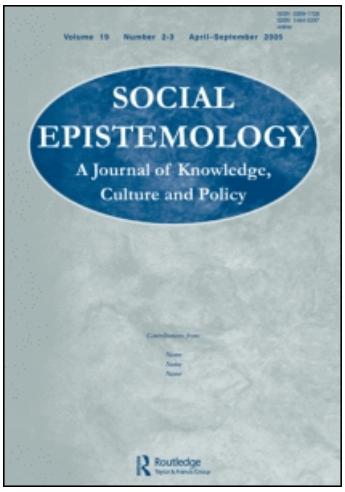

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Diversity and the Fate of Objectivity

Karyn L. Freedman

Helen Longino argues that the way to ensure scientific knowledge is objective is to have a diversity of scientific investigators. This is the best example of recent feminist arguments which hold that the real value of diversity is epistemic, and not political, but it only partly succeeds. In the end, Longino's objectivity amounts to intersubjective agreement about contextually based standards, and while her account gives us a good reason for wanting diversity in our scientific communities, this reason turns out to be political.

Keywords: Helen Longino; Feminist Philosophy; Objectivity

Introduction

Feminist philosophers have an uneasy relationship to the complex notion of objectivity. On the one hand, the traditional ideal of an objective method, undertaken by an autonomous and detached knower, has regularly come under attack. On the other hand, as feminists we want our insights and arguments about value-laden methodologies and the social character of scientific inquiry to be taken seriously. We want our claims to have a ring of truth and, to this end, be measured against a backdrop of what is really the case. Objectivity, in this sense of *the way the world is*, thus remains important to feminist epistemology even in the face of skepticism about an objective method. Indeed, feminist philosophers often claim that their epistemologies gives us a more accurate picture of the world than traditional epistemology, a claim that both presupposes and gets its punch from just such an objective reality. This tendency dates back to initial versions of standpoint theory and its explicit privileging of partial perspective. So Donna Haraway claims that "only partial perspective promises objective vision" (1988, 561), and Sandra Harding argues that the marginalized perspective is what gives us our critical edge for generating "theoretically and empirically more accurate and comprehensive accounts" of dominant paradigms (1995, 344). Recent work by Helen Longino also exhibits this inclination that we can somehow "get the world right"; indeed, in both

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the early and recent versions of her contextual empiricism, this kind of objectivity is a key consequence of the social character of scientific inquiry (Longino 1990, 2002a).

What is both peculiar and interesting about this trend is the assumption, occasionally but not always explicit, that feminist methods and feminist desiderata of scientific theories have epistemic value. What I mean by "epistemic value" is that these methods give us knowledge about the world, in so far as they provide us with accurate representations or conformations (to use Longino's preferred locution) of the world. In the traditional picture, it was thought that we could accurately represent reality only by adopting methods that were supposedly value-neutral and, as such, acted as filters on our subjective preferences. Indeed, these two kinds of objectivity are mutually reinforcing: value-neutral methods purportedly give us an unbiased picture of the world, and the fact that we can "get the world right" reinforces the need for an objective method.[1] And this is what is odd about the trend in feminist epistemology; namely, the idea that we can access the way the world really is not through the elimination of subjective preferences, but *because* of those preferences. As it happens, our value-laden methodologies, idiosyncrasies, geographic locations, gender—these are what *correct*, not distort, our view of the world. Except this time around these preferences, or values, are not androcentric, but feminist. Moreover, it is these values that dictate our theoretical desiderata in science. To borrow from a list recently compiled by Longino (1995), instead of simplicity, consistency and unity, our scientific theories should aim for diversity, ontological heterogeneity, and complexity. And this brings us to what is interesting about this picture. Not the idea, already current in feminist and social constructivist circles and dating back at least to Kuhn (1962/1970), that so-called cognitive values, such as simplicity, are in part social. But the idea that certain so-called social or political values, such as diversity, are in part epistemic. This mixing of politics and truth is more *subversive* than what we have recently seen from Philip Kitcher, for example, in his recent *Science, Truth and Democracy* (2001). While Kitcher's moderate, pluralist realism is notably progressive in its concessions to the constructivist position, his view remains conservative in so far as it keeps truth and politics conceptually distinct.[2] In a Foucauldian move, feminist epistemology blurs the line between political and epistemic values, or at least brings to the fore the question of where this line is appropriately drawn.

In what follows I argue that the fate of one kind of objectivity, specifically of being able to accurately model or represent the way the world is—to have successful conformations—depends on the value of diversity. Not on whether diversity (or complexity or ontological heterogeneity) is valuable or worth having, but on what *kind* of a value it is. If diversity in our scientific methods, in our communities of scientific investigators and in our theoretical results is good, or desirable, because it improves our ability to model or otherwise represent the way that the world is—and not for some political reason—then the fate of this new objectivity looks good. But can this be established? The best case for this position is given by Helen Longino in her *The Fate of Knowledge* (2002a), but even this only partly succeeds. In what follows I argue that by socializing cognition Longino gives us a good reason for wanting diversity in our communities of scientific investigators, and by socializing knowledge she gives us a kind of objectivity.

But in the final analysis Longino's objectivity is nothing more than intersubjective agreement about contextually based standards and goals. Objectivity, in this sense, is reached when a community of individuals agrees upon a matter. I will elaborate this characterization of objectivity shortly, but I want to be clear that, like Longino (and many others),[3] I happily endorse it. Indeed, I think that the best sense we can make of the idea of objectivity is nothing more and nothing less than the agreement of our peers. But this way of understanding objectivity robs Longino of the ground she needs for the claim that diversity in our scientific communities gives us a better or more accurate picture of the world, or that it enhances the likelihood of the conformation of a theory or hypothesis. More than the negotiations of a community are required for that. There is, nevertheless, a good reason for wanting diversity in our critical communities of scientific inquirers, but that reason is political and not epistemic. In what follows I argue that the real value of diversity of inquiry is that it results in a greater understanding of the broad spectrum of human needs and desires. I do not reject the possibility that scientific inquiry driven by the value of diversity will give us successful representations or conformations of the world, for it might; rather, my point is that if epistemic success is a function of intersubjective agreement, so too might scientific inquiry driven by the value of simplicity. And the result of this will be multiple and potentially conflicting, inconsistent, even contradictory representations or conformations of the world. So while diversity in our communities of scientific inquirers is valuable, it is not because it can be counted on for improving our knowledge about the world.

Objectivity and Methodology

The historian Peter Novick notes that objectivity is one of our "essentially contested concepts", rich with multiple meanings and loaded with assumptions (1988, 1), an idea echoed in Daston and Galison's (1992) study of objectivity. In my Introduction I listed only two different senses of the term. I was being imprecise. Heather Douglas (2004) has recently argued that there are eight distinct senses of objectivity. Douglas' distinctions are clearly delineated and well reasoned, but more fine-grained that I need for my purposes here.[4] Elizabeth Lloyd (1995, 353) has delineated *four* senses of objectivity: objective as in detached and unbiased, objective as in publicly available or accessible (at least in principle), objective as in existing independently or separately from us, and objective as in *really* existing (i.e. the way things really are). Lloyd's first kind of objectivity is methodological, the second is epistemological, and the last two are ontological. David Bell sees it differently. He argues that there are essentially two fundamental meanings of objectivity, an ontological one and an epistemological one (Bell 1993, 310–311). According to Bell something is objective if it exists, independently of our conceptions and perceptions of it, like rocks or my neighbors next door. That is ontology, and it matches the first of Lloyd's senses of ontological objectivity, sensibly leaving untouched the notion of objective as in the way things *really* are. From an epistemological point of view, objectivity is the property of the *content* of mental states and propositions. When this content is made public, then it is able to be verified (or not) by others; it is this possibility for intersubjective verifiability that renders a

claim objective, from an epistemic point of view. So, for example, a belief or a statement is objective if its propositional content is publicly verifiable, like a statement about the number of words on this page, or a belief about rocks or my neighbors next door. This way of understanding epistemological objectivity fits both Bell's and Lloyd's characterization of the concept.

I think Bell is right to identify these two meanings of objectivity as basic, but, as Lloyd and Douglas note, there is a third fundamental meaning of the term; namely methodological objectivity. Since feminist writing on this idea has done a good deal to expose its flaws, it makes for a good starting point. When used in the context of methodology, objectivity has traditionally referred to a process that is undertaken by a detached investigator who is free from any personal stake in the outcome of the investigation and free as well from the influence of any non-epistemic value. The idea here is that we are achieving methodological objectivity if, when we go off to investigate the world, we leave our personal goals as well as our ethical, political and social value commitments at home. Take the laboratory scientist whose funding depends on the achievement of certain research results. Her investigative methods are considered objective if, first, she brackets her preferences for those results and goes about her work with a measure of detachment that will help to prevent a biasing of her results, and second, her commitment to (for example) what makes a good life good does not influence her weighing of one evidential claim against another.

Feminist philosophers have worked hard to expose some of the problems with this conception of methodological objectivity. The ideal of a "detached" observer has been thoroughly trounced. Feminists have pointed out that individuals are socially situated in a particular ethical, historical, social and political context. Their individual goals and identities are layered in ways that resist a simple divorce. And the concept of a "value-free" inquiry has not done much better. As Heather Douglas argues, this ideal is inherently flawed (2004, 459). While we need to take care that values do not supplant reasoning, value commitments are nevertheless instrumental in shaping a scientific investigation. They influence our choice of subject matter and they shape the standards we use to rate the importance of certain evidential claims. Indeed, non-epistemic values can be so embedded in our ways of reasoning that they can become invisible – and this is the worry. As Douglas claims, "Hiding the decisions that scientists make, and the important role values should play in those decisions, does not exclude values. It merely masks them, making them unexaminable by others" (2004, 459–460).

Feminist philosophers are, of course, not the first to reject the ideal of an investigation free from value, nor are they the only ones to argue that individuals are not "unencumbered". The era of post-positivist philosophy of science has witnessed the thorough debasing of these ideals. Kuhn had different motivations but his conclusion, at least in *The Structure of Scientific Revolutions* (1962/1970), was consistent with this feminist point of view: we are inexorably clothed in our paradigmatic perspective, and there is no stepping out of our skins to investigate the world.[5] The maelstrom of debate that this started is well known, pitting realists and instrumentalists against relativists and social constructivists. These debates linger on (much to the chagrin of those calling for an end to the "science wars") but the constructivist/feminist side of it has made

great strides. Although the ideal of a detached knower inquiring from nowhere is not entirely dead, it has less purchase these days than it once did.

There is a third conception of methodological objectivity that, at least at first glance, appears less problematic than these other two. Douglas refers to this notion as "value neutrality". The idea here is that even if investigators cannot rid inquiry of the influence of values, they can refrain from sanctioning any particular one (Douglas 2004, 460). While Douglas endorses this form of methodological objectivity (2004, 460), from a feminist perspective it turns out also to be problematic, and showing what is wrong with it exposes a problem that is shared by each of the three conceptions discussed. The value of neutrality has been used to sanction other values in the name of methodological objectivity, such as detachment and autonomy. However, according to the feminist critique, the value of neutrality, along with the values of detachment and autonomy, all of which have been hitherto equated with methodological objectivity, are androcentric. In other words, these methodological values are nothing (according to this picture) if not traditional masculine values.

These challenges to the traditional ideal of a value-neutral or value-free inquiry, undertaken by a disinterested knower, have shed light on the very idea of methodological objectivity. In the first place, there is the insight that scientific inquiry is taken on by particular individuals in social contexts, combined with the claim that the values which infuse methodological principles cannot be eliminated, with the conclusion that these principles are neither universal nor value-free, but in fact androcentric.

If this is right, and there is some reason to think it is, then we have reason to question the fate of methodological objectivity. We might even wonder whether it is possible to preserve a notion of objectivity when it comes to method, one that is not just shorthand for a specific set of value commitments. This issue becomes further complicated when we consider certain implications of the feminist challenge. As we have just seen, the feminist argument is that we are not unencumbered, but rather that our habits and histories are inseparable from us as we investigate the world. On this story, we replace the methodological ideals of detachment, neutrality and autonomy with the methodological ideals of, for instance, connection, context and caring. These new methods are feminist in two senses. First, they are motivated *politically*; that is, as part of an ongoing struggle by feminists to end oppression against women by exposing, in this case, the androcentricity of the old methodological ideals of objectivity. Second, the new ideals reflect what is at least traditionally viewed as women's ways of being in the world; that is, through connection and attachment. Despite this explicit bias there is nevertheless a universalizing tendency here that is found in the claim that *no one* is unencumbered; that no one is capable of achieving detachment and indifference, or otherwise value-free methods. Moreover, it has been argued that it is in light of our particular situatedness in the world that we are able to understand the way the world really is.

Objectivity and Epistemology

On the feminist trend depicted here there is the rejection of the purportedly androcentric methodological ideals of neutrality, detachment and autonomy in favor of the

feminist methodological ideals of attachment, connection and caring. Over the past few decades we have seen this move made in feminist ethics and epistemology, and in the philosophy of science where it has been cashed out as the rejection of the purportedly androcentric desiderata of simplicity in favor of the feminist desiderata of diversity as objective grounds for theory choice. As I mentioned in my introduction, what is particularly interesting about this new methodology is that its justification is not an egalitarian ideal of human flourishing, as one might expect, but rather a claim about its epistemic fruitfulness that is entailed by its objectivity. The best defense of this position can be found in Helen Longino's *The Fate of Knowledge* (2002a). Longino is a dyed-in-the-wool empiricist. For her, empirical methods constitute the least defeasible grounds for knowledge claims in science. But her empiricism is importantly contextual. Longino argues that the methods of empiricism, in particular the cognitive capacities of observation and inference, are essentially social in that they are exercised socially; that is, interactively (2002a, 99). On Longino's account, observation is not simple sense perception, but rather an organized sensory encounter. Individuals have their own sensory capacities, to be sure, but they structure their perceptions according to the categories and classifications they deem *significant*, where significance is determined in a social context, specifically by the norms of their community. Our observational reports are thus ordered in accordance with our particular conceptual frameworks and various ontological commitments (Longino 2002a, 99–103). Inference is a social norm in much the say way. According to Longino, the rules and standards of inquiry are neither subjective nor arbitrary, but they are also not universal. Rather, they are immanent in the context of inquiry, dependent on localized rules and procedures. Thus, just as our observational encounters with the world are socially structured, what counts as a good reason for an inference is also contextual (Longino 2002a, 103–107). Individual cognitive practices are thus best understood not as wholly autonomous but rather as interdependent within a community, where they are established and stabilized interactively.

By socializing cognition, Longino's account nicely explains how come our scientific results end up reflecting what she calls "background assumptions", which are our social, political, ethical and cultural value commitments. Since the empirical methods of inference and observation are inherently social, the value commitments of individuals, which in turn reflect social norms, will necessarily be reflected in empirical results. If this conclusion is taken as a descriptive fact, which I think is how Longino intends it to be understood, then it provides us with sufficient motivation for socializing knowledge. That said, Longino provides extra support for this move by citing the perennial problem of underdetermination as a classic case of social penetration of values (2002a, 124–128). In any event the result is the same, which is that our empirical results will necessarily be saturated with social values, various and sundry. We thus need a mechanism that will enable a community of inquirers to identify and weed out those values that it deems unsavory. According to Longino, we can get just that by increasing the pool of individuals with whom we test our observations and inferences. According to Longino, this will help to generate the critical discursive interactions that are the social processes of knowledge production. This understanding of "knowledge" as

procedural is one of the ways in which Longino helpfully disambiguates the term. On her view, the way to ensure that our background assumptions do not go unchecked is to expose our hypotheses to a broad range of criticism by having a diversity of perspectives in our scientific communities. These communities, for instance, should include individuals from all different sorts of racial, gender, ethnic, geographic and economic backgrounds. Longino refers to this as a "tempered equality" of intellectual authority (2002a, 131). The idea here is that diversity in our pool of inquirers will result in diversity in scientific opinion. Tempered equality is surely a reasonably measure to introduce if our goal is to democratize science, but Longino claims that it does more than that, and it is here that her argument misses a step. Tempered equality is one of a number of conditions she introduces to ensure that critical discursive interactions are *effective*.[6] And when effective, she claims, critical interactions "[they] transform the subjective into the objective, not by canonizing one subjectivity over others, but by assuring that what is ratified as knowledge has survived criticism from multiple points of view" (Longino 2002a, 129). In other words, diversity in our scientific communities results in the objectivity of our scientific results.

There is a probabilistic generalization that helps to lend intuitive plausibility to this position. The larger and more diverse a research group is, the better the odds that someone will recognize an unwarranted assumption hidden in a hypothesis. Longino is thus correct to suggest that diversity in a community of scientific inquirers works to ensure that unchecked values do not make their way into scientific theories. But we have to be careful not to overstate this conclusion. For what does it mean to say that tempered equality will get rid of unwarranted assumptions and unchecked values? It is clear that, in Longino's view, this is the purification process that turns the subjective into the objective. But what kind of objectivity do we end up with here? On the one hand, as the quotation cited above indicates, Longino rejects the idea that objectivity is achieved by canonizing one set of subjective preferences over all others. Yet this seems almost disingenuous since she states (in the very same quotation) that we achieve objectivity when a knowledge claim has survived criticism from multiple points of view. Objectivity, on this view, is akin to intersubjective agreement and verifiability, which sounds very much like the canonization of one set of subjective preferences; namely the one that we get greatest consensus on. I will come back to this point shortly, for there is another problem here. If "objective" is shorthand for whatever survives the criticism of a diverse group, then a gap opens between an objective theory (or hypothesis) and one that conforms to reality, in which case it is not clear what reason we have to think that objectivity, so construed, is *epistemically* desirable. Group consensus resulting from tempered equality might be politically desirable, in fact I am sure that is, but that is another matter. Certainly, the *kind* of objectivity at issue here is epistemological, as opposed to methodological or ontological; it maps onto Bell and Lloyd's idea of public availability of content. Thus, this is an epistemological objectivity—but an epistemically fruitful one? Yet this seems to be what Longino has in mind, as evidenced by her claim that critical discursive conditions of knowledge production are *effective*. Effective at what? Her answer is not at gaining consensus or publicly verifiable content, but rather at achieving conformations and avoiding falsehood. Diversity in our

scientific communities is thus a requirement of epistemology, not politics. As she puts it: "The exclusion of women and members of certain racial minorities from scientific education and the scientific professions constitutes not only a social injustice but a cognitive failing" (Longino 2002a, 132). It is a cognitive failing because, again, the inclusion of a diverse group of individuals is what ensures *effective* criticism: "Criticism must be epistemologically effective—by helping a community avoid falsehood and by helping to bring its accepted content into alignment with its cognitive goals and its cognitive standards" (Longino 2002a, 129). The standards and goals referred to here may be contextual but falsehood is not, and it is falsehood that we hope to avoid through the social conditions of knowledge-productive practices. To avoid falsehood, however, it is not enough that diversity in our critical communities helps us to meet our own contextually based standards; it has to be that diversity guarantees that those standards are not wrongheaded.

Objectivity and Ontology

If a theory or hypothesis is considered objective when it passes the critical scrutiny of a diverse scientific community, then objectivity amounts to intersubjective acceptability and verifiability. But if objectivity is to be a mark of epistemic success, as Longino wants, where epistemic success means not just satisfying our contextually based goals using our contextually based standards but coming up with theories that conform to the world, then something is missing here. Longino's notion of objectivity entails only that when a theory or hypothesis survives the critical scrutiny of a diverse community, it has met the standards of that community. As I stated earlier, I happily endorse this notion of objectivity; indeed, I think that "agreement with the testimony of others" (to borrow Russell's phrase) is the best sense we can make of this idea. And this characterization moves theory acceptance beyond the unscrutinized whims of the individual into the social norms of a community. However, it cannot thwart epistemological relativism. For that to happen the stamp of objectivity must go beyond merely assuring that what is ratified as knowledge has survived criticisms from multiple points of view. After all, the history of science is replete with examples of community-wide acceptance of what turned out to be false theories.[7] Convergence is no guarantee of truth (or conformation), regardless of the make-up of the group who is doing the converging. If we want the results of the critical discursive knowledge-production practices of a community to be more than the canonizing of one set of subjective preferences over all others—that is, if we want the results to be publicly verifiable content that *hooks onto the world*—then we need something to fill this gap. Longino is aware of this and she gives us just such a factor, but as we will see it fails to do the work she needs it to do.

For Longino, what purportedly guarantees that a more robust sense of objectivity falls out of the diversity of criticism in a community is *realism*. In Longino's view, wrongheaded standards will lead to false theories because if we are barking up the wrong tree, the world will bite back and our theories will fail to *conform*. As I mentioned earlier, "conformation" is Longino's preferred term for epistemic success, and she introduces it as an alternative to the notion of truth (2002a, 115–121). Conformation is intended

to be broader than the notion of truth and thus to be better able to capture scientific content that is represented non-linguistically; for instance, through models. The notion of conformation thus has the benefit of accommodating multiple kinds of epistemic successes, but it has an even greater advantage for Longino. Unlike the notion of truth, conformation admits of degrees and respects, which opens the door for the possibility of a *pluralism* of conforming content about the world. Thinking about maps can illuminate Longino's idea of pluralist realism. Geographical, statistical and topographical maps all accurately represent some aspect of the world, but their adequacy depends on our expectations of them. As Longino says: "Maps teach us that there can be degrees of fit, degrees of conformation. How much conformation is required and of what to what depends on the purposes of the map. Once these are specified, conformity or failure of conformity depends on the terrain" (2002a, 116). And just like there can be different maps that accurately represent the same territory but in different respects, there may be various sets of knowledge-producing practices that offer multiple epistemically acceptable correct (i.e. conforming) representations of a given phenomenon or process. That said, as Longino emphasizes, each conforming account (maps or otherwise) must capture some aspect of the way that the world is—this is realism, after all: "A map must be a partial representation; otherwise it fails to be a map" (2002a, 116).

Longino's map analogy offers us a helpful way to understand the notion of conformation, but it also points to a potential problem with the idea. If our representations of the world are multiple and partial, what reason do we have to suppose that they will not be conflicting or contradictory? The reason that Longino gives for this, as I suggested earlier, is scientific realism, but as we will see her commitment to realism is a presupposition of her contextual empiricism and not a consequence of it.

Pluralist Realism

In Longino's view, realism is the link that connects tempered equality and objectivity. Indeed, it is her commitment to realism that *explains* her belief that diversity of critical interaction in a scientific community will generate results that approach truth or conformation and avoid falsehood. As Longino sees it, if a community converges on wrongheaded standards or theories, then it will be only a matter of time before the results do not conform. So she claims: "Hunger pangs are not banished on the say-so of tea leaves or comparable prognostications" (2002a, 160). Realism is thus what rules out the likelihood of a community attaching itself to wrongheaded standards or false theories. This is what will ensure that the plurality of conforming content will not be inconsistent, contradictory, or mutually exclusive, but will be rather like a patchwork quilt, with each different pattern occupying its own square foot with no awkward overlaps. But what justifies this commitment to realism? Unfortunately, Longino offers no argument for it, nor does it follow from any of her claims about critical discursive knowledge-producing practices. Her realism is a *presupposition* of her other theoretical commitments, and not a consequence of them. As the missing link that connects objectivity and diversity realism is just the right kind of stopgap, but only if we can count on the world reliably pushing back when we are pushing in the wrong direction. Longino's

realism thus begs the question we most need it to answer. We need evidence; that is, some reason to believe that the world is rigid enough to prevent our tea-leave prognostications from conforming. And the convergence of scientific opinion, as I stated earlier, is not sufficient evidence for this; it is no assurance of the accuracy of that opinion, regardless of the diversity of the group who is doing the converging. Without that evidence, we have no reason to think that conformation indicates anything more than the agreement of a diverse community of inquirers. Conformation does not, in other words, move the notion of objectivity beyond community acceptance. This does not diminish the value of diversity from a political standpoint, and I will say more about this shortly. But it does put pressure on the "realism" component of "pluralist realism". A pluralist realist can allow for multiple conforming representations of the world, but no realist can allow for a multiplicity of conforming representations of the world that are contradictory, inconsistent, or mutually exclusive. And without some assurance that the world will decide which of our contextually based standards and goals of science triumphs when there is real disagreement between and within communities, the pluralist realist is left defenseless against epistemological relativism, with each group using their own standards to judge their own results as superior.

The Real Value of Diversity

The conclusion that pluralist realism opens the door to relativism is not one that I am particularly bothered by, nor do I think that it is one that Longino need reject. It is not a pernicious "anything goes" relativism, but a benign commonsensical one. And indeed, I think it falls out quite naturally from Longino's own contextual empiricism. It gives us a picture of scientific communities whose openness allows for the expression of a plurality or diversity of human need, and a notion of epistemic success that is measured in accordance with said needs—and *this*, I suggest, is the real value of diversity. Diversity in our scientific communities is good, is worth having, not because it leads to truth but for all the typical reasons associated with an egalitarian ideal of human flourishing. Thus, diversity is a political value. A diversity of interests and background assumptions in our research communities means that the production stage of scientific knowledge will be exposed to a broad array of human needs. And this should help to ensure that the outcome of this production (i.e. scientific knowledge) will be accountable to that diversity of human need. Epistemological objectivity, understood as the agreement of our peers, does not necessarily get us closer to the way the world is, but that fact does not diminish what is really valuable about Longino's notion of tempered equality: it democratizes knowledge.

Once we recognize that the real value of diversity is political, then we can begin the important work of determining which kinds of diversity are salient when it comes to scientific inquiry. For example, do we want to include a diversity of race and gender in our communities of scientific experts, or do we want to have a diversity of height and weight? This is a fair challenge to the advocate of diversity, but I think it is an easy one to meet. In order to determine which kinds of diversity are key in our scientific communities we should look at who benefits from science, and who is burdened by it.

If decision-making in science is conducted by all those who have a stake in the outcome of research—that is, the underprivileged as well as the elite—then we would stand a better chance at representing the interests of all social groups. And we could accomplish more than just that. As Longino claims, background assumptions are often invisible and only with the contrasting values of another interest group do our particular value commitments come to light. Jim Brown makes this same point in his argument for diversity of inquirers:

> we do not know precisely what our biases are, so they cannot be systematically eliminated. We can do the next best thing: We can organize the pursuit of knowledge so that a great variety of *different* prejudices are at work in the production of rivals. We can then select the best theory from among the rivals. The way to ensure the optimal diversity of rival theories is to make sure we have a wide variety of theorists. (Brown 2001, 187)[8]

Conclusion

Longino's critical contextual empiricism is the best example of recent efforts by feminist philosophers to secure a notion of objectivity that falls out of the ideal of diversity, and while it partly fails, it is mostly successful. Longino makes a compelling argument that our cognitive processes are social, and as an explanation for why our scientific results end up reflecting our individual and shared value commitments and background assumptions, this is a refreshing alternative to the usual arguments from underdetermination. And it also provides us with a good reason to socialize knowledge. Tempered equality in our scientific communities is justified because a diversity of inquirers will help to ensure that we can identify societal and cultural values that wind up in our empirical results; and as a group we can decide which of these values and background assumptions are unsavory and should be weeded out. But what this shows is that, in the final analysis, the real value of diversity is political, and not epistemic. This broadening of human needs in the production of scientific knowledge allows for a possibility of multiple conforming representations of the world, but since conformation is a matter of community acceptance, there is no guarantee that our representations will not be contradictory, inconsistent, or mutually exclusive. We have pluralism, in other words, but not the kind of realism that can thwart epistemological relativism. But who needs that? Once Longino has established that values make their way into scientific knowledge, then diversity in our scientific communities is easily justified for strictly political reasons, just like any other system of checks and balances. Whether scientific inquiry that is driven by the value of diversity gives us a better or more accurate picture of the world turns out to be beside the point.

Notes

[1] This is what Elizabeth Lloyd refers to as the "tyranny of objectivity" (1995, 356).

[2] Despite their recent antagonistic exchange in *Philosophy of Science* (Kitcher 2002a, 2002b; Longino 2002b, 2002c), Kitcher's (2001) and Longino's (2002a) recent work has a lot in common, including a commitment to democracy and the idea that pluralist realism is the best way to achieve this.

[3] The list of supporters of this form of objectivity is too long to detail and dates back at least to the 1920s, when in his *The Analysis of Matter* Bertrand Russell endorsed this non-metaphysical sense of objective, which he characterized as "agreeing with the testimony of others" (1927, 150).

[4] For the most part, that is. I will rely on her nuanced distinctions of methodological objectivity shortly.

[5] While Kuhn eschewed what I am calling "methodological objectivity" in *Structure*, he later argued that the rationality of science could be partially preserved in light of the fact that the history of science presents us with a more or less constant set of objective cognitive values; see Kuhn (1977).

[6] The other conditions are: publicly recognized venues for critical interaction, genuine uptake of criticism, and publicly recognized standards of criticism (Longino 2002a, 129–131).

[7] Many of these are cited by Larry Laudan (1981) in his well-known argument against convergent realism.

[8] Brown, like Longino, seems to think this diversity is both politically *and* epistemically fruitful; he claims "pluralism for the sake of epistemology" (Brown 2001, 186).

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