A Hasty Retreat From Evidence: The Recalcitrance of Relativism in Feminist Epistemology

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While feminist epistemologists have made important contributions to the deconstruction of the traditional representationalist model, some elements of the Cartesian legacy remain. For example, relativism continues to play a role in the underdetermination thesis used by Longino and Keller. Both argue that because scientific theories are underdetermined by evidence, theory choice must be relative to interpretive frameworks. Utilizing Davidson's philosophy of language, I offer a nonrepresentationalist alternative to suggest how relativism can be more fully avoided.

In this essay I contribute to an ongoing debate about the nature of relativism and its presence in feminist critiques of traditional epistemology. I argue that an unnecessary level of relativism enters into some of the epistemological writings of three influential feminist theorists: Helen Longino, Evelyn Fox Keller, and Sandra Harding. However, my diagnosis of relativism is not meant to support the antifeminist views of some traditional epistemologists (i.e., those who argue that feminists introduce relativism into what would otherwise be a world of objective truth-telling). I take the strength of most feminist writings on epistemology to be the suggestion that we should dismantle the entire traditional epistemological project, including both objectivism and relativism. In this essay I highlight those areas where the dismantling is not yet complete.

Beginning with an analysis of Longino's "Can There be a Feminist Science?" (1987) and Science as Social Knowledge (1990), and proceeding to three essays from Keller's collection Secrets of Life, Secrets of Death (1992a; 1992b; 1992c), I argue that each of these writings employs a similarly relativist use of the "underdetermination thesis." This is the thesis, often associated with W.V.

Quine, that every scientific theory is underdetermined by the evidence brought forward in its support, i.e., theoretically, any particular piece of evidence can be used to support an infinite number of theories. Conversely, for any theory that fits the available evidence, there may be another theory that fits the same evidence equally well (Quine 1981, 28-29).

The relativist applications of the underdetermination thesis involve some version of the claim that because some scientific theories *are* chosen over others, these choices must, ultimately, be *relative* to a political or cultural "worldview," "explanatory scheme," or "interpretive framework"; there can be no objective adjudication on the basis of how any one theory simply "corresponds" to the empirical evidence. I show how this sort of relativism involves the conceptual splitting of the empirical evidence, on the one hand, from the filter of politics or culture, on the other—a split similar to that between "content" and "scheme" critically discussed by Donald Davidson (e.g., Davidson 1984).

Davidson argues that the scheme/content split is indicative of a questionable representationalist model of knowers and the world. I support his interpretation and believe it to be an important diagnostic aid for feminist discussions of epistemology and science. I include some examples from Harding's standpoint theory (Harding 1991; 1993) to further illustrate the pervasiveness of the representationalist model within feminist science critique and the subsequent pervasiveness of relativism. Finally, I offer a pragmatist reading of Davidson's nonrepresentationalist alternative that would make feminist concessions to relativism unnecessary.

RELATIVISM—A NECESSARY EVIL?

Longino, Keller, and Harding have each taught us the importance of distancing our scientific discourse from the traditional epistemological project. Their struggles have shown us, however, that the inherited epistemological legacy is not easily displaced. The result, for feminists, and others critical of the tradition, is that unless we are fully distanced from our epistemological legacy, any moves critical of one end of the epistemological continuum (typically, objectivism) will involve an endorsement, however begrudging, of the other end (typically, relativism). This phenomenon is manifest in each of the feminist writings referred to above.

In each of their arguments, Longino, Keller, and Harding begin by providing compelling criticisms of objectivism—roughly, the view that a true theory has a one-to-one correspondence with the evidence adduced in its support. For example, in her discussion of competing anthropological theories regarding the use of ancient chipped stones (specifically, the choice between the "woman-the-gatherer" or the "man-the-hunter" theory), Longino claims that the choice cannot be based on a one-to-one correspondence between one of

the theories and the evidence because each theory has been influenced by an accompanying "interpretive framework" through which the data is screened (Longino 1990, 106-11). When the data is thus screened, she argues, it can then form evidence for the theory in question. Specifically, feminist or gynocentric interpretive frameworks screen the data as evidence for the woman-the-gatherer theory and androcentric frameworks screen data as evidence for the man-the-hunter theory. In this way, each theory is underdetermined, i.e., each theory can be supported equally well (or equally poorly) by the available evidence. Further, she writes, the historical nature of the competing theories compounds the underdetermination problem, so that "not only do we not now have evidence [that would definitively support one theory over the other but we cannot have it" (Longino 1990, 111). Theory choice, she argues, must be relative to the political values that form the interpretive frameworks because there is no such thing as value-free evidence. Evidence, construed as value-free, cannot play the deciding role in the way objectivists thought it could.

Similarly, Keller speaks of "abandoning the hope for a one-to-one correspondence with the real" (Keller 1992c, 73). She uses the underdetermination thesis to argue that the "real" actually corresponds to any number of theories and that "since nature is only accessible to us through representations and since representations are necessarily structured by language (and hence, by culture), no representation can ever 'correspond' to reality" (1992a, 5).

Finally, Harding argues that certain aspects of culture, namely the social standpoint of the theorist, filter the correspondence between any one theory and the evidence gathered in support of that theory. Harding makes the Marxist claim that one's social standpoint will "organize and set limits" on one's understanding of the world (Harding 1993, 54). In other words, the choice of which theories of the world we take to be true will be relative, in some way, to our social standpoint. Harding does not put the issue in terms of the underdetermination of theories by evidence, but her criticism of the objectivist view of one-to-one correspondence between theory and evidence is remarkably similar to the criticisms offered by Longino and Keller.

For each of these theorists, some level of relativism is presented as a necessary evil; an evil that must be accepted by critics of objectivism and applied consistently, not only to androcentric or sexist scientific theories, but also, reflexively, to those theories offered by feminist scientists and feminist critics of science. While I appreciate these criticisms of objectivism, I believe the elements of relativism that remain give too much away to opponents of feminism and sceptics of a more general philosophical sort.

Longino, for instance, admits that her criticism of the possibility of direct correspondence between theory (or hypothesis) and evidence, relativizes what counts as evidence, and that "by relativizing what counts as evidence to background beliefs or assumptions, hypothesis acceptance on the basis of

evidence is also thus relativized" (Longino 1990, 61). While Longino does not abandon objectivity, her contexualized account results in a restricted notion of "objectivity by degrees" that is relative to the social dynamics of various science communities (1990, ch. 4). Keller too, concedes that in the absence of any one-to-one correspondence between representations and reality, our feminist decisions between representations should be made relative to the differing political "interventions" each representation affords (Keller 1992c, 76). Similarly, because Harding argues that *all* beliefs are filtered through the social standpoint of the believer, she disavows the claim that the standpoints of women or feminists will produce true beliefs about reality—just less partial, less distorted ones than those produced by "anti-liberatory interests," for example (1991, 185, 149).

While these lingering elements of relativism evoke a dangerous level of self-directed scepticism, they are also unnecessary. I believe that both relativism and the objectivist theory of one-to-one correspondence remain predicated on an unnecessary, and untenable, representationalist view of language users and the world.⁴

THE REPRESENTATIONALIST METAPHOR IN EPISTEMOLOGY

What is it about the epistemological continuum from objectivism to relativism that leads to trouble no matter what end one approaches? Feminist epistemologists have long been struggling with this question, but I find the diagnostic work of Richard Rorty and Donald Davidson to be particularly persuasive. Rorty has suggested that part of the problem results from the representational metaphors that frame the epistemological debate (e.g., Rorty 1991, 151-61). Discussants on both sides of the debate, he explains, view beliefs, sentences or theories as representing the world. The acquisition of these representations is viewed as a filtering process. Here, in Davidson's terms, our "language scheme," "worldview," or culture is described as a medium through which the empirical "content," "sense-data," or "the facts" of the external world are filtered (Davidson 1984). Hypotheses, or more formally, theories, are then viewed as the combination or systematization of representations. Sometimes the resulting theory is said to feed back into the filtering system, so that our allegiance to the theory affects our ability to perceive new data and to form new representations.

My concern is that by invoking this filtering process, the representationalist invokes a metaphysical gap between the subjective endproduct of belief and the objective external reality the belief is about, a gap between mental "inner space" and the outside world. The ontological task presented by the representationalist model is the identification of those normative properties that would indicate the level of interference or filtering between the representations and the bits of the world to which they refer. Typically, these normative properties

are identified as relational, such as the property of correspondence. A scientific theory that has the property of correspondence is one that successfully bridges, with little or no interference, the implied metaphysical gap between our inner subjective beliefs and objective external reality.

Epistemology is then a process of adjudicating between representations, based on the detection of these normative relational properties. This process used to be motivated by a quest for certainty. Feminists (among others) were right to suggest that this epistemological goal needed to be scaled down (e.g., Harding 1991). It also seemed appropriate that we supported the shift toward naturalistic accounts that replaced a priori theorizing about the detection of truth and evidence (e.g., Lynn Hankinson Nelson 1990). Other changes consistent with feminist politics included the development of a more holistic approach to the subjects of epistemological theorizing, focusing on human beliefs in their natural "ecological" settings of larger theories and worldviews, rather than on the abstract "S knows that P" model (e.g., Lorraine Code 1991).

However, while we have thus restrained and restructured the traditional quest for certainty, I believe that these differences reflect changes in degree more than kind. Epistemology, in both feminist and traditional versions, remains an attempt to specify, either *a priori*, or through a naturalized account of human cognition, the property of theories, sentences or beliefs that makes them true, or least partial, or maximally objective. Despite the qualifiers, the key similarity is the epistemological specification of a normative *property*, the detection of which will help us choose between competing knowledge claims.⁶ Even when this property is characterized as "justified by the empirical evidence" as some empiricists have maintained, this philosophical specification remains separate from the everyday ad hoc question whether any *particular* knowledge claim is justified by the evidence.

Epistemology is a required response, given representationalist metaphysics. The metaphysical independence or gap between the inner subjective stuff of mind and the external objective reality makes coherent the worry that the two worlds might not be bridgeable—all of our subjective theories about external reality "might be just as they are and yet reality—and so the truth about reality—be very different" (Davidson 1990, 298). In other words, the independence is such that all of our theories would "float free" of the bits of the world they purported to describe, unless securely anchored via the normative relational properties. When one conceives of such a gap between representations and the world represented, there is always the possibility of massive error in the representations (i.e., it becomes conceivable that all of our bridgework could be completely undependable). This is the worry of global scepticism, so clearly articulated by the proto-representationalist, Descartes, in his theory of mind/body dualism. Epistemological responses to scepticism range from objectivism to relativism, with instrumentalism, or empiricism playing a moderate

role somewhere between the two. A brief examination of these familiar positions, in terms of their less-familiar representationalist commitments, follows.

In representationalist terms, objectivism is the view that scepticism about the truth of our representations can be defeated—that we can delineate a priori the criteria for judging whether or not our representations have the requisite relational property. In other words, the claim goes, we can tell if and when the bridgework between our subjective inner space and the objective outer reality is dependable. "Objectivity" names the prescribed approach to the detection of truth. If we are objective, if we stand apart from the filters of all our subjective theories, if we enlist the help of other objective observers similarly placed, then we can clear the bridgeway between our sensory receptors and the causal forces of the empirical data. We can tell whether a particular theory is in a correspondence relation with the external data the theory purports to describe. ⁷

Instrumentalists and empiricists take the objectivist views to be generally coherent but false for a specified range of claims. More specifically, they disagree with the traditional objectivist view about the possibility of identifying relational properties that would hold between the theoretical or unobservable elements of any given theory and the external world the theory represents. But they typically agree with the objectivist that a normative identification of relational properties is possible, and necessary, as long as the focus is restricted to the observable or otherwise empirically accessible elements of the theory.⁸

Those who have moved well away from objectivism but who stay within the representationalist framework of the debate, end up with a relativism that resigns them to doubt, at a very general level, the existence of any firm causal relationships between their theories and the world. At this relativist end of the continuum, we find the tacit claim that if we are critical of the objectivist notion of relational properties linking our representations to the world, then we are left with the position that links can be made only between representations themselves. Our subjective filtering of the external world is so opaque that criteria for adjudicating between representations—criteria such as truth—can only be said to be relative to our interests, our politics, our worldviews, and not to the world. At best, we can attain "maximal" objectivity, or "least partiality."

According to relativists, the metaphysical gap between our representations and the world represented remains unbridged, or at least any bridgework we construct is irredeemably blocked by the filters of our worldviews and conceptual schemes. I believe that some version of this claim underlies the relativist use of the underdetermination thesis that theory-choice cannot be made strictly on the basis of evidence; that evidence for theory choice is screened through "interpretive," "linguistic," or "cultural" frameworks. In the next

three sections I will highlight this sort of relativism in the writings of Longino, Keller, and Harding.

HELEN LONGINO'S FEMINIST SCIENCE

In her essay "Can There Be a Feminist Science?" (1987), Longino previews the major themes of her book Science as Social Knowledge: Values and Objectivity in Scientific Inquiry (1990). One of these themes is the debate over the criteria for what makes feminist science "feminist." Longino argues against some feminist accounts that equate objectivity with value-free scientific method (1987, 60). Her negative project seems to me to be largely correct. My criticisms concern her positive articulation of science (including feminist science). Here, Longino explains that objective, good science is always biased with the "contextual values" of our "interpretive frameworks," and these, in turn, guide our observations. For example, the interpretive frameworks of theories in particle physics are necessary to guide observations of elementary particles in cloud chambers (Longino 1987, 54). The observations are not "given," they are guided or filtered by our interpretive frameworks and prior value commitments. Much of science, Longino claims, is guided by interpretive contextual values so feminist diagnoses of bad, unobjective science as that science which is "biased by contextual values" will not fully capture the problem (1987, 56). What we need to do, she writes, is to redefine objectivity as that which allows us to better examine the influence of these interpretive frameworks and values. She explains:

We cannot restrict ourselves simply to the elimination of bias, but must expand our scope to include the detection of limiting and interpretive frameworks and the finding or construction of more appropriate frameworks. We need not, indeed should not, wait for such a framework to emerge from the data. (Longino 1987, 60)

On her model, the prescribed focus for feminist work in science then becomes a search for better conceptual filters (or schemes), as distinct from, and more coherent than, the search for better evidence (or content). Note, also, the scheme/content split in her explanation that the data of the external world are "dumb" and that it is only through subjective conceptual filters that they are given voice as evidence for a particular hypothesis or theory (Longino 1990, 111).

The problem here is that when one conceives of a split between an inner conceptual world of values and interpretive frameworks and an outer world of unanalyzed data one invites an unanswered (and unanswerable?) scepticism about the relationship between evidence and theory. While Longino is surely correct that evidence of elementary particles, for example, is not simply

"given," I do not think that we then have to redirect our project away from questions of evidence and toward some nonevidential investigations of interpretive frameworks. On the Davidsonian model I prescribe, interpretive frameworks are holistically *of a piece* with other evidential considerations. The positive implications of such holism are described below.

Longino continues her argument by outlining two sorts of values that, she claims, are part of even the best science: those values that are constitutive of scientific practice; and those that affect the context in which science is practiced (1987, 54). The constitutive values govern "what constitutes acceptable scientific practice" (Longino 1987, 54). The contextual values are the background values, explanatory schemes, or political commitments that each scientist might bring to her laboratory.

Against more traditional philosophers of science, and paralleling, to some extent, the work of Thomas Kuhn (1970), Longino argues that the second set of values—the contextual values—play an active role not only in what some call the context of discovery, but also in "the inner workings of scientific inquiry" or the context of justification (Longino 1987, 54). These contextual values have a similar function to that of "paradigms" in Kuhn's writings. Contextual values must play a role in scientific justification and theory-choice, she argues, because we cannot choose theories on the basis of the evidence alone. Given that theories are underdetermined, theory-choice, even "objective" theory-choice, is always based on something more than evidence (Longino 1987, 54-56).

Thus, Longino explains, there is "no formal basis for arguing that an inference [from data to theory that is] mediated by contextual values is thereby bad science" (1987, 55). It could be bad science, but the presence of contextual values is not the deciding factor. Indeed, she argues, the influence of contextual values in "the inner workings of science" can be part and parcel of good science as usual (1987, 56). From here she proceeds to describe feminist science and feminist science criticism—two obvious sites of contextual values at work—as good science as usual. She claims that feminist scientific practice will be good, objective science *insofar as* it "admits political considerations as relevant constraints on reasoning, which, through their influence on reasoning and interpretation, shape content" (Longino 1987, 61). As I have suggested earlier, I believe this formulation to be unnecessarily weak and will prescribe, instead, a nonrepresentationalist approach whereby feminist political considerations are viewed as *further elements* of evidential reasoning, rather than as nonevidential "constraints on reasoning."

There are a number of other representationalist elements in Longino's move toward the relativist corollary of the underdetermination thesis. For example, illustrating how the contextual values of our worldview play a role in science, Longino discusses the role of feminist and nonfeminist background assumptions in the "woman-the-gatherer" versus "man-the-hunter"

interpretations in anthropology and in the selection of interactionist versus linear models used to "mediate data" within sex-hormone research (Longino 1990, chs. 6-7; 1987, 58).

In the latter case, the interactionist model of the influence of sex hormones highlights the two-way interaction between the presence of prenatal hormones and resulting physiological changes at the pre- and postnatal cellular and macro levels. Linear models focus on a more deterministic, one-way relationship where the prenatal presence of hormones are assigned all, or most, of the causal power, with little, or no causal attention given to the feedback from the rest of the system either pre- or post-natally.

Examining the two competing hormonal theories, Longino and her research partner Ruth Doell, found sexism and androcentric bias in many aspects of the linear theory research, though they did not find that sexism or androcentric bias affected the inferences from data to theory in any straightforward way (Doell and Longino 1988). Instead, they claim that the inferences were affected at a deeper level by prior commitments to patriarchal political ideals, which, in turn, affected commitments to the linear explanatory model. Inferences from data to theory within the level of the linear explanatory model were found to be sound.

Longino describes the patriarchal contextual values, and the linear explanatory model associated with them, as screens or filters in the process of scientific justification. For example, she writes, "In the conduct of research [explanatory models] serve as background assumptions against which data are ordered, in light of which data are given status as evidence for particular hypotheses and as a context within which studies gain significance" (1990, 135). Objectionable, patriarchal politics favored commitments to the linear hormonal explanatory models, which, in turn resulted in a one-way, deterministic view of prenatal hormones in control of adult human behavior.

Longino describes the linear model as a patriarchal, hierarchical view of human behaviour that limits understanding of "human capacities for self-knowledge, self-reflection, [and] self-determination" (Longino 1987, 58). Longino prescribes the nonlinear, interactionist model instead, because self-knowledge, self-reflection, and self-determination are part of a feminist political vision or worldview (1987, 59). She then concludes that an interactionist model should be chosen by feminists, "because of explicitly political considerations" (1987, 61). Here, again, "political considerations" seem to be distinct from evidential considerations, just as the representationalist model distinguishes "scheme" from "content."

Leaving aside, for the moment, the problematic nature of the split between feminist politics and evidence, there does, indeed, seem to be evidence (however conceived) that the interactionist model is better than the linear model. ¹⁰ Even Longino writes that the interactionist model "allows not only for the interaction of physiological and environmental factors but also for the inter-

action of these with a continuously self-modifying, self-representational (and self-organizing) central processing system"—something that the linear model cannot do (1987, 58). But, says Longino, this is not enough. "Obviously model-choice is also constrained by (what we know of) reality, that is, by the data. But reality (what we know of it) is, I have already argued, inadequate to uniquely determine model choice" (1987, 61).

My sense is that Longino's use of the hedge "what we know of reality" is the sort of scepticism made coherent but unanswerable by the metaphysics of the representationalist model. It is the scepticism that results from conceiving of a metaphysical gap between the raw data of the world, out there waiting, and our organizing schemes primed to filter the waiting data. The organizing filters of feminism or androcentrism block unmediated knowledge of reality, serving as preconceived explanatory frameworks that organize the raw data of sex hormones, for example. In Longino's words, again, explanatory models "serve as background assumptions against which data are ordered, in light of which data are given status as evidence" (1990, 135). For all Longino knows, all our theories might be floating free of the real world because they are part of our subjective representational system of explanatory frameworks or political worldviews, that filter reality. Keller's arguments contain similar concessions to scepticism.

KELLER'S SECRETS OF LIFE, SECRETS OF DEATH

In the introduction to her essay collection, Secrets of Life, Secrets of Death, Keller argues that objective method cannot be that which distinguishes theories based on ideology or myth from theories based on truth (1992a, 4). She describes this more critical view of objectivity, as "my 'linguistic turn,'" which, she continues, "represents a shift from my earlier preoccupation with the frailties of description, and in one respect at least, a departure from my initial confidence in the possibility of identifying certain beliefs as 'myth-like,' as distinct from other beliefs that are, by implication, 'myth-free.' Such a notion now seems to me suspiciously reminiscent of the old demarcation between 'truth' and 'ideology,' or between 'good science' and 'value-laden science,' demarcations that are themselves residues of the copy theory of truth" (Keller 1992a, 4-5). In representationalist terms, Keller no longer believes that objective method involves identifying which theories have the truth-conferring property of correspondence and which are based merely on ideology. In another essay in the collection, "Critical Silences in Scientific Discourse," she writes of "abandoning the hope for a one-to-one correspondence with the real" (Keller 1992c, 73).

However, it seems throughout these essays that her abandonment of objectivist correspondence is based on what she sees as a failure of execution and not necessarily of conception. Correspondence remains the ideal sort of rela-

tion we need to bridge the metaphysical gap between us and the world. The problem, says Keller, is that we simply cannot construct successful bridges, because they are always blocked by the influence of cultural conceptual schemes. Where Longino writes of political inclinations and explanatory frameworks, Keller writes more generally of culture—but in both cases a conceptual scheme is invoked. Keller explains further that "Since nature is only accessible to us through representations and since representations are necessarily structured by language (and hence, by culture), no representation can ever 'correspond' to reality" (1992a, 5). Again, for the representationalist, this criticism of objectivism inevitably leads to some version of relativism. The only option is to view our representations as filtered products of our subjective language scheme or culture. The representationalist is then faced with the question: how are we to choose between subjective representations if none has the objective, truth-conferring property of one-to-one correspondence with the external world?

Employing the relativist view of the underdetermination thesis, Keller's response is that we should choose those representations that facilitate certain "interventions." Specifically, we should choose those interventions that best suit our feminist political goals. In the following passage Keller explains the options she believes this sort of conceptual relativism leaves for feminists:

Since it is demonstrably possible to envision different kinds of representations, we need now to ask what different possibilities of change might be entailed by these different kinds of representation? For this, we need to understand the enmeshing of representing and intervening, how particular representations are already committed to particular kinds of interventions. Is there, for instance, a sense in which we might say that the program of modern genetics already has, written into its very structure, a blueprint for eugenics? Or that nuclear weapons are prebuilt into the program of nuclear physics? And if so, what kinds of theories of the natural world would enable us to act on the world differently? (Keller 1992c, 76)

In the above quotation, Keller makes the representationalist acknowledgment that subjective linguistic filters play an instrumental role in our choice of theories. However, she is still concerned to acknowledge the flip side of the representationalist scheme/content coin, namely, the role of the "nonlinguistic" realm—the objective reality the theories describe. For example, in the first essay in the collection, "Gender and Science: An Update," Keller writes that for feminist critics who take the objective success of science seriously, the new task is to answer the question "How do 'nature' and 'culture' interact in the production of scientific knowledge?" (1992b, 36). But discovering how these two metaphysically distinct realms

interact becomes as much of a sceptical problem for Keller as it was for Descartes. Keller is in good company when she is unable to provide a compelling answer. Despite her switch from objectivist searches for truth to instrumentalist searches for success, the representationalist elements remain, as do the scepticism and relativism.

HARDING AND FEMINIST STANDPOINT THEORY

Paralleling Keller's and Longino's views on the underdetermination thesis, Sandra Harding's work on feminist standpoint theory is critical of the claim that objective method consists in detecting a one-to-one correspondence between true representations and the world (Harding 1991; 1993). But, again, in parallel with Longino and Keller, Harding does not fully dismantle the representationalist model, rather she focuses her criticism on the clarity of the correspondence relation.

In "Rethinking Standpoint Epistemology: What is 'Strong Objectivity'?" (1993), Harding explains her commitment to the general tenets of standpoint theory:

The starting point of standpoint theory—and its claim that is most often misread—is that in societies stratified by race, ethnicity, class, gender, sexuality, or some other such politics shaping the very structure of a society, the activities of those at the top both organize and set limits on what persons who perform such activities can understand about themselves and the world around them. . . . In contrast, the activities of those at the bottom of such social hierarchies can provide starting points for thought—for everyone's research and scholarship—from which humans' relations with each other and the natural world can become visible. This is because the experience and lives of marginalized peoples, as they understand them, provide particularly significant problems to be explained or research agendas. (Harding 1993, 54; italics in original)

In Whose Science? Whose Knowledge? (1991) Harding argues that while it is true that every social standpoint filter "organizes and sets limits" on understanding, i.e., every filter provides only a partial representation of reality, not all social standpoints generate equally partial representations or beliefs. The social standpoints of women, or feminists with "maximally liberatory social interests," for example, "have generated less partial and distorted beliefs than others" (Harding 1991, 144, 148). She explains:

The history of science shows that research directed by maximally liberatory social interests and values tends to be better

equipped to identify partial claims and distorting assumptions, even though the credibility of the scientists who do it may not be enhanced during the short run. After all, anti-liberatory interests and values are invested in the natural inferiority of just the groups of humans who, if given real equal access (not just the formally equal access that is liberalism's goal) to public voice, would most strongly contest claims about their purported natural inferiority. Anti-liberatory interests and values silence and destroy the most likely sources of evidence against their own claims. That is what makes them rational for elites. (Harding 1991, 148-49)

As with Longino and Keller, Harding rightly criticizes the traditional epistemological view of objectivism. The "value-free" approach of objectivism, she argues, results in a "semi-science" that "turns away from the task of critically identifying all those broad, historical social desires, interests, and values that have shaped the agendas, contents, and results of the sciences much as they shape the rest of human affairs" (Harding 1991, 143). Harding prescribes, instead, "strong objectivity" that extends the idea of scientific research "to include systematic examination of . . . powerful background beliefs" thereby "maximizing objectivity" (1991, 149). However, paralleling Longino in particular, Harding continues with the representationalist metaphor by characterizing strong objectivity as the critical examination of linguistic or social filters, "the powerful background beliefs" that continually block our knowledge-seeking of the nonlinguistic, natural realm. We cannot get at objective representations so the best we can do is to search for better conceptual filters. The worry of philosophical scepticism that results from scheme/content relativism begins to appear in Harding's work, just as it appeared in the writings of Longino and Keller.

For example, because she acknowledges that all beliefs have a social filter, Harding disavows the claim that the standpoints of women or feminists will produce true beliefs (1991, 185, 149). While she purchases some consistency by claiming that *all* knowledge is somehow distorted, this sceptical claim robs her of the foundation she then needs to argue her thesis—namely that the knowledge produced from maximally liberatory social standpoints is less distorted, generally, than that produced from others.

Even as Longino, Keller, and Harding rightly reject the claims that objective method involves impartial (value-, social-, culture-free) detection of one-to-one correspondence, none seems to fully critique the metaphysical gap of representationalism that correspondence sets out to bridge. They argue that our subjective conceptual schemes filter our gathering of evidence (our belief acquisitions) so that, on Longino's and Harding's analysis, in particular, objective method ("objectivity by degrees" for Longino; "strong objectivity" for

Harding) is simply the least subjective method for judging which conceptual schemes, filters, or interpretive frameworks make for the least opaque filters between us and the world. Unfortunately, accepting the metaphysical gap between our theories and the world, while criticizing the ability of correspondence to bridge that gap, makes global scepticism a concern. All of our representations could be floating free of the world, to varying degrees. If this is the case, then, Longino, Keller, and Harding (and critics of feminism) are right, we must concede a certain amount of relativism. When feminist scientists and science commentators choose between representations that are underdetermined by evidence, our decision can be made only on the basis of our feminist political interpretive frameworks.

But wait. We shouldn't give up on the potentially decisive role of evidence just yet. While feminist scholars, and others, have shown that correspondence doesn't bridge the metaphysical gap, relativist resignation is not our only other option. We need to more fully deconstruct the traditional epistemological project by dismantling the representationalist metaphor of the gap. So says Davidson, or so, at least, I have been hinting.

A DAVIDSONIAN PRESCRIPTION

Davidson makes a number of points against the representationalist model that informs the epistemological debates between objectivists and relativists. For example, paralleling the work of many feminist critics of epistemology, he argues against the claim that the objective detection of sensory data can be used to justify or stand as evidence for beliefs that represent those data. Davidson notes that for the justification process to work, we have to be aware of the detection of sense data, and this awareness is simply another belief. His argument undercuts the objectivist attempt to construe awareness of sensory data as an evidential entity that stands *independent from* our beliefs.

It might seem, however, that in revealing the incoherence of harnessing sensations as independent evidence, Davidson has removed any justificatory scheme for our empirical beliefs. This seems to leave us with the scepticism encountered by Longino, Harding, and Keller, a scepticism that Davidson's nonrepresentationalist model is supposed to avoid. If explanations appealing to the sensory origins of our beliefs do not justify those beliefs, how do we know that we are not globally mistaken about the world? In this section I introduce Davidson's "radical interpreter" as a heuristic device that provides a "reason for supposing most of our beliefs are true that is not a form of evidence" (Davidson [1986] 1991a, 127).

It is important to make clear that the term "most" in the above quotation is not meant as a quantificational claim guaranteeing, for example, that a certain *number* of our beliefs must be true. Rather, Davidson uses the concept of the radical interpreter to support a philosophical claim, namely the claim that the

detection of false beliefs *requires* that we have a background of true beliefs against which the error of the false beliefs can be measured. This latter claim undercuts the global sceptic who wants to make error a general concern, i.e., who wants to deny or question the existence of norms against which errors can be measured and detected.

The "radical interpreter"—an adult interpreter faced with a completely foreign language—is an idealized concept Davidson borrows from Quine. Quine introduced the character in his explanation of how we would have to proceed to learn a completely foreign language when no "translation manual" is available (e.g., Quine "Ontological Relativity" 1969). I will argue that if we analyze meaning from the perspective of the radical interpreter, a whole host of traditional epistemological problems can be set aside.

Davidson equips the radical interpreter with the abilities of a competent adult speaker of a language. Parachuted into the midst of a foreign land, she has general expectations about how to proceed. She has a sense of basic logical structure (i.e., she understands the implications of those elements of a language ["and," "if. . . , then," etc.] that give the sentences that contain them their particular logical form). She also has the ability to discern when the speakers of the foreign language are making assertions, that is, expressing, in the form of sentences, beliefs held true (even though, in the beginning, she has no idea what those sentences mean).

Davidson notes that, in order to make any progress in her new world, the radical interpreter must watch for correlations between types of sounds uttered by the native speakers and the kinds of events in their shared world that caused the utterances. In the beginning this is all she has to go on. She does not have any preconceived notion of the particular semantic role that is played by any particular noises uttered by the native speakers. Rather, at this early stage, it is the radical interpreter's successful (accurate) identification of the environmental reference that prompted the native speakers' noises, which provides those noises with semantic content in the first place. For example, the interpreter's understanding of the meaning of the native speaker's utterance "There's the bus!" is provided by the shared causal relationship between the arrival of a bus in the visual (or aural) fields of the interpreter and the native speaker, and the native speaker's utterance. 12

The foreign noises that express basic or simple beliefs, in sentences such as "There's the bus!" are the starting points for the radical interpreter. These basic beliefs are expressed in what Quine called "occasion sentences" (Quine 1960). Occasion sentences are so named because their truth values change depending on precise, salient variables such as the time and place the sentences are uttered and who utters them. The truth of the sentence "There's the bus!" for example, will depend on the presence of a bus at the time the sentence is uttered. For these "basic" beliefs expressed in occasion sentences, it is possible for the radical interpreter to make an educated guess about the truth condi-

tions of the native utterance, because she has such immediate access to the truth values of her guesses.

Quine contrasts these occasion sentences with "standing sentences," such as "There have been some buses." These latter sentences will be true depending on much more general variables, such as the presence of buses at any number of times prior to the occasion "There have been some buses" is uttered. What makes occasion sentences, as opposed to standing sentences, the basic entry points for the radical interpreter is not the epistemic simplicity of the terms involved in the sentences (as the empiricist might claim), but the relative ease with which a non-native speaker can guess the truth conditions of the native occasion sentences.¹³

The causal triangular relationship between the interpreter, the native speakers' utterances of occasion sentences, and the objects and events in their world, requires that the interpreter assume the natives are speaking truthfully about their beliefs. Of course, while the adult language user has the ability to recognize when a native speaker is making an assertion, this recognition does not *guarantee* that the native speaker's assertion is true. But, says Davidson, at the beginning, the radical interpreter must *assume* that the native speaker's assertions are true. For interpretation to occur she must assume that the same relation between belief and truth holds for those she interprets, as for herself—what Davidson and Quine have called "the principle of charity." In other words, starting with the most simple utterances such as "There's the bus!" the radical interpreter must assume that she and the native speakers agree about what would make those utterances true (e.g., the presence of a bus).

Why is this agreement necessary at the beginning when the interpreter is collecting sentences in the native language and correlating them with the sorts of environmental conditions that prompted the sentences? It is necessary, says Davidson, because in order to identify her teachers as having any beliefs, she must assume the beliefs they hold are true. Once she has established an empirical base of correlations between their sentences and hers, then she can start to make judgments of inconsistency and falsehood. Before that point, identifying her teachers' beliefs as false would deplete the empirical base from which she needs to begin her interpretative project in the first place. As one Davidson commentator explains, assigning "too much falsity among beliefs undermines the possibility of identifying beliefs at all" (Jeffrey Malpas 1992, 159). Identifying falsehoods and misconceptions is "parasitic" on an established coordinate of shared meaning. We are getting closer, then, to explaining Davidson's "anti" sceptical claim about the necessity of having true beliefs for the identification of false beliefs.

It might still be unclear, however, why the existence of a "shared coordinate of meaning" between the native speaker and the radical interpreter, guarantees, in Davidson's words, that "it cannot happen that most of our plainest beliefs about what exists in the world are false" (1991b, 195). Just because

there must be agreement between the radical interpreter and the native speakers about the truth of basic beliefs, does not guarantee that those beliefs are, in fact, true. Davidson responds by examining the concept of truth itself. Where, he asks, do we come up with the concept of objective truth? The answer is in shared language. "Unless a language is shared there is no way to distinguish between using the language correctly and using it incorrectly; only communication with another can supply an objective check" (Davidson 1991c, 157). And communication with another can only start by assuming agreement on what makes utterances true—the principle of charity.

Davidson's apologists note that the principle of charity is unfortunately named, because it does not operate as advice that we could choose to follow or not (see Bjørn Ramberg 1989; Malpas 1992). Ramberg emphasizes this point: "The principle of charity . . . offers no advice to us as interpreters, it yields no interpretational strategy. It is not a heuristic device, nor is it, accordingly, something we could get by without; it is a condition of the possibility of interpretation" (Ramberg 1989, 74; italics in original).

If the principle of charity is a precursor for successful interpretation, this means that truth must be held primitive for words and sentences to be meaningful. This takes us back to the example of the radical interpreter correlating environmental circumstances with basic native utterances, e.g., "There's the bus!" The radical interpreter has no initial preconceptions about how to link a native utterance with specific semantic content. Rather, her attention to the correct (true) reference of the native sentence is what provides her with clues to the meaning of the utterance in the first place. The meaning of an utterance is given by its truth conditions, and not the reverse.

Davidson uses these points about the radical interpreter to support his extensionalist claim that in the simplest cases of beliefs, i.e., those expressed in occasion sentences, the events and objects that cause those beliefs (the extension of the beliefs) also determine their contents, or meaning (the intension of the beliefs) (Davidson 1989a, 164; 1989b; [1986] 1991a; 1991b, 195). This means that in the simplest cases, there cannot be wholesale slippage between our understanding the meaning of a sentence and our understanding of the conditions that would make that sentence true. Davidson describes this approach to meaning further, in the following passage: "As long as we adhere to the basic intuition that in the simplest cases words and thoughts refer to what causes them, it is clear that it cannot happen that most of our plainest beliefs about what exists in the world are false. The reason is that we do not first form concepts and then discover what they apply to; rather, in the basic cases, the application determines the content of the concept" (Davidson 1991b, 195).

Davidson's extensionalist approach to meaning excludes the possibility that the speech of the radical interpreter could be, in principle, indistinguishable from her teachers and idiosyncratic with respect to meaning. In the simplest cases of beliefs expressed in occasion sentences, the meaning of her utterances is determined by their being used correctly in the presence of another speaker and the event in the world that caused the utterance. Taking a holistic approach to build from the simpler cases of beliefs, to beliefs expressed in more complex theories, any idiosyncrasies in the radical interpreter's meaning are, in principle, available for her correction through a purely extensional examination of how she has applied her references. Somewhere along the line, any discrepancies can, in principle, be revealed. There is no subjective "inside" to her beliefs that is metaphysically separate and inaccessible from the viewpoint of the native speakers in the objective, outer world.

For example, if the radical interpreter has interpreted "She's candid," in the native language, as "She's rude" in her own language, the difference in meaning between the two sentences could, in principle, be revealed to her. The two words "rude" and "candid" are linked in a web-like fashion to different, simpler concepts, which in turn have different causes. The two utterances are correctly applied on different occasions; this is what gives them different meanings.

Using the model of the radical interpreter, Davidson's causal analysis of belief provides us less-than-radical interpreters with a presumption in favor of the truth of any particular belief. However, a presumption is not a guarantee. He cheerfully admits that the truth of each belief is up for grabs, though not all or even most of these beliefs can be up for grabs at once. It is the veridicality of beliefs generally, as understood through his causal account, that makes "meaningful disagreement" over particular beliefs possible (Davidson 1984, 196-97). Our beliefs have no content unless we have established a common convergence between ourselves, another speaker (or speakers), and a shared environmental stimulus. Occasion sentences provide the entry points for this convergence. Once we have established a pattern of successful convergence, a pattern of semantic "firmness," then we can say of any particular belief that it is false. You have to be right about a large background of beliefs before you can critically examine the validity of particular ones. Similarly, successful communication with others indicates that you know many things about your world (Davidson 1989a; 1990, sec. III).

We now have a way to explain how, on Davidson's view, scepticism does not arise as a coherent option that needs epistemological attention. Davidson does not show that global scepticism is wrong, he simply argues that on the model of the radical intepreter, a metaphysical gap between language users and the world is unthinkable. Recall that on the representationalist view, beliefs are conceived as an "inner" non-natural, subjective representation of the outer, natural realm. In contrast, Davidson asks us to try viewing belief as the production of a triangular causal relationship between three naturalized entities, namely, ourselves, other speakers, and our shared environment. From the

perspective of the radical interpreter, our ability to use language comes from direct, unmediated, causal contact with the world, which, in turn, guarantees that we have an established background of true beliefs against which our false beliefs can be measured. As Davidson writes, "communication begins where causes converge" ([1986] 1991a, 132). If we want to doubt in a wholesale, global fashion the causal etiology of our beliefs, we must also "give up language" (Ramberg 1989, 97).

DAVIDSON ON UNDERDETERMINATION THEORY

Applying Davidson's model of language use, we are cautioned against the metaphysical bifurcation of inner, subjective, political reasons for scientific beliefs from external, objective, evidential reasons for these beliefs. This advice is particularly relevant for addressing the problems that Longino and Keller encountered when they prescribed a relativist version of the underdetermination thesis, and for Harding when she made similar representationalist claims about the filtering of social standpoints. Longino and Keller argued that the underdetermination of theory by evidence means that, because interpretive frameworks or cultural worldviews filter any evidence brought forward in support of a theory or hypothesis, we cannot choose between theories or hypotheses on the basis of evidence. Adjudication can only be made on the basis of our political values. However, this construal presumes the representationalist view that the "evidence" and our feminist "political values" emanate from two metaphysically separate spheres—the first from the objective, external world; the second from the subjective, internal mind (or minds). The "evidence" is construed as providing independent (objective) support for a theory, while political values are viewed as dependent and subjective.

In response to this representationalist claim about the belief-independence of empirical evidence, Davidson reminds us that when we marshal empirical evidence in support of a belief or theory, we need first to be aware of the empirical evidence, and that awareness is itself another belief. In the project of marshaling epistemic justification for our individual beliefs there is no independent, "nonbelief" entity to which we can appeal. The evidence for a belief must itself be a belief. It is also important to see that both our political values and our more straightforwardly empirical commitments are beliefs of this evidential sort. On Davidson's model even our (feminist) political beliefs must have some web-like relation to empirical evidence, if they are to have any content.

There are a number of ways in which feminist political values can interact with and support the more straightforwardly empirical commitments that, together, make up our growing web of beliefs (e.g., our beliefs critical of sexism and oppression in science). For example, recall Longino's particular discussion of the role of political values in choosing between competing archaeological

interpretations of chipped stones. One theory, highlighting the role of the male hunter, interprets the stones as hunting tools. The other competing theory highlights or includes the role of the female gatherer and interprets the stones as implements for gathering and preparing edible vegetation. According to Longino, the available evidence supports both theories equally well, so the choice between the male-focused model or the more inclusive, female model must be *relative* to an underlying *political* commitment, namely to androcentrism or feminism, respectively (Longino 1990, 109). I argue, instead, that feminist political values are *themselves* beliefs with empirical content that can, in turn, provide *good evidential reasons* for rejecting the man-the-hunter interpretation. Our rejection of this interpretation does not need to be construed as relative to the nonevidence world of feminist politics.

For example, feminist political analysis of past scientific practices has revealed what is by now a well-documented pattern, namely that theories of human bodies and/or behavior that ignore women's bodies and/or behavior have proven to be inaccurate. The feminist archaeologist who disputes the man-the-hunter theory, in spite of the equivocal evidence provided by the chipped stones, still has good inductive evidence, based on her feminist political views, to support her decision. The man-the-hunter theory leaves out the role of women in the human development of technology and culture. The feminist archaeologist who chooses to interpret the chipped stones on the basis of a theory that includes or even highlights the role of female agrarian behavior is making her choice based on past evidence that to ignore the role of women is to get the "human" story drastically wrong. Her decision is not merely relative to feminist politics, it is not based on some non-evidence belief entity brought in when all the objective evidence, independent of belief, is equivocal. Rather it is a decision well-supported by inductively observed instances of past scientific errors.

On my nonrepresentationalist view, then, the man-the-hunter and the woman-the-gatherer interpretations are not equally well-supported by the evidence. The former is *not* supported by feminist analyses of past scientific practice. It is not the case that, faced with interpretations equally well-supported by the "belief-independent" empirical evidence, we are forced to the inner belief world of politics to make our choice.

On Davidson's model, our empirical beliefs have no better metaphysical links than do our political beliefs to the outer, independent objective world, just as our political beliefs are no more closely related than our more straightforwardly empirical beliefs to our inner subjective world. But this is because, on Davidson's view, there is no inner or outer world, there is no metaphysical bifurcation. There is only one world, an objective view of which can be made meaningful only by the language users who are part of it.

While it is certainly possible that some of the political beliefs that make up our belief webs might be more *geographically* remote from the empirical beliefs

at the edge of our webs, the holism of Davidson's model indicates that the political beliefs are still connected, by some threads, to those empirical beliefs. When we examine meaning on the model of the radical interpreter, we see that changes in empirical beliefs can, and must, in principle, affect more theoretical beliefs, even if the effect is only slight. For the radical interpreter, no two theoretical beliefs can both conflict with each other in drastic ways and have the same truth conditions.

Of course, even though Longino might not have found an example of two underdetermined theories or models, there still might be cases where we want to say that, from the point of view of us nonradical interpreters, two conflicting theories are equally well-supported by the empirical evidence. Here, if we are careful to construe both the "empirical" and "political" evidence in support of each theory as themselves beliefs, we might say that both types of belief can be epistemically underdetermined by their causal relationship with the external world. But, in principle, the radical interpreter must be able to identify the precise causal history of any individual belief, even if we, less-than-radical-interpreters cannot.

In the sceptic's world, the fear is that the metaphysical separation between us and the world makes coherent the worry that we are, *in principle*, unable to speak with confidence about the causal links between our representations and the world represented. Davidson's point is not to offer comfort to the sceptic that her representations are indeed accurate, but to rethink the "beliefs as representations" model itself. He uses the radical interpreter to give life to an alternate view of the relationship between language users and the world, whereby all we have (and all we need) is an interconnected web of empirical and theoretical/political beliefs, where for any one attribution of error, that potentially false belief must be connected sufficiently firmly to a sufficiently rich background of true beliefs before we can even identify that belief as being false *about* some feature of the world.

To review, Davidson's repudiation of the representationalist metaphor is a repudiation of a metaphysical gap between our representations and the world. Unlike the filtering conceptual schemes invoked in the writings of Longino, Keller, and Harding, Davidson views our language use as a guarantee of an unmediated causal relationship between most of our beliefs and the world. But, unlike the correspondence theory of objectivism, he does not use this unmediated contact to justify particular beliefs. I think we feminists should examine this option further.

A nonrepresentationalist understanding of contextual values or worldviews would conceive of them, not as filters between our beliefs and some non-belief form of evidence, but as further important strands in our web of belief. When we justify particularly crucial elements of our feminist worldviews, such as our beliefs about oppression and justice, our appeals to the evidence have been well-documented and are powerfully persuasive as a result. There is no need

for us to doubt the evidence of our feminist political values, as long as we conceive of such evidence as that which is provided by other beliefs in our web. This inter-belief comparison is where all justification happens, and has happened, for decades of feminist research. In this way, we can make stronger claims than those allowed by the sceptical arguments of Longino, Keller, and Harding. Our scientific theories and our beliefs about oppression and justice are not merely relative to our feminist conceptual schemes, they are justified by the evidence and they are true.

NOTES

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- 1. See Elisabeth Lloyd's "Science and Anti-Science: Objectivity and its Real Enemies" (Lloyd 1997) for an excellent discussion of this sort of antifeminist argument.
- 2. Quine's views on the scepticism underlying this relativist application are difficult to identify (see Bergström [1993] for a review of this point).
- 3. See the parallel analysis offered by Ilkka Niiniluoto in "The Relativism Question in Feminist Epistemology" (1997).
- 4. Karen Barad makes similar suggestions based on the philosophy of Bohr (Barad 1997).
 - 5. My thanks to Bjørn Ramberg for suggesting this characterization.
- 6. See Linda Alcoff's *Real Knowing* for a recent endorsement of this sort of epistemological project (Alcoff 1996, 2-3).
- 7. A prototypical version of objectivism, as I have described it, can be found in Mind and the World Order by C. I. Lewis ([1929] 1956). He explains that "the two elements to be distinguished in knowledge are the concept, which is the product of the activity of thought, [such as the forming of an hypothesis or a theory] and the sensuously [empirically] given, which is independent of such activity" (Lewis [1929] 1956, 37). For Lewis, the "given" of experience is "what remains unaltered, no matter what our interests, no matter how we think or conceive" ([1929] 1956, 52). This is what Davidson calls the "content." Our conceptualization of the given content is the perceptual imposition of a filter or "scheme."
- 8. Bas van Fraassen's constructive empiricism, for example, maintains that we can only have objective knowledge of the truth about the observable entities in a theory. He explains that "to accept a theory is (for us [constructive empiricists]) to believe that it is empirically adequate—that what the theory says about what is observable (by us) is true" (van Fraassen 1980, 18; italics in original). When a theory makes reference to unobservable entities we cannot have such knowledge. Van Fraassen argues that theories that contain unobservables can be "empirically adequate" but not true or false as a whole (1980, 18). Many feminist philosophers, notably Nelson (1990), have begun to reexamine feminist versions of empiricism, but these approaches are not the focus of this essay.

- 9. Longino's differences with Kuhn are discussed in chapter 2 of Science as Social Knowledge (Longino 1990).
- 10. Nelson makes the same observation about Longino on this point, but Nelson's diagnosis is from a Quinean rather than a Davidsonian perspective (Nelson 1990, 238-39; see also Nelson 1993). Insofar as Nelson makes use of Quine's non-representationalist moments, I am generally in agreement with her proposals.
 - 11. For an alternative examination of Davidson, see Alcoff's Real Knowing (1996).
- 12. Charlene Haddock Seigfried reminds me that an even more thorough-going pragmatist interpretation would involve pairing the sentence "There's the bus!" with a whole host of public transit practices—riding the bus, smelling the bus fumes, etc. I think Davidson would appreciate the addition of these other practical, experiential details.
- 13. Quine goes on to distinguish a subclass of occasion sentences, the observation sentences, in order to make a number of empiricist claims that rely on a representationalist model (Quine 1960, ch. 2). Like some of the more traditional foundationalists such as Hempel (1965), Quine tries, at times, to use the empirical simplicity of occasion sentences as an epistemological grounding for claims about more complex sentences. As I will argue, Davidson's discussion of occasion sentences has no such epistemological implications.
 - 14. Another interpretive point suggested to me by Ramberg.

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