BEYOND OBJECTIVISM AND RELATIVISM: SCIENCE, HERMENEUTICS, AND PRAXIS

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PART ONE

BEYOND OBJECTIVISM AND RELATIVISM: AN OVERVIEW

I think that Aristotle was profoundly right in holding that ethics is concerned with how to live and with human happiness, and also profoundly right in holding that this sort of knowledge *("practical knowledge") is different from theoretical knowledge. A view of knowledge that acknowledges that the sphere of knowledge is wider than the sphere of "science" seems to me to be a cultural necessity if we are to arrive at a sane and human view of ourselves* or *of science.*

Hilary Putnam, *Meaning and the Moral Sciences*

THERE is an uneasiness that has spread throughout intellectual and cultural life. It affects almost every discipline and every aspect of our lives. This uneasiness is expressed by the opposition between objectivism and relativism, but there are a variety of other contrasts that indicate the same underlying anxiety: rationality versus irrationality, objectivity versus subjectivity, realism versus antirealism. Contemporary thinking has moved between these and other, related extremes. Even the attempts that some have made to break out of this framework of thinking have all too frequently been assimilated to these standard oppositions.

There are, however, many signs that the deep assumptions, commitments, and metaphors that have shaped these oppositions, and from which they gain their seductive power, are being called into question. For along with the disquietude that is provoked by these extremes, there is a growing sense that something is wrong with the ways in which the relevant issues and options are posed—a sense that something is happening that is changing the categorial structure and patterns within which we think and act—a sense that we have an urgent need to move beyond objectivism and relativism.

My purpose in this study is to probe this complex phenomenon, to clarify what is happening, to indicate what is wrong with the intellectual and cultural matrix that has shaped so much of modern life, to show why traditional oppositions are breaking down, what new directions are emerging, and what is the evidence for and the meaning of the move beyond objectivism and relativism. Specifically, I intend to examine a number of debates and controversies that have broken out recently among philosophers. While at first glance the debates may appear to have very different subjects and emphases, all of them, in essence, have a single concern and focus: to determine the nature and scope of human rationality.

A new conversation is now emerging among philosophers—a conversation about human rationality—and as a result of this dialogue we are beginning to gain a new understanding of rationality that has important ramifications for both theoretical and practical life. A true "conversation"—which is not to be confused with idle chatter or a violent babble of competing voices—is an extended and open dialogue which presupposes a background of intersubjective agreements and a tacit sense of relevance. There may be different emphases and stresses by participants in a conversation, and in a living conversation there is always unpredictability and novelty. The contours of the conversation about human rationality, especially as it pertains to science, hermeneutics, and *praxis*, have recently taken on a new and exciting shape. I want not only to reveal the common themes of this dialogue—the shared assumptions, commitments, and insights—but also to do justice to the different individual voices and emphases within it.

From a manifest perspective, many contemporary debates are still structured within traditional extremes. There is still an underlying belief that in the final analysis the only viable alternatives open to us are *either* some form of objectivism, foundationalism, ultimate grounding of knowledge, science, philosophy, and language *or* that we are ineluctably led to relativism, skepticism, historicism, and nihilism. Whether we focus on the origins of analytic philosophy or phenomenology, there was an earlier period of intellectual confidence and optimism, a conviction that we had finally discovered the secure path for philosophy, the right "method" for making genuine intellectual progress, for turning philosophy into a discipline that would yield knowledge (*epistēmē*), instead of being the endless battleground for competing and shifting opinions (*doxai*). In this respect the differences between such central figures as Russell and Husserl are less significant than what they shared. Both were at one time convinced that the "real" foundation or ground of philosophy had been discovered and that the methods and procedures for seriously advancing philosophic inquiry were at hand. The fact that such claims had been made over and over again in the past—and have become a persistent theme since the time of Descartes—was taken not as evidence for the dubiousness of the project of grounding philosophy but rather as a sign of the "scandal" of philosophy that demanded resolution. But as we follow the internal development in the twentieth century of both Anglo-American and continental philosophy, we can detect increasing doubts about the project of grounding philosophy, knowledge, and language.

The movement from confidence to skepticism about foundations, methods, and rational criteria of evaluation has not been limited to philosophy. The confusion and uncertainty in philosophy exhibits and reflects a phenomenon that is characteristic of our intellectual and cultural life. In the entire range of the human and social sciences, we have witnessed the playing out of bold attempts to secure foundations and the elaborations of new methods that promise genuine knowledge, followed by a questioning that reveals cracks and crevices in what had been taken to be solid and secure. There seems to be almost a rush to embrace various forms of relativism. Whether we reflect on the nature of science, or alien societies, or different historical epochs, or sacred and literary texts, we hear voices telling us that there are no hard "facts of the matter" and that almost "anything goes." Whether we focus on such cherished subjects in philosophy as rationality, truth, knowledge, reality, or norms, we seem to be confronted with incommensurable paradigms, theories, conceptual schemes, or forms of life. We have been told that it is an illusion and a deep self-deception to think that there is some overarching framework, some neutral descriptive language, some permanent standards of rationality to which we can appeal in order to understand and critically evaluate the competing claims that are made, and that we are limited to our historical context and to our own social practices. The dream or hope that many philosophers have had—to grasp the world *sub species aeternitatus*—is, we are told, a deceiving illusion that leads to dogmatism and even terror.

The problem is not just an intellectual one, nor is it restricted to parochial disputes about the meaning and scope of rationality. At issue are some of the most perplexing questions concerning human beings: what we are, what we can know, what norms ought to bind us, what are the grounds for hope. The malaise penetrates our everyday moral, social, and political experiences. The fashionable varieties of relativism that are spreading everywhere frequently lead to cynicism and a growing sense of impotence. The recent celebration of relativistic doctrines and the enthusiasm for an endless playfulness of interpretation that knows no limits has already elicited a strong reaction. It has been argued that regardless of the many errors of those who have been wedded to the concept of representation, the correspondence theory of truth, the doctrine that the function of the mind is to mirror nature, we cannot avoid the "primordial intuition" that there is a world that is independent of our beliefs and fancies that forces itself upon us willy-nilly and constrains what we can think, say, and do.[1]

Confusion is compounded not only by the complexity of the issues involved and the shifting meanings of such key concepts as rationality, objectivity, realism, and norms but by the different fundamental attitudes of philosophers toward opposing positions. Consider, for example, Karl Popper's horror at what he takes to be the rampant growth of subjectivism and relativism today. According to Popper, this is not simply an innocent epistemological deviation but an error that opens the floodgates to irrationalism and fanaticism.[2] Contrast this attitude with that of Paul Feyerabend, who at one time was intellectually quite close to Popper but has now turned against Popper and the "gang" of critical rationalists. Feyerabend gleefully champions "irrationality" against the type of rationality defended by critical rationalists. He claims that if one applies the standards of Popper and his followers one is forced to conclude that science itself is a thoroughly irrational discipline—and ought to be. In his recent work, Feyerabend, in ever more imaginative and wild ways, seeks to question and mock science itself and the role that it plays in our lives.[3]

At the heart of Popper's apology for "objective knowledge" is a practical-moral concern that informs all of his work and rhetoric. But this is also true of Feyerabend. These competing practical-moral concerns, which reflect Popper's and Feyerabend's different assessments of what is taking place in the contemporary world, are far more significant than many of the technical and professional issues that divide them. Popper thinks of himself as the public defender of the "open" society, which is being threatened. He is against all forms of dogmatism, irrationalism, and fanaticism. But Feyerabend accuses Popper and those sympathetic with his doctrines of being caught in a dangerous illusion. Popper's thinking, in Feyerabend's view, ultimately leads to further closure and fixity, to a new, masked form of dogmatism that is the enemy of human freedom, spontaneity, and creativity. Feyerabend ridicules and seeks to undermine the "puritanical seriousness" represented by Popper. The opposition between Popper and Feyerabend, especially in what I have called their practical-moral orientations, is an extreme example of a typical contrast that occurs in a variety of different contexts and domains of discourse. (Compare the style and content of Feyerabend's attack on "method" and "rationality" with Jacques Derrida's punning assaults on the "metaphysics of presence.")

Many professional philosophers, while they are critical of Popper and regard Feyerabend as irresponsible, nevertheless share the basic conviction of Descartes, Kant, Husserl, the early logical positivists, and indeed most modern philosophers, that philosophy has *now* finally discovered its "proper object" and the right way of going about solving philosophic problems. Michael Dummett, a leading (some would say *the* leading) British philosopher of our time has recently claimed:

> Only with Frege was the proper object of philosophy finally established: namely, first, that the goal of philosophy is the analysis of the structure of *thought;* secondly, that the study of *thought* is to be sharply distinguished from the study of the psychological process of *thinking;* and, finally, that the only proper method for analysing thought consists in the analysis of *language.* . . . The acceptance of these three tenets is common to the entire analytical school . . . [but] it has taken nearly a half-century since his death for us to apprehend clearly what the real task of philosophy, as conceived by him, involves.
>
> I know that it is reasonable to greet all such claims with scepticism, since they have been made many times before in the history of philosophy. Just because the scandal caused by philosophy's lack of a systematic methodology has persisted for so long, it has been a constant preoccupation of philosophers to remedy that lack, and a repeated illusion that they had succeeded in doing so. Husserl believed passionately that he at last held the key which would unlock every philosophical door; the disciples of Kant ascribed to him the achievement of devising a correct philosophical methodology; Spinoza believed that he was doing for philosophy what Euclid had done for geome-

> try; and, before him, Descartes supposed that he had uncovered the one and only proper philosophical method. I have mentioned only a few of many examples of this illusion; for any outsider to philosophy, by far the safest bet would be that I was suffering from a similar illusion in making the same claim for Frege. To this I can offer only the banal reply which any prophet has to make to any sceptic: time will tell.[4]

But it is not only "outsiders" to philosophy who are skeptical. Such an insider as Richard Rorty has recently argued that the real scandal of philosophy is that we are still taken in and mesmerized by the very conception of philosophy that Dummett embraces. We still assume that there is such a thing as the "proper object" of philosophy; that philosophy identifies philosophic problems that are to be solved once and for all; and that there is "a systematic methodology" for doing this. According to Rorty, if we really want to overcome the scandal caused by "philosophy's lack of a systematic methodology," then what is needed is a form of philosophic therapy that will rid us of the illusion and the self-deception that philosophy is or can be the foundational discipline of culture. We need to abandon the very idea that philosophy is a form of inquiry that *knows* something about knowing, language, or thought that nobody else knows, and frankly admit that at its best, philosophy is just another voice in the conversation of mankind.

In contrast to Dummett's claims about the significance of Frege, Rorty interprets our contemporary situation in a radically different manner. According to Rorty, the three most important philosophers of the twentieth century are Dewey, Wittgenstein, and Heidegger. Rorty makes this claim for their importance precisely because they have helped us to overcome the very conception of philosophy that Dummett and so many professional philosophers accept.

> Each tried, in his early years, to find a new way of making philosophy "foundational"—a new way of formulating an ultimate context for thought. Wittgenstein tried to construct a new theory of representation which would have nothing to do with mentalism, Heidegger to construct a new set of philosophical categories which would have nothing to do with science, epistemology, or the Cartesian quest for certainty, and Dewey to construct a naturalized version of Hegel's vision of history. Each of the three came to see his earlier effort as self-deceptive, as an attempt to retain a certain conception of philosophy after the notions needed to flesh out that conception (the seventeenth-century notions of knowledge and mind) had been discarded. Each of the three, in his later work, broke free of the Kantian conception of philosophy as foundational, and spent his time warning us against those very temptations to which he himself had once succumbed.

> Thus their later work is therapeutic rather than constructive, edifying rather than systematic, designed to make the reader question his own motives for philosophizing.[5]

While Dummett likens himself to a prophet who will be vindicated by future developments, from Rorty's perspective he looks more like an arch reactionary who is desperately trying to hold on to what has been discredited and ought to be abandoned. The contrast between Dummett's and Rorty's views indicates not only the most divergent and antithetical understandings of the accomplishment of modern and recent analytic philosophy but of the self-understanding of philosophy itself.

The type of opposition represented by the contrast between Popper and Feyerabend is not localized to any school of philosophy, or even to philosophy itself; the same is true of the antithesis between Dummett and Rorty. The repeated stress on these oppositions, and the swinging back and forth of the pendulum of philosophic debate in relation to them, suggests that there is a different and more penetrating interpretation of what is happening in philosophy and more generally in the range of the cultural disciplines. Like Rorty, I think we are coming to the end—the playing out—of an intellectual tradition (Rorty calls it the "Cartesian–Lockean–Kantian tradition"). But I also think Rorty misses what is now in the process of emerging.[6] When we think and work through the most significant contemporary philosophic debates, we will discover that views which initially seem fragmentary, conflicting, and even contradictory ultimately converge and cohere. I do not want to make exaggerated claims for something that is still in the process of developing, sometimes in very tentative and hesitant ways, but I intend to show that there are now sufficient signs and evidence to reveal the shape and the *telos* of this new understanding of our human situation.

In order to set the context for this investigation, it is important to clarify in a preliminary manner what I mean by "objectivism" and "relativism" and why I take this to be the central cultural opposition of our time. Both terms have been used with shifting meanings. Furthermore, it might seem that the natural contrasts to pursue are those between "objectivism" and "subjectivism," or between "relativism" and "absolutism." I will be using the terms "objectivism" and "relativism" in an extremely broad sense which departs from some of the standard philosophic uses of these expressions. As I proceed, I will introduce further refinements and qualifications.

OBJECTIVISM AND RELATIVISM

By "objectivism," I mean the basic conviction that there is or must be some permanent, ahistorical matrix or framework to which we can ultimately appeal in determining the nature of rationality, knowledge, truth, reality, goodness, or rightness. An objectivist claims that there is (or must be) such a matrix and that the primary task of the philosopher is to discover what it is and to support his or her claims to have discovered such a matrix with the strongest possible reasons. Objectivism is closely related to foundationalism and the search for an Archimedean point. The objectivist maintains that unless we can ground philosophy, knowledge, or language in a rigorous manner we cannot avoid radical skepticism.

The relativist not only denies the positive claims of the objectivist but goes further. In its strongest form, relativism is the basic conviction that when we turn to the examination of those concepts that philosophers have taken to be the most fundamental—whether it is the concept of rationality, truth, reality, right, the good, or norms—we are forced to recognize that in the final analysis all such concepts must be understood as relative to a specific conceptual scheme, theoretical framework, paradigm, form of life, society, or culture. Since the relativist believes that there is (or can be) a nonreducible plurality of such conceptual schemes, he or she challenges the claim that these concepts can have a determinate and univocal significance. For the relativist, there is no substantive overarching framework or single metalanguage by which we can rationally adjudicate or univocally evaluate competing claims of alternative paradigms. Thus, for example, when we turn to something as fundamental as the issue of criteria or standards of rationality, the relativist claims that we can never escape from the predicament of speaking of "our" and "their" standards of rationality—standards that may be "radically incommensurable." It is an illusion to think that there is something that might properly be labeled "*the* standards of rationality," standards that are genuinely universal and that are not subject to historical or temporal change.

The *agōn* between objectivists and relativists has been with us ever since the origins of Western philosophy, or at least from the time of Plato's attack on the Sophists and on Protagoras's alleged relativism. But it is only in recent times that the complex issues that this debate raises have become almost obsessive and have spread to every area of human inquiry and life. Despite the many novel twists and turns in this ancient debate, it has exhibited a remarkable continuity. Each time that an objectivist has come up with what he or she takes to be a firm foundation, an ontological grounding, a fixed categorial scheme, someone has challenged such claims and has argued that what is supposed to be fixed, eternal, ultimate, necessary, or indubitable is open to doubt and questioning. The relativist accuses the objectivist of mistaking what is at best historically or culturally stable for the eternal and permanent. When the objectivist claims to come up with clear and distinct criteria or foolproof transcendental arguments to support his or her claims, the relativist argues that close examination reveals that there is something fraudulent and ingenuous about such claims. But ever since Plato objectivists have argued that relativism, whenever it is clearly stated, is self-referentially inconsistent and paradoxical. For implicitly or explicitly, the relativist claims that his or her position is true, yet the relativist also insists that since truth is relative, what is taken as true may also be false. Consequently, relativism itself may be true *and* false. One cannot consistently state the case for relativism without undermining it. As so frequently happens in philosophy, the argument tends to shift from substantive claims about what are the proper foundations and how we know them to who has the burden of proof. Objectivists argue, rather like Dummett, that even though we can frankly recognize the failures of past philosophers, this is not a sufficient or even a good reason for thinking that we cannot discover the "proper object" of philosophy and a "systematic methodology" for making genuine progress. Because philosophers like Rorty and the edifying thinkers that he admires see the trap of trying to *prove* that the objectivist is fundamentally mistaken, they employ a form of indirect communication and philosophic therapy that is intended to loosen the grip that objectivism has upon us—a therapy that seeks to liberate us from the obsession with objectivism and foundationalism.

It should be clear that I am using the term "objectivism" in a way that is far more inclusive than some of its standard uses. "Objectivism" has frequently been used to designate metaphysical realism—the claim that there is a world of objective reality that exists independently of us and that has a determinate nature or essence that we can know. In modern times objectivism has been closely linked with an acceptance of a basic metaphysical or epistemological distinction between the subject and the object. What is "out there" (objective) is presumed to be independent of us (subjects), and knowledge is achieved when a subject correctly mirrors or represents objective reality. This dominant form of objectivism is only one variety of the species. We can read Kant and the tradition of transcendental philosophy that he initiated as questioning the very possibility of making sense of the objectivity of knowledge by resorting to metaphysical realism—by appealing to a world or thing-in-itself that is completely independent of the ways in which we condition and constitute experience. But from my perspective, Kant is no less an objectivist and foundationalist than the empiricists and the rationalists he was criticizing. Kant does not question the need for an ahistorical permanent matrix or categorial scheme for grounding knowledge; he insists upon it more rigorously than many of his predecessors. He claims that his critical inquiry at once reveals and justifies the universal and necessary conditions for the possibility of experience and knowledge. Kant identifies the transcendental turn with the "proper way" of philosophy. To question the possibility and success of such a critical project would be to call philosophy itself into question. All those who share this commitment—all those who think that only by taking the transcendental turn and who claim that there is an a priori universal and necessary structure of human knowledge—share the objectivist bias.

Consequently even Husserl, who is at once sharply critical of Kant's understanding of transcendental philosophy and who argues that Kant was not radical enough in pursuing the questions that he raised, is an objectivist. Husserl thought of himself as pursuing the *telos* of transcendental philosophy in a more thoroughgoing way than any previous philosopher, and he understood himself as battling against all forms of objectivism in modern philosophy. He tells us that

> what characterizes objectivism is that it moves upon the ground of the world which is pregiven, taken for granted through experience, seeks the "objective truth" of this world, seeks what, in this world, is unconditionally valid for every rational being, what it is in itself. It is the task of *epistēmē, ratio,* or philosophy to carry this out universally. Through these one arrives at what ultimately is; beyond this, no further questions would have a rational sense.[7]

He contrasts objectivism with transcendentalism, which claims that "the ontic meaning [*Seinssinn*] of the pregiven life-world is a *subjective structure [Gebilde]*, it is the achievement of experiencing, prescientific life."[8] Transcendentalism is not to be confused with the appeal to the "psychological subjectivity" of human beings, for "mature transcendentalism protests against psychological idealism" and claims to "have initiated a completely new sort of scientific procedure, the transcendental."[9] Husserl draws the contrast between objectivism and transcendentalism in the strongest possible manner in order to set the stage for his own investigation and defense of transcendental

phenomenology. The fate of philosophy, and indeed the fate of European culture, is, he says, bound up with the fate of transcendental phenomenology. According to Husserl, the most consequential issues of modern philosophy and culture are involved in the battle between objectivism and the type of transcendentalism that he defends.

> The whole history of philosophy since the appearance of "epistemology" and the serious attempts at a transcendental philosophy is a history of tremendous tensions between objectivistic and transcendental philosophy. It is a history of constant attempts to maintain objectivism and to develop it in a new form and, on the other side, of attempts by transcendentalism to overcome the difficulties entailed by the idea of transcendental subjectivity and the method it requires.[10]

But Husserl fails to stress the dialectical similarity between the objectivism that he attacks and the transcendentalism that he defends. *Au fond,* both share the aspiration to discover the real, permanent foundation of philosophy and knowledge—a foundation that will withstand historical vicissitudes, escape from "anthropologistic relativism," and satisfy the craving for ultimate constraints. In using the term "objectivism" to characterize both what Husserl calls "objectivism" and what he calls "transcendentalism," it is this common assumption about the objective of philosophic thought that I want to emphasize.[11]

It should be clear from the way I am using the term "relativism" that it must be carefully distinguished from "subjectivism." A relativist need not be a subjectivist, and a subjectivist is not necessarily a relativist. Husserl is a subjectivist, at least insofar as he claims that there are a priori structures of transcendental subjectivity that can be apodictically known—structures of transcendental subjectivity that ground both our scientific objective knowledge and the pregiven *Lebenswelt* of everyday experience. However, there is nothing relativistic about Husserl's conception of transcendental phenomenology; it is intended to be the definitive answer to all forms of relativism, skepticism, and historicism. Even if we think of subjectivism in its more common and mundane sense—using the term to call attention to whatever is "merely" a matter of personal opinion, taste, or bias, and consequently idiosyncratic—a relativist is not necessarily a subjectivist. As I have characterized the relativist, his or her essential claim is that there can be no higher appeal than to a given conceptual scheme, language game, set of social practices, or historical epoch. There is a nonreducible plurality of such schemes, paradigms, and practices; there is no substantive overarching framework in which radically different and alternative schemes are commensurable—no universal standards that somehow stand outside of and above these competing alternatives. But the relativist does not necessarily claim that there is anything subjective about these schemes, paradigms, and practices.

Given this characterization of objectivism and relativism, I can begin to explain why I am focusing on this opposition rather than on that between relativism and absolutism, or between objectivism and subjectivism. Although the quest for certainty and the search for absolute constraints continues to haunt philosophy, there is a sense in which "absolutism," to use William James's phrase, is no longer a "live" option. The dominant temper of our age is fallibilistic. If we focus on the history of our understanding of science during the past hundred years, from Peirce to Popper, or on the development of epistemology during this period, we discover that thinkers who disagree on almost everything else agree that there are no nontrivial knowledge claims that are immune from criticism. Even a philosopher like Husserl who claims to have discovered an entirely new science and believes that we can achieve apodictic knowledge of the structure of transcendental subjectivity nevertheless emphasizes the ways in which transcendental phenomenology is open, dynamic, cooperative, and fallible. Absolutism is therefore no longer a live option.

But neither is subjectivism. The type of transcendental subjectivism projected by Husserl has been extensively and devastatingly criticized. However great Heidegger's debt to Husserl, we can interpret Heidegger's philosophic journey as raising the profoundest questions about the very idea of a transcendental phenomenology.[12] Heidegger also probes the roots of the various forms of subjectivism that have pervaded modern thought. He questions the whole mode of thinking whereby we take the "subjective" and the "objective" as signifying a basic epistemological or metaphysical distinction. Despite some rearguard attempts to defend the type of transcendental phenomenology that Husserl elaborated, the entire program is in disarray. A pervasive skepticism about the possibility of a transcendental phenomenology is felt even by those who think of themselves as working within the phenomenological tradition. When we shift from this internal controversy within continental philosophy to more garden-variety notions of subjectivity, it becomes clear that the most plausible defenses of relativism have nothing to do with subjectivism. So while neither absolutism nor subjectivism is a live option for us now, the choice between a sophisticated form of fallibilistic objectivism and a nonsubjective conception of relativism does seem to be a live—and indeed a momentous—one.

Many thinkers want to distinguish between cognitive and moral relativism. They are convinced that while we can give strong arguments in favor of moral relativism, or at least cannot totally discredit it, cognitive relativism is indefensible. A combination of cognitive objectivism and moral relativism has been taken to be the most attractive and supportable option.[13] But recently even this has changed, and arguments have been advanced for showing that nothing, not even the "hard sciences," escapes the clutches of relativistic arguments. Relativism, a stream in the philosophy of the past two hundred years that began as a trickle, has swelled in recent times into a roaring torrent.

Although Kant was not explicitly concerned with battling relativists, he saw that there were already tendencies in the empiricist tradition that, if relentlessly pursued, would call into question the objectivity of knowledge, the foundations of morality, and indeed the very discipline of philosophy itself. The "Copernican Revolution" in philosophy—Kant's transcendental turn—was intended to show how we can account for and justify the *objectivity* of knowledge. In his *Critique of Practical Reason* and his *Foundations of the Metaphysics of Morals,* Kant sought to explain and establish the *objective* foundation of morality.

Kant's *Critiques* are not independent inquiries but stages of a single, comprehensive critical inquiry. As long as we fail to make a rigorous distinction between the Is and the categorical Ought, as long as we fail to realize that all attempts to ground morality on experience cannot possibly succeed, we are doomed to heteronomy (and, one might add, moral relativism). A primary aim of Kant's philosophy was to demonstrate once and for all that there is a basic, universal, objective moral law for all rational beings. In the background of Kant's inquiry into morals is a dramatic Either/Or. *Either* there is a universal, objective moral law, *or* the concept of morality is groundless and vacuous.

But once the concept of a sharp and rigorous distinction between the Is and the categorical Ought is pushed to its extreme, it is as if Kant had sowed the seeds for undermining his own project. Kant's intention in pressing and clarifying a rigorous distinction between the Is and the Ought was to show us what he took to be the only possible way of grounding the moral law itself. But almost immediately philosophers began questioning, probing, and even ridiculing the Ought side of this great divide. Hegel, Kierkegaard, Nietzsche, Schopenhauer, contemporary existentialists like Sartre, and logical positivists—with different emphases and philosophic motivations—have questioned Kant's categorical imperative. All agree that there is something basically wrong with the claim that there is an objective moral law that can be grounded by an appeal to pure practical reason. The specter that haunts this multifaceted critique of Kant is moral relativism.[14]

But it is not only the arguments, critiques, and failures of philosophers that have led us to a variety of types of moral relativism. With the growth of the social sciences, and especially cultural and social anthropology, many have interpreted the evidence gained from studying different societies and cultures as fresh support for cultural and moral relativism.

In the social disciplines, the despair about the grounding of ultimate moral norms is poignantly illustrated by Max Weber. Weber too insisted on an ultimate and unbridgeable gap between the Is and the Ought, between what science can teach us about the world and our ultimate moral norms. In this respect he was a follower of Kant, although his understanding of the Is and the Ought differs from Kant's. But although Weber held that there are varied and subtle ways in which our scientific knowledge of what Is can influence our basic moral norms, he thought that neither science nor any *rational* discipline could lessen the burden of responsibility and decision that we must assume in choosing the "gods" or "demons" that we follow. Weber was at once a passionate moralist and a defender of science as a vocation who despaired about the possibility—and indeed the intelligibility—of discovering a rational ground for ultimate moral norms.[15]

Although many of the thinkers who have criticized Kant certainly did not regard themselves as moral relativists and might have been horrified that this conclusion can be drawn from their critiques, nevertheless some form of relativism seems to be an ineluctable consequence of the lines of inquiry they have pursued.[16] Nietzsche himself thought of such a relativism as a form of nihilism, the prevailing sickness that was spreading throughout Western culture and that he explored with such acuity. Yet it is a deeply troubling and perplexing question whether Nietzsche shows us any way out—any way to escape the nihilism that is so characteristic of modernity.

Until recently this struggle about the status and nature of morality has been developed against the background conviction that at least in science—especially in the natural sciences—we have clear and rigorous standards of objectivity, truth, rationality, progress, and the growth of knowledge (although we can also find a questioning of this dogma in Nietzsche). But in our own time serious doubts have been raised about the meaning and warrant for these claims. Whether, and in what sense, Thomas Kuhn is a relativist is an intricate question that I will explore in part II. But it is undeniable that many thinkers, especially philosophers, have perceived him and others who have developed similar positions as being relativists. Kuhn's claims about the incommensurability of rival paradigms and about the "circular reasoning" involved in supporting these paradigms have been interpreted as leading straight to relativism, subjectivism, and irrationalism. Although Kuhn has consistently denied that this is what he has claimed or that it is entailed by what he says, Feyerabend feels no hesitancy about defending "Protagorean relativism," claiming that such relativism is *"reasonable* because it pays attention to the pluralism of traditions and values," a pluralism that includes Reason as merely one among many different traditions and as having "as much (or as little) claim to the centre of the stage as any other tradition."[17] We will look closely, in part II, at the work of Kuhn and Feyerabend, and the interpretations of their work, to see how controversies concerning relativism which originally focused on moral, social, and political issues have now spread to our very understanding of the "hard core" of scientific knowledge.

But how are we to account for the tangled controversies that have grown up between objectivists and relativists? Why is it that today variations of this opposition seem to turn up almost everywhere? Why have relativists been unconvinced when objectivists argue, as they almost invariably do, that relativism is self-referentially inconsistent, self-defeating, and incoherent?[18] Why have objectivists been unmoved when time and time again it is shown that they have failed to make the case for the objective foundations for philosophy, knowledge, or language, and that the history of attempts to reveal such foundations must be judged thus far to be a history of failures?

We might try to answer these questions in a variety of ways. Perhaps, despite the self-understanding of many philosophers that they are the defenders of rational argument, the positions they take are influenced more by social practices, metaphors, matters of temperament, and other nonrational factors than the arguments upon which they place so much emphasis. Perhaps, despite grand claims about clear and distinct ideas, transcendental proofs, conceptual necessities, philosophy never has been and never will be more than a shifting battleground of competing opinions. But even if we are dubious about what can and cannot be achieved by philosophic argumentation, this does not help us to understand why the controversies between objectivists and relativists have become so pervasive and dominant today, or why so much passionate energy and polemic are exhibited in these debates, or why it is felt that the choice is such a "forced" and "momentous" one.

THE CARTESIAN ANXIETY

We can begin to answer these questions by concentrating on what I shall call the "Cartesian Anxiety." I do not want to suggest that this anxiety begins with Descartes or even that thinkers after Descartes have accepted it in the form in which it is found in his work. To speak of the Cartesian Anxiety is to speak of a construct, but one that is helpful for getting a grip on the primary issues.

Descartes' *Meditations* is the *locus classicus* in modern philosophy for the metaphor of the "foundation" and for the conviction that the philosopher's quest is to search for an Archimedean point upon which we can ground our knowledge. The opening of the first *Meditation* introduces the metaphor.

> It is now some years since I detected how many were the false beliefs that I had from my earliest youth admitted as true, and how doubtful was everything I had since constructed on this basis; and from that time I was convinced that I must once for all seriously undertake to rid myself of all the opinions which I had formerly accepted, and commence to build anew from the foundation, if I wanted to establish any firm and permanent structure in the sciences."[19]

And in the second *Meditation* Descartes tells us that

> Archimedes, in order that he might draw the terrestrial globe out of its place, and transport it elsewhere, demanded only that one point should be fixed and immoveable; in the same way I shall have the right to conceive high hopes if I am happy enough to discover one thing only which is certain and indubitable.[20]

We know that Descartes claimed to have discovered something that could serve as a foundation upon which we could construct a "firm and permanent structure in the sciences." It is less clear what is the Archimedean point in Descartes' philosophy—whether it is the *cogito* or God himself.

The *Meditations* has been read as the great rationalist treatise of modern times. Its potentially radical implications have inspired many because of Descartes' demand that we should not rely on unfounded opinions, prejudices, tradition, or external authority, but only upon the authority of reason itself. Few philosophers since Descartes have accepted his substantive claims, but there can be little doubt that the problems, metaphors, and questions that he bequeathed to us have been at the very center of philosophy since Descartes—problems concerning the foundations of knowledge and the sciences, mind–body dualism, our knowledge of the "external" world, how the mind "represents" this world, the nature of consciousness, thinking, and will, whether physical reality is to be understood as a grand mechanism, and how this is compatible with human freedom. Philosophers have been primarily concerned with the precise character and cogency of Descartes' *arguments*.

But another pervasive theme in the *Meditations*, although it is seldom directly addressed by professional philosophers, has a greater relevance for clarifying what I mean by the Cartesian Anxiety. The *Meditations* portray a journey of the soul, a meditative reflection on human finitude through which we gradually deepen our understanding of what it really means to be limited, finite creatures who are completely dependent on an all-powerful, beneficient, perfect, and infinite God. If we practice these spiritual exercises earnestly, as Descartes urges us to do, if we follow the precarious stages of this journey without losing our way, then we discover that this is a journey that is at once terrifying and liberating, culminating in the calm reassurance that although we are eminently fallible and subject to all sorts of contingencies, we can rest secure in the deepened self-knowledge that we are creatures of a beneficient God who has created us in his image. The terrifying quality of the journey is reflected in the allusions to madness, darkness, the dread of waking from a self-deceptive dream world, the fear of having "all of a sudden fallen into very deep water" where "I can neither make certain of setting my feet on the bottom, nor can I swim and so support myself on the surface,"[21] and the anxiety of imagining that I may be nothing more than a plaything of an all-powerful evil demon. But the more I probe my finitude, and realize how completely dependent I am on a beneficient God, for he sustains me at every moment of my existence, the more I can be liberated from this dread, fear, and anxiety. It is a spiritual journey that culminates with the assurance that I can and ought to

> set aside all the doubts of these past days as hyperbolical and ridiculous. . . . For because God is in no wise a deceiver, it follows that I am not deceived

> in this. But because the exigencies of action often oblige us to make up our minds before having leisure to examine matters carefully, we must confess that the life of man is very frequently subject to error in respect to individual objects, and we must in the end acknowledge the infirmity of our nature.[22]

Reading the *Meditations* as a journey of the soul helps us to appreciate that Descartes' search for a foundation or Archimedean point is more than a device to solve metaphysical and epistemological problems. It is the quest for some fixed point, some stable rock upon which we can secure our lives against the vicissitudes that constantly threaten us.[23] The specter that hovers in the background of this journey is not just radical epistemological skepticism but the dread of madness and chaos where nothing is fixed, where we can neither touch bottom nor support ourselves on the surface. With a chilling clarity Descartes leads us with an apparent and ineluctable necessity to a grand and seductive Either/Or. *Either* there is some support for our being, a fixed foundation for our knowledge, *or* we cannot escape the forces of darkness that envelop us with madness, with intellectual and moral chaos. Even those commentators who have claimed that there is a hidden message revealed in the *Meditations* that is the very opposite of what the book seems to say on the surface do not lessen the grip of this Either/Or.[24]

Despite the almost ritualistic attempts of succeeding philosophers to overthrow and murder Descartes as the father figure of modern philosophy, and despite the many attempts to discredit the foundation metaphor that so deeply affects modern philosophy, this underlying Cartesian Anxiety still haunts us and hovers in the background of the controversies waged by objectivists and relativists. It is reflected and extended in the counterpart to Descartes' metaphors with which Kant begins his *Critique of Pure Reason,* when, in the opening sentences, he speaks of *reason* precipitating itself into "darkness and contradictions," or again when Kant pauses to reflect upon his transcendental analytic of pure understanding before embarking on his critique of dialectical illusion.

> We have now not merely explored the territory of pure understanding, and carefully surveyed every part of it, but have also measured its extent, and assigned to everything in it its rightful place. This domain is an island, enclosed by nature itself within unalterable limits. It is the land of truth—enchanting name!—surrounded by a wide and stormy ocean, the native home of illusion, where many a fog bank and many a swiftly melting iceberg give the deceptive appearance of farther shores, deluding the adventurous seafarer ever anew with empty hopes, and engaging him in enterprises which he can never abandon and yet is unable to carry to completion.[25]

It would be a mistake to think that the Cartesian Anxiety is primarily a religious, metaphysical, epistemological, or moral anxiety. These are only several of the many forms it may assume. In Heideggerian language, it is "ontological" rather than "ontic," for it seems to lie at the very center of our being in the world. Our "god terms" may vary and be very different from those of Descartes. We may even purge ourselves of the quest for certainty and indubitability. But at the heart of the objectivist's vision, and what makes sense of his or her passion, is the belief that there are or must be some fixed, permanent constraints to which we can appeal and which are secure and stable. At its most profound level the relativist's message is that there are no such basic constraints except those that we invent or temporally (and temporarily) accept. Relativists are suspicious of their opponents because, the relativists claim, all species of objectivism almost inevitably turn into vulgar or sophisticated forms of ethnocentricism in which some privileged understanding of rationality is falsely legitimated by claiming for it an unwarranted universality. The primary reason why the *agōn* between objectivists and relativists has become so intense today is the growing apprehension that there may be nothing—not God, reason, philosophy, science, or poetry—that answers to and satisfies our longing for ultimate constraints, for a stable and reliable rock upon which we can secure our thought and action.

Thus far, I have given a preliminary characterization of what I mean by objectivism and relativism; have explained why this dichotomy is helpful in making sense of many of the philosophic conflicts that have broken out recently; and have singled out what I take to be the basic anxiety that underlies these conflicts. But it is important to emphasize that I am not primarily concerned with taking sides on this grand Either/Or or with assessing the strengths and weaknesses of the varieties of objectivism and relativism. On the contrary, I view this dichotomy as misleading and distortive. It is itself parasitic upon an acceptance of the Cartesian persuasion that needs to be questioned, exposed, and overcome. We need to *exorcize* the Cartesian Anxiety and liberate ourselves from its seductive appeal. Only if we implicitly accept some version of Cartesianism does the exclusive disjunction of objectivism or relativism become intelligible. But if we question, expose, and exorcise Cartesianism, then the very opposition of objectivism and relativism loses its plausibility. In the course of this investigation both the meaning of these categorical assertions and the reasons supporting them will be explicated. But what does exorcising the Cartesian Anxiety mean? What is beyond objectivism and relativism? Where is the evidence that such a movement is really taking place? What are the consequences of this transformation for theory and practice, for thought and action? In order to begin to specify more concretely and to answer these questions, let me briefly review some of the recent philosophic controversies that I will be examining in greater detail later on in this book, and suggest some of the ways in which they are intimately related.

POSTEMPIRICIST PHILOSOPHY AND HISTORY OF SCIENCE

In what initially appear to be quite disparate contexts, controversies have broken out about the meaning, nature, and scope of rationality. But why is there a problem here? We have to recognize that we do use the expression "rational" to characterize beliefs, arguments, actions, agents, societies, theories, and even philosophic positions. So the question arises, does the use of "rational" in these disparate contexts have a univocal meaning? Is there something like analogical meaning in these different uses of the term? Is the situation here one of family resemblances? Or is there some other way of explicating the meaning(s) of the word?

Some philosophers have argued that the only clear sense of "rational" is applicable to arguments and that what is meant is that the arguments conform to logical canons. But such a severe restriction does not help us to understand what appear to be other legitimate uses of "rational." For example, we frequently think of science, especially natural science, as a rational form of conduct. When we say this, we mean more than that science consists of arguments that conform to the canons of logical reasoning. But the real difficulty (and obscurity) begins when we try to specify precisely what is the "more" that is intended. In recent debates, issues concerning the meaning and scope of rationality have become even more complex and tangled because of the conviction that there are incommensurable paradigms, language games, or forms of life.

In the philosophy of the natural sciences, these issues have been in the foreground of discussion since the publication of Thomas Kuhn's *The Structure of Scientific Revolutions* in 1962. Viewing this book in its historical context, it is now clear that many of Kuhn's controversial theses that seemed so fresh and original had been anticipated by others. This does not diminish the significance or the impact that

his monograph had (and continues to have). It helps to explain it. Kuhn gave expression to and helped to identify issues that were erupting from a wide variety of sources. It is as if Kuhn had touched a sensitive intellectual nerve, and it would be difficult to name another book published in the last few decades that has been at once so suggestive and provocative for thinkers in almost every discipline and so persistently attacked and criticized, frequently from antithetical perspectives. Kuhn even remarks about his book, "Part of the reason for its success is, I regretfully conclude, that it can be too nearly all things to all people."[26]

Kuhn argued that there is something fundamentally wrong and askew with the image or conception of science that had been elaborated by most mainstream or "orthodox" philosophers of science, a conception that was itself a blending of deeply entrenched dogmas inherited from traditional empiricism and rationalism. He attempted to sketch an alternative "image of science" which he claimed did far greater justice to the ways in which scientific inquiry is actually conducted. The typical pattern of development that he outlines can be divided into a series of stages. It begins with a preparadigmatic stage where there is little or no agreement about subject matter, problems, and procedures among competing "schools." This school phenomenon is followed by the emergence and acceptance of a dominant paradigm by scientists—"universally recognized scientific achievements that for a time provide model problems and solutions to a community of practitioners."[27] Paradigms guide "normal science," a type of "puzzle solving" through which the dominant paradigm is made more determinate and precise as it is applied to new phenomena. The pursuit of normal science, with its increasing specificity and precision, leads to the discovery of discrepancies and anomalies that resist solution. Although the "fit" between a paradigm and "nature" is never perfect—there are always some discrepancies that the paradigm cannot explain—a stage may be reached at which there is a growing sense of crisis, a questioning about the adequacy of the very paradigm that has guided normal science. This is the stage when "extraordinary science" begins and when rival paradigms are proposed. Scientists do not reject or abandon a dominant paradigm, even when discrepancies and anomalies are discovered. What appears to be an anomaly or a problem that resists solution may turn out to be only an obstacle that can be overcome and explained without abandoning the prevailing paradigm. This is one reason why Kuhn thinks the appeal to falsification can be so misleading. Evidence that may appear to falsify an existing paradigm theory may turn out to be accounted for by adjusting or modifying the paradigm without abandoning it.[28] Nevertheless the situation may become critical when a rival paradigm is proposed, one that may be able to explain the troubling anomaly but is incompatible and incommensurable with the entrenched paradigm. At this point a battle takes place between adherents of the entrenched paradigm and the advocates of the new paradigm. According to Kuhn, in the controversies that arise when new and rival paradigms are proposed—a situation that he compares with political revolutions—there are no criteria of logical proof or any straightforward appeals to evidence that are *sufficient* to resolve the dispute. The differences that arise during a scientific revolution may be so great that any common agreement is lacking about what counts as a decisive argument in favor of the competing paradigms.

Kuhn

When Kuhn denied that the choice of theories or paradigms in scientific revolutions is a matter of proof or appeal to evidence, when he insisted that "proponents of competing paradigms are always at least slightly at cross purposes,[29] when he compared switching paradigms to "gestalt switches" and spoke of such a switch as a type of conversion through which one comes to see the world differently, and when he asserted that "after a revolution scientists work in a different world"[30] he touched off a storm of protest. Explicit discussion of rationality did not play a significant role in *The Structure of Scientific Revolutions,* but many of Kuhn's critics were quick to argue that Kuhn's image of science was one that made science into an irrational, subjectivistic, relativistic activity where "mob psychology" rules.[31]

When I try to untangle the major issues involved in the disputes between Kuhn and his critics in a later discussion, I will show not only that such accusations misrepresent Kuhn's intentions but that there is much more agreement among Kuhn and his critics than one might expect, given the fierce polemics that have characterized these debates. Many of the disagreements among the participants (including Popper, Feyerabend, Lakatos, and Toulmin), when reexamined, begin to look like differences of emphasis rather than absolute cleavages. I will be concentrating on the common ground that emerges in what has been called the "postempiricist philosophy and history of science"[32] and in doing so will bring to the fore features of scientific inquiry that have been neglected by many accounts of the nature of science from the seventeenth century until the present.

Part of the reason why Kuhn's book caused such a stir is the Cartesian Anxiety. Neither Kuhn nor his critics were defending or advocating foundationalism. Indeed, one of the most persistent and incisive critics of foundationalism and the misguided search for the origins of knowledge has been Karl Popper (who is also one of Kuhn's major critics).[33] Nevertheless the search for an algorithm of theory-choice, or for clear and explicit criteria for demarcating science from nonscience, or for reconstructing the permanent standards that it is believed ought to govern the validation of scientific hypotheses and theories are legacies of Cartesianism in contemporary analytic philosophy of science. They reflect the demand that the philosopher of science be able to state explicit, determinate, fixed criteria and standards. The task of the philosopher of science is to give a rational reconstruction of science which will clearly and unambiguously specify these decision procedures, criteria, and standards. Kuhn is right in detecting that this quest has been at the very heart of the project of giving a rational reconstruction of science. So it is little wonder that when Kuhn declared that there is "no neutral algorithm for theory choice, no systematic decision procedure which, properly applied, must lead each individual in the group to the same decision"[34] his critics, especially philosophers, took him to be challenging the very rationality and objectivity of science. One reason why these controversies seem to generate more heat than light is that the entire discussion is still infected with the legacy of the Cartesian Either/Or; many of the participants in these disputes argue as if we must choose between the alternatives of objectivism (e.g., scientific realism) or relativism. But this way of framing the key issues is misleading. We gain a better insight into the positive achievement of the postempiricist philosophy and history of science when we appreciate that what is really going on is that the whole framework of thinking that poses issues with reference to these and related dichotomies is being called into question. The most significant outcome of these discussions is the tentative steps taken toward a post-Cartesian and postmodern understanding of rationality and the way in which it is manifested in scientific inquiry.

I agree with many of Kuhn's critics that much of what he says is ambiguous, unclear, and unsatisfactory and that his rhetoric frequently invites conflicting interpretations. However, a fairer and more generous reading of even *The Structure of Scientific Revolutions* shows that his intention was never to claim that scientific inquiry is irrational but rather to show the way to a more open, flexible, and historically oriented understanding of scientific inquiry as a rational activity. He is suggesting that we need to transform both our understanding of scientific inquiry and our concept of rationality.

Consequently it was disingenuous of Larry Laudan, in 1977 (fifteen years after the appearance of *The Structure of Scientific Revolutions*), to write as if he were saying something startling new when he made these statements;

> Confronted by the acknowledged failure of the traditional analysis to shed much light on the rationality of knowledge, three alternatives seem to be open to us:
>
> 1. We might continue to hope that some as yet undiscovered minor variation in the traditional analysis will eventually clarify and justify our intuitions about the cognitive well-foundedness of science and thus prove to be a worthy model of rationality.
>
> 2. We might, alternatively, abandon the search for an adequate model of rationality as a lost cause, thereby accepting the thesis that science is, so far as we know, blatantly irrational.
>
> 3. Finally, we might begin afresh to analyze the rationality of science, deliberately trying to avoid some of the key presuppositions which have produced the breakdown of the traditional analysis.[35]

Laudan claims that Kuhn has pursued the second alternative, and he interprets Kuhn as arguing that "choices between competing scientific theories, in the nature of the case, *must be irrational*."[36] Not only is this a gross distortion of Kuhn's position, but it blinds us to an idea that is central to Kuhn's work and that has also been at the heart of the controversies in the postempiricist philosophy and history of science—the third alternative listed.

To speak of a new model of rationality may be misleading, because it suggests that there is more determinacy than has yet been achieved (or can be achieved). Nevertheless, what is striking is the growing awareness and agreement about the components of an adequate understanding of rationality as it pertains to scientific inquiry. There has been a dramatic shift in what is taken to be the significant epistemological unit for coming to grips with problems of the rationality of science. In the philosophy of science, and more generally in contemporary analytic epistemology, we have witnessed an internal dialectic that has moved from the preoccupation (virtually an obsession) with the isolated individual term, to the sentence or proposition, to the conceptual scheme or framework, to an ongoing historical tradition constituted by social practices—a movement from logical atomism to historical dynamic continuity. Awareness has been growing that attempts to state what are or ought to be the criteria for evaluating and validating scientific hypotheses and theories that are abstracted from existing social practices are threatened with a false rigidity or with pious vacuity and that existing criteria are always open to conflicting interpretations and applications and can be weighted in different ways. The effective standards and norms that are operative in scientific inquiry are subject to change and modification in the course of scientific inquiry. We are now aware that it is not only important to understand the role of tradition in science as mediated through research programs or research traditions but that we must understand how such traditions arise, develop, and become progressive and fertile, as well as the ways in which they can degenerate.

Other questions about scientific inquiry also come into prominence as a result of this shift of orientation. What is it that constitutes a scientific community? How are norms embodied in the social practices of such communities, and how do such communities reach objective—intersubjective—agreement? We must do justice to the ways in which such communities are committed to the regulative ideal of achieving a *rational* consensus and discern how this is compatible with individual initiative and forms of dissent that may question a prevailing consensus. When I examine the controversies concerning "incommensurability" (and the meaning of this term) later in this book, we will discover that while some of the apparently extreme claims made about the significance of incommensurability must be rejected, nevertheless an important truth emerges from these controversies that must be preserved in an adequate understanding of scientific inquiry as a rational process.

These issues will be explored subsequently, but in this preliminary overview, I want to turn to another area of controversy that shows some remarkable and deep parallels with the issues raised, the positions taken, and the strategies of argumentation used in the postempiricist philosophy and history of the natural sciences.

THE IDEA OF A SOCIAL SCIENCE

A few years prior to the appearance of Kuhn's *Structure of Scientific Revolutions* in 1962, another monograph appeared, Peter Winch's *The Idea of a Social Science and Its Relation to Philosophy* (London: Routledge & Kegan Paul, 1958). Like Kuhn's book, it was short, polemical, provocative, and ambiguous; it too touched off a controversy that has continued until the present.

Winch was not primarily concerned with giving an analysis of the natural sciences but rather with drawing a strong conceptual contrast between the natural and the social disciplines. Ironically (and the significance of this will soon be apparent), in drawing his contrast Winch virtually accepted the empiricist image of science that Kuhn and others (including Polanyi, Feyerabend, and Hanson) were discrediting and deconstructing. Against the mainstream of social scientists, Winch sought to show the conceptual confusion involved in thinking that the object, methods, and aim of the social disciplines are the same as or even analogous to those of the natural sciences. As he put the issue in one of his subsequent clarifications, he was interested in giving an analysis and exhibiting the distinctive, nonreducible "logical grammar" of the "concept of the social."[37] One of the many influences on Kuhn was the work of the later Wittgenstein, especially the increasing importance for Wittgenstein of language games and forms of life. In Winch, this aspect of Wittgenstein's investigations is the dominant influence. Winch was one of the first to suggest and try to show that not only the work of Wittgenstein but the linguistic turn in analytic philosophy had significant consequences for understanding social life and for gaining a new insight into what is (or ought to be) distinctive about the social disciplines. Social life is a form of rule-following activity, using the term "rule" in the sense in which Wittgenstein, according to Winch, used it in his *Philosophical Investigations.*

Whatever one's final judgment of the adequacy of Winch's claims, he must be given credit for showing the close relations between concerns that had previously been thought of as independent and unrelated—the type of analysis of language games that we find in Wittgenstein and analytic philosophy, and the concrete understanding of social life that we find in the social disciplines.[38] Until the appearance of Winch's monograph, the main issues in analytic philosophy had appeared to be irrelevant to serious concern with questions pertaining to the social disciplines and social life. But this is not the only connection that Winch made. He realized that there were analogies and subterranean connections between the type of insights that could be appropriated from Wittgenstein and those that were at the center of the tradition of interpretative sociology, especially as formulated by Max Weber (even though Winch criticizes Weber for making too many concessions to a naturalistic, scientific model of the social sciences).

Winch was not only breaking new ground but was going against the mainstream of the Anglo-American understanding of the nature of the social sciences. The prevailing attitude at the time among professional social scientists was that their discipline was now on the secure path of becoming a genuine natural science of individuals in society, a natural science that differed in degree and not in kind from the rest of the natural sciences. Progress in the social sciences, they argued, required adopting and following those methods, procedures, and criteria for testing hypotheses and theories that had proven so successful in the natural sciences. They therefore scorned "interpretive sociology," with its appeal to "subjective meaning," *Verstehen* (understanding), and such concepts as empathy and interpretation. There was a prevailing dogma that while a concept like *Verstehen* might have some value in helping to clarify how social scientists make good guesses and invent hypotheses (and therefore was relevant to the context of discovery), it was irrelevant to questions about the validation and testing of social scientific hypotheses and theories which are formulated to explain and predict social phenomena.[39] Winch not only stressed the logical gap and the logical incompatibility between natural and social science; he questioned whether the interpretations required for understanding social life can be checked by the appeal to the type of data which many social scientists took to be vital for their scientific endeavors. Thus, in contrast to Weber, who claimed that we can check the validity of sociological interpretations by appealing to "statistical laws based on observations of what happens," Winch wrote: "Against this, I want to insist that if a proffered interpretation is wrong, statistics, though they may suggest that that is so, are not the decisive and ultimate court of appeal for the validity of sociological interpretations in the way Weber suggests. What is then needed is a better interpretation, not something different in kind."[40]

But perhaps the most controversial aspect of Winch's analysis of the "concept of the social" was that it seemed to entail a new, sophisticated form of relativism. This is indicated by the very appeal to notions like language games and forms of life. For Winch seems to be suggesting that forms of life may be so radically different from each other that in order to understand and interpret alien or primitive societies we not only have to bracket our prejudices and biases but have to suspend our own Western standards and criteria of rationality. We may be confronted with standards of rationality about beliefs and actions that are incompatible with or incommensurable with our standards. When Winch published his subsequent essay, "Understanding a Primitive Society" (1964), which develops the line of thought introduced in *The Idea of a Social Science,* he used the figure of speech of "our standards" and "their standards" of rationality when speaking of modern Western society and the "primitive" society of the Azande.[41] Winch, like Kuhn, was attacking positivist models of knowledge and rationality. Like Kuhn, he was protesting against the pervasive ethnocentricism whereby we measure and judge what is initially strange and alien to us by "our" present standards, as if they were the sole and exclusive measure of rationality.

In one respect Winch was far less radical than Kuhn. He seemed to accept an empiricist reconstruction of natural science. He argued, however, that such a reconstruction was totally inadequate for understanding social life. But in another sense he suggested something that was far more radical than Kuhn. Kuhn, for all his claims about incommensurability of paradigms and theories, never doubted that there is a proper sense in which we can speak of Aristotle, Galileo, Newton, and Einstein as scientists—that there was something common to them, even though Kuhn strongly objected to the ways in which philosophers of science tried to account for this commonality. Indeed, Kuhn's problem was to give an account of science which would make sense of why we consider inquirers as different as Aristotle and Einstein to be scientists. But Winch's claim about the way in which societies differ—that the point and meaning of their activities might differ—was far more extreme than anything that Kuhn suggested. Using Kuhn's language, we might say that the "conversion" required for understanding an alien or primitive society is far more extreme than the type of conversion involved in understanding a new scientific paradigm.

Winch's work, like Kuhn's, touched off a wide-ranging and tangled dispute about the meaning (meanings) of rationality and the sense (senses) in which there are (or are not) universal standards of rationality.[42] This dispute has raged not only among philosophers but has also spread rapidly to practicing social scientists, especially anthropologists, for the issues concern not just a philosophic understanding of the social disciplines but the practice of these disciplines—the types of questions that are addressed and the proper ways of explaining and understanding alien societies. But to construe the main issue as the problem of defining standards of rationality—which is how most of the participants in the debate construe it—is misleading and mystifying. The vital issue here is really the question of what is involved in understanding, interpreting, and explaining alien societies (and not just their rationality or lack of rationality). How are we to do justice to the strangeness that we discover when we encounter alien types of activities, beliefs, rituals, institutions, and practices, without falsifying or distorting them?

Initially the debates about the meaning and scope of rationality in the philosophy of the natural sciences and in reflection on the social disciplines were conducted almost totally independently of each other. But in looking back over these controversies, one is struck by the deep similarities in the underlying issues raised. For example, Kuhn was perceived as a relativist (although he denied this charge); so was Winch. And just as Kuhn was seen as questioning the very possibility of the objectivity of scientific endeavor, so Winch was accused of making social science a matter of subjective taste. There are structural parallels in the very arguments that were brought against Kuhn and against Winch. In both cases objectivists were alarmed by what they took to be the writer's blatant relativism and its pernicious consequences. The significance of the practical-moral concern that, as I have already suggested, is essential for understanding the controversies about the natural sciences becomes even more apparent in the controversies about understanding primitive societies, different cultures, or even early epochs of our own culture. It becomes clear that Winch's primary concern is a practical-moral and critical one. The basic problem that is at the center of his work is to determine what is the best way to try to understand and interpret different cultures and societies so that we can learn from them. Winch is seeking the type of practical wisdom whereby we grasp the point of institutions and practices that initially seem to be strange and alien and become more sensitive to the pointlessness of many institutions and practices that we take for granted in our own society. "My aim," he tells us,

> is not to engage in moralizing, but to suggest that the concept of *learning from* which is involved in the study of other cultures is closely linked with the concept of *wisdom*. We are confronted not just with different techniques, but with new possibilities of good and evil in relation to which men may come to terms with life.[43]

In the controversy that has surrounded Winch's work, the Cartesian Anxiety also hovers in the background. After all, at the heart of Cartesian (and indeed most modern and ancient) philosophy has been the conviction of the universality of reason and the belief that there are universal standards and criteria of rationality (however extensive or narrow we take human rationality to be). To use a figure of speech such as "our standards" and "their standards" seems to fly in the face of this tradition and certainly looks like a version of the type of skepticism and relativism that Descartes sought to defeat. But in this controversy also, I shall try to show that posing issues in this manner, as many of the participants have done, obscures the areas in which there has been a significant movement beyond objectivism and relativism.

THE RECOVERY OF THE HERMENEUTICAL DIMENSION OF SCIENCE

One way to begin to appreciate how these discussions converge and help to illuminate each other is to view them from the perspective of hermeneutics. As I have already mentioned, Winch was attempting to show how themes concerning the nature of meaning and action that were emerging from analytic philosophy, especially Wittgenstein's *Philosophical Investigations,* were related to the major themes in the continental tradition of interpretative sociology. But if we consider this latter tradition, it was itself part of the general discussion that was taking place during the nineteenth century concerning the relation of the *Naturwissenschaften* and the *Geisteswissenschaften.* Insofar as one strand in this complex discussion had been the claim that these two types of sciences are conceptually distinct, requiring different methods, Winch's arguments about the logical gap between the social and the natural can be understood as a linguistic version of the dichotomy between the *Naturwissenschaften* and the *Geisteswissenschaften.* Even the arguments that he uses to justify his claims sometimes read like a translation, in the new linguistic idiom, of those advanced by Dilthey.[44] Dilthey drew upon hermeneutics, especially as it had been developed by Schleiermacher, to bring out what he took to be both the distinctive subject matter and the method of the *Geisteswissenschaften,* especially "historical reason." In the twentieth century, both the understanding and the scope of hermeneutics have been dramatically extended by Heidegger and other thinkers working in the phenomenological tradition, including Hans-Georg Gadamer and Paul Ricoeur.

In contemporary reexaminations of the social disciplines there has been a recovery of the hermeneutical dimension, with its thematic emphasis on understanding and interpretation. This is also what has been happening in the postempiricist philosophy and history of science. Kuhn himself remarks in the preface to his recent collection of articles,

> What I as a physicist had to discover for myself, most historians learn by example in the course of professional training. Consciously or not, they are all practitioners of the hermeneutic method. In my case, however, the discovery of hermeneutics did more than make history seem consequential. Its most immediate and decisive effect was instead on my view of science.[45]

And he also states,

> The early models of the sort of history that has so influenced me and my *historical* colleagues is the product of a post-Kantian European tradition which I and my *philosophical* colleagues continue to find opaque. In my own case, for example, even the term "hermeneutic," to which I resorted briefly above, was no part of my vocabulary as recently as five years ago. Increasingly, I suspect that anyone who believes that history may have deep philosophical import will have to learn to bridge the longstanding divide between the Continental and English-language philosophical traditions.[46]

Kuhn sometimes uses the term "hermeneutic" in a weak sense to mean the type of sensitive reading that has always been considered essential in the hermeneutical tradition. The maxim that he offers to his students is one that we could find in almost any discussion of hermeneutics:

> When reading the works of an important thinker, look first for the apparent absurdities in the text and ask yourself how a sensible person could have written them. When you find an answer, I continue, when those passages make sense, then you may find that more central passages, ones you previously thought you understood, have changed their meaning.[47]

Such a maxim might lead one to think that what I am calling the "recovery" of the hermeneutical dimension of science is limited to the task of writing the history of science. There is, however, a much stronger and much more consequential sense in which the hermeneutical dimension of science has been recovered. In the critique of naive and even of sophisticated forms of logical positivism and empiricism; in the questioning of the claims of the primacy of the hypothetical-deductive model of explanation; in the questioning of the sharp dichotomy that has been made between observation and theory (or observational and theoretical language); in the insistence on the underdetermination of theory by fact; and in the exploration of the ways in which all description and observation are theory-impregnated, we find claims and arguments that are consonant with those that have been at the very heart of hermeneutics, especially as the discipline has been discussed from the nineteenth century to the present.

This point has been effectively made by Mary Hesse. She lists five contrasts that have typically been drawn in the past between the natural sciences and the human sciences (*Geisteswissenschaften*):

> 1. In natural science experience is taken to be objective, testable, and independent of theoretical explanation. In human science data are not detachable from theory, for what count as data are determined in the light of some theoretical interpretation, and the facts themselves have to be reconstructed in the light of interpretation.
>
> 2. In natural science theories are artificial constructions or models, yielding explanation in the sense of a logic of hypothetico-deduction: *if* external nature were of such a kind, *then* data and experience would be as we find them. In human science theories are mimetic reconstructions of the facts themselves, and the criterion of a good theory is understanding of meanings and intentions rather than deductive explanation.
>
> 3. In natural science the lawlike relations asserted of experience are external, both to the objects connected and to the investigator, since they are merely correlational. In human science the relations asserted are internal, both because the objects studied are essentially constituted by their interrelations with one another, and also because the relations are mental, in the sense of being created by human categories of understanding recognized (or imposed?) by the investigator.
>
> 4. The language of natural science is exact, formalizable, and literal; therefore meanings are univocal, and a problem of meaning arises only in the application of universal categories to particulars. The language of human science is irreducibly equivocal and continually adapts itself to particulars.
>
> 5. Meanings in natural science are separate from facts. Meanings in human science are what constitute facts, for data consist of documents, inscriptions, intentional behaviour, social rules, human artefacts, and the like, and these are inseparable from their meanings for agents.
>
> It follows, so it is held, that in natural science a oneway logic and method of interpretation is appropriate, since theory is dependent on self-subsistent facts, and testable by them. In human science, on the other hand, the "logic" of interpretation is irreducibly circular: part cannot be understood without whole, which itself depends on the relation of its parts; data and concepts cannot be understood without theory and context, which themselves depend on relations of data and concepts.[48]

Hesse notes that these contrasts have not always been clearly formulated, particularly in relation to the crucial concepts of meaning and interpretation. But the point that she emphasizes, and the one that I want to emphasize in this context, is the "natural science half of the dichotomy." As she emphatically notes:

> What is immediately striking about it to readers versed in recent literature in philosophy of science is that almost every point made about the human sciences has recently been made about the natural sciences, and that the five points made about the natural sciences presuppose a traditional empiricist view of natural science that is almost universally discredited.[49]

Hesse summarizes the new, postempiricist account of natural science with explicit parallels to the five points of the dichotomy.

> 1. In natural science data [are] not detachable from theory, for what count as data are determined in the light of some theoretical interpretation, and the facts themselves have to be reconstructed in the light of interpretation.
>
> 2. In natural science theories are not models externally compared to nature in a hypothetico-deductive schema, they are the way the facts themselves are seen.
>
> 3. In natural science the lawlike relations asserted of experience are internal, because what count as facts are constituted by what the theory says about their inter-relations with one another.
>
> 4. The language of natural science is irreducibly metaphorical and inexact, and formalizable only at the cost of distortion of the historical dynamics of scientific development and of the imaginative constructions in terms of which nature is interpreted by science.
>
> 5. Meanings in natural science are determined by theory; they are understood by theoretical coherence rather than by correspondence with facts.[50]

One must be careful not to draw the wrong conclusions from these observations. Hesse is not saying, and it does not follow from what she says, that there are no important differences between natural science and human science. Rather, she asserts that standard ways of making the dichotomy are suspect.[51]

It would be a mistake to think that postempiricist philosophers of science have been directly influenced by hermeneutics. In the main, as Kuhn indicates in the passages we have cited, they have been virtually ignorant of the hermeneutical tradition. It is primarily because of the internal dialectic of contemporary philosophy of science, by reflection on and argumentation about a correct understanding of scientific inquiry, that they have stressed those features of science (and not just the study of science and its history) that are hermeneutical. But this coincidence and convergence should at least, in the manner suggested by Kuhn, open us to a serious confrontation with hermeneutics. In hermeneutics and some of its critiques we discover still another rationality debate. And here, too, the central issues bear on the Cartesian Anxiety and can themselves be interpreted as further evidence of the movement beyond objectivism and relativism.

PHILOSOPHIC HERMENEUTICS: A PRIMORDIAL MODE OF BEING

In 1960 (at approximately the same time that Kuhn's and Winch's monographs appeared), Hans-Georg Gadamer published *Wahrheit und Methode.* (The English translation, *Truth and Method,* was published in 1975.) Gadamer was sixty years old then, and the book, his magnum opus, represents a life's work of philosophic and hermeneutical reflection. Building on the work of Heidegger, or rather drawing on themes that are implicit in Heidegger and developing them in novel ways, Gadamer's book is one of the most comprehensive and subtle statements of the meaning and scope of hermeneutics to appear in our time. Hermeneutics, for Gadamer, is no longer restricted to the problem of Method in the *Geisteswissenschaften;* it moves to the very center of philosophy and is given an ontological turn; understanding, for Gadamer, is a primordial mode of our being in the world. Acknowledging his debt to Heidegger, Gadamer tells us:

> On the basis of Heidegger's existential analysis of *Dasein,* with the many new perspectives that it implies for metaphysics, the function of hermeneutics in the human sciences also appears in a totally new light. While Heidegger resurrects the problem of Being in a form which goes far beyond all traditional metaphysics—he secures at the same time a radically new possibility in the face of the classical [*aporias*] of historicism: his concept of understanding carries an *ontological* weight. Moreover, understanding is no longer an *operation* antithetic and subsequent to the operations of the constitutive life, but a primordial mode of being of human life itself.[52]

At first sight it may appear as if Gadamer's primary concerns are foreign to those that have been dominant in the postempiricist philosophy and history of natural science and to the rationality debate that followed Winch's controversial claims about the social sciences. Natural science is not explicitly analyzed in *Truth and Method* but enters only obliquely as a manifestation of "Method" that is contrasted with Gadamer's probing of the "hermeneutical phenomenon." In *Truth and Method* Gadamer does not discuss such social sciences as

economics, political science, sociology, or anthropology. He concentrates primarily on the experience of works of art, the understanding and interpretation of literary texts, and the study of history.

Nevertheless the claims that Gadamer makes for the ontological primacy and universality of hermeneutics have important consequences for our understanding of the natural and social sciences. When I turn later to a detailed examination of Gadamer's contribution, we will see that there is a basis for a dialogue between hermeneutics and our current understanding of the natural and social sciences. Despite the contrasts that Gadamer wants to draw between modern science and the type of knowledge and truth that we can achieve through hermeneutics, his own understanding of hermeneutics helps to deepen our understanding of the natural and social sciences. At the same time we can also use insights gained from recent investigations of the natural and social sciences to test the limits of Gadamer's conception of philosophic hermeneutics.

Here we touch upon a crucial ambiguity caused by the disparity between the Anglo-American and the German understanding of the nature of the social sciences. In the Anglo-American tradition, intellectual disciplines fall into the trichotomy of the natural sciences, social sciences, and humanities, but on the Continent they are categorized according to the dichotomy between the *Naturwissenschaften* and the *Geisteswissenschaften* (the expression that was introduced into German as a translation for what Mill called the "moral sciences"). In the main tradition of Anglo-American thought—at least until recently—the overwhelming bias has been to think of the social sciences as *natural sciences* concerning individuals in their social relations. The assumption has been that the social sciences differ in the degree and not in kind from the natural sciences and that ideally the methods and standards appropriate to the natural sciences can be extended by analogy to the social sciences. But in the German tradition there has been a much greater tendency to think of the social disciplines as forms of *Geisteswissenschaften* sharing essential characteristics with the humanistic disciplines. One of the reasons why Gadamer's work has received so much attention is because it appeared at a time when many thinkers were arguing that a proper understanding of the range of the social disciplines requires us to recognize the essential hermeneutical dimension of these disciplines.

There is an affinity between Gadamer's probing of the hermeneutical phenomenon and Winch's reflection on the role of understanding and interpretation of social life, although Gadamer goes much further than Winch in stressing the universality of hermeneutics and showing the historicity of all understanding and interpretation.[53] This affinity goes deeper than attempting to show that there are ways of understanding alien cultures and texts without imposing our blind prejudices, even prejudices about rationality. As I have suggested, in order to grasp the point of Winch's claims we must be sensitive to his primary aim. To quote him again,

> My aim is not to engage in moralizing, but to suggest that the concept of *learning from* which is involved in the study of other cultures is closely linked with the concept of *wisdom*. We are confronted not just with different techniques, but with new possibilities of good and evil in relation to which men may come to terms with life.

It is precisely in and through an understanding of alien cultures that we can come to a more sensitive and critical understanding of our own culture and of those prejudices that may lie hidden from us. We will see that this theme, which Gadamer relates to dialogue, questioning, and conversation, stands at the very center of Gadamer's philosophic hermeneutics. For him this is the type of practical wisdom that is characteristic of the ongoing interpretation of our own tradition.

A pervasive theme in *Truth and Method*, and indeed in all of Gadamer's writings, is the critique of the Cartesian persuasion. Here, too, Gadamer is building on the work of Heidegger, who probed the phenomenon of the modern turn to subjectivity and traced it back to its Cartesian roots. The idea of a basic dichotomy between the subjective and the objective; the conception of knowledge as being a correct representation of what is objective; the conviction that human reason can completely free itself of bias, prejudice, and tradition; the ideal of a universal method by which we can first secure firm foundations of knowledge and then build the edifice of a universal science; the belief that by the power of self-reflection we can transcend our historical context and horizon and know things as they really are in themselves—all of these concepts are subjected to sustained criticism. In this respect there are significant parallels (as well as striking differences) between Gadamer's and Heidegger's critique of Cartesianism and the critique of a philosopher who might seem to have little in common with them, Charles Sanders Peirce.[54]

The novel and distinctive element in Gadamer's challenge to Cartesianism is his argument that the Cartesian tradition shaped and distorted nineteenth-century hermeneutics. According to Gadamer's reading, Dilthey implicitly accepted the Cartesian ideal of "Method" and "objective knowledge." Dilthey sought to meet the challenge, so forcefully argued by John Stuart Mill, that the so-called moral or human sciences are to be understood as empirical, inductive sciences differing only in degree from the natural sciences. But as Dilthey interpreted this challenge it meant showing that there is a distinctive subject matter and method appropriate to the *Geisteswissenschaften* that can equal and even rival the claim of the natural sciences to achieve "objective knowledge." For Gadamer, Dilthey was not sufficiently radical in questioning whether the ideal of objectivity, or more accurately the Cartesian understanding of objectivity, is appropriate for understanding the *Geisteswissenschaften* and the hermeneutical phenomenon.

Gadamer tells us:

> The understanding and the interpretation of texts is not merely a concern of science, but is obviously part of the total human experience of the world. The hermeneutic phenomenon is basically not a problem of method at all. It is not concerned with a method of understanding, by means of which texts are subjected to scientific investigation like all other objects of experience. It is not concerned primarily with the amassing of ratified knowledge which satisfies the methodological ideal of science—yet it is concerned, here too, with knowledge and with truth. (*TM*, p. xi; *WM*, p. xxv)

Gadamer argues that there is an "inconsistency at the heart of Dilthey's thought," a result of his "latent Cartesianism."[55] Gadamer, in his own way, is seeking to exorcise the Cartesian Anxiety and to elaborate a way of thinking that moves beyond objectivism and relativism. For relativism, he thinks, is not only the dialectical antithesis of objectivism; it is itself parasitic upon objectivism.[56] What is most important in Gadamer's work is the way in which, through his questioning of the hermeneutical phenomenon, he begins to elaborate a way of thinking that is beyond objectivism and relativism and that recovers and explores "an entirely different notion of knowledge and truth."[57] The understanding of reason and rationality itself undergoes a subtle transformation in Gadamer's work.[58] For he rejects the oppositions that have been so entrenched since the Enlightenment—between reason and tradition, reason and prejudice, reason and authority. Reason is not a faculty or capacity that can free itself from its historical context and horizons. Reason is historical or situated reason which gains its distinctive power always within a living tradition. For Gadamer this is not a limitation or deficiency of reason, but rather the essence of reason rooted in human finitude.

HERMENEUTICS AND PRAXIS

One of the most challenging, intriguing, and important motifs in Gadamer's work is his effort to link his ontological hermeneutics with the tradition of practical philosophy, especially as it is rooted in Aristotle's understanding of *praxis* and *phronēsis*. Gadamer is well aware that initially this may seem to be a strange connection. After all, hermeneutics has been primarily concerned with the understanding and interpretation of texts, and this was certainly not Aristotle's concern in his ethical and political writings. Gadamer tells us,

> It is true that Aristotle is not concerned with the hermeneutical problem and certainly not with its historical dimension, but with the right estimation of the role that reason has to play in moral action. But precisely what is of interest to us here is that he is concerned with reason and with knowledge, not detached from a being that is becoming, but determined by it and determinative of it. (*TM*, p. 278; *WM*, p. 295)

Gadamer even claims that

> if we relate Aristotle's description of the ethical phenomenon and especially of the virtue of moral knowledge to our own investigation, we find that Aristotle's analysis is in fact a kind of model of the problems of hermeneutics. (*TM*, p. 289; *WM*, p. 307)

The specific context in *Truth and Method* where Gadamer explores the relevance of Aristotle to hermeneutics is the investigation of the moment of "application" or appropriation in the act of understanding. According to an earlier tradition of hermeneutics, three elements were distinguished: *subtilitas intelligendi* (understanding), *subtilitas explicandi* (interpretation), and *subtilitas applicandi* (application). But Gadamer argues—and this is one of the central theses of *Truth and Method*—that these are not three distinct moments or elements of hermeneutics. They are internally related; every act of understanding involves interpretation, and all interpretation involves application. It is Aristotle's analysis of *phronēsis* that, according to Gadamer, enables us to understand the distinctive way in which application is an essential moment of the hermeneutical experience.

The intimate link that Gadamer seeks to establish between hermeneutics and the tradition of practical philosophy that has its origins in Greek philosophy is not an afterthought or merely incidental to his understanding of philosophic hermeneutics. It is a key for appreciating what he means by philosophic hermeneutics. Not only

do we find in Gadamer an extraordinarily incisive interpretation of what Aristotle means by *phronēsis* and the ways in which he distinguishes *phronēsis* from both *epistēmē* and *technē*; the creative use Gadamer makes of Aristotle and the tradition of practical philosophy is far richer.[59] Gadamer's interpretation of Aristotle is an exemplification of what he means by opening ourselves to the truth that speaks to us through tradition. It is also the basis for his claim that the *Geisteswissenschaften* are genuine *moral* sciences. Furthermore, it is Aristotle's understanding of *praxis* and *phronēsis* that can enable us to come to grips with what Gadamer takes to be the most poignant problem in the modern world.

> When Aristotle, in the sixth book of the *Nicomachean Ethics*, distinguishes the manner of "practical" knowledge . . . from theoretical and technical knowledge, he expresses, in my opinion, one of the greatest truths by which the Greeks throw light upon "scientific" mystification of modern society of specialization. In addition, the scientific character of practical philosophy is, as far as I can see, the only methodological model for self-understanding of the human sciences if they are to be liberated from the spurious narrowing imposed by the model of the natural sciences.[60]

Or again, he writes:

> In my own eyes, the great merit of Aristotle was that he anticipated the impasse of our scientific culture by his description of the structure of practical reason as distinct from theoretical knowledge and technical skill. By philosophical arguments he refuted the claim of the professional lawmakers whose function at that time corresponded to the role of the expert in the modern scientific society. Of course, I do not mean to equate the modern expert with the professional sophist. In his own field he is a faithful and reliable investigator, and in general he is well aware of the particularity of his methodical assumptions and realizes that the results of his investigation have a limited relevance. Nevertheless, the problem of our society is that the longing of the citizenry for orientation and normative patterns invests the expert with an exaggerated authority. Modern society expects him to provide a substitute for past moral and political orientations. Consequently, the concept of *'praxis'* which was developed in the last two centuries is an awful deformation of what practice really is. In all the debates of the last century practice was understood as application of science to technical tasks. . . . It degrades practical reason to technical control.[61]

It would be a mistake to think that Gadamer is advocating some sort of nostalgic return to Aristotle. The thrust of his philosophic reflections moves in a very different direction. For the temporal distance between ourselves and Aristotle does not permit a return to Aristotle—Gadamer knows this is impossible—but rather a critical appropriation of Aristotle's insights about practical reason that we seek to make relevant to our questions and problems.[62] Philosophic hermeneutics is the heir of this tradition of practical philosophy:

> I think, then, that the chief task of philosophy is to justify this way of reason and to defend practical and political reason against the domination of technology based on science. That is the point of philosophical hermeneutic. It corrects the peculiar falsehood of modern consciousness: the idolatry of scientific method and of the anonymous authority of the sciences and it vindicates again the noblest task of the citizen—decision-making according to one's own responsibility—instead of conceding that task to the expert. In this respect, hermeneutic philosophy is the heir of the older tradition of practical philosophy.[63]

With this interlacing of hermeneutics and *praxis*, the threefold interconnection of science, hermeneutics and *praxis* becomes explicit. Contemporary reflections on the character of the natural and the social sciences have led to a recovery of the hermeneutical dimension of these disciplines and to an encounter with the hermeneutical tradition. A common theme running through all these discussions is the movement beyond objectivism and relativism and the attempt to exorcise the Cartesian Anxiety. But thinking through the nature and grounds of hermeneutics as it has been probed by Heidegger and Gadamer leads to a confrontation with the understanding of *praxis* and *phronēsis*. According to Gadamer, not only is philosophic hermeneutics the proper heir of the tradition of practical philosophy, but the type of judgment and reasoning exhibited in all understanding is itself a form of *phronēsis*. I have suggested that we gain a more textured understanding of the postempiricist philosophy and history of science, as well as of the recent debates about the nature of the social and political disciplines, when we approach them from the perspective of the hermeneutical tradition. We gain an even more penetrating understanding when we pursue the intimate relations between hermeneutics and *praxis*. This will become clear when we see that the type of rationality that Kuhn has been struggling to articulate when dealing with the complex issues of theory-choice and paradigm switches—his insistence that reasons function as values which can be differently weighted and applied to concrete situations, and his defense of the role of judgment in making choices and decisions—are closely related to Gadamer's analysis of *phronēsis* and the role that it plays in all understanding and interpretation. There is a groping quality in Kuhn's several attempts to clarify the characteristics of the type of argumentation that is involved in choosing among rival paradigms. It is as if he has been searching for a proper model to express his awareness that such deliberation and choosing are rational activities, but not the sort of rational activity that has been characterized as deductive proof or empirical verification or falsification. I will argue that without being completely aware of what he is doing Kuhn is appealing to a conception of rationality that has been at the core of tradition of practical philosophy that Gadamer seeks to disclose and revive. In seeking to appreciate the basic orientation of Winch's work, too—an orientation that helps to set the context for his discussion of "our standards" and "their standards"—we need to be sensitive to his practical-moral stance. Here, too, we will discover latent affinities with the tradition of practical philosophy and wisdom.

The appearance of Winch's *Idea of a Social Science* in 1958 and the publication of Kuhn's *Structure of Scientific Revolutions* in 1962 were catalysts for complex, nuanced, and wide-ranging debates and controversies. Similar discussions occurred when Gadamer's *Wahrheit und Methode* was published in 1960. For heuristic purposes we can distinguish three closely related foci to the controversies that the book generated.[64] The first concerns the significance of philosophic or ontological hermeneutics for biblical interpretation and more generally for the interpretation of religious traditions. Since the time of the Reformation, one primary strand in the tradition of hermeneutics had been its relevance for the understanding and interpretation of sacred texts. The work of Heidegger, Gadamer, Ricoeur, and Bultmann provides new challenges to those concerned with biblical narrative, the interpretation of religious traditions, and the role that theology might play in the twentieth century.

The second focus concerns the significance of Heidegger's and Gadamer's reflections on hermeneutics for the understanding and interpretation of legal and literary texts. The Italian scholar Emilio Betti has been an arch rival to Gadamer as the interpreter of the hermeneutical tradition. In his major work, translated into German in 1962, *Die Hermeneutik als allgemeine Methodik der Geisteswissenschaften*, and in E. D. Hirsch, Jr.'s *Validity in Interpretation*, published in 1967 (which owes a great deal to Betti), it is forcefully argued that Heidegger and Gadamer lead us to a self-defeating historicism and relativism.[65] Against Gadamer, both argue that it is crucial to distinguish and separate the three traditional moments of hermeneutics that Gadamer blends together: understanding, interpretation, and application.

The third focus—and the one that I intend to explore in greater detail—concerns the significance and challenge of philosophic hermeneutics for understanding the nature of the social and political disciplines. From the beginning of his intellectual career Gadamer has always had an interest in the tradition of practical philosophy, especially as it emerges in Plato and Aristotle. It is also clear that a decisive intellectual event that deeply affected Gadamer's own distinctive practice and interpretation of hermeneutics was his participation in Heidegger's seminar (1923) on Aristotle's *Nicomachean Ethics.*[66] But it was as a result of criticism of Gadamer's work that this aspect of his thinking was brought into the foreground. In the twenty years since the publication of *Wahrheit und Methode,* Gadamer has returned again and again to the theme of the practical implications of hermeneutics and its significance for understanding the limits and role of the social and political disciplines.[67] It is not entirely inaccurate to claim that this aspect of Gadamer's thinking has come into so much prominence because it was at once underscored and sharply criticized by Jürgen Habermas.[68] But others besides Habermas drew attention to the significance and limitations of philosophic hermeneutics for the social and political disciplines. This is also a key idea in the work of Karl-Otto Apel and Albrecht Wellmer.[69] Since the initial confrontation between Gadamer and Habermas, beginning with Habermas's critical review of *Wahrheit und Methode,* there has been an extensive literature on what has come to be labeled the "Gadamer–Habermas debate."[70] I will be exploring some of the issues raised in this debate and will try to show how it is related to the other rationality debates in the philosophy of the natural and social sciences. My aim will be to show that the latent issues in this debate, and the responses and counter-responses by Gadamer and Habermas (and others), are a further contribution to the movement beyond objectivism and relativism. But in this preliminary overview I simply want to suggest why the interest in, and limitations of, philosophic hermeneutics was so important for Habermas. Quite independently of any direct influence by Heidegger or Gadamer, Habermas was already engaged in a critical reexamination of the social and political disciplines and the legacy of positivism in the twentieth century.[71] Working within a Hegelian-Marxist tradition, he argued that any adequate social and political theory must involve an interpretative or hermeneutical dimension. Habermas realized that Gadamer had developed one of the strongest and most persuasive arguments showing the importance of this dimension of human knowledge. But at the same time Habermas was skeptical of the universalistic claims of hermeneutics and argued that philosophic hermeneutics underestimated and distorted the role of a scientific understanding of social life. Philosophic hermeneutics lacked an explicit critical function, which is so vital for an adequate social theory. What was needed is a "depth hermeneutics" which would do justice to the role of *work* and *power* (not just language and communication) in the understanding of culture and society. Against Gadamer, who tended to contrast scientific method with the hermeneutical phenomenon, Habermas argued for the necessity of a dialectical synthesis of empirical-analytic science and hermeneutics into a critical theory that has a practical intent and is governed by an emancipatory cognitive interest.[72]

We can state the primary issue in a slightly different manner. Habermas thought that one of Gadamer's most significant contributions was the explicit linking of hermeneutics to application, or more generally to *praxis.*[73] But at the same time he argued that Gadamer's own understanding of *praxis* and his belief that Aristotle's conception of *praxis* is "the model for self-understanding of the human science" would not stand up to critical scrutiny.[74] Habermas certainly agreed with Gadamer's claim that "the concept of 'praxis' which was developed in the last two centuries is an awful deformation of what practice really is."[75] And Gadamer would certainly endorse the following statement by Habermas:

> The real difficulty in the relation of theory and praxis does not arise from this new function of science as a technological force, but rather from the fact that we are no longer able to distinguish between practical and technical power. Yet even a civilization that has been rendered scientific is not granted dispensation from practical questions; therefore a peculiar danger arises when the process of scientification transgresses the limit of technical questions, without, however, departing from the level of reflection of a rationality confined to the technological horizon. For then no attempt is made to attain a rational consensus on the part of citizens concerning the practical control of their destiny. Its place is taken by the attempt to attain technical control over history by perfecting the administration of society, an attempt that is just as impractical as it is unhistorical.[76]

But while there is common agreement between Gadamer and Habermas about the pressures in modern society to confuse and deform genuinely practical questions with technical and strategic issues, and both seek to defend the autonomy and legitimacy of a *praxis* that is distinguishable from *technē,* they disagree about precisely what this means and its consequences. Many of their differences are related to their different understandings of *praxis,* the features of *praxis* that they highlight, and especially the nature and role of reason as it pertains to *praxis*.

POLITICAL JUDGMENT AND PRACTICAL DISCOURSE

The issues that come into prominence in the differing emphases of Gadamer and Habermas open us to a much broader dimension in the new conversation about human rationality. My purpose in introducing the "Gadamer–Habermas debate" is to emphasize the more general way in which the analysis of *praxis, phronēsis,* practical discourse, and political judgment (all of which are intimately related) has entered this new conversation. The critiques of the varieties of scienticism, positivism, behaviorism, and methodism are shared by a much larger group of thinkers who have sought in different ways to recover the meaning of *praxis* and to show its relevance to contemporary society. These have been major themes in the work of Hannah Arendt, whose investigation of the human condition focuses on the *vita activa,* with the threefold distinction of labor, work, and action (*praxis*).[77] She too warns us about the current danger of forgetting what action or *praxis* really is—the highest form of human activity, manifested in speech and deed and rooted in the human condition of plurality. She also argues that in the modern age a fabricating or means–end mentality (*technē*) and a laboring mentality have distorted and corrupted *praxis*. Her analysis of the public space of appearance in the *polis* has many parallels with Habermas's analysis of communicative action that is oriented toward mutual understanding.[78] Some dimensions of her analysis of political judgment have an affinity with Gadamer's own analysis of *phronēsis* and judgment.[79] But the common ground that is shared by Arendt, Gadamer, and Habermas enables us to appreciate the sharp and consequential differences among them in their reflections on the meaning and role of *praxis* in the contemporary world.

We find similar motifs in a variety of other political thinkers including Charles Taylor, Hanna Pitkin, and Sheldon Wolin.[80] Consider, for example, Sheldon Wolin's essay, "Political Theory as a Vocation." When we compare this essay with the writings of Gadamer and Feyerabend, structural similarities leap to view. All three examine and criticize the modern obsession with Method. All three trace this back to the Cartesian legacy. Feyerabend's attack on Method is directed against what he takes to be the invidious consequences that the obsession with Method has had for the understanding of the natural sciences. Gadamer is constantly battling against the intrusion of method into hermeneutics and the *Geisteswissenschaften.* Wolin seeks to show how "methodism" has infected and distorted the discipline of political science. Method is not innocent or neutral. It not only presupposes an understanding of what constitutes social and political life; it has become a powerful factor in shaping (or rather misshaping) human life in the modern world. Wolin makes fully explicit the practical–moral concern that lies at the heart of the writings of Feyerabend and Gadamer when he tells us that the *vita methodi* "avoids fundamental criticism and fundamental commitment," and that far from being an innocent, epistemological, neutral ideal it is a "proposal for shaping the mind"—a proposal that all three see as having ominous consequences.[81] Against the *vita methodi,* Wolin defends the *bios theoretikos,* and at the heart of his understanding of this form of life is judgment. The following passage by Wolin might have been written by Gadamer, for it approximates Gadamer's own understanding of the quintessence of political judgment.

> What is political wisdom? Put in this vague form, the question is unanswerable, but it may be reformulated so as to be fruitful. The antithesis between political wisdom and political science basically concerns two different forms of knowledge. The scientific form represents the search for rigorous formulations which are logically consistent and empirically testable. As a form, it has the qualities of compactness, manipulability, and relative independence of context. Political wisdom is an unfortunate phrase, for . . . the question is not *what* it is but *in what* does it inhere. History, knowledge of institutions, and legal analysis [are relevant] . . . knowledge of past political theories might also be added. Taken as a whole, this composite type of knowledge presents a contrast with the scientific type. Its mode of activity is not so much the style of the search as of reflection. It is mindful of logic, but more so of the incoherence and contradictoriness of experience. And for the same reason, it is distrustful of rigor. Political life does not yield its significance to terse hypotheses but is elusive, and hence meaningful statements about it often have to be allusive and intimative. Context becomes supremely important, for actions and events occur in no other setting. Knowledge of this type tends, therefore, to be suggestive and illuminative rather than explicit and determinate. Borrowing from M. Polanyi, we shall call it "tacit political knowledge."[82]

SCIENCE, HERMENEUTICS, AND PRAXIS

It may seem that I have wandered quite far from the issues involved in the movement beyond objectivism and relativism. One may be genuinely perplexed about what political wisdom and the tradition of practical philosophy has to do with the character of rationality in the natural sciences and the type of argumentation required for theory-choice or paradigm switches. There may be legitimate suspicion that the interrelationships of science, hermeneutics, and *praxis* that I have been adumbrating are more suggestive than substantive. Finally, there may be a proper skepticism about my constant references to a new conversation, a feeling that this expresses more of a pious hope than a living reality. The reader rightly demands a working out or working through of the suggestions that I have been making that will clarify, test, and support my claims. My objective thus far has been to provide an orientation, to convey a sense of the underlying questions, and to suggest how I plan to go about probing and answering them.

In turning to the working out of this project, I begin with the self-understanding of the nature of science, its essential character and scope. It is our cultural understanding of science, especially the physical sciences, and the remarkable "success" of the scientific enterprise since its modern origins that has set the context for the intellectual and cultural problems in the modern world. Hermeneutics, as that discipline took shape in the nineteenth century, has been a defensive reaction against the universalistic and reductivistic claims made in the name of the sciences. Every defender of hermeneutics, and more generally the humanistic tradition, has had to confront the persistent claim that it is science and science alone that is the measure of reality, knowledge, and truth. As for *praxis* and *phronēsis*, these concepts are suspect once we are in the grips of the Cartesian legacy. There are deep cultural reasons and causes—as Gadamer, Arendt, and Habermas have argued—why in the modern world the only concept of reason that seems to make sense is one in which we think of reason as an instrument for determining the most efficient or effective means to a determinate end, and why the only concept of activity that seems viable is one of technical application, manipulation, and control. Once we are caught into thinking that the subjective–objective distinction is a fundamental one that arises as soon as anyone reflects and we pursue the variations of this distinction until the subjective becomes virtually synonymous with the private, idiosyncratic, and arbitrary, then the very idea of *phronēsis* seems like a confused concept. Knowledge must be objective—or else it is only pseudo-knowledge. When values enter, they must be treated as noncognitive emotional responses or private subjective preferences. From this perspective, especially in its positivist variants, talk of practical or political wisdom and *phronēsis* as a special type of rational activity may have a certain charm but fails to live up to the promise of serious scientific knowledge.

In contrast to the overwhelming bias which this invidious contrast between wisdom and science reflects and the obsession of many modern thinkers with *epistēmē* and science, the development that is becoming increasingly evident in the new conversation is an inversion.[83] It can be misleading to think of this inversion as the "primacy of the practical," insofar as we still accept traditional and modern contrasts between the "theoretical" and the "practical." One must be sensitive to and acknowledge the important differences between the nature of scientific knowledge and other forms of knowledge, but the more closely we examine the nature of this scientific knowledge that has become the paradigm of theoretical knowledge, the more we realize that the character of rationality in the sciences, especially in matters of theory-choice, is closer to those features of rationality that have been characteristic of the tradition of practical philosophy than to many of the modern images of what is supposed to be the character of genuine *epistēmē*.[84]

There is a deep irony in the tradition that Aristotle helped to initiate. Aristotle is at once one of the noblest defenders of the autonomy and integrity of *praxis* and *phronēsis* and also the philosopher who sowed the seeds for the denigration of practical philosophy. The expression "practical philosophy" is virtually self-contradictory, because philosophy as the love of *sophia* is something higher and more divine than *phronēsis*. In the tenth book of the *Nicomachean Ethics*, a book that has been so problematic for many scholars of Aristotle,[85] Aristotle, returning to the theme of happiness, states that "happiness consists in contemplation may be accepted as agreeing both with the results already reached and with the truth."[86] The life consisting of the pure *activity* of contemplation is more than truly human; it is godlike, divine. Compared to this, "the life of moral virtue . . . is happy only in a secondary degree."[87] *Praxis* in morals and politics is only second best to the highest form of activity, *theoria*, which is intimately related to *sophia*, *nous*, and *epistēmē*. Although the differences between modern conceptions of *epistēmē*, especially as shaped by the Cartesian legacy, and the more ancient understanding of *epistēmē* are as striking as similarities, the prejudice suggested by Aristotle's contrasts has worked itself out with a vengeance in modern thought. It has become a well-entrenched dogma of modern thought that only after we resolve the "hard" issues of epistemology and come to grips with scientific knowledge can we turn to the "softer" and "fuzzier" concerns of moral, social, and political philosophy. This is a prejudice that is being questioned in the new conversation about human rationality.

To conclude part I and set the context for my investigation of the postempiricist philosophy and history of science, let me summarize from a slightly different perspective. Ever since the origins of modern science, the typical strategy of scientifically minded philosophers, when confronted with the claim that there are other forms of knowledge in addition to those evidenced in the formal and natural sciences, has been to argue that whatever is legitimate, acceptable, or rational in these presumably "other" forms of knowledge can be assimilated, translated, or reduced to the canons of scientific discourse. What cannot be assimilated, translated or reduced must be rejected as pseudo-knowledge. In this respect, logical positivism and empiricism are continuous with the older traditions of empiricism and rationalism. But whenever the implicit scientism (science is the only measure of what counts as knowledge and reality) has been pressed to the extreme, there have always been those who have argued that such a scientism is deficient; it leaves out something vitally important, or it fails to recognize that there are other legitimate forms of experience and knowledge. But typically (although not universally), defenders of these other modes of knowledge and experience, whether they draw their inspiration from the classical humanistic disciplines or the tradition of practical philosophy and wisdom, have explicitly or implicitly accepted the self-understanding of the natural sciences that has been advocated by their "tough-minded" opponents. The tangled debates that we will examine have taken place within this framework of commonly shared assumptions about the characteristics of science and Method. Each time some philosopher comes up with what he or she takes to be a new argument or insight showing why one cannot assimilate or reduce all forms of knowledge to the canonical forms of the formal and natural sciences, there have always been an ample supply of tough-minded types who have countered with arguments that, at best, their opponents have noted some "practical" difficulties but certainly not any genuine "theoretical" obstacles to the essential unity of all science and the reduction of the several sciences to a single all-encompassing universal science.[88] The *dramatis personae* change: Descartes versus Vico, Comte or Mill versus Dilthey, positivists and logical empiricists versus ordinary language philosophers and phenomenologists. Although it is likely that this type of opposition will continue, a new pattern in the conversation concerning human rationality is now taking shape:

the very framework, the unacknowledged assumptions and metaphors that have kept these debates alive are now being called into question. With this questioning and probing, new continuities (and differences) among science, hermeneutics, and *praxis* are becoming increasingly manifest. It is now my task to show this in detail and to justify my central thesis that we are witnessing and participating in a movement beyond objectivism and relativism.