures* by which men learn to criticize their beliefs, deliberate about actions, and reach firmly based decisions; but, taken by itself, this move too left us prey to an equally destructive relativism. "This is how it's done among our kind of people, so what more is there to explain?" To get beyond that point, we had to go behind the *established* practices and procedures and look more closely at the experience on which they are based, at the further tests to which they might be subjected, and at their broader relations with the common problems of human beings in all cultures.

In this way, we have arrived—step by step—at a picture of the philosopher's task as concerned with human nature in its very largest and most comprehensive framework—with an image of humanity and of individual human beings adapted, as far as is possible, to both their collective and their individual situations. Such an image of mankind, and of the individual human being, reaches well beyond the scope of any particular science—beyond the reach of the psychologist or the geometer, the anthropologist or the historian, the neurophysiologist or the

physical cosmologist—and beyond the range of straightforward theorems, procedures and theoretical concepts. So far is this the case, indeed, that a final question arises: “May not the philosopher be obliged, in this respect, to take on the additional functions of the *poet* or creator of *myths*?” Certainly this was a role in which the classical Greeks were prepared to cast philosophy and the philosopher. To them, the poet Homer himself appeared as a kind of philosopher, while all of Plato’s geometry, logic, and dialectic went hand in hand with myth-making.

How will the resulting integrative activities of the philosopher-as-poet relate to those of the philosopher-as-geometer, the philosopher-as-human-scientist, the philosopher-as-preacher, and the rest? The alternative answers to that question can best be seen rather than stated—by reading in philosophy, not by talking about philosophy. So, this is as good a point as any to bring an end to our circumnavigation of the territory of philosophy—that is, to stop taking bearings on it, without ever plunging into it and coming to grips with its detailed problems. Rather than prolong this survey any further, therefore, let me simply invite you to put this book aside, face the philosophical problems that you find most perplexing in your own mind and begin tackling them for yourself, and in your own ways.