

# The Third Way: Reflections on Helen Longino's *The Fate of Knowledge*\*

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Helen Longino's *The Fate of Knowledge* offers a positive view of how to integrate social considerations into epistemology, as well as a diagnosis of the failures of previous efforts. I suggest that Longino's positive account is interesting and fruitful, although her favorite version of pluralism seems unclear and unmotivated. I also argue that her attempt to distinguish her own views from earlier ventures in social epistemology suffers from obsession with an allegedly pervasive Rational-Social dichotomy. This defect doesn't interfere with the insights of her positive proposals.

**1. The R\*D Menace.** A specter is haunting Science Studies, the specter of the Rational-Social Dichotomy. From Edinburgh and Cardiff to Tucson and San Diego, there are R\*D's (Rational-Social Dichotomizers) under plenty of beds, and, even though they protest (Prufrock-style: "that is not what we meant, that is not what we meant at all"), they must be hauled out and exposed. Fortunately, philosophers and sociologists may rest easy; Special Prosecutor Longino is on the case.

It is a pity that Helen Longino's *The Fate of Knowledge* is pervaded by discussions that invite the response of the last paragraph. For at the center of the book is an insightful presentation of a way in which social and cognitive aspects of the practice of the sciences might be integrated. My principal concern in what follows will be to bring this account into

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focus, to highlight some of its strengths, and to raise some questions. I'll only return to Longino's obsessive R\*D-detection at the end.

**2. Some Possible Positions.** Let's start with some common theses about the aims, achievements and methods of the sciences, and the interrelations among them. First, a widespread—but not undisputed—claim about truth as a goal of scientific research:

*Veritism:* Science aims to accept, and often succeeds in accepting, true statements.

This is often, but not invariably, combined with:

*Correspondentism:* The appropriate notion of truth for understanding *Veritism* is one that sees truth as correspondence to a mind-independent reality.

Further, the joint acceptance of these theses is frequently accompanied by:

*Methodism:* The acceptance of statements in science is guided by rules of method.

The package can now be tied together by adding:

*Reliabilism:* The rules of method are rightly adopted, because following them reliably generates and sustains true beliefs.

There are, of course, lots of worries about what the theses mean, why they are preferable to alternatives, and so forth. For present purposes, however, it's useful to note an obvious tension between the first pair and the second pair: *Veritism* is concerned with an entity, Science, supposed to be capable of aims and acceptance; *Methodism* and *Reliabilism* are most naturally understood as applying to people, most obviously to scientists. On the face of it, some explanation of *Veritism* is needed, and one natural elaboration is by way of a three-part commitment to the idea that individual scientists have aims and accept statements.

*Individualism:* (a) Individual scientists aim to accept, and often succeed in accepting, true statements; (b) Individual scientists aim that true statements should be accepted by most (if not all) the members of the community to which they belong; (c) Community acceptance is to be understood in terms of acceptance by the individuals who comprise the community.

The principal thrust of (c) is to oppose any idea of an irreducible "social fact" of community acceptance.

*Individualism* is not by any means incompatible with the idea that science is a social activity. In particular, it can be combined with

*Interactionist Socialism*: Individual scientists accept statements as the result of interactions with others (debate, collaboration, instruction, and so forth).

Those who adopt both *Individualism* and *Interactionist Socialism* are likely to add an obvious development of *Methodism*, to wit

*Social Methodism*: Among the rules of method are rules governing the interactions among scientists.

And they will see rules of this type as judged by a standard that fuses *Reliabilism* with part (b) of *Individualism*.

There is, however, another obvious possibility. Someone who held *Interactionist Socialism* might also contend that the social interactions in which scientists are involved (whether they involve only other scientists or members of the broader society will be left indeterminate) are antithetical to achieving the aims set forth by *Veritism* and *Correspondentism*. This person would propose

*Social Skepticism*: The social interactions in which scientists engage interfere with their acceptance of true statements (when truth is understood in the correspondence sense).

In more familiar terms, taking the sociology of science seriously spells trouble for a realist account of scientific knowledge.

One strand in traditional philosophy of science (call it the *Realist Package*) combines *Veritism*, *Correspondentism*, *Methodism*, *Reliabilism*, and *Individualism*. A prominent movement in the sociology of science, from the early 1970s to the present, uses *Interactionist Socialism* and *Social Skepticism* to question the traditional philosophical package(s).<sup>1</sup>

Yet not only in British politics, but in philosophy of science as well, recent years have seen attempts to find a "third way." Moreover, there's an obvious way to try: build on to the Realist Package *Interactionist Socialism* and *Social Methodism*; of course, this will require an explicit rejoinder to arguments thought to favor *Social Skepticism*; but this version of the third way seems to "transcend the Rational-Social Dichotomy." In recent years it has been pursued by Alvin Goldman, Susan Haack, and one of my former selves.

Helen Longino is a self-described follower of the third way. But the position I've just sketched isn't hers. She does better. The ways in which she does better have less to do with the acceptance of *Interactionist So-*

1. There are many versions of philosophical anti-realism that would question *Veritism* or *Correspondentism*, but that would produce a position isomorphic to the cluster of theses I've conjoined; those versions are equally unsatisfactory from the standpoint of the sociological critique.

*cialism* than with her refinement of *Veritism* and articulation of *Social Methodism*. Most fundamental is her recognition of an error that has infected some previous versions of the third way (perhaps most egregiously in my own 1993). That error is to go beyond *Veritism* to

*Monism*: Individual scientists aim to contribute to the attainment of a single, complete, true account of nature.<sup>2</sup>

It's not clear that the idea of a complete true account of nature is coherent, and any such account is surely not attainable. A better version of the same general idea is to propose that science aims at the *significant* truths, and that significance is a matter of identifying natural kinds, formulating unifying general principles, and so forth. (This is the line I pursued in 1993). But Longino is right to see that the whole idea is suspect.

Her own position starts with a reaction to *Veritism*. Longino believes that scientific knowledge should be understood by focusing on other vehicles of representation than statements. In particular, she is sympathetic to the idea that visual representations play an important role in the sciences, and to the semantic conception of theories (especially in the version offered in Giere 1988). Hence, she'd replace *Veritism* with something broader, along the lines of

*Conformism*: Science aims to accept, and often succeeds in accepting, representations that conform to reality.

The notion of conformity that is at issue here rests on a broadening of the notion of truth as correspondence. Unlike many philosophers who have worried about the Realist Package, Longino doesn't reject *Veritism* or conjoin it with some other view of truth (a deflationary account of truth, or a "don't ask, don't tell" approach). Instead she adopts

*Extended Correspondentism*: Representations conform to reality just in case they are statements and true in the correspondence sense, or visual representations and accurate in corresponding to their intended domain, or models and correspond to the intended domain in appropriate respects and to appropriate degrees, or. . . .

Here I've left room for the possibility that Longino's examples of representational vehicles don't exhaust all the types she'd sanction, since she doesn't commit herself to the completeness of her list.

Notice that *Extended Correspondentism* introduces a pragmatic dimen-

2. I should note that Longino has a thesis she calls "monism," characterized in various ways at various places in her book; her formulation on page 67 comes closest to my usage; I should note, however, that my 1993 book, while in the vicinity of monism, was a little less crude than the *Monism* discussed here.

sion into the account of the desired relation of conformity between representations and reality. I have made this explicit with respect to models, where, following Giere, Longino suggests that models need to correspond in "appropriate respects and to appropriate degrees"; but the same relativization to background goals that generate "appropriate" respects and degrees can easily be allowed in the case of visual representations (we may think, as Longino does, of maps) and even of statements (a statement ascribing a value to a parameter counts as true, or approximately true, if the value ascribed is within an appropriate interval around the actual value). This allows for the possibility that *Monism* is far too grandiose as an account of the aims of science, and what we really want is a collection of representations adapted to our needs and interests. In fact, Longino explicitly adopts something like

*Pluralism*: The desired representations need not fit together into a single complete true account; rather they may be partial and not necessarily "congruent."

I'll want to return to the notion of "congruence" below; for the moment we can simply understand it as some way of marking out the idea that the totality of the representations accepted by science, even ideally, need not fit together into a complete account of nature.<sup>3</sup>

As I understand it, Longino's version of the third way proceeds by adopting *Methodism* and rewriting *Reliabilism* to accord with her broader notion of the representations science aims at (and the broader notion of correspondence). Given her frequent castigation of other people for pursuing social accounts of science in too restricted a way, one might expect that she would reject *Individualism*, but so far as I can tell, this is not so. Longino never attempts to provide a notion of community acceptance that would be irreducible to acceptance by the individuals who comprise the community: indeed her response to a problem posed by John Hardwig concerning the bearer(s) of knowledge in cases where large numbers of researchers collaborate seems thoroughly in line with *Individualism*, and her emphasis throughout is on the importance of *interactions* among individual scientists. I therefore interpret her as adopting *Interactionist Socialism* and *Social Methodism*.

At this point, we come to the last, and to my mind the most interesting, aspect of Longino's third way. Given her adoption of *Pluralism*, Longino wants to ensure that the collection of representations actually proposed and accepted in the course of scientific research isn't restricted through

3. Whether this brings with it the idea that representations that are (in some sense) correct needn't be jointly consistent is an issue to which we'll return below; my own acceptance of *Pluralism* emphasizes incompleteness rather than inconsistency.

the exclusion of some viewpoints from scientific discussion. This leads her to conclude that *Social Methodism* has to be articulated in a particular way, that it must offer an ideal of a scientific community in which different points of view are expressed and heard. Longino is not so naïve as to suppose that some condition of simple equality for all voices will do; she recognizes differences in acumen and expertise—suggesting instead that the right ideal is one of *tempered* equality (although, as she admits, she only gestures towards spelling this out). She is thus committed to:

*Democratism*: The rules of method have to articulate the ideal of an appropriate democratic community.

Let's now take stock. We have the following array of positions. First the Realist Package, and variants on it that don't take any social turn (although they may diverge from *Veritism*, *Correspondentism*, *Reliabilism*, and so forth); this cluster of views is the stock of traditional philosophy of science. Second, come the most obvious views in recent sociology of science, views that conjoin *Interactionist Socialism* with *Social Skepticism* and proceed to draw negative conclusions for traditional philosophy of science. Third are earlier versions of the third way, such as those that add *Interactionist Socialism* and *Social Methodism* to the Realist Package, attempt to rebut *Social Skepticism*, but also commit themselves to *Monism*. These positions differ from Longino's preferred alternative *not in failing to transcend some Rational-Social Dichotomy* but in not adopting her broader approach to representations and the *Pluralism* that flows from it. For Longino's version of the third way consists of: *Conformism*, *Extended Correspondentism*, *Methodism*, *Reliabilism* and *Individualism* (so far an amended Realist Package), *Interactionist Socialism* and *Social Methodism* (theses which, like the denial of *Social Skepticism* she shares with other followers of the third way), and, distinctively, *Pluralism* and *Democratism*.<sup>4</sup>

The options I've listed are not the only possibilities (indeed, one of my purposes in this section was to invite philosophers to consider their own preferred deviations from the positions on which I've primarily focused). But Longino's seems to me preferable to the alternatives, and, in particular, to those third way accounts that commit themselves to *Monism*. Unfortunately, I don't think Longino is entirely clear about *why* her account is superior.

**3. The Road to Democracy.** Let me start with a small point. I'm not sure how much hangs on replacing *Veritism* and *Correspondentism* with *Con-*

4. I should note that (as Longino recognizes very clearly), *Pluralism* has been developed by a number of people. Patrick Suppes is one important source, and the writings of John Dupré (1993) and Nancy Cartwright (1999) provide detailed recent elaborations.

*formism* and *Extended Correspondentism*. For instead of saying that one of the aims of science is to adopt models that fit the world in appropriate respects to appropriate degrees, we might suggest that among the statements science aims to accept is a class describing this kind of fit. That would still allow for the pragmatism that generates the attractive features of Longino's position: science would be seen as aiming at significant truth, where significance is determined by us and our evolving interests (see Kitcher 2001, chapters 4–6). Of course, there would still be the challenge of assimilating the accuracy of visual representations to some notion (or close analogue) of truth, but it may well be possible to meet the challenge (for a preliminary attempt, see Kitcher and Varzi 2000).

Longino seems quite clear that not all truths, or visual representations, or models, are significant (176), and one way to recognize the contrast between *Monism* and *Pluralism* is to suppose that monists view significance as an objective, context-independent, matter, while pluralists suppose that what is significant is relative to our cognitive capacities and our (changing) interests. The analogy with maps, which both Longino and I like, is useful here. Good maps are held to an objective standard (they have to conform to the domain mapped) but the character of that standard (what is omitted, what included, the degree of accuracy required, and so forth) is set by us and our concerns.

But now we must raise a more serious issue. In advocating *Pluralism*, Longino goes beyond the modest view that the bits of nature we try to represent accurately are a function of us, our capacities and our interests, to the suggestion that the representations we achieve may not be “congruent” (140), may resist reconciliation (93), or may be “nonreconcilable” (207). Her discussion of these notions of congruence and reconciliation is extremely murky. There's no difficulty in understanding the idea that models that focus on different aspects of a system may both conform to it or that maps constructed according to different projections may both be accurate (to specified degrees). No inconsistency threatens in claiming both that the world is like this map in these respects to these degrees and like the other one in those respects to those degrees. But inconsistency is evaded here precisely because the claims are partial: the point is as boring as the lack of difficulty in identifying Helen Longino as a member of both Minnesota's Philosophy Department and of its Center for Advanced Feminist Studies. Now, of course, good maps may be *literally* noncongruent, but that's no problem unless we think that the world has to be like them in *all* respects. On a weak interpretation of *Pluralism*, “noncongruent” is just further emphasis for the partiality of representations.

On the weak interpretation, *Pluralism* is unexceptionable, although still strong enough to lead us to *Democratism* (as we'll see shortly). But Longino clearly wants more. Although she seems to be a fan of the Principle

of Non-Contradiction (as I think she should be), she wants to allow for the acceptability of representations that are “hard to reconcile”—presumably in ways that the adequacy of different maps or the different academic identifications of Helen Longino are not. Utter mystery descends at this point. The closest she comes to explaining what is intended occurs in a response to a counterargument that urges the consistency of all true statements:

The demand for consistency of all true statements is only problematic if one supposes that statements can be detached from their truth conditions and the contexts in which those are determinable. A contextualist denies that such detaching is possible without constructing a further or more encompassing context. (94)

There’s a commonplace point here—one supported by an obvious reading of the following sentences that discuss measurements in the context of different branches of physics—namely that what *appear* to be incompatible statements need not actually be so because of the ways in which the reference of the constituent terms is determined. This should be very stale news, since the point has been exploited for about three decades in discussions of the alleged phenomenon of incommensurability (to which Longino refers in a footnote). *Sentences* that look incompatible may both be true because the extensions of tokens of the same type are different. But there’s no difficulty of reconciliation here. Longino seems to be gesturing towards something more interesting, but what it is—what else lies behind her talk of “detaching” statements—is quite obscure.

I think we should only accept the modest version of *Pluralism*, on which “noncongruent” is redundant. But this will still provide a route to *Democratism*. For, if the representations at which we aim are those that answer to changing human interests, it’s important that there should not be groups whose voices are never heard. In fact, there are two independent arguments for *Democratism*, one focusing on the search for *significant* truth (or conformity) the other on the search for *significant truth* (or *conformity*). The latter is Millian in spirit—it arises from the thought that correct ideas emerge most readily from the clash of opposing points of view. The former emerges from the rejection of *Monism*; once the idea of a “complete true account of nature”—or any other context-independent specification of the scientifically significant truths—is abandoned, the representations at which the sciences aim are those that answer to human needs (some theoretical, some practical), and it’s important that the needs of all groups should be included.

Longino’s articulation of *Democratism* is quite short and very sketchy. As I’ve already noted, she appreciates the point that vulgar democracy would be a disaster—there’s a serious problem in letting the uninformed



vote—but it's not apparent how she proposes to overcome the problem. In fact, I think the trouble is deeper. Longino has failed to distinguish two different kinds of problematic situations for which a commitment to *Democratism* might be the remedy. The *Millian Problem* arises when the choice of alternative hypotheses is restricted because of the exclusion of some group of people from scientific deliberation, so that the hypothesis that would conform to nature is left out (the idea being that that hypothesis is one that would likely have occurred to the outsiders, but isn't at all salient for those who actually engage in the discussion). The *Interest Problem* arises when the hypotheses accepted conform to nature in a way that suits the concerns only of a subgroup of the species (or even of the society in which the research is done).

I think *Democratism* is a good way of responding to both of these problems, but you need to be clear which one you are trying to tackle, because the ways of articulating the democratic ideal will differ. Consider, first, a striking example of the Millian problem—prior to the 1970s, when women began to enter the field in significant numbers, studies of “dominance” in primates were narrowly attuned to the aggressive interactions among males; female primatologists revolutionized the field by offering broader perspectives—they showed, for example, how apparently subordinate males were able to achieve significant reproductive success by “making friends” with females.<sup>5</sup> For the Millian problem, the appropriate way to develop *Democratism* is to insist on full representation of relevantly different points of view within the community of researchers (of course, it's not easy to identify the notion of relevance here). An obvious example of the Interest Problem is the current skewing of biomedical research towards diseases that afflict citizens of affluent countries and the relative neglect of infectious diseases that cause vast amounts of death and suffering. In this instance, the appropriate response is to ensure that the institutions that allocate resources to various lines of inquiry can no longer ignore the plight of distant people.

Longino is right to maintain *Democratism*, but I think she lacks a clear view of exactly what greater democracy is to achieve. She fails to distinguish the Millian problem from the Interest problem. The root of the trouble here is, I think, her extremely elusive discussion of underdetermination. On the one hand, she seems to think that traditional claims about underdetermination are “fanciful” (127, quoting Ian Hacking); on the other, underdetermination is supposed to be rampant, but whether it is the result of equally good evidence for rival views or divergence in in-

5. Effectively, the female primatologists expanded the set of hypotheses considered, revealing unexpected complexities in primate social interactions. They did so because different kinds of events were salient for them.

terest is never made clear. The obscurity of her commitments may have prevented her from saying more about the details of her ideal epistemic community.

In fact, the latter third of the book is somewhat anti-climactic. After her brief account of social norms, Longino concedes that she won't fully address the important issues she has raised (134). Instead, she concludes with an attempt to situate her views with respect to positions she regards as taking the social aspects of knowledge seriously, and with a review of pluralist approaches in biology (and the history and philosophy of biology), whose point is not entirely evident. At the very end, she rightly remarks that her approach raises new issues for the philosophy of science, and her penultimate sentence poses the crucial question: "What kinds of institutional changes are necessary to sustain the credibility, and hence value, of scientific inquiry while maintaining democratic decision making regarding the cognitive and practical choices the sciences make possible and necessary?" (213). That question could easily have been posed some eighty pages earlier, and I wish that Longino had spent some of the intervening space coming to terms with it.

**4. The Obsession with R\*Ds.** In general, the principal deficiency of *The Fate of Knowledge* lies in the space devoted to a superficial engagement with the views of other authors. This is nowhere more evident than in Longino's pursuit of the evil Rational-Social Dichotomy, a pursuit that often distorts her exposition of her own position. That dichotomy is embraced by people who regard social and cognitive explanations as intrinsically opposed. Hence it is transcended by anyone who adopts *Interactionist Socialism* and *Social Methodism*.

Oddly, however, Longino spends a great deal of time attacking sociologists and philosophers who allegedly commit the dichotomy. I'll leave the sociologists to defend themselves (all except Bruno Latour who, since he has campaigned against the dichotomy in print, is a Good Guy; this apparently means that we should offer "fruitful" interpretations of his words—"wildly creative" seems to me the more accurate term). But Longino argues at some length that Alvin Goldman, Susan Haack, and I are all guilty, and this leads her to some misreadings of our work. So Longino overlooks our explicit commitment to *Interactionist Socialism* and *Social Methodism*. How did this happen?

Longino thinks that the philosophers she chastises have a tendency to "equate social forces with 'bias'" (56) because she overlooks the fact that we spend a fair bit of time trying to come to terms with *Social Skepticism*; and, of course, when one is doing that, one wants to *address the question* of whether social forces are inevitably biasing; to address the question is very different from *accepting the thesis*; indeed, it's a large part of the

burden of Goldman's (1999) and my (1993) that social forces aren't inevitably contrary to the rationality and progressiveness of the sciences.

Virtually everything that Longino says about the philosophical work she criticizes is infected by this odd view, but the nadir is probably her discussion of the attempts to model scientific communities that Goldman and I have (independently) made. Longino seems to think that we're wedded to the acceptance of neoclassical economics, that we have simple-minded views of cognitive agents, and a "crass interpretation" of the sociologists' notion of credit. To set the record straight: we use a mathematical formalism (one that economists can deploy to different ends), the utility functions can be specified in a wide variety of ways (and in terms of preferences that are as rich and wonderful as Longino would like them to be), and the concept of credit can be introduced in as subtle a fashion as she'd like; the point of the mathematics is to make unobvious possibilities clear. I suspect that Longino's preferred approach to the social studies of science is Geertzian rather than Galilean, but it is a wonderful irony that someone who is so happy talking about models doesn't understand that the models Goldman and I develop aren't intended as literal descriptions of people: they are supposed to capture interesting facts about the social organization of science *in various respects and to various degrees*.

Disentangling Longino's misinterpretations of my work and that of others would take another essay far longer than this one. But let me close on a positive note. Despite her obsession with rooting out R\*Ds, Longino has a valuable and interesting perspective to advance. She is quite correct in chiding Goldman, Haack, and me for our monist commitments, and she offers a version of the third way that is worth further discussion and elaboration.

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