PART ONE

Foundations

ONE

Epistemology and Postmodern Resistance

1.1 *Truth seeking in the social world*

"ALL men by nature desire to know." So said Aristotle (1924: Book I) and he was right. Information seeking is a pervasive activity of human life. We scan the horizon to see if rain is imminent, we watch the news to learn who has been elected, and we listen to the traffic report to anticipate delays in our drive to work. Our interest in information has two sources: curiosity and practical concerns. The dinosaur extinction fascinates us, although knowing its cause would have no material impact on our lives. We also seek knowledge for practical reasons, as when we solicit a physician's diagnosis or compare prices at automobile dealerships. What we seek in all such cases is true or accurate information, not misinformation. No newspaper reader wants the sports page to misreport outcomes or the financial section to falsify market transactions. We commonly seek the truth, or a close approximation to the truth.

A familiar type of social interaction highlights the fact that truth is what we are after. Question asking is a universal feature of human communication and the prototype of a truth-seeking practice. The primary purpose of asking a question is to learn the answer, the true answer, from the respondent. In asking someone for the time, or the location of the nearest post office, a questioner evinces a desire to know something she does not already know. There are exceptions to this pattern. Teachers and quiz-show hosts pose questions when they already have the answer. Survey researchers simply want their respondents' opinions, true or false. These are nonstandard cases, however. The normal purpose of question asking is to learn a truth from the respondent. The truth motive explains why questioners direct their interrogatories at authoritative informants. If I want to know when the next faculty meeting is scheduled in my department, I will ask the department head or the secretary because *they* (probably) know the answer. I will not ask my children, my doctor, or a random pedestrian on the street.

Although question asking is interpersonal, truth seeking is not universally or necessarily social. To gauge the probability of rain, I can personally check

the sky rather than listen to a weather forecaster. An enormous portion of our truth seeking, however, is either directly or indirectly social. It is directly social when one verbally requests information from others, or consults written texts. It is indirectly social when one's current activity, albeit autonomous, exploits intellectual skills acquired from others, through formal or informal education. The social dimensions of knowledge are dramatized by modern society, which teems with information-dispensing enterprises ranging from newspapers and libraries to the World Wide Web. Complex societies delegate knowledge-gathering and knowledge-disseminating missions to many specialized agencies. Justice systems are instituted to determine who perpetrated crimes or torts; census takers are appointed to obtain population statistics; and schools are established to transmit knowledge. These activities and enterprises form the starting point of social epistemology as here conceived.

Traditional epistemology, especially in the Cartesian tradition, was highly individualistic, focusing on mental operations of cognitive agents in isolation or abstraction from other persons. Roughly this traditional pursuit is what I have called *individual epistemology*. I have no general objection to individual epistemology; indeed, it was the subject I explored in the predecessor of this volume, *Epistemology and Cognition* (Goldman 1986). But given the deeply collaborative and interactive nature of knowledge seeking, especially in the modern world, individual epistemology needs a social counterpart: *social epistemology*. That is the topic of the present book.[1]

In what respects is social epistemology social? First, it focuses on social paths or routes to knowledge. That is, considering believers taken one at a time, it looks at the many routes to belief that feature interactions with other agents, as contrasted with private or asocial routes to belief acquisition. This "social path" dimension is the principal dimension of sociality that concerns me here. Second, social epistemology does not restrict itself to believers taken singly. It often focuses on some sort of group entity—a team of co-workers, a set of voters in a political jurisdiction, or an entire society—and examines the spread of information or misinformation across that group's membership. Rather than concentrate on a single knower, as did Cartesian epistemology, it addresses the distribution of knowledge or error within the larger social cluster. Even in this second perspective, however, the knowing agents are still individuals. Third, instead of restricting knowers to individuals, social epistemology may consider collective or corporate entities, such as juries or legisla-

[1] The contrast between individual and social epistemology, plus the way I characterize individual epistemology, may make it sound as if mental operations fall outside the province of social epistemology. That is not so. As we shall see, especially in Ch. 4, the way an agent reasons from the reports, testimony, and arguments of others belongs to the field of social epistemology. In a sense, then, individual and social epistemology are not sharply exclusive branches of epistemology. I am indebted on this point to Corlett 1991. However, the bulk of the practices subsumed under social epistemology fall outside individual epistemology.

tures, as potential knowing agents. This third approach will occasionally be taken in this volume, but only rarely.[2]

Having said a few words about the social dimension of social epistemology, let me now say a few about its *veritistic* dimension, that is, its orientation toward truth determination. Veritistic epistemology (whether individual or social) is concerned with the production of knowledge, where knowledge is here understood in the 'weak' sense of *true belief*.[3] More precisely, it is concerned with both knowledge and its contraries: *error* (false belief) and *ignorance* (the absence of true belief). The main question for veritistic epistemology is: Which practices have a comparatively favorable impact on knowledge as contrasted with error and ignorance? Individual veritistic epistemology asks this question for nonsocial practices; social veritistic epistemology asks it for social practices. This book is an essay in social veritistic epistemology.

A brief glimpse of the book's contents should help put some flesh on this abstract skeleton.[4] Part One (Chapters 1–3) formulates and defends my general approach, contrasting it with other conceptions of social epistemology. Chapter 1 confronts and rejects reasons for scoffing at truth and denying the very possibility of its attainment. Chapter 2 dissects the truth concept in greater philosophical depth, and then the basic structure of my approach is detailed in Chapter 3.

Part Two (Chapters 4–7) examines generic social-epistemic practices, which cut across specialized domains. Chapter 4 considers simple reports or testimony about allegedly observed events. What reporting practices would be most beneficial, and how can hearers make positive veritistic use of speakers' reports? Chapter 5 analyzes the more complex speech practices of arguing and debating. Rules for debate are examined, and we explore how conformity with such rules can promote the goal of truth. Chapter 6 looks at the effects of technology and economics on the feasibility and scope of information dissemination. How does the electronic revolution affect prospects for human knowledge? How does the financing of the mass media constrain their role in the advancement of knowledge? Chapter 7 examines the role of "gatekeepers" of communication. What framework for speech regulation or deregulation would maximally foster the spread of knowledge? The free market for ideas is often touted as the best framework for knowledge maximization. Is it the best?

Part Three (Chapters 8–11) canvasses four specialized domains in which knowledge quests are crucial. Chapter 8 examines science, with specific atten-

[2] Since it plays a very minor role in my project, I shall not give any account of the metaphysical status of collective entities or of belief as the state of a collective entity. For one treatment of this topic, see Gilbert 1989.

[3] Beginning in Ch. 3 I shall broaden the inquiry so as to encompass degrees of belief (subjective probabilities) and degrees of knowledge. For the moment, however, I keep things simple by restricting attention to unqualified, flat-out belief.

[4] The synopsis that follows is not intended to be exhaustive. It generally presents only representative topics from each chapter.

tion to scientific authority and the assignment of professional credit. Chapter 9 looks at the truth-determining capacities of the law. It compares the prospects for truth determination under the common law system and the civil law system, and asks how the management of expert testimony can best promote truth determination. Chapter 10 targets a prominent topic in modern political science: the role of information in democracy. What types of information do voters need for democracy to succeed, and which institutional practices would foster optimal voter knowledge? Finally, Chapter 11 concerns education. What is the proper role of truth in systems of education, and which kinds of classroom and policymaking procedures can best cultivate knowledge in the long run?

The reader may wonder at this point how veritistic social epistemology can plausibly be applied to law or democracy. After all, knowledge and error-avoidance are not the only pertinent criteria for appraising these institutions' practices. This point is entirely correct, so I need to explain more precisely the mission of veritistic epistemology. Veritistic epistemology is a specialized subject, analogous to environmental studies and nutritional studies. Neither epistemology nor these other fields tries to fix correct social policies "all things considered." Each is dedicated to a special social value, one circumscribed kind of thing that people and institutions take an interest in. Environmental studies examines the impact of policies specifically on environmental integrity. Nutritional studies examines the impact of food content and diets specifically on health. The distinctive value of each field need not be exhaustive, supreme, or paramount; that does not invalidate the mission or integrity of the subject. Even if taste sometimes trumps health in the larger scheme of things, the nutritional effects of what you eat are worth studying. Analogously, the knowledge impact of various policies is worth determining even if that impact is trumped, in certain spheres, by other values. For example, the exclusionary rule that bars the admission of illegally obtained evidence might be acceptable, all things considered, even though it reduces the amount of knowledge obtained at trial. We need not resolve the problem of how, exactly, to prioritize plural values. As long as multiple things are valued, a sensible division of labor will ordain special fields of study, each dedicated to variables that augment or diminish the incidence of a selected type of good or bad. Veritistic epistemology is such a special field, where the selected good is knowledge and the selected bads are error and ignorance.

Social veritistic epistemology bears certain resemblances to familiar segments of social science, but its distinctive features must not be overlooked. Social veritistic epistemology does not merely seek to describe social practices that are actually in place, nor to trace their historical development. It has the distinctive *normative* purpose of evaluating or appraising such practices on the veritistic dimension, that is, in terms of their respective knowledge consequences. Practices currently in place will be veritistically good or bad in varying degrees; they will rarely be ideal. To investigate prospects for

improvement, social epistemology must be prepared to transcend previously realized practices. It must be ready to consider the probable veritistic properties of practices that have not yet been, but might be, adopted. Thus, veritistic epistemology tackles the admittedly nontrivial task of assessing both actual and possible practices in terms of their foreseeable informational bounty.

1.2 *Veriphobia*

Having outlined my veritistic approach to social epistemology, I must hasten to observe that the playing field of social epistemology has been substantially preempted by world views quite opposed to the veritistic conception. I allude to such views as social constructivism, postmodernism, pragmatism, cultural studies, and critical legal studies. Although writers of these persuasions rarely use the phrase "social epistemology," they engage in projects that bear a superficial similarity to mine.[5] However, they all share a deep skepticism or utter repudiation of truth as a viable criterion for studying epistemic phenomena. They would raise a suspicious and even scornful eyebrow at any serious attempt to wield the concept of truth. I think they suffer from an affliction that may be called *veriphobia*. Although veriphobes differ from one another in the details of their preferred methodologies, they share the idea that the study of social "knowledge" should be confined to the interpersonal and cultural determination of belief: not true or false belief, just plain belief. When veriphobes talk of "knowledge," they do not refer, as I do, to *true* belief, but to something like institutionalized belief. They deliberately bracket questions of truth and falsity, holding that nothing legitimate can come of any attempt to draw distinctions in those terms. Whereas *epistemology* derives from the Greek word *episteme*, meaning knowledge, their enterprise is better classified as social *doxology*, from the Greek word *doxa*, meaning opinion or belief (whether true or false).[6]

A clear preference for social doxology over social epistemology is expressed by Steven Shapin, in a book with the intriguing but misleading title *A Social History of Truth* (Shapin 1994). In the first chapter Shapin takes issue with "a special community of language-users called 'academic philosophers'" who want to mark a distinction between what is true and what is merely taken to be so (1994: 3). He calls this a "restrictive" notion of truth, and pleads for a more "liberal" sensibility in which truth is simply *accepted belief* (1994: 4). After all, says Shapin, historians, cultural anthropologists, and sociologists of

[5] One of these writers, Steve Fuller, used the phrase "social epistemology" as the title both of one of his books (Fuller 1988) and of the journal that he has edited.

[6] This proposed use, of course, is unrelated to the religious use of the term "doxology."

knowledge are interested in understanding cultural variation in belief. Since truth on the "restrictive" approach cannot vary across communities, a liberal approach to truth is needed to accommodate these disciplines. So truth is defined, for Shapin's purposes, as accepted belief.

I have no quarrel with intellectual history, cultural anthropology, or the sociology of knowledge. They are perfectly legitimate disciplines understood as Shapin describes them, as explorations of social forces that influence the development and variation in belief. But why tamper with the word "true" to accommodate these disciplines? We already have such words as "belief" and "opinion," and these disciplines can ply their trades with these and kindred terms. They need no spurious help from a bogus use of "truth." The expressions "true belief" and "accepted belief" are simply not equivalent. There are (and were) innumerable accepted beliefs that are not true, for example, that the sun revolves around the earth. Why propose this revisionary sense of "true" when there is already a perfectly good word for the concept Shapin needs, namely, "belief"? Shapin defends his use of "truth" as more "tolerant" (1994: 5) than the restrictive use, presumably because it is less prone to invite invidious judgments among different communities or cultures. But if Shapin expects his favored disciplines to abstain from veritistic appraisals of different communities, let their practitioners simply use the words "belief" and "opinion" rather than "truth." Certainly history, cultural anthropology, and sociology of knowledge should not be deprived of the belief concept. But that does not mean that the ordinary ("restrictive") concept of truth should be replaced by, or confused with, the belief concept.

Unless true opinion is distinguished from opinion *per se*, we cannot draw the palpable distinction between normal, truth-seeking questioners, and survey researchers who merely want respondents' opinions.[7] Unless we avail ourselves of the so-called "restrictive" use of "true," this important distinction will be lost. Retention of this sense of truth does not stem from intolerance; it stems from a sensible desire to keep a valuable tool in our conceptual toolkit.

The distinction between truth and belief can be illustrated by the concept of a valid argument. According to the standard definition, an argument is *valid* just in case its conclusion must be true if its premises are all true. Here is an example:

> Premise 1: If it rained, then the street are wet.
> Premise 2: The streets are not wet.
> Conclusion: It did not rain.

If the premises are both true, the conclusion must be true as well. So the argument is valid. Suppose, however, that "true" is replaced by "believed" in the

[7] Of course, many survey questions concern the respondents' preferences rather than beliefs. It suffices for my purposes to focus on the latter.

foregoing definition. This yields a new definition of what we might call "balidity": an argument is *balid* just in case its conclusion must be believed if its premises are all believed. Is the indented argument balid? No. The two premises can both be believed without the conclusion being believed; in particular, if the believer is unappreciative of the logical relation between the premises and conclusion. Thus, if we substituted "belief" for "truth" everywhere, we would be forced to abandon the standard distinction between valid and invalid arguments, and make do with a different distinction between balid and inbalid arguments.

Shapin says that nothing in his book is intended to be an argument against the legitimacy of the restrictive concept of truth (1994: 4). Perhaps, then, he would not oppose (veritistic) social epistemology, but would simply prefer social doxology. Other theorists, however, certainly take a critical stance toward anything akin to veritistic social epistemology. They not only prefer doxology to veritistic epistemology, but challenge the very viability of the latter. I begin this book, therefore, with replies to many of their predictable objections. The remainder of this chapter looks at a sampling of probable misgivings, especially ones originating in postmodern quarters (where the term "postmodern" is understood loosely). Adherents of postmodernism now comprise a populous camp in the general vicinity of social epistemology, and they dismiss invocations of truth as naive and antiquated. This chapter therefore undertakes a minesweeping operation, to clear the territory of (many of) their objections. Also addressed are related worries of nonpostmodern philosophers. A more detailed and philosophically nuanced discussion of truth is undertaken in Chapter 2. Finally, the general contours of veritistic social epistemology are presented in Chapter 3, where I elaborate its structure and mission, critically examine rival conceptions of social epistemology, and reply to additional concerns.

1.3 *Six criticisms of truth-based epistemology*

Purveyors of anti-truth hostility are legion, but it is tricky to pinpoint their theses and arguments. Veriphobic arguments often evaporate like mist when examined in the full light of day. Nonetheless, I assemble six types of criticisms that are either expressly stated or strongly intimated in veriphobic writings. Some objections draw on well-known and hotly debated theses on which there are massive literatures. These literatures cannot be addressed here with anything approaching thoroughness, so I shall confine myself to selected arguments and comparatively brief replies. Because this book primarily aims to construct a positive epistemology rather than a critique of opposing voices, I restrict ground-clearing discussions to the first two chapters (plus bits and pieces of later chapters). Here, then, are six criticisms extracted from the literature. Although there is some overlap in the stated criticisms themselves, my

replies will be fairly separate. In the case of several objections, a central critical theme is embellished by a family of variations.

(1) There is no such thing as transcendent truth. What we call "true" is simply what we agree with. So-called truths or facts are merely negotiated beliefs, the products of social construction and fabrication, not 'objective' or 'external' features of the world.
(2) Knowledge, reality, and truth are the products of language. There is no language-independent reality that can make our thoughts true or false.
(3) If there were any transcendent or objective truths, they would be inaccessible and unknowable by human beings, hence unavailable for any practical epistemological purposes.
(4) There are no privileged epistemic positions, and no certain foundations for beliefs. All claims are judged by conventions or language games, which have no deeper grounding. There are no neutral, transcultural standards for settling disagreements.
(5) Appeals to truth are merely instruments of domination or repression, which should be replaced by practices with progressive social value.
(6) Truth cannot be attained because all putatively truth-oriented practices are corrupted and biased by politics or self-serving interests.

1.4 *The argument from social construction*

Let me repeat the first criticism, to have it directly before us.

(1) There is no such thing as transcendent truth. What we call "true" is simply what we agree with. So-called truths or facts are merely negotiated beliefs, the products of social construction and fabrication, not 'objective' or 'external' features of the world.

This is a bundle of claims culled from a variety of sources. What they all deny is that truth is transcendent, in the sense that truths exist or depend on the nature of "reality" rather than on human persuasion. This is a criticism of veritistic epistemology because it presumes that truth does indeed depend on reality, which is what the present criticism disputes. In other words, veritistic epistemology requires some sort of correspondence conception of truth, at least a conception compatible with correspondence intuitions about truth.

In addition to rejecting transcendent truth, criticism (1) proposes an alternative theory of truth, roughly what is known as the "performative" theory. On this theory, calling a statement "true" is just a way of concurring with it. As Richard Rorty (1991: 24) puts it, "true" is merely a compliment we pay to statements we find good to believe. Truth is not a property possessed by beliefs in virtue of some relation they bear to "worldly" facts that stand outside of discursive practices.

The performative theory, however, is off the mark, as I shall briefly indicate here before returning to the subject in Chapter 2. There are many cases in which "true" does not express agreement or concurrence with any particular statement. For instance, if Frankie says there is left-over stew in the refrigerator and Johnnie says there isn't, I might comment, "Either Frankie or Johnnie said something true." But I may have no opinion as to which one is right, so I am not agreeing with either Frankie's or Johnnie's statement. Another flaw in the performative theory is that "true" can be used to ask questions as well as express agreement, as when one says, "Is Melanie's contention true?" Here one seems to be asking about the relation between Melanie's statement and an objective state of affairs, not just looking to compliment a statement. Performative theorists are right, of course, to the extent that someone who believes a statement to be true is prepared to agree with others who might assert it. This does not imply, however, that *all one does* in calling a statement "true" is signal a willingness to agree with others.

The suggestion that "true" merely signals belief, or a willingness to agree, fits the last sentence of (1), which says that truths are merely negotiated beliefs. The palpable error in this theory, construed as an account of the ordinary meaning of truth, can be highlighted by again considering questions. No matter how well a belief has been negotiated, or how deeply entrenched, institutionalized, or "stabilized" it is, we can always intelligibly ask, "But is it really *true*?" Mere entrenchment or institutionalization—in George Orwell's (1949) totalitarian society of *Nineteen Eighty-Four*, for example—would not resolve the issue of truth. As Hilary Putnam (1978: 108–9) observes, if "true" simply *meant* "stably believed," it would be pointless to say, "I grant that *P* is stably believed, but is it true?" Since such a question always does have a point, truth cannot be equated with stabilized or institutionalized belief.

A somewhat different version of an agreement or consensus theory of truth is also endorsed by Rorty. In other passages he writes of the "homely use of 'true'" to mean "what you can defend against all comers" (Rorty 1979: 308), and elsewhere suggests that "*S* knows that *P*" is a "remark about the status of *S*'s reports among his peers" (1979: 175). A brief formulation of the theory might be: truth is what peers let you say. This formula led one wag to pen the following limerick about Rorty:

> "Truth is what peers let you say,"
> It was false said at the APA,
> And so Richard Rorty
> Changed peer groups at forty;
> Now his statements get truer each day.[8]

[8] The author of this limerick is Dean Zimmerman. "The APA" refers to the American Philosophical Association, most of whose members would probably *not* consent to this theory of truth. Rorty's move from the philosophy department at Princeton University to the English department at the University of Virginia undoubtedly put him in a milieu more receptive to his theories.

Did Rorty's statements really become truer when he changed peer groups? The poet obviously does not think so; nor do I. Peer acceptance of one's statements might make one happy, but it does not make those statements more or less true.[9]

A consensus theory of truth seems wrong from the start, at least as an account of our ordinary concept. Not only does the truth of a proposition not require total consensus, it does not require anybody at all to believe it. Consider a proposition that asserts the existence of a huge ridge beneath the oceans (the Mid-Oceanic Ridge) and of a deep canyon (the Great Global Rift) that runs the length of the ridge and right along its center. Had the history of geological science been different, had the sea floor not been explored so extensively, no human being (or other intelligent creature) might now be aware of these formations. Nonetheless, a proposition asserting their existence would still be true. Similarly, if nobody had ever formed a belief in the double helical structure of DNA, it would still be true that DNA has a double helical structure. Such examples refute the attempt to equate truth with actual belief. Can a belief theory of truth be salvaged by appeal to future rather than current beliefs? Charles Peirce hoped to accomplish this in saying, "The opinion which is fated to be ultimately agreed to by all who investigate is what we mean by truth" (1931–5: 5.407). But surely this is not what we *mean* by truth. Even if a truth is formulated and investigated, there is no metaphysical guarantee that every investigator will be persuaded of it. Furthermore, even if all who investigate *will* converge on a given opinion, that does not make it true. Perhaps all the intelligent creatures who ever investigate a certain astronomical event that occurs at one end of the universe live at this end of the universe, and their evidence about the event, as it happens, is misleading. They might all converge on the same opinion, although it is erroneous. The conviction that convergence coincides with truth is the faith of optimists, not part of a proper definition of truth.

Until now my replies have assumed that critics wish to equate the ordinary sense of "true" with mere belief. But there is an alternative line that social constructivists may prefer. They might concede that ordinary thought admits the possibility of truth without consensus, but why should ordinary thought go uncontested? An analogy can be drawn here with moral language. The philosopher J. L. Mackie (1977) conceded that people regularly assume there are moral facts, but he disputed this widespread assumption. He denied the existence of "worldly" moral facts, finding them "queer" and unlike well-behaved physical facts. Metaethical theorists of this sort are called "error theorists." Analogously, social constructivists like Bruno Latour and Steve Woolgar (1986) seem to be error theorists about (unobserved) scientific objects or facts. Latour and Woolgar admit that scientists believe in objective scientific facts, but they

[9] For a pragmatist like Rorty, happiness (or the like) is all that matters. But whether or not truth "matters," it should not be equated with peer acceptance.

themselves reject these entities. All that really exists are sets of beliefs or inscriptions that scientific actors distribute within a social network.

Latour and Woolgar's theoretical vacillations make interpretation somewhat difficult. Near the beginning of their book, they adopt an agnostic position about the allegedly external entities or facts that scientists purport to discover (1986: 31). If they maintained this agnosticism throughout they could not be error theorists, because agnosticism consists in neutrality, which is incompatible with denial. In subsequent passages, however, Latour and Woolgar depart from their initial neutrality. They explicitly affirm that facts (or truths) are "constituted" or "fabricated" when statements come to be accepted, or no longer contested. They explicitly deny what scientists proclaim, namely, that scientists discover entities with independent, "out there" existence.

> [I]n situations where a statement is quickly borrowed, used and reused, there quickly comes a stage where it is no longer contested. Amidst the general Brownian agitation, a fact has then been constituted. (1986: 87)

> Despite the fact that our scientists held the belief that the inscriptions could be representations or indicators of some entity with an independent existence "out there," we have argued that such entities were constituted solely through the use of these inscriptions . . . [W]e do not conceive of scientists . . . as pulling back the curtain on pregiven, but hitherto concealed truths. Rather, objects (in this case, substances) are constituted through the artful creativity of scientists. Interestingly, attempts to avoid the use of terminology which implies the preexistence of objects subsequently revealed by scientists has led us into certain stylistic difficulties . . . We have therefore found it extremely difficult to formulate descriptions of scientific activity which do *not* yield to the misleading impression that science is about *discovery* (rather than creativity and construction) . . . [T]he formulations which characterize historical descriptions of scientific practice require exorcism before the nature of this practice can be best understood. (1986: 128–9)

Clearly, then, Latour and Woolgar deny the existence of "out there" truths or facts. The language of "truth" or "fact" is only legitimately applicable to accepted statements of the community of scientists, that is, to consensual beliefs. This is explicitly stated elsewhere by Woolgar: "[T]here is no object beyond discourse . . . the organization of discourse *is* the object. Facts and objects in the world are inescapably textual constructions" (1988: 73). The question is: What arguments do Latour and Woolgar offer to support their claim? What warrants them in denying the existence of scientific facts (or entities) independent of the negotiated agreements of scientists?[10]

[10] In some passages Latour and Woolgar suggest a weaker position. For example, they write: "We do not wish to say that facts do not exist nor that there is no such thing as reality . . . Our point is that 'out-there-ness' is the *consequence* of scientific work rather than its *cause*" (1986: 180–2). The last sentence seems to imply that there *is* "out-there-ness," which is inconsistent with the passages quoted in the text that imply the *non*existence of independent, "out-there" (scientific) facts or entities. My criticism in the text

Apparently, Latour and Woolgar think that sociological analysis establishes the case for the nonexistence of independent scientific facts.

> More recently, sociologists of science have convincingly argued the case for the social fabrication of science . . . But despite these arguments, facts refuse to become sociologized. They seem able to return to their state of being "out there" and thus to pass beyond the grasp of sociological analysis. (1986: 175)

So Latour and Woolgar's argument for the nonexistence of "out there" facts is supposedly based on sociological analysis. The question is: How does this argument from sociological analysis proceed?

Observe that their conclusion, that there are no external (scientific) facts, is what philosophers call a *negative existential* statement. Other statements of this genre include "There are no witches" and "There are no ghosts." Similarly, although the neuroendocrinologists studied by Latour and Woolgar posit the independent existence of certain hormones, Latour and Woolgar deny their existence. They regard the scientists' posits as just a "mythology" (1986: 54). The problem is: How can sociological analysis alone justify the negative existential conclusion "There are no (external) hormones"? Perhaps the form of inference they employ is a variant of "inference to the best explanation" (Harman 1965). Today we deny the existence of witches because all the phenomena that once seemed to indicate the existence of witches can now be explained without this hypothesis. The best explanation of those phenomena allows us to dispense with witches. Latour and Woolgar may be arguing that the "observable" phenomena they study, namely, agreement and disagreement among scientists, can be fully and satisfactorily explained by social acts of argumentation and negotiation (triggered, perhaps, by outputs of experimental apparatus). "External" scientific entities like hormones or chemical structures are not needed for a satisfactory explanation, so we should deny their existence.

Can sociological analysis alone provide a satisfactory explanation of scientific agreement and disagreement? For argument's sake, let us grant that social discourse and negotiation provide at least a *partial* explanation of scientific opinion formation. The proximal or immediate causes of scientists' beliefs, in other words, are acts of verbal argumentation. What about the distal or more remote causes of these beliefs, however? Couldn't they include "external" microentities (ones that either match or mismatch the scientists' descrip-

focuses on the latter, more extreme, claim, which I believe is Latour and Woolgar's main position. Philip Kitcher (1993: 165–7) addresses a weaker interpretation, under which Latour and Woolgar allow that scientists engage in causal interaction with something beyond themselves but merely deny that their beliefs are causally affected by these interactions. In reply, Kitcher constructs an ideal experiment which, if performed, would undoubtedly show that people's beliefs *would* be affected by inputs from external, asocial nature. Kitcher's hypothetical experiment is a good antidote, I agree, to the weaker claim, but I think that, on the whole, Latour and Woolgar mean to endorse the stronger claim.

tions)? This is just what realist scientists and philosophers maintain, and they would add that such entities are needed for a *full* explanation of observable phenomena, including the observed inscriptions on scientific recording devices.

To elucidate this realist response, let me introduce the following notation, which fits the neuroendocrinology case studied by Latour and Woolgar:

- C = a nonobservable chemical structure, such as Pyro-Glu-His-Pro-NH_2;
- T = traces on a recording apparatus, such as a myograph, a gamma counter, or an amino acid analyzer;
- P = perceptual observations of T by scientists;
- N = negotiatory or argumentative acts by scientists;
- B = belief states of scientists, e.g., the belief that TRF (thyrotropin releasing factor) is Pyro-Glu-His-Pro-NH_2.

According to Latour and Woolgar, the following diagram depicts an adequate causal explanation of the production of B, the belief states of scientists. (Arrows represent causal-explanatory relations.)

$$T \longrightarrow P \longrightarrow N \longrightarrow B$$

Moving backward from "B" in the diagram, we see that belief states are (partly) caused by negotiatory acts, negotiatory acts are (partly) caused by the perceptions of recording device traces, and these perceptions are (partly) caused by those traces. This exhausts the set of causal or explanatory factors that Latour and Woolgar seem to acknowledge. Omitted from the set are any microentities like chemical structures.

Realists might accept Latour and Woolgar's positive explanatory story *as far as it goes*. They could agree that all of these factors have causal and explanatory relevance. However, they wish to supplement the list of causal-explanatory factors. In Latour and Woolgar's story, T goes uncaused or unexplained; but doesn't it stand in need of explanation? The proper explanation, say scientific realists, is one invoking some sort of chemical microentities that must have given rise to the observed recording traces (or inscriptions) under the experimental conditions. This is depicted in the following, expanded diagram:

$$C \longrightarrow T \longrightarrow P \longrightarrow N \longrightarrow B$$

By acknowledging the existence of the unobservable entities, C, we provide a better, more complete, explanation of the events in question than Latour and Woolgar provide. This explanation, of course, would invoke precisely the kind of "out there" entities that Latour and Woolgar reject.

To demonstrate the plausibility and legitimacy of expanded causal explanations, let me switch examples. Suppose that Jones suffers a head injury on a particular occasion, and we seek a causal account of this event. Initially, we

point to the fact that a ceiling beam collapsed and struck him on the head. This looks like a very satisfactory explanation, which might be diagrammed as follows:

Ceiling beam collapse ⟶ Head contusion

Does the fact that we have a satisfactory explanation of this sort exclude a more complete explanation? Certainly not. We might also seek an explanation of why the ceiling beam collapsed, and the answer might be: there was an earthquake. We could then expand our causal-explanatory diagram as follows:

Earthquake ⟶ Ceiling beam collapse ⟶ Head contusion

The fact that the first diagram is correct *as far as it goes* does not preclude the second diagram from also being correct. The moral for the Latour and Woolgar case is obvious. The mere fact that negotiatory acts play a role in the formation of scientific belief does not preclude the possibility of a more complete explanation, and such an explanation might ultimately invoke "external," "out there" entities of the sort Latour and Woolgar dislike.

The crucial dispute is between neuroendocrinologists and sociologists like Latour and Woolgar. The former claim that the best explanation of the observed trace-patterns of recording devices (T) is the existence of certain chemical substances (C). The sociologists dispute this. With what epistemic warrant, however, do sociologists join issue with the neuroendocrinologists? Sociologists may be experts on causal links between negotiations and beliefs, but they have neither evidence nor expertise about the links between chemical substances and recording-device traces. How could sociological information possibly shed light on this question? On the subject of chemistry, therefore, sociologists are well advised to hold their tongues. But since they are in no position to deny the existence of chemical microentities, they are unwarranted in saying that scientists "fabricate" such entities when they hypothesize them. Consensual *belief* in such entities may indeed be produced by human interaction. But the entities themselves, if they really exist, are not produced by human interaction. Furthermore, unless the sociologists can establish that the entities do not exist, unless they can establish these negative existential statements, the term "fabrication" is misleading because it suggests the construction of a fiction. My contention is, precisely, that they have failed to establish the negative existential statement.

A final difficulty for the social constructivist account of factuality is the infinite regress it generates, as pointed out by Arthur Fine (1996). According to constructivism, the truth of a statement P consists in there being a consensual belief in P by a community. But wherein consists the truth that there is a consensual belief in P? According to the theory, it must reside in yet another level of consensual belief, namely, belief in a proposition P^*, where P^* is the proposition that there is a consensual belief in P. Once again we must ask wherein

the truth of *P** consists. According to constructivism, its truth must reside in still another consensual belief, this time a belief in the proposition *P***: that there is a consensual belief in *P**. Obviously, an infinite regress is generated. If there is any truth of the constructivist sort, there must be infinitely many levels of consensus. Surely, however, people are incapable of so many levels of belief! So there cannot be any truths or facts of the constructivist sort.

Constructivists might reply that their theory of truth is not intended to apply to truths about consensus. These truths, they might hold, are a special, privileged case. They have an "intrinsic" reality independent of agreements about them. In this fashion, constructivists might seek to escape the threat of a regress by seeking refuge in realism about consensus. But why should anyone accept realism about consensus (i.e., realism about belief states) if realism is rejected for chemical structures? This is just half-baked metaphysics. Social constructivists, I fear, have not really reflected systematically on these ontological questions.[11]

1.5 *Language and worldmaking*

The most pervasive source of social constructivism within postmodernism, perhaps, is its obsession with language as the great determiner, the determiner of both knowledge and reality. The dominance of language is encapsulated in Jacques Derrida's dictum: "The text is all and nothing exists outside of it" (1976: 158). It is also found in frequent assertions that truth can never be independent of language. Truth is said to be an "effect of discourse" (Flax 1990*a*: 35), or "a product of our willing bewitchment by language" (Norris 1988: 188). At a symposium on sexuality, one postmodern anthropologist suggested that if a particular language lacks the word for "orgasm," the people speaking the language cannot possibly experience anything like an orgasm (de Waal 1996: B1). (This remark led the assembled natural scientists to wonder whether, without a word for "oxygen," people could breathe.)

This obsession with language as the determiner of knowledge and reality leads to the second line of criticism of veritistic epistemology, which I formulated as follows.

(2) Knowledge, reality, and truth are the products of language. There is no language-independent reality that can make our thoughts true or false.

The first point to notice is that postmodernists tend to conflate knowledge, reality, and truth. These must be kept distinct. It is far more plausible to regard

[11] I do not wish to claim that all social constructivists, much less all researchers in science studies, hold the radical position I am criticizing. Some may hold more moderate positions. But only the radical position described here poses a potential roadblock to my veritistic project, so that is the position that has occupied my attention.

knowledge and thought as products of language than reality or truth, as I shall argue below. Even with respect to knowledge and thought, however, the significance of language has been oversold. The case for a more limited role for language is persuasively presented by Steven Pinker (1994: ch. 3), a case that I briefly sketch below.

The thesis of linguistic determinism antedates postmodernism, starting as early as the famous Sapir–Whorf hypothesis (Sapir 1921) that people's thoughts are determined by the categories made available in their language. One example is color. The linguistic determination thesis holds that people divide the color spectrum by the inventory of color words in their language. In fact, the reverse seems to be true: the way we see colors determines how we learn words for them. For one thing, speakers of different languages unanimously pick the shades of the eight-crayon Crayola box—the fire-engine reds, the grass greens, the lemon yellows—as the best examples of their color words, as long as the language has a color word at all in that part of the spectrum. This suggests that color "preferences" stemming from what we *see* shape the color vocabularies of languages. Languages do differ in their numbers of color words, but there seems to be an orderly progression based on which colors are perceptually most salient. Two-color languages have words for black and white, three-color languages have black, white, and red, and so on. In a clinching experiment by Eleanor Rosch (Heider) with the Dani of New Guinea, a people speaking one of the black-and-white languages, the Dani were found to be quicker at learning a new color category that was based on fire-engine red than a category based on an off-red (Heider 1972). That they could learn a new color category at all shows that the ability to *think* or *represent* color categories is not exhausted by prior linguistic vocabulary, and that a certain previously unlabeled shade was more easily learned than another suggests that they already had a language-independent preference for the former shade, presumably based on a nonlexicalized perceptual experience.

The independence of thought and language is attested by many other phenomena. In a recent book, Susan Schaller (1991) tells the story of Ildefonso, a 27-year-old deaf immigrant from a small Mexican village who lacked any form of language whatsoever—no sign language, no writing, no lip reading, no speech. When Schaller became his volunteer teacher, Ildefonso quickly showed her that he had a full grasp of number (he learned to do addition on paper in three minutes), and demonstrated numerous other dimensions of intelligence. Experimental work in cognitive science also demonstrates language-independent thought. Karen Wynn (1992) has experimentally demonstrated that five-month-old babies—obviously prelinguistic creatures—can do simple forms of mental arithmetic, such as add one and one, or subtract one from two. Other experimental research, by such pioneers as Roger Shepard and Stephen Kosslyn, has shown that adults (and presumably children) solve certain kinds of tasks using wordless imagery (Shepard and Metzler 1971; Kosslyn 1980). Furthermore, studies of first-language acquisition raise

questions about the categories babies possess and the thought operations they must engage in *before* knowing any (natural) language. In learning their first language, babies learn its grammatical properties. But how could they mentally represent these grammatical properties unless they can already represent such linguistic categories as noun, verb, verb phrase, and so forth? And how could they choose among alternative possible grammars, based on what they hear, if they did not already possess reasoning procedures? Thought must ontogenetically precede language.

Finally, everyday experience plus a little reflection show that language does not exhaust thought. We have all had the experience of finding that a sentence we had just uttered or written does not convey exactly what we meant to say. To have that feeling, there must be a "what we meant to say" that is different from what we said. Sometimes, moreover, it is not easy to find *any* words that adequately convey what we meant (Pinker 1994: 57–8). Confirmation of this comes from reflecting on ambiguity. Below are some delicious headlines cited by Pinker (1994: 79) that actually appeared in newspapers:

> Child's Stool Great for Use in Garden.
> Stud Tires Out.
> Iraqi Head Seeks Arms.
> Columnist Gets Urologist in Trouble with his Peers.

Each headline contains at least one word that is ambiguous. But surely the original thought underlying the word was not ambiguous, for the writers of the headlines knew which of the two senses they had in mind. If there can be two thoughts corresponding to one word, however, thoughts can't be words. In short, postmodernists need to moderate their claim that language is the great determiner of thought, for that unqualified view is simply false.

What about language and reality? Postmodernists seem to be old-fashioned idealists or solipsists, at least according to what they say. Some of them simply deny the existence of the external world. Their behavior, however, belies what they write. Why do they bother to write or give lectures at all if they do not believe that other people exist (including their bodies) and can read the (physical) books that they publish? Many postmodernists, moreover, are activists whose theory is motivated by interest in social change. Their aim is not only "to interpret daily life but to transform it" (Huyssen 1986: 157–8). But what is there to transform if there is no reality? So I shall not waste space defending the reality of the external world, since I am unpersuaded that postmodernists sincerely deny it.

Assuming, then, that there is some kind of reality, the question is whether we, our language, or our epistemic practices *make* or *create* the world in which we live. Some such thesis has been defended even by eminent philosophers such as Nelson Goodman. Goodman says that people make reality, or "make worlds," by drawing certain boundaries rather than others.

> Now as we thus make constellations by picking out and putting together certain stars rather than others, so we make stars by drawing certain boundaries rather than others. Nothing dictates whether the sky shall be marked off into constellations or other objects. We have to make what we find, be it the Great Dipper, Sirius, food, fuel, or a stereo system. (Goodman 1984: 36)

An apt rejoinder to Goodman is given by John Searle (1995: 165–6). When Goodman claims that we draw boundaries around objects, there is no way to understand this claim unless it presupposes some reality on which we draw the boundaries. No boundaries can be drawn unless there is a pre-existing territory on which to draw them.

The really crucial point, however, as Searle points out, is that people do not so much fix the *world* (or *reality*) as they fix the categories for classifying the world.

> Conceptual relativism, properly understood, is an account of how we fix the applications of our terms. What counts as a correct application of the term "cat" or "kilogram" or "canyon" . . . is up to us to decide and is to that extent arbitrary. *But once we have fixed the meaning of such terms in our vocabulary by arbitrary definitions, it is no longer a matter of any kind of relativism or arbitrariness whether representation-independent features of the world satisfy those definitions, because the features of the world that satisfy or fail to satisfy the definitions exist independently of those or any other definitions* . . . Contrary to Goodman, we do not make "worlds"; we make *descriptions* that the actual world may fit or fail to fit. But all this implies that there is a reality that exists independently of our system of concepts. Without such a reality, there is nothing to apply the concept to. (Searle 1995: 166; emphasis in the original)

Similar points, I may add, apply to questions about truth and knowledge. Neither people nor their language literally create truths.[12] They merely create *candidates* for truth value, which features of the world render true or false. A helpful metaphor here is racetrack betting. At the track you make an arbitrary choice of whether to bet at all, whether to bet on a particular race, and, if so, which horse to bet on. All of this is up to you. But once you make your choice, whether you win or lose is not up to you (unless you can fix the race). That is up to the horses and jockeys. The parallel is obvious. It is up to you which propositions to entertain or contemplate for possible belief or acceptance. It is equally up to you (though not usually a matter of deliberate voluntary control) whether to go ahead and believe such a proposition. Once you form a belief, though, its "success" or "failure" is not up to you; that is up to the world, which in general is independent of you.

I said above that language does not literally create truths, but this calls for minor qualification. The statement is right insofar as the correctness or incor-

[12] One possible exception to this are "analytic" or verbally stipulated truths such as "A bachelor is a man who has never been married." Other possible exceptions are discussed in the next paragraph.

rectness of linguistic descriptions depends on what holds or transpires in the portions of the world described. On the other hand, descriptive uses of language are themselves events *in* the world, which commonly have causal effects. Descriptions or assertions can have the effect of persuading hearers of their contents, which can lead to small-scale or large-scale world changes, such as career shifts or political revolutions. These might be described as cases in which linguistic acts indirectly bring about truths. Occasionally, linguistic acts make their own contents true, as when telling someone she will win her tennis match so bolsters her confidence that she does win. Even in such cases, however, the linguistic act does not directly confer truth on its content. It is still the portion of the world predicted that directly confers truth or falsity on the prediction's propositional content. It just so happens, in self-fulfilling prophecies, that the predictive act causally influences the truth-conferring portion of the world.

In a significant sense, then, only the world confers truth and falsity. There is, nonetheless, something correct in constructivist claims. The thought contents we consider and accept are rarely "given" to us by the (nonhuman) world. They result from our own biological resources and linguistic activities; in that sense, they are human constructs or products. Since knowledge involves belief, and belief is in contents that are so constructed, there is merit to the claim that knowledge is (partly) a social construct. But since knowledge is *true* belief, knowledge also involves truth; and what is true, as we have seen, is not a human construct as opposed to being of the world. Hence, it is wrong to say that knowledge is *merely* or *entirely* a human construct. Similar points pertain to postmodern claims that knowledge is always "local," "contextual," or "situated" rather than timeless or universal. Knowledge partly consists of belief, and belief is always local or situated because it is always the belief of a particular knower or group of knowers who live at particular points in time. But knowledge also partly consists of truth, and when a fully determinate proposition is true, it is true for all time, not just at particular times or places. The proposition that there is a cup on the kitchen table at such-and-such an address at noon, Greenwich Mean Time, October 18, 1997, is either timelessly true or timelessly false. Similarly, the proposition that African slaves were brought to the Americas between the sixteenth and nineteenth centuries is true for all time. Its truth value does not change as a function of the locale of a given believer. In this sense, truth is not something local or situated or socially constructed.

Another correct point stressed by certain constructivists is that people are often unaware of the fact that their concepts are socially constructed. They mistakenly suppose that these concepts track "natural" properties rather than socially constructed ones. Many feminist writers—for example, Sally Haslanger (1993, 1995)—argue that the concept of gender is constructed roughly as follows. The ideal of Woman is an externalization of men's desire; so-called Woman's Nature is what men find desirable. This ideal is projected

onto individual females and regarded as intrinsic and essential to them. What Haslanger and other feminists claim is that the social construction of the concept of Woman's Nature is an occurrence that has not been generally understood or appreciated (prior to the advent of feminism). People have mistakenly supposed that the concept of Woman's Nature simply mirrors a natural kind. This feminist story of social construction is eminently plausible but does not conflict with anything I am suggesting. I would put the point this way. The crucial feminist propositions make assertions about how certain concepts or ideals historically emerged or were created. It is very credible that these propositions are true, but if so, they are made true by historical features of the world. Once again, it is worldly facts that confer truth, in this case worldly facts concerning the development of certain concepts and language.[13]

1.6 *The unknowability criticism*

If truth is something "of" the world rather than "of" the knower, if it is transcendent rather than immanent, can we know it? This is a further pervasive worry of veriphobes, a worry articulated in the third postmodern criticism given above:

(3) If there were any transcendent or objective truths, they would be inaccessible and unknowable by human beings, hence unavailable for any practical epistemological purposes.

Is this a serious ground for worry? That depends on what is meant by "transcendent" and what is meant by "knowable." We cannot settle this issue without considering possible definitions of these terms and their implications.

I propose to distinguish two possible meanings, or definitions, of "transcendence," one yielding a concept of radical transcendence and the second a concept of moderate transcendence.

> *Radical transcendence*: A state of affairs is radically transcendent just in case it is utterly and in principle unknowable by human beings.
>
> *Moderate transcendence*: A state of affairs is moderately transcendent just in case its obtaining is logically independent of anybody's believing that it obtains. It could obtain even if nobody believed it did, and somebody could believe it obtained without that belief (logically) guaranteeing that it did.

I do not hold—nor do many realists hold—that truth in general is radically transcendent. Simply because a state of affairs is objective or external to the

[13] Haslanger herself does not attempt to use the constructivist story to undermine the worldliness of truth. On the contrary, she tends to favor an objectivist conception of reality.

mind does not imply that it is utterly and in principle unknowable. Demonstration of this point, however, must await clarification of the "knowledge" concept (see below).

I do maintain, however, that most states of affairs are moderately transcendent. For instance, take a state of affairs consisting of there being a quart of milk in the refrigerator. This is a state of affairs that (logically) *could* obtain even if nobody believed that it did. Of course, this is not likely to happen. Usually quarts of milk arrive in a refrigerator only when somebody puts them there, and usually such people believe that they are there. But it is "logically" possible for such a state of affairs to obtain without anybody believing that it does. Perhaps the person who places it there, the chief user of the refrigerator, was misleadingly assured that it was a fake milk container, really holding eggnog or beer instead. Nor does he believe that anything else in the refrigerator is a quart of milk. Thus, there *could* be a quart of milk in the refrigerator without anybody believing it. Conversely, somebody could believe that such a state of affairs obtained without thereby guaranteeing that it did. The same refrigerator owner might believe that there is a quart of milk in the refrigerator because he put one there, straight from the supermarket, only an hour ago. He might be wrong, however, either because it *was* a fake, or because, unbeknownst to him, his teenage son drank it up. Ordinary states of affairs, then, typically qualify as moderately transcendent.

Does moderate transcendence imply unknowability? That depends on what is meant by "know." I shall distinguish two main senses of "knowledge": *strong* knowledge and *weak* knowledge (S-knowledge and W-knowledge). Most of the philosophical literature on knowledge is addressed to S-knowledge. It assumes that S-knowledge consists of true belief plus some additional element or elements, such as justification or warrant for the belief, and the exclusion of alternative possibilities. According to an extreme view, an agent cannot know a proposition *P* unless *P* is true and the agent believes it on the basis of evidence that excludes *all* rival possibilities to *P*. Let us call knowledge fulfilling this extreme condition "superstrong" knowledge (SS-knowledge). It is obvious that SS-knowledge is rarely attained. You might truly believe that there is a quart of milk in your refrigerator, but does your evidence exclude all rival possibilities? If you are not pouring from the container right now, but are seated in your study, how does your evidence exclude the possibility that your son removed the container from the refrigerator? Even if you are looking into the refrigerator at the moment, can you exclude the possibility that somebody has substituted an empty (opaque) milk container for the full container that was there ten minutes ago? Even if you seem to be actively pouring milk from a milk container right now, does your evidence exclude the possibility that you are suffering a massive hallucination, or being deceived by a Cartesian demon? In light of such scenarios, most philosophers agree that SS-knowledge is largely unattainable.

It does not follow, however, that regular old S-knowledge is unattainable.

Maybe S-knowledge does not require that *all* (logical) possibilities be excluded by the knower's evidence. Perhaps knowledge requires that only a narrower range of possibilities be excluded, possibilities that are "serious," "realistic," or genuinely likely to transpire.[14] On this kind of approach, the possibilities of a Cartesian demon or a massive hallucination do not have to be excluded, because they are not realistic or likely enough. Perhaps even the other scenarios, the theft and substitution scenarios, are not likely enough to be serious rivals. In that case, one could have S-knowledge of the state of affairs in question.

Volumes of philosophical literature have been devoted to theories of S-knowledge. Although the debate continues, it is widely accepted that S-knowledge is feasible for external, or moderately transcendent, states of affairs. In particular, there is nothing about the assumption of objectivity or externality of states of affairs that precludes the possibility of knowing them. Some new argument by postmodernists or veriphobes would be needed to show that moderately transcendent states of affairs are S-unknowable, but no such argument has been offered.

The present book, however, will have nothing to say about S-knowledge. It is devoted entirely to the prospects for W-knowledge, which is simply *true belief*. One reason I focus on W-knowledge is to circumvent the intricate issues that surround the notion of S-knowledge. Addressing those issues would demand a major digression from the main thrust of the book. A second and more important reason is that people's dominant epistemic goal, I think, is to obtain true belief, plain and simple. They want to be *informed* (have true belief) rather than *misinformed* or *uninformed*. The usual route to true belief, of course, is to obtain some kind of evidence that points to the true proposition and away from rivals. But the rationale for getting such evidence is to get true belief. Hence, the entire focus of this book is on W-knowledge.[15]

Is there an ordinary sense of "know" that corresponds to true belief, or have I invented it? I believe there is an ordinary sense. In one sense of "*X* knows that *P*," it is synonymous with "*X* is aware that *P*" (or "*X* is apprised of *P*"), a sense that ignores justification. Suppose it is given that *P* is true, and we wonder whether Jane is aware of it. The only question that needs to be resolved is whether she believes *P*. If she does, she is aware of it; if she doesn't, she is unaware of it. The issue of justification or evidence is irrelevant. "Know" can be used similarly. If we wonder whether Jane knows that *P*, again given its truth, the only issue to be settled is whether she believes it. She knows if she

[14] This is the theme of theories of knowledge that take either the subjunctive conditional, "relevant alternatives," or "tracking" approach. See Dretske 1969, 1981, Goldman 1976, 1986, and Nozick 1981: ch. 3.

[15] Although I focus in this work on the weak sense of "knowledge," I do not deny that "know" is often used to express the strong sense of knowledge. This is, apparently, denied by Crispin Sartwell (1992), who unqualifiedly equates knowledge with true belief.

does believe it, and is ignorant (does not know) if she does not believe it. The issue of justification, or its ilk, is again out of the picture. Here is another example. The sentence "You don't want to know what happened while you were gone" seems to mean: You don't want to have the truth about what happened in your belief corpus. It does not seem to require the translation: You don't want to have a *justified* belief in the truth about what happened. So I believe there is an ordinary sense of "know" in which it means "truly believe." If I am wrong about this, however, I am prepared to proceed cheerfully with weak "knowledge" as a term of art (or technical term).

Having clarified what sense of "knowledge" concerns me here, let us return to the issue of (moderate) transcendence. Is moderate transcendence a threat to W-knowledge? Not at all. The mere fact that a state of affairs *could* obtain without being believed to obtain, or *could* be believed to obtain without obtaining, does not put it beyond the pale of knowability, especially in the weak sense of "knowledge." What is required for W-knowledge, after all, is that a person *actually believes* that a certain state of affairs obtains and it *does* obtain (it is true that it obtains). This is a fairly easy standard to meet, and the mere objectivity or externality of a state of affairs does not pose an insuperable hurdle. The fact that it is possible to be mistaken, as moderate transcendence implies, does not stand in the way of its *also* being possible to get it right (believe truly). Of course, there are some states of affairs to which it is difficult for most people to gain epistemic "access." This includes many of the states of affairs which science tries to investigate. As a general matter, however, externality *per se* is not an insurmountable barrier to W-knowledge.

Looked at one way, in fact, it is comparatively easy to attain W-knowledge; at least, for *somebody* to attain W-knowledge. Consider two people, Seth and Beth, reflecting on the question of whether there is life outside our solar system. Seth forms the belief that life outside our solar system does exist, whereas Beth forms the belief that no such life exists. *One* of them must have W-knowledge on this topic.[16] This is not intended as a proof that W-knowledge is always a snap. Nonetheless, the sweeping claim of criticism (3), that transcendent truths are unknowable for human beings, hardly applies to W-knowledge and moderately transcendent truths. W-knowledge is a goal within

[16] But, you may ask, does either Seth or Beth *know* that he or she knows? Perhaps not, but failing to know that you know does not preclude knowing. First-order knowledge does not require second-order knowledge. Anyone tempted to insist on the principle that knowledge of level N demands knowledge of level $N + 1$ should notice that such a principle leads to an infinite regress, because second-order knowledge would require third-order knowledge, and so on. It is unlikely that anybody has such an infinite corpus of knowledge. Notice that I say that first-order knowledge does not *require* second-order knowledge. This does not mean that second-order knowledge is impossible, or even particularly difficult. In fact, second-order *weak* knowledge is not much harder to attain than first-order *weak* knowledge; you just have to believe that you truly believe that P when you do truly believe it. I don't think that such a higher-order belief is automatic, but neither is it particularly difficult for anyone with the concept of belief.

human reach, which makes it a suitable topic for the discipline of social epistemology.

Some postmodern writers sound their loudest alarms for a special class of putative truths, namely, "grand narratives," metanarratives, or master narratives, which offer large-scale generalizations about history, culture, and social life (Lyotard 1984). Nothing I have said about the feasibility of W-knowledge is intended to guarantee the knowability of propositions or theories of such grand design.[17] It is misleading, however, to suggest that the failure of "grand narratives" spells doom for all types of knowledge quests. Each category must be considered on its own merits. We must also bear in mind the possibility that some categories of thought or discourse do not admit of genuine truth or falsity at all. Especially in such areas as normative ethics and aesthetics, it is notoriously controversial whether statements in those areas can be bearers of truth values. I shall remain largely neutral on this issue, that is, neutral about the precise scope of truth-valuable domains. It suffices for purposes of this book that many domains of human thought *do* admit of truth or falsity. If there are exceptions to this rule, that does not stop epistemology dead in its tracks.

1.7 *The denial of epistemic privilege*

Rorty's *Philosophy and the Mirror of Nature* (1979) is a widely cited attack on epistemology of the sort undertaken here. A centerpiece of that book is chapter 4, "Privileged Representations," which attacks the notion that some propositions, beliefs, or epistemic positions are more privileged than others. Invidious distinctions between beliefs or epistemic positions have indeed typified traditional epistemology, which has usually held that some beliefs are justified or warranted whereas others are unjustified or unwarranted. Rorty means to deconstruct this entire "problematic" by attacking the very notion of a privileged representation. This and related themes lead me to the fourth criticism of veritistic epistemology:

(4) There are no privileged epistemic positions, and no certain foundations for beliefs. All claims are judged by conventions or language games,

[17] This is not to say that I deny the W-knowability of all metanarratives. Veritistic epistemology might itself be a metanarrative, the feasibility of which I endorse. Of course, veritistic epistemology as a general project is not committed to any particular claim about which practices maximize knowledge. But it does suggest that some practices are veritistically better than others and it encourages the attempt to identify the better ones. I see no a priori reason to deny the possibility of knowing which practices are veritistically better than others. Furthermore, if the claim that certain practices are veritistically better than others is metanarrative, why isn't the denial of this sort of claim equally metanarrative? Yet postmodernists themselves are committed to such a denial. So the rejection of all metanarrative is not a sustainable position.

> which have no deeper grounding. There are no neutral, transcultural standards for settling disagreements.

Rorty's critique of epistemic warrant or privilege, however, is strikingly abortive. He simply ignores most theories now under serious consideration. He pays almost exclusive attention to a single historical theory that once enjoyed popularity but was long since exploded, as everybody in the field knows. All the currently respected theories, on the other hand, are treated as if they did not exist.

What Rorty attacks is the classical doctrine of infallibilist foundationalism, which is a doctrine about epistemic *justification* or *warrant* for a belief.[18] Originally developed by Descartes, this doctrine held that all warranted belief rests on infallible foundations, a special class of beliefs that are absolutely certain and cannot be mistaken. Possible examples of such foundational beliefs are "I now experience a reddish appearance" and "All squares have four sides." The first illustrates the category of beliefs about the empirically "given," and the second illustrates the category of "analytic" truths. For a variety of reasons, including a critique of the given by Wilfrid Sellars (1963) and of analyticity by Willard van Orman Quine (1953), most epistemologists have given up infallibilist foundationalism. Rorty is right that this is a dubious doctrine, but for epistemologists this is old news (and it was old in 1979).

Meanwhile, epistemologists have not been standing around shedding tears for infallibilist foundationalism. They have developed a variety of theories of warrant or justification, and although no recent theory has emerged as a clear winner, there are many strong candidates. Rorty simply ignores this entire field, somehow assuming that the refutation of infallibilist foundationalism is the only needed *coup de grâce*.

This is not the place for detailed exposition of alternative theories of justification, but a brief mention of three leading candidates should convey a rough feel for the territory. First, there is fallibilist foundationalism. This view agrees with traditional foundationalism in claiming that some beliefs (the foundational ones) obtain initial warrant on their own, not from other beliefs. This independent infusion of warrant, however, can be overridden. According to fallible foundationalism, foundational beliefs are neither infallible nor certain. A second candidate theory is coherentism, which denies that there are any special foundational beliefs with independent justification. Instead, according to coherentism, all justified beliefs obtain their justification by virtue of cohering, or meshing, with the rest of the agent's belief system.

[18] There is another doctrine of "foundationalism" that Rorty and others attack, namely, the doctrine that philosophy can be a "founding" discourse for all other disciplines. This sense of foundationalism, unfortunately, is not systematically distinguished from foundationalism as a theory of justified belief. I shall not discuss this sense of "foundationalism" because I am not committed to it. The doctrine, as I understand it, postulates a kind of autonomy for philosophy that I do not accept.

Rorty's neglect of coherentism is particularly mysterious because he endorses Quine's "holism" which is simply a version of coherentism. He somehow classifies holism as an anti-epistemology doctrine, rather than a theory of justification.[19] A third theory of justification is reliabilism, which was only taking shape when Rorty was writing *Philosophy and the Mirror of Nature*. In its simplest form, reliabilism says that a belief is justified in case it is produced by reliable psychological processes, where "reliable" means "produces mostly truths." Like fallible foundationalism and coherentism, reliabilism requires neither infallibility nor certainty. Since Rorty registers no objections to these kinds of theories, a blanket refutation of "privileged representations" has hardly been achieved. It is like damning an entire political party by exposing the doctrine of its single most radical sect.

The postmodern rejection of epistemic privilege is not wholly rooted in displeasure with Cartesian epistemology. Much of it has a political cast. The language of "privilege" is the language of rank and honor, especially *unearned* rank and honor, which has a nasty anti-egalitarian odor. But we are not here talking about political status, rights, or liberties. The theory of justification is concerned with the circumstances in which a person has sufficient evidence or epistemic access to a state of affairs to be entitled to hold a certain belief about it. Manifestly, epistemic access to a given state of affairs is not the same for all people and all times. It can vary from time to time and from person to person, as a function of perceptual, memorial, and inferential circumstances. For example, consider the layout of buildings at a certain university, say the University of Heidelberg. Petra might now be justified in believing that such-and-such is the building layout at the University because she personally studied there, observed this layout on many occasions, and remembers it well. But Petra did not always have this evidence for the layout. Before she ever visited Heidelberg or heard it described, she had no basis for believing anything about the specific arrangement of buildings. Similarly, if Stefan never visited Heidelberg, nor heard specifics of the building layout described, he would also lack epistemic grounds for believing anything about the layout. This difference in epistemic state between Petra and Stefan, however, has no implications whatsoever of a moral or political nature. It is pointless to deny the palpable difference in epistemic condition out of a misguided desire to avoid all invidious distinctions between people.

Certain rather different strands of contemporary antijustificationism can be traced to Ludwig Wittgenstein. Wittgenstein's influence filters through the idea that justification is merely a matter of convention, which has no rational grounding. Intellectual authorization is a matter of language games, and the choice of language games is simply a matter of local custom. Here is a passage from Wittgenstein that suggests this idea:

[19] "A holistic approach to knowledge is not a matter of antifoundationalist polemic, but a distrust of the whole epistemological enterprise" (Rorty 1979: 181).

> You must bear in mind that the language-game is so to say something unpredictable. I mean: it is not based on grounds. It is not reasonable (or unreasonable). It is there—like our life. (1969: para. 559)

This theme is adopted by many Wittgenstein interpreters, who dispute any attempt to base rules on anything, especially considerations of truth. For example, Gordon Baker and Peter Hacker write:

> Philosophy is purely descriptive. It clarifies the grammar of our language, the rules for the construction of significant utterances whose violation yields nonsense. Explanation would be possible only if it made sense to get behind these rules and supply a deeper foundation. But there is no behind, and rules are not answerable to reality in the currency of truth. Any deeper explanation would simply be another rule of grammar standing in the same relation to the use of expressions as the rules it allegedly explains. Therefore philosophy must be flat. This insight shapes the whole of Wittgenstein's philosophy. (1985: 22)

This sort of theme runs through the second sentence of our criticism (4), which reads: "All claims are judged by conventions or language games, which have no deeper grounding."

This thesis about justification is pretty dubious. Careful reflection on judgments of justification suggests—as reliabilism maintains—that a belief is considered justified if it is arrived at by processes or practices that the speaker (or the community) regards as truth conducive. Beliefs formed by perception and retained by memory, for example, are viewed as justified because perception and memory are considered reliable, whereas beliefs formed by wishful thinking or hasty generalization are viewed as unjustified because wishful thinking and hasty generalization are thought to be unreliable (Goldman 1992: chs. 6, 7, 9). Thus, judgments of justification are not without grounding, nor are they purely conventional. They are grounded precisely on appeals to truth conduciveness. Furthermore, there seems to be nothing *arbitrary* in a concept of justification tied to truth conduciveness. Given people's interest in truth, it is relevant to classify beliefs in terms of whether they were formed by truth-conducive processes or non-truth-conducive processes. After all, those formed by truth-conducive processes are more likely to be true, and those formed by non-truth-conducive processes are less likely to be true.

Many contemporary writers tend to confuse justification with interpersonal agreement. Where there is no agreement, and no basis for settling disagreement, justification or rationality are thought to be impossible. Without neutral, transcultural principles for settling disagreements, prospects for an "objectivist" epistemology founder. But this view elevates agreement to an exaggerated epistemic position. An ability to elicit agreement is neither a necessary nor a sufficient condition of justification.

To demonstrate the nonnecessity of agreement, consider Heather and her headache. Heather currently has a headache, and is amply justified in believing that she has one. But Heather recently exhibited a deceptive streak in her

conduct. She persistently lied about her health, and her friends and acquaintances now distrust her reports on this subject. Thus, Heather cannot get anyone else in her community to accept the proposition that she has a headache. Nonetheless, *she* is justified in believing that she has one.

To demonstrate the nonsufficiency of agreement for justification, consider charismatic Karen, who is gifted and personable enough to persuade anyone of anything she says. It does not follow that Karen is justified in all her beliefs. She might have a very foolish and unjustified belief yet be capable of getting people to agree with it by sheer force of personality.

Postmodernists not only think that agreement is necessary for justification, or at least rationality; they also think that the prospects for agreement are dim, because there are no transcultural principles for settling disagreements among different communities. Inspiration for this idea is often ascribed to Thomas Kuhn (1962), who says things like the following:

> As in political revolutions, so in paradigm choice—there is no standard higher than the assent of the relevant community. To discover how scientific revolutions are effected, we shall therefore have to examine not only the impact of nature and logic, but also the techniques of persuasive argumentation within the quite special groups that constitute the community of scientists. (1962: 94)

But wholesale denial of common criteria for theory choice is apparently not what Kuhn intended, despite this interpretation by numerous epigones. Elsewhere (Kuhn 1977) he has insisted that there are common criteria in science, even transparadigm criteria. There he presents five characteristics—accuracy, consistency, scope, simplicity, and fruitfulness—which provide the "shared basis for theory choice" (1977: 322). So Kuhn is far from denying transparadigm criteria for scientific judgment. Other writers, however, such as Barry Barnes and David Bloor, unequivocally maintain that "there are no context-free or super-cultural norms of rationality" (1982: 27).

Before examining this position, let us distinguish (1) the ultimate aim of epistemic practices from (2) the specific methods adopted in pursuit of that aim. I wholeheartedly grant that different methods are adopted by different communities; that is beyond dispute. It is far less clear that the bases for adopting such practices are so disunified, at least insofar as they have a genuinely epistemic or intellectual aim. The unifying aim, I suggest, is the pursuit of true belief. Both Galileo and the Church aimed at true belief, or knowledge, only the latter insisted on consulting scripture (or ecclesiastical authorities) to determine truth, while the former advocated experiment and observation. It will be replied that it is incredibly naive to suppose that all epistemic agents actually aim at truth or knowledge. Isn't it all too common to masquerade or parade oneself as committed to truth, though one's real aims are entirely different? Granting this point, we must probe more deeply. Why do epistemic agents parade their favored methods or practices under the banner of truth? The obvious explanation is that others will deny epistemic authority to a

method unless they are persuaded, rightly or wrongly, that it meets the standard of truth conduciveness. In other words, truth conduciveness is the presumptive ground for epistemic authorization. That is why agents peddle their epistemic practices as instruments of truth even when their hidden agenda may be different. That is why Lenin named his propagandizing newspaper *Pravda* (truth).

Epistemic practices differ so dramatically throughout history and across cultures that it is often hard to credit the notion that these practices were commonly motivated, or at least rationalized, by truth considerations. Nonetheless, I believe that such motivations and rationalizations were in fact quite extensive. This is not to deny the pursuit of power across human culture and history, but that should not blind us to a coexisting interest in truth, however poorly it may have been pursued by our present lights. Let me trace a few examples of this theme in unlikely or little-discussed quarters.

A first example is the practice of torture in medieval European legal procedure. To enlightened modern eyes, torture is such a ridiculous method of truth determination that it is hard to imagine it might seriously have been so conceived. However, a brief review of its history, based on a treatment by John Langbein (1980), suggests precisely this. In 1215 the Roman Church effectively destroyed the older modes of legal proof such as trial by battle or by ordeal. The new law of proof, however, aspired to achieve the same level of certainty as had been accorded to the earlier methods. The Italian Glossators who designed the system entrenched the rule that conviction for serious crimes had to be based upon the testimony of two unimpeachable eyewitnesses. Alternatively, an accused could be convicted if he voluntarily confessed to the offense. The trouble with the early thirteenth-century proof system, however, was that the standard of proof was so high that it was difficult to obtain convictions of the guilty. That is one way to "miss" the truth. Bound by the weight of tradition, how could the standard be adjusted? The confession rule invited a subterfuge. When there was already strong evidence against a suspect, although less than two eyewitnesses, torture was authorized in order to obtain a confession. Torture was permitted when a so-called "half proof" was established against the suspect, meaning either one eyewitness or circumstantial evidence of substantial gravity. If a suspect was caught with a bloody dagger and stolen loot from a murdered man's house, each of those "indicia" would be a quarter proof, which together constituted half proof, and this was sufficient for torture. Confession under torture was not grounds for conviction since it was considered involuntary. The suspect was convicted only if he ("voluntarily") repeated the confession at a hearing held a day or so later. In this fashion the prohibition against circumstantial evidence was overcome, and the authorities found a way which, by their lights, did a better job at obtaining accurate judgments. Bizarre as we now find it, the method of torture seems to have been motivated by a concern for truth, constrained by the requirement that new procedures comply with tradition.

Let me turn from this historical case to contemporary crosscultural considerations. Postmodernists often imply that truth and reason are the special obsessions of white Europeans, or perhaps white European males, implying that other cultures do not partake of this value. Some evidence belying this claim comes from linguistics. A widespread concern for matters of evidence and reliability (truth conduciveness) seems to be present in all languages. Moreover, in a certain range of languages drawn from quite different families, *grammar* requires that the warrant for a claim be indicated by citing a channel of evidence, such as perceptual evidence, testimonial evidence, or inferential evidence (Chafe and Nichols 1986, Willett 1988).

Next I wish to marshal evidence from a valuable survey of epistemological anthropology by James Maffie (1995). Focusing on African sources, Maffie establishes that truth is a central concern of many cultures including prescientific ones. The research of Onyewuenyi (1991), Oruka (1990), and Tempels (1969) shows that various African ethnophilosophies conceive of knowledge in terms of truth. Other studies suggest that the desire for truth occupies a central role in workaday cognitive practices such as magic, divination, and religion. Maffie quotes Turner as saying:

> [A]ll societies develop a need both for revelation and divination and construct appropriate cultural instruments for satisfying these needs . . . Man cannot tolerate darkness; he must have light, whether it be the sunlight of revelation or the flaring torch of divination. (Turner 1975: 29)

Horton (1982) claims that African and non-African cultures use magic, religion, and divination to discover the underlying system of natural and supernatural forces with the hope of successfully predicting and intervening in this system. Central to their endeavors is the belief that practical success turns upon truthful apprehension.

Frazer (1959) distinguishes theoretical from practical aspects of magic, where the theoretical aspect strives for understanding of the laws of contact and similarity governing the world. Magicians believe that one must first correctly apprehend these laws before successfully manipulating them with spells, incantations, and rites. Mistaken notions yield misguided practice. Religious practices are likewise truth oriented, according to Frazer. Truth is necessary for practical success, since false notions incur divine wrath.

Divination seeks information about things past, future, or otherwise hidden from ordinary perception. Peek argues that African diviners "exhibit an intense need to know the true reasons for events" (1991: 194). The Temne regard divination as a matter of "splitting truths from darkness" (Shaw 1991). Turner writes that modes of divination are regarded as both lie-detecting and truth-discovering instruments, which people use in order to undertake remedial measures or to restore individual or collective peace of mind (1975: 209).

Finally, we should not fail to observe that in contemporary South Africa a Truth and Reconciliation Commission has been established by the post-

apartheid government to bring out the truth about atrocities committed by all sides in the struggle over white rule. This too illustrates the interest of Africans—including indigenous Africans—in learning truths.

There is ample evidence, then, that truth is a vital concern of humankind across history and culture, not an idiosyncratic concern of modern white Europeans. Despite the heterogeneity of truth-pursuing practices and the diversity of questions to which true answers are sought, a single concept of truth seems to be crossculturally present. It is eminently reasonable, then, for a discipline to be devoted to the systematic and critical evaluation of truth-oriented practices.

1.8 *The argument from domination*

It is time to turn to the fifth criticism of veritistic social epistemology, which was:

(5) Appeals to truth are merely instruments of domination or repression, and should be replaced by practices with progressive social value.

This kind of critique (at least its first clause) is most intimately associated with Michel Foucault, but it is echoed by many movements, including postmodern feminism. Focusing on the human sciences, Foucault (1979) contended that the sciences of man arose from practices of social domination, including "carceral" practices involving prisons and punishment and sexual confessional practices involved in psychotherapy and medical procedures. The interest in knowledge was driven by concerns for management and power:

> I am not saying that the human sciences emerged from the prison. But, if they have been able to be formed and to produce so many profound changes in the episteme, it is because they have been conveyed by a specific and new modality of power . . . [which] required definite relations of knowledge in relations of power . . . Knowable man (soul, individuality, consciousness, conduct, whatever it is called) is the object-effect of this analytic investment, of this domination-observation. (1979: 305)

The criminal, for example, was conceptualized as a type that needed to be understood by the newly emergent sciences of psychiatry and criminology. Knowledge was essential to rehabilitate the criminal, so that what had been primarily a legal and political matter became invested with new dimensions of scientific knowledge, which served the end of "bio-power." As Hubert Dreyfus and Paul Rabinow summarize the idea:

> Political technologies advance by taking what is essentially a political problem, removing it from a realm of political discourse, and recasting it in the neutral language of science. Once this is accomplished the problems have become technical ones for specialists to debate. In fact, the language of reform is, from the outset, an essential component of these political technologies. Bio-power spread under the

banner of making people healthy and protecting them. When there was resistance, or failure to achieve its stated aims, this was construed as further proof of the need to reinforce and extend the power of the experts. A technical matrix was established. By definition, there ought to be a way of solving any technical problem . . . We are promised normalization and happiness through science and law. When they fail, this only justifies the need for more of the same. (1983: 196)

Foucault and his followers are not the only ones to highlight scientific abuses in the interest of political or social power. Postmodern feminists argue that the ideal of rationality—and with it, presumably, the goal of truth—is really a masculine ideal, advanced as a vehicle for marginalizing, dominating, and silencing women, who by nature, it was alleged, do not partake of rationality. The ideals of rationality and objectivity have only been used to sustain the inequality of power between males and females (Fraser and Nicholson 1990, Flax 1990*b*).

There are three lines of reply to this critique. First, the fact that appeals to truth are used as instruments of power or domination does not imply that truth is either nonexistent or deserving of neglect. Most of these appeals, in the domains just surveyed, were false, inaccurate, and even fraudulent. The way to combat such appeals is to *correct* the errors and inaccuracies. Stephen Jay Gould (1981) has traced the pockmarks of bias that have contaminated the history of intelligence measurement. Starting with the nineteenth-century "science" of craniometry, continuing through the twentieth-century measurements of IQ, including the flawed and finally fraudulent work of Cyril Burt, and persisting today with the dubious analyses of Herrnstein and Murray (1994), this area has been badly contaminated with personal and cultural prejudice.[20] But Gould rightly presumes the meaningfulness of such concepts as error, inaccuracy, and distortion, all of which presuppose a concept of objective truth. He also plausibly assumes that errors can be corrected.

Similarly, many feminist theorists reject the veriphobic and anti-objectivist aspects of postmodern feminism. Two important alternatives to postmodern feminism are feminist empiricism and feminist standpoint theories.[21] Feminist empiricists maintain that sexism and androcentrism are identifiable biases of knowers that can be eliminated by stricter application of scientific and philosophical methodologies. Feminist standpoint theorists reject the notion of an "unmediated" truth (which they associate with empiricism), and emphasize the role of social position in shaping understanding. However, they argue that the social position of the oppressed can pierce ideological obfuscation and facilitate a correct understanding of the world.[22]

[20] For a critique of Herrnstein and Murray, see Block 1995.

[21] For a discussion of these variants of feminism, see Hawkesworth 1989. A more complex classification of varieties of feminism is provided in Tong 1989. I am indebted to Melissa Berry for helpful advice about the feminist literature.

[22] Three examples of feminist standpoint theory are Harding 1991, Hartsock 1983,

Indeed, if one examines debunkings of truth on the grounds that truth claims merely cloak a drive for domination, almost all of these debunkings themselves depend on truth claims! Unless there is truth in Foucault's story that the human sciences arose, at least in part, out of motives to control, administer, and dominate, why should we pay it any attention? Presumably Foucault did not mean to write historical fiction, or why did he expend effort documenting his allegations? And if it was fiction, why should we agree with him that knowledge and power are inextricably intertwined? We need true evidence to persuade us of a tight connection between knowledge and power, and Foucault provides evidence. Apparently, he does so because he contends that there is truth in his claim. Admittedly, Foucault tries to avoid this consequence by denying that he is propounding a "theory." He says that he offers an "interpretation" of events, not a "theory." In Foucault 1979 he holds out no promise of a better, more "objective" social science. His method has been called "interpretive analytics" (Dreyfus and Rabinow 1983: 183), perhaps to distance it from truth-oriented science. But if his analysis contains no true propositions, why should we find it instructive or appealing? If it is false—or even truth-valueless—that truth appeals are tools of oppression, criticism (5) carries no weight or significance.

The need to base political progressiveness on truth is equally pressing in other domains. Historical truths about racism underpin claims to compensatory justice. Allegations of rape, domestic violence, and sexual harassment must not be mere fictions if they are to be cited in support of political action. This is clearly explained by Mary Hawkesworth:

> The victim's account of these experiences is not simply an arbitrary imposition of a purely fictive meaning on an otherwise meaningless reality. . . . [I]t would be premature to conclude from the incompleteness of the victim's account that all other accounts (the assailant's, defense attorney's, character witnesses' for the defendant) are equally valid or that there are no objective grounds on which to distinguish between truth and falsity in divergent interpretations. (1989: 555)

Similarly, I would argue that Catharine MacKinnon's (1989) critique of traditional rape law would be best articulated in terms of the *falsity* of men's beliefs about women's practices of consent to intercourse. MacKinnon argues that traditional rape law reflects a male perspective, but that men do not

and Jagger 1983. The formulation given at this point in the text is that of Hawkesworth. Here is how Harding articulates her conception of standpoint epistemologies: "The standpoint epistemologies . . . call for the acknowledgement that all human beliefs—including our best scientific beliefs—are socially situated, but they also require a critical evaluation to determine which social situations tend to generate the most objective knowledge claims. They require . . . a scientific account of the relationships between historically located belief and maximally objective belief. So they demand what I shall call *strong objectivity* in contrast to the weak objectivity of objectivism and its mirror-linked twin, judgmental relativism" (1991: 142). Though Harding is cautious about truth, standpoint epistemology under her formulation has nonnegligible points of similarity to veritistic social epistemology.

understand women. "Men . . . define rape as they imagine women to be sexually violated through distinguishing that from their image of what they normally do . . . But men are systematically conditioned not even to notice what women want" (MacKinnon 1989: 181). The best way to formulate MacKinnon's critique (though not MacKinnon's own explicit formulation) is to say that traditional laws or legal procedures concerning rape have rested on falsehoods men believe. This formulation presupposes a distinction between truth and falsity.

Other central theoretical arguments in feminism rely essentially on causal or historical truth claims. For example, as we saw in Section 1.5, feminist theories frequently assert that traditional norms for women (norms for being emotional, nurturing, and cooperative, for example) did not arise from veridical observations of natural, intrinsic features of human females that distinguish them from males. Rather, these norms arose from gendering: from the social creation or construction of certain roles. The classification of features as masculine or feminine is derivative from, and depends upon, the entrenchment of prior social—rather than natural—practices. Clearly, these causal claims are either true or false. If they are false, many feminist theories deserve far less credence than their proponents maintain. If they are true, these same theories become much more important. Thus, the strength of the theories depends essentially on the truth values of the causal claims. Theoretical feminists cannot afford to abandon truth.

Moving to my second line of reply, consider how implausible it is to advance the domination thesis in connection with *all* truth claims. Can one seriously maintain that every factual statement in everyday life cloaks a desire for domination, even such statements as "There's a coyote behind that bush," or "Your friend Molly called this afternoon"? Even Foucault does not venture this far. He restricts his theses to those "dubious" disciplines which have come to be called the human sciences, and exempts the "nondubious" sciences (physics, biology, and so forth) from his strictures (see Dreyfus and Rabinow 1983: xxiv, 206). Actually, even the generalization about the social sciences is too broad. If domination is equated with centralized control of individuals, economics does not belong on the list. The chief policy message of much of economics since Adam Smith has been the virtue of decentralized, free market association rather than organized state control. In any case, only a segment of truth discourse is alleged to be an instrument of domination, so it makes little sense to issue a general prohibition against truth claims. And if there is no general prohibition against truth claims, there is surely a place for truth-oriented epistemology, which concerns itself with the promotion of true claims (and beliefs) as contradistinguished from the false.

This second reply eases us into the third. Even if the truth concept has sometimes been used as a weapon of coercion or domination, should it be banned from use altogether? Truth claims, like knives, can sometimes be used for lethal purposes, as when one culture claims cognitive superiority over

another and uses this claim to justify political or economic domination. But knives are not always or normally used for lethal purposes, and truth claims are similarly not normally so employed (Schmitt 1995: 231–2). Furthermore, even when one society does seek to intervene in another on grounds of cognitive superiority, the principal complaint should be against the intervention *per se*, not against the cognitive claim (although the latter might also be misguided). The issue becomes stickier when truth claims are claims to *moral* truth, and I shall not try to adjudicate this issue. Whether morality is a domain of "correspondence" truth, or truth at all, I leave unaddressed. But if the claim is one of superior scientific knowledge, for example, such a claim might be warranted in itself, but could not justify any form of oppression, domination, or imperialism. If it were said that American students know less mathematics than students of many other countries, this might have to be conceded, because this is what recent test scores show. But this would hardly justify military intervention on the part of other countries.

1.9 *The argument from bias*

The final criticism of veritistic epistemology was as follows:

(6) Truth cannot be attained because all putatively truth-oriented practices are corrupted and biased by politics or self-serving interests.

The argument seems to rest on two assumptions: that all belief is driven by motivational biases, and that there is always a conflict between these biases and the pursuit of truth. Both assumptions are highly questionable.

As a preliminary matter, we must distinguish belief from behavior, including speech behavior. When (6) talks of the unattainability of truth, it presumably refers to belief rather than behavior. It says that truth cannot be attained—that is, believed—because people's beliefs are swayed by their own politics and interests. This assumes that belief is controlled by one's motives, a claim that is open to challenge. Philosophers have long pointed out that belief is not *voluntary* in the way that behavior is voluntary. You can decide to lie about something if it suits your interest, but you cannot so easily decide to believe or disbelieve something. If the *New York Times* reports the defeat of your favorite political candidate the morning after the election, you cannot simply choose to disbelieve the story. I am not saying that personal motives never influence belief, only that their impact is indirect and not always determinative. (For further discussion see Section 8.3.)

The second assumption of criticism (6) is that personal motives invariably run counter to getting the truth. This premise is also wildly implausible. Although *speaking* the truth may sometimes cut against one's interest, it is less common for *knowing* the truth to do so. As argued in Section 1.1, people frequently have an interest in knowing the truth. If I suffer an accident and need

an emergency room, it serves my interest to know the location of the nearest emergency room. It is possible, of course, that the pervasive corruption of truth contemplated by (6) is chiefly a matter of interest-distorted speech. But even if speakers' assertions were systematically distorted by interests, hearers need not always be duped. Dupery would only follow if hearers were universally gullible. The allure of generalizations like (6) arises from preoccupation with political domains, where the best case can be made for conflict between interest and truth (at least truth *speaking*). But epistemology is concerned with all domains, and facile generalizations based on a restricted sector of domains cannot be accepted. Of course, many workers in the sociology of science think that (6) applies even in science. This view will be scrutinized in Section 8.10, where I shall argue that there is no necessary conflict between private interests of scientists and the search for truth. A few remarks should be added here, however, about the inconclusiveness of most treatments of this topic.

Many writers appeal to Kuhn and Quine as having clinched the case for a sociopolitical analysis of science. Sandra Harding, for example, writes that "in effect, [Kuhn] showed that all of natural science was located inside social history . . . [A]ny theory can always be retained as long as its defenders hold enough institutional power to explain away potential threats to it" (1992: 582). Similarly, Quine's thesis of the underdetermination of theory is often cited as license for a noncognitive, sociopolitical analysis of science. However, in addition to doubts about the underdetermination thesis itself (see Section 8.5), it is quite unclear that logical gaps between theory and evidence must be filled by motives and interests (see Laudan 1990, Slezak 1991). Although Kuhn pressed the case for the incommensurability of paradigms, he himself seemed to lean toward cognitive explanations of paradigm choice; for instance, the prior entrenchment of a paradigm among older practitioners.

Many case studies within the field of science studies aim to show that politics and/or interests played a crucial role in the development and acceptance of scientific ideas. Such case studies cannot support (6), however, without establishing that politics or interests were causally efficacious for scientific beliefs, not merely temporally coincident with them. But causal efficacy requires the counterfactual thesis that the beliefs would not have occurred had the politics or interests of the situation been different.[23] Case studies, being mere chronologies, can seldom establish such a counterfactual.[24]

Furthermore, although case studies sometimes make a plausible case for the role of politics and interests in the initial development of certain ideas, it is

[23] This claim about causal efficacy oversimplifies a bit, but the nuances are not germane to the present discussion.

[24] Cassandra Pinnick (1994) makes the general point that the Strong Programme in the sociology of science cannot establish the causal efficacy of sociopolitical allegiances through historical case studies. Paul Roth and Robert Barrett (1990) show how a specific well-known work in the sociology of science, Pickering (1984), fails to establish the causal efficacy of its favored social factors.

rarely shown that the acceptance of these ideas—especially over a long period of time—stemmed from similar motivations. This leaves the evidence for the interests theory much weaker than it may appear. Consider Donald Mackenzie's study of the history of statistics (1981).[25] In turn-of-the-century Britain, Mackenzie relates, there was a social program of eugenics, intended to improve the genetic composition of the human race. Measures were proposed to promote the fertility of "better types" (the "fit") and diminish the birth rate among the "inferior" (the "unfit"). Tax incentives and family allowances were proposed to encourage a high birth rate among the professional class. Eugenics identified "civic worth" with "mental ability," thought to be an inherited characteristic of each person. Only those who possessed a high degree of this natural characteristic could survive the demands of a professional training, and thus the professional class could be seen as naturally superior. Francis Galton, who lived his life among Britain's intellectual elite, explicitly wrote in terms of replacing religious authority with a "scientific priesthood." Mackenzie shows how Galton developed a set of concepts in mathematical statistics to deal with the variability of human characteristics in order to support eugenics.[26] A similar thesis is developed by Mackenzie in tracing Karl Pearson's contributions to statistics.

One question I would raise here concerns the contrast between Galton and Pearson's initial proposals and the continued acceptance of these statistical ideas (about regression and correlation in bivariate normal distributions) over a long period of time. Suppose Mackenzie is right that interests drove Galton and Pearson to think up and deploy their statistical techniques. Galton and Pearson, however, are no longer with us, and, as Alan Chalmers (1990) points out, their techniques have a far wider range of application than human heritability. It seems extremely unlikely that the continued acceptance of these techniques, applied by many practitioners to a vast array of problems, can be explained in terms of the same sorts of politics or interests that motivated Galton and Pearson. Certainly Mackenzie has not established this. Since we are interested not simply in the creation of a scientific method but in a community's long-term commitment to it, the history of Galton and Pearson does not go far in settling the matter. Thus, even in this promising case for the interests theory, the evidence falls far short of supporting thesis (6).

It should also be mentioned that Mackenzie presents this example in support of a 'strong' version of sociology of science which holds that social influences can affect the content of even *good* science, not just *bad* science. In this case, the pieces of mathematical statistics that emerged were significant contributions, genuine advances in knowledge. This serves to undercut criticism

[25] For a useful summary of Mackenzie's work, see Chalmers 1990.

[26] Interestingly, Mackenzie disavows the claim that Galton's motive was a desire to advance professional interests. This, he claims, "is dubious" (1981: 51). But Galton's eugenic thought, says Mackenzie, was a celebration of the work of the professional elite.

(6) rather than support it. It shows that politics and interests do not inevitably hinder truth attainment, but can sometimes promote it.

This is an atypical feature of Mackenzie's case studies, however. Proponents of the interests approach to science studies commonly seek to show how interests corrupt or threaten the quality of science, as criticism (6) maintains. The trouble is that their selection of cases is frequently biased. They do not publish randomly selected scientific episodes, but mainly ones that are grist for their mill. Good scientific methodology does not sanction an inference to a generalization like (6) on the basis of a deliberately skewed set of cases. (Admittedly, their own bias in the selection of cases may be a confirming instance of the very pattern asserted in thesis (6). But although their own bias is one instance of the pattern, it is hardly sufficient evidence of its universality.)

The argument from historical case studies also poses a problem of reflexivity. If truth is unattainable, as (6) contends, then how can we hope to attain the putative truth that (6) itself asserts? If everyone is thoroughly biased by politics and interests, the proponents of thesis (6) must themselves be biased, so how can we trust their historical studies? In short, (6) seems to be self-defeating.

To summarize, all the central arguments against veritism that spring from postmodern and constructivist quarters have failed. This does not mean that no additional problems lurk in the wings, but I have replied enough to this genre of objections. In the next chapter, I address another central question for any veritistic program: What, exactly, is truth?