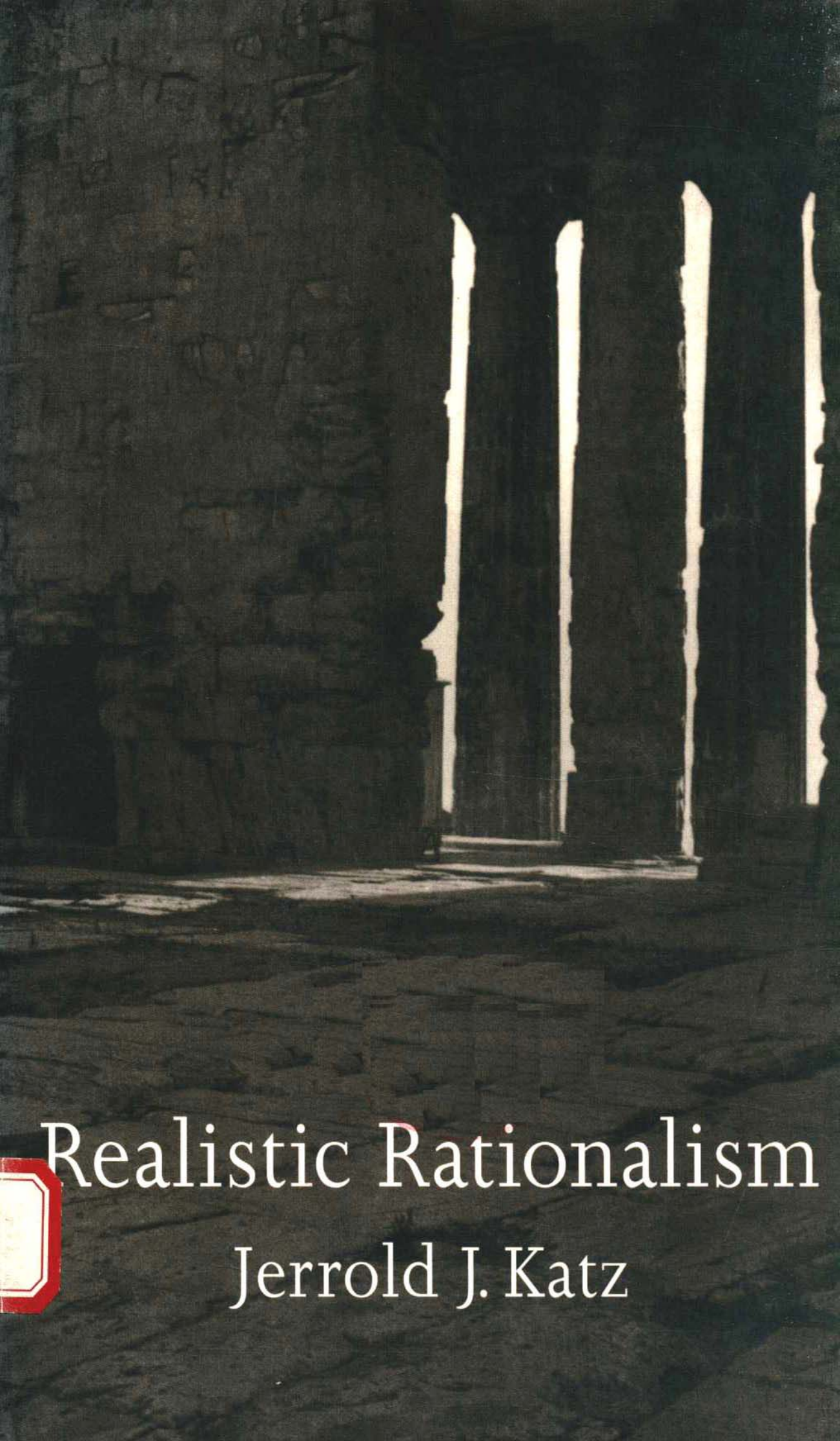




Realistic Rationalism

Jerrold J. Katz

Realistic Rationalism

Jerrold J. Katz

A Bradford Book
The MIT Press
Cambridge, Massachusetts
London, England

First MIT Press paperback edition, 2000

© 1998 Massachusetts Institute of Technology

All rights reserved. No part of this book may be reproduced in any form by any electronic or mechanical means (including photocopying, recording, or information storage and retrieval) without permission in writing from the publisher.

This book was set in Palatino by Wellington Graphics

Printed and bound in the United States of America.

Library of Congress Cataloging-in-Publication Data

Katz, Jerrold J.

Realistic rationalism / Jerrold J. Katz.

p. cm. — (Representation and mind)

"A Bradford book."

Includes bibliographical references and index.

ISBN 0-262-11229-9 (hardcover : alk. paper), 0-262-61151-1 (pb)

1. Realism. I. Title. II. Series.

B835.K38 1998

149'.2—dc21

97-26469

CIP

Representation and Mind

Hilary Putnam and Ned Block, editors

Representation and Reality Hilary Putnam

Explaining Behavior: Reasons in a World of Causes Fred Dretske

The Metaphysics of Meaning Jerrold J. Katz

A Theory of Content and Other Essays Jerry A. Fodor

The Realistic Spirit: Wittgenstein, Philosophy, and the Mind Cora Diamond

The Unity of the Self Stephen L. White

The Imagery Debate Michael Tye

A Study of Concepts Christopher Peacocke

The Rediscovery of the Mind John R. Searle

Past, Space, and Self John Campbell

Mental Reality Galen Strawson

Ten Problems of Consciousness: A Representational Theory of the Phenomenal Mind Michael Tye

Representations, Targets, and Attitudes Robert Cummins

Starmaking: Realism, Anti-Realism, and Irrealism edited by Peter J. McCormick

A Logical Journey: From Gödel to Philosophy Hao Wang

Brainchildren: Essays on Designing Minds, 1984–1996 Daniel C. Dennett

Realistic Rationalism Jerrold J. Katz

This book is dedicated to Paul Benacerraf and Hilary Putnam. As will be obvious, their work was indispensable to me in developing the position in this book. I am especially grateful to them for undertaking to educate me about philosophy and food at a time when my knowledge of both was at the matzo ball soup level.

Acknowledgments

I acknowledge with gratitude the help of many friends and colleagues at various stages in the writing of this book. Special thanks are due to Glenn Branch, who has been especially helpful in the final stages of the undertaking. Special thanks are also due to Arnold Koslow and David Pitt, who were in at the beginning and provided support and useful comments all along the way. All three of them have taught me a lesson about generosity.

In addition, thanks are owed to Jody Azzouni, Mark Balaguer, Ned Block, Paul Boghossian, Arthur Collins, Hartry Field, Eric Hetherington, Keith Hosacks, Dan Isaacson, Gerrit Jan Kemperdyk, Juliette Kennedy, Noa Latham, Paolo Mancosu, Richard Mendelsohn, Elliott Mendelson, Sid Morgenbesser, Tom Nagel, Yuji Nishiyama, Robert Nozick, Paul Postal, David Rosenthal, Mark Sainsbury, Robert Tragesser, Palle Yourgrau, Hao Wang, and Linda Wetzel. My thanks also go to the members of my seminars at the Graduate Center in the springs of 1993, 1994, and 1996, and to the members of my seminar at King's College, University of London, the audiences at my Oxford University lectures, and the audience at my Cambridge University Moral Sciences Lecture (1994 Michaelmas term).

Introduction

In the course of this century, a large segment of Anglo-American philosophy was persuaded to abandon the traditional conception of philosophy on which it is an *a priori* inquiry into the most general facts about reality. This conception was replaced with one or another of two naturalist conceptions of philosophy: philosophy as therapy designed to cure the linguistic illness of which philosophy itself is the cause, and philosophy as an *a posteriori* discipline within natural science.

Expressing the former naturalist conception, Wittgenstein (1961 [1922], sec. 6.53) wrote in the *Tractatus*:

The correct method in philosophy would really be the following: to say nothing except what can be said, i.e., propositions of natural science—i.e., something that has nothing to do with philosophy—and then, whenever someone else wanted to say something metaphysical, to demonstrate to him that he had failed to give a meaning to certain signs in his propositions.

This conception remained with him throughout his life. In the *Philosophical Investigations*, Wittgenstein (1953, sec. 109) articulates his therapeutic conception of philosophy in the famous passage:

[Philosophical problems] are, of course, not empirical problems; they are solved, rather, by looking into the workings of our language, and that in such a way as to make us recognize those workings: *in despite of* an urge to misunderstand them. The problems are solved, not by giving new information, but by arranging what we have always known. Philosophy is a battle against the bewitchment of our intelligence by means of language.

In an equally famous passage, Quine (1969a, 83) expresses the latter—philosophy as natural science—conception of philosophy:

Our very epistemological enterprise, therefore, and the psychology wherein it is a component chapter, and the whole of natural science wherein psychology is a component book—all this is our

own construction or projection from stimulations like those we were meting out to our epistemological subject. There is thus reciprocal containment, though containment in different senses: epistemology in natural science and natural science in epistemology.

Broadly, there are three doctrines called "naturalism" in contemporary philosophy. The first, which may be called "ontological naturalism," claims that the universe consists exclusively of natural objects, that is, spatiotemporal objects belonging to the causal order in nature. This is the contemporary naturalism closest to the doctrines that have traditionally been referred to as "naturalism." The second doctrine, which may be called "epistemological naturalism," claims that knowledge is knowledge of natural objects. The third doctrine, which may be called "methodological naturalism," claims that the only way we can obtain knowledge of the universe is through prescientific and scientific investigations of natural objects. Ontological naturalists are epistemological and methodological naturalists, but epistemological and methodological naturalists may or may not be ontological naturalists. Since he thinks that our theories in natural science commit us to abstract objects because they involve ineliminable quantification over them, Quine, who is a methodological naturalist, is neither an ontological nor an epistemological naturalist.¹

The naturalist hegemony is well established today in the form of programs to naturalize philosophy and philosophize naturalistically, in agendas to deflate one or another philosophical concept, in revivals of the late Wittgenstein's therapeutic positivism, in resuscitations of American pragmatism, and in construals of philosophy as an exclusively second-order discipline concerned with linguistic and/or conceptual analysis. These positions, which are at some points overlapping, at some points independent, and at some points even conflicting, are tied together by the privileged status they accord to natural objects and by their firm epistemological opposition to anything smacking of an autonomous metaphysics claiming to provide *a priori* knowledge about reality.

This hegemony flourishes despite a number of prominent philosophers, such as Blanshard, Chisholm, Ewing, Langford, Thomas Nagel, Pap, and P. F. Strawson, whose philosophizing is a continuation of just

1. In the philosophy of mind, the term "naturalism" is often used just to mean anti-Cartesianism. Here it is better to use a term like "materialism." In any case, my argument in this book is not directed against philosophers who take themselves to be "naturalists" in this sense, unless, of course, they are also naturalists in any of the senses of "naturalism" in the text.

such old-style metaphysics. The problem is not that such philosophers have failed to produce anything of recognized philosophical significance, but rather that their work lacks a substantive metaphilosophical dimension, and that it either ignores important philosophical developments that have taken place within the prevailing naturalistic outlook or accommodates itself too much to that outlook. As a consequence, contemporary representatives of traditional philosophy have not articulated and defended a metaphilosophy with which to oppose the well-articulated and well-defended positions based on Wittgenstein's and Quine's naturalism.²

One consequence of this was that the stereotype of traditional philosophy as a series of interminable and inconclusive squabbles was allowed to go unchallenged. This stereotype has motivated critics of metaphysics from Kant to Carnap, who see such squabbling to be characteristic of metaphysical philosophizing and to arise from the metaphysician's view that philosophy in and of itself is a legitimate source of *a priori* knowledge about reality. The critics are impatient with philosophical business as usual and, in the case of many of them, particularly the positivists and Quine, they are attracted by the ideal of a more amicable future in which an intellectual consensus of the sort that exists in science becomes the way of philosophy.³ The late Wittgenstein and his followers, of course, do not share this ideal.

The critics agree in denying that philosophy can be a legitimate source of *a priori* knowledge about reality, but they disagree about why. There are two main diagnoses of what is wrong with thinking that philosophy can be a legitimate source of *a priori* knowledge about reality. According to the diagnosis popular among Wittgensteinians, logical empiricists, and ordinary language philosophers, the mistake is

2. Even the best of such philosophizing is disappointing from this perspective. Strawson's (1985) championing of the rationalist tradition does nothing to articulate the metaphilosophy inherent in that tradition, and, as I (1990b, 344, n. 1) have argued elsewhere, the book's discussion of intuition and even of naturalism muddies the waters. Nagel's (1986) book, *The View from Nowhere*, which, I believe, makes significant contributions to several metaphysical topics, is content simply to endorse a rationalist perspective against Quinean empiricism. Further, Nagel's (1986, 105–9) overestimation of the force of Wittgensteinian philosophy of language, particularly the rule-following argument, leads to the absence of a discussion of the essential role that mathematical realism plays in the formulation of rationalism and in the development of a metaphilosophy based on realism and rationalism.

3. Of course, the positivist claim to eschew metaphysics did not go unquestioned. The positivists were accused, rightly I believe, of doing metaphysics, as it were, under the table. In particular, their criterion of cognitive significance was criticized as either an *a priori* metaphysical principle or a self-defeating empirical one. But their explicit doctrine was that it was a convention. (See chapter 6, section 3.)

thinking of philosophy as a first-order discipline like the sciences, which, like them, has some aspect of reality as its subject matter. This is wrong because the sciences cover reality exhaustively. Once physics, chemistry, psychology, social science, history, and so on have staked their claims to their subject matters, there is no part of reality left for philosophy. With no domain of facts to settle issues between conflicting metaphysical claims about reality, it is no wonder that metaphysicians, laboring under this misconception, should be involved in endless controversies: the controversies have no objective resolution because they are not about reality.

Mary Warnock (1995) has aptly described this diagnosis in her recent reflections on the vicissitudes of ethics in this century. Speaking of philosophy at Oxford during and after World War II, she (1995, 22) writes:

The new philosophy was contrasted with a supposed golden age, when philosophers were metaphysicians, and did not bother about the concepts, or words, actually embedded in language. . . . philosophers were allowed to pontificate about [causation, mind, and so forth] . . . and use what concepts they chose to invent.

In contrast, "the new philosophy," she (1995, 21–22) writes,

. . . was a 'second-order' subject. What we meant could be put in the following way: botanists, let us say, talk about plants and their genetic composition; and historians write about events and people of the past. Philosophy, however, has no subject-matter of its own. There are no philosophical objects to be examined. Philosophy, unlike botany or history, does not apply concepts to things; it is one step higher up the ladder of abstraction. . . . Philosophy considers the concepts that other subjects employ, and seeks clarification, or analysis, of them. It is out of this description of philosophy (which I still think is a good one), that there arose . . . the idea that philosophy is linguistic.

The "new philosophers" took the phenomena about which traditional metaphysicians speculated to be natural phenomena belonging to the province of natural sciences like physics and psychology. They concluded that genuine knowledge about causation, mind, and so forth is empirical knowledge in natural science. In order for there to be something beyond natural phenomena, there would have to be non-natural objects and *a priori* knowledge. But the strong strain of naturalism and empiricism is the background of these "new philosophers" assured them that there are no non-natural phenomena and there is no

a priori knowledge. Hence, having no first-order subject matter, either philosophy can deliver no genuine knowledge at all or it is a second-order subject which delivers second-order knowledge in the form of linguistic and/or conceptual analyses of first-order knowledge.

There was, however, disagreement among these naturalists about how philosophy should be thought of in relation to the natural realm. The main issue is whether or not philosophy is kicked upstairs to become some sort of second-order discipline, with the task of clarifying the linguistic and conceptual matters in first-order disciplines. While many of the philosophers about whom Warnock is talking saw philosophy as such a second-order discipline, the late Wittgenstein did not. He (1953, sec. 121) wrote:

One might think: if philosophy speaks of the use of the word "philosophy" there must be a second-order philosophy. But it is not so: it is, rather, like the case of orthography, which deals with the word "orthography" among others without then being second-order.

For him (1953, sec. 124), philosophy makes no contribution to human knowledge—even second-order knowledge: "It leaves everything as it is." Philosophy is a kind of linguistic therapy. Wittgenstein (1953, secs. 122 and 123) thinks it should just help us to "*command a clear view of the use of words*" principally by helping us to "*see connexions*" in the uses of words through "*finding and inventing intermediate cases*".

Quine's was the other diagnosis of what is wrong with the traditional metaphysical view that philosophy can be a legitimate source of *a priori* knowledge about reality. He agrees with other naturalists that the sciences cover reality exhaustively. Once physics, chemistry, psychology, social science, history, and so forth have staked claims to their subject matters, there is nothing left. Hence, there can't be an autonomous metaphysical philosophy. But for Quine this doesn't mean that philosophy cannot legitimately address questions about reality. It only means that it must do so within natural science. The trouble with traditional metaphysics is that it took itself to be an autonomous discipline with the right to speculate about reality independently of the experiential and methodological constraints internal to natural science. Without such constraints, the traditional philosopher's conclusions were often unscientific speculations about scientific matters.

On both diagnoses, the cure is to replace the traditional conception of the relation of philosophy to reality with a naturalistic one on which the sciences are the only first-order disciplines. Beyond this, each form of twentieth-century naturalism has its own idea of how to understand the relation between philosophy and science. Except for the late

Wittgenstein, naturalists see philosophy as at least a second-order discipline that is part of the scientific enterprise. But there is disagreement about the relation of philosophy to first-order scientific disciplines, and hence about the role philosophy plays in scientific investigation. The disagreement turns on which aspect of what Quine calls "reciprocal containment" it is that a naturalistic metaphilosophy stresses—either "epistemology in natural science" or "natural science in epistemology."

Every scientific naturalist accepts the view that philosophy is to some extent concerned with clarifying the linguistic and conceptual practices of first-order disciplines. But those who stress natural science in epistemology tend to think that it is entirely legitimate for philosophers—with suitable basic training in science—to get down there in the trenches with the scientists, not only to provide more scientific troops but also to further their own quest for philosophical enlightenment. On the other hand, those who stress epistemology in natural science tend to think of philosophers who do not stick to metascientific analysis as having gone native.

Each form of twentieth-century naturalism thought that a proper dose of its medicine would cure philosophy of the disease of metaphysics. The interminable and inconclusive squabbling of the past would disappear and philosophy would enjoy a future in which honest philosophical endeavor is rewarded with steady philosophical progress. But, as must by now be evident, we are not living in such a philosophical Canaan. Even a cursory look at the controversies in contemporary philosophy of language and logic, the philosophy of mathematics, the philosophy of mind, and so on shows that, although the cures have been tried, there is not the slightest sign of the disease going away. Indeed, it looks more as though the disease has spread to the hospital staff. Philosophical squabbles are going on as before with no serious prospect of abating, and, if anything, the range of controversy has only increased with the addition of the internal disagreements among Wittgensteinians and among Quineans and with the disagreements between Wittgensteinians and Quineans.

Hence, some reassessment of the "revolution in philosophy" is surely in order. The present book is one reassessment. It is a radical reassessment. Its broad aim is to provide the metaphilosophy and the arguments to show that abandoning the traditional conception of philosophy in favor of one or another form of naturalism was a fundamental mistake. Not that traditional versions of the metaphysical conception of philosophy did not deserve criticism, but the critics threw out the baby with the bathwater. Part of my case for this claim was presented in my (1990b) earlier book, *The Metaphysics of Meaning*. That

book took the necessary first step of showing that Wittgensteinian and Quinean arguments do not justify abandoning the traditional metaphysical conception of philosophy. The present book takes the next step of formulating and justifying a new version of traditional realist and rationalist philosophy. This version is the position to which the title of this book refers.

This enterprise of trying to revive the traditional conception of philosophy did not originate in nostalgia for the past. I spent my philosophically formative years during the flowering of logical empiricism, Quineanism, and ordinary language philosophy; I was a naturalist and empiricist of the scientistic sort. Nevertheless, like nearly everyone who goes into philosophy, I was initially drawn in by the pull of philosophy's uniquely puzzling questions: What is knowledge? What is the relation between mind and body? Is there free will? Are ethical values universal? and, particularly, its central question, What is philosophy? My disillusionment with naturalism, as I will explain below, came as the result, on the one hand, of finding that naturalist and empiricist philosophies do not provide satisfying answers to the questions that first lure us into philosophy and, on the other, of coming to think that answering some of those questions requires a non-naturalist position combining realism in ontology with rationalism in epistemology.

Such a position differs from the naturalist positions in twentieth-century philosophy in various ways. One way in which first-order and second-order disciplines can differ is in terms of the questions they ask. The distinction in this case is that a first-order discipline addresses questions about some domain of objects in the world and a second-order discipline addresses questions about the linguistic forms or concepts employed in first-order disciplines. Another way in which they can differ is in terms of their role in answering questions about the domain. The distinction in this case is that the first-order discipline has a fact-finding and fact-systematizing role in the investigation of the scientific domain, and the second-order discipline does not.

With respect to the former distinction between first-order and second-order disciplines, our non-naturalist position says that philosophy is both first-order and second-order. It thus rejects the naturalist positions that would restrict the questions it asks. Warnock's "new philosophers" simply had too impoverished a conception of the range of questions a discipline can address. Mathematics addresses questions about a domain of numbers, sets, spaces, and so on, but, since metamathematics is part of mathematics, mathematics also addresses questions about the technical language within which mathematical accounts of those domains are given. My suspicion is that, not having separated

the two distinctions between first-order and second-order disciplines, those philosophers, already carried along by the linguistic turn, found it easy to assume that, since philosophy does not contribute to the empirical work of the natural sciences, its questions are, by default, restricted to the linguistic and/or conceptual structure of first-order disciplines.

With respect to the second distinction, I think that the naturalist's diagnosis is a half-truth. The true part is that philosophy is not a first-order discipline in the hands-on sense in which the sciences themselves are. There is surely some room for doubt about this in connection with ethics and aesthetics, where there is more plausibility in thinking of philosophy as a first-order discipline than there is in the philosophy of science. But I believe that thinking of them in this way confuses the roles of moralist and moral philosopher and the roles of art critic and aesthetician. Ethics and aesthetics are better seen as second-order studies: respectively, studies of the work of moralists and art critics. Philosopher-moralists like Sartre and philosopher-art critics like Danto wear two hats. Furthermore, the universal scope of philosophy strongly suggests that it is a second-order discipline with general interests in the common epistemological and ontological problems of first-order disciplines. Philosophy would hardly have this particular form of universal scope if it were literally a collection of first-order disciplines with circumscribed domains of objects as their subject matters.

The correct part of the naturalist's diagnosis is that philosophy is a second-order discipline in the sense that it is not part of a scientific attempt to ascertain the facts about a domain and build a theory to explain them on the basis of deeper principles. On my non-naturalism, philosophy is a first-order discipline only in asking questions about the world. The traditional philosophers who took philosophy to be an inquiry into general facts about reality did not, I think, want to say that philosophy is part of the scientific enterprise in a hands-on way. Rather, I think their view was that philosophy is part of the scientific enterprise in another way. It has the status of a second-order discipline in having no fact-finding or fact-systematizing role in scientific investigation, but that does not restrict its epistemic contribution to serving as conceptual referee in someone else's ball game.

The false part of the diagnosis is the assumption that not being a first-order discipline in not having a fact-finding or fact-systematizing role in scientific investigation means that a discipline is not in a position to address substantive questions about reality. The possibility that the naturalist's diagnosis overlooks is that some questions that arise in the course of a scientific investigation of reality are not questions that can be answered by broadening the investigation to attain a wider scientific

knowledge of the facts or better scientific knowledge of their underlying principles. This is because the questions are not scientific questions. They are philosophical questions. They concern the nature and validity of the very methodology on which such knowledge rests. For example, physics is in no position to dispel skeptical doubts about how we know that the future will be sufficiently like the past to justify our confidence in the scientific use of induction.⁴ Philosophical questions that arise in relation to mathematics are: Are numbers and sets objects? If so, what kind of objects are they? What does the mathematician's knowledge of numbers and sets consist in? Does mathematical knowledge depend on natural facts? and Why does the mathematician's knowledge of numbers and sets seem so much more certain than even the physicist's knowledge of matter? Similar questions arise in connection with logic and linguistics.

Such philosophical questions concern both the fundamental nature of the reality investigated in the first-order discipline and the methods that can provide knowledge of it. Those questions receive no answer in first-order mathematical, logical, and linguistic investigations, not simply because the focus of those investigations is on describing and explaining facts about the objects under study, but because those questions concern the status of the investigations and their methodological foundations.⁵

On our position, philosophy, conceived of as a second-order discipline with no role in the fact-finding and fact-systematizing of science, nonetheless answers certain questions about the objects in the domains of the sciences. How does it go about doing this? There is a long answer and a short answer to this question. The long answer, and it is only a partial answer at that, is this entire book, but particularly chapters 2, 4, 5, and 6. The short answer is that philosophy tries to answer such questions in the way that philosophers in the foundations of mathematics try to answer questions like what kind of things numbers are. Philosophical attempts to answer this question constitute the dialectic

4. Quine (1975, 68) claims that skeptical questions are scientific questions. I shall return to his claim below. I note here that his inability to say anything about how science might resolve such doubts argues in favor of the view in the text. See Stroud (1984, 209–54).

5. Although mathematicians, logicians, and linguists normally confine themselves to answering questions about the structure of objects such as numbers, sets, propositions, and sentences, some, like Frege, Hilbert, Brouwer, Gödel, and Chomsky, have not, for one reason or another, been content to leave philosophical questions to the philosophers, but have stepped out of their role as scientists to address epistemological or ontological issues about their discipline in a way that contributes importantly to our philosophical understanding. Such scientists are rare, and we mark their special status by referring to them as both a scientist and a philosopher, as, for instance, in the title of the Schilpp volume *Albert Einstein: Philosopher-Scientist*.

among realists, conceptualists, and nominalists that began in Greek philosophy and that continues, in a far more professionalized form, to the present. It is, moreover, hard to see how the foundations of mathematics, conceived of as a discipline the aim of which is to answer questions about the epistemology and ontology of mathematics, can be understood without taking it to be a second-order discipline (in the sense of the second first-order/second-order distinction) that can provide knowledge of reality.

Naturalism also was behind the positivist attack on traditional philosophy's claim to provide *a priori* answers to substantive factual questions about reality. Note again the early Wittgenstein's (1961 [1922], sec. 6.53) remark quoted above:

The correct method in philosophy would really be the following: to say nothing except what can be said, i.e., propositions of natural science—i.e., something that has nothing to do with philosophy—and then, whenever someone else wanted to say something metaphysical, to demonstrate to him that he had failed to give a meaning to certain signs in his propositions.

Schlick (1949, 285) thought that metaphysicians radically misjudge the nature of the philosophical questions they attempt to answer:

. . . The error committed by the proponents of the factual *a priori* can be understood as arising from the fact that it was not clearly realized that such concepts as those of the colors have a formal structure just as do the numbers or spatial concepts, [which] determines their meaning without remainder. . . . Thus, [the sentences that are the show-pieces of the phenomenological philosophy] say nothing about existence, or about the nature of anything, but rather only exhibit the content of our concepts . . . they bring no knowledge, and cannot serve as the foundations of a special science. Such a science as the phenomenologists have promised us just does not exist.

As I see it, the early positivists and more recent positivists such as Carnap and the late Wittgenstein overestimate the scope of linguistic meaning. Linguistic meaning is not rich enough to show either that all metaphysical sentences are meaningless or that all alleged synthetic *a priori* propositions are just analytic *a priori* propositions. The idea that linguistic meaning can be used for such purposes was Frege's; in particular, it came from his expansion of the concept of analyticity, undertaken in order to provide a semantic basis for his logicist explanation of mathematical truth as analytic truth. To a philosopher like Schlick, Frege's logical semantics together with Wittgenstein's philo-

sophical foundations in the *Tractatus* seemed capable of accounting for all of the phenomenologist's examples of synthetic *a priori* knowledge without resorting to faculties such as intuition. I believe that the program to explain away such examples of synthetic *a priori* knowledge as analytic *a priori* knowledge fails just as logicism does. The only way in which analyticity might be made powerful enough for such a positivist program is to adopt something like Carnap's (1956a, 222–32; 1956b) approach, but Quine (1953c, 32–57) shows that the approach doesn't help. The approach provides no concept of analyticity, so there is no notion of the analytic *a priori* under which to bring the metaphysician's synthetic *a priori* propositions. Arbitrarily putting the disputed propositions on a list with the uninterpreted term "analytic" at the top is hardly a refutation of metaphysics.⁶

Although our conception of philosophy conflicts with Quine's (1974, 2) nonpositivistic, methodological naturalism, it shares Quine's (1969a, 69) characterization of epistemology as "concerned with the foundations of the sciences." What I reject are his claims that science is first philosophy and that philosophy is a scientific concern with scientific knowledge. Philosophy, as I see it, is not continuous with science; it is not of a piece with science.⁷ Philosophy, or at least one large part of it, is subsequent to science; it begins where science leaves off.

Quine's case for naturalizing epistemology is based on what he (1969a, 75) refers to as the "[t]wo cardinal tenets of empiricism": first, "whatever evidence there is for science is sensory evidence," and, second, "inculcation of meanings of words must rest ultimately on sensory evidence." He (1969a, 75) refers to them, and hence naturalized epistemology, as "unassailable." This, however, is something of an exaggeration. They have been assailed, to my mind quite successfully, from various philosophical standpoints. Stroud (1984, 209–54) has

6. This is not, as I see it, a shortcoming of the notion of analyticity, but rather an inevitable consequence of the Fregean notion of analyticity. As I will explain below, the original sin was to broaden the traditional Lockean and Kantian notion of analyticity in the way Frege did instead of revising it slightly to meet his criticisms. When it is revised, we retain a narrow analytic/synthetic distinction that vindicates the traditional metaphysical conception's focus on the explanation of synthetic *a priori* knowledge.

7. My position further departs from Quine's in rejecting his claim that formal science is continuous with natural science (and hence the extraordinary consequence of his naturalized Platonism that entities referred to in unapplied portions of mathematics do not exist). On a realist view of the formal sciences, they are about abstract objects, while on everyone's view of the natural sciences, they are about natural objects. Hence, the epistemologies of the formal and natural sciences will differ in the way that traditional rationalists always claimed they do. We shall see, however, that this difference can be given a much sharper statement than it has received at the hands of traditional rationalists.