

A Socially Relevant Philosophy of Science? Resources from Standpoint Theory's Controversiality

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Feminist standpoint theory remains highly controversial: it is widely advocated, used to guide research and justify its results, and yet is also vigorously denounced. This essay argues that three such sites of controversy reveal the value of engaging with standpoint theory as a way of reflecting on and debating some of the most anxiety-producing issues in contemporary Western intellectual and political life. Engaging with standpoint theory enables a socially relevant philosophy of science.

Standpoint theory reemerged in the 1970s and 1980s as a feminist epistemology, philosophy of science, sociology of knowledge, and methodology.¹ It had received enthusiastic attention in the social sciences by 1979 (see Westcott 1979), and subsequently has been widely used and advocated there, though not without controversy. It has become especially influential in sociology and political science, which is not surprising since these are the disciplinary homes of Dorothy Smith (1987, 1990a, 1990b) and Nancy Hartsock (1983/2003), two of its most influential early authors (see Campbell and Manicom 1995; Kenney and Kinsella 1997).

Several feminists working close to the natural sciences also have been engaging with and developing standpoint themes for close to two decades (see, for example, Haraway 1978, 1981, 1983, 1991; Harding 1986, 1991, 1998; Harding and Hintikka 1983/2003; Rose 1983, 1984; Wylie 1987, 2003; Wylie and Okruhlik 1987). Yet the standpoint project remains marginal to mainstream postpositivist philosophy of science, as it does to the field of science studies more generally, as several observers have noted (see Rouse 1996b, Wylie 2003). This

is especially intriguing because one of its central conceptual innovations is to describe and prescribe the practice of taking on the cognitive, technical core of the natural sciences and their philosophies, as Fredric Jameson (1988), for one, has pointed out. This move is one that theoretical projects of other liberation movements had for the most part avoided. It also has significant affinities with the postpositivist philosophy of science and post-Kuhnian science studies that ignore it (see Elam and Juhlin 1998; Haraway 1997, 35–39; Harding 2003; Rouse 1996b; and Wylie 2003.)

Standpoint projects critically engage with natural sciences in two ways. Some delineate how particular sciences, such as primatology (Haraway 1978/1989) or biology (Rose 1983), constituted their hypotheses and methods to meet the sexist and androcentric (and often racist and eurocentric) needs of dominant social groups, thereby providing distorted and partial accounts of nature's regularities and underlying causal tendencies and revealing otherwise hidden features of dominant ways of thinking. These and others also directly analyzed the inadequacy of sciences' standards for achieving objectivity or good method, and how the plausibility of these standards has been maintained (see, for example, Harding 1992b and Keller 1984).² Moreover, standpoint theory claims that some kinds of social locations and political struggles *advance* the growth of knowledge, contrary to the dominant view that politics and local situatedness can only block scientific inquiry. Given such projects, perhaps one should expect the combination of either disattention or hysterical attack with the absence of serious engagement that, with important exceptions, has characterized even the responses of self-proclaimed postpositivist philosophers of science and science studies scholars to this theory.

To be sure, the rest of feminist philosophy also has had only a modest impact on the philosophy of science, though it is too soon to know if some recent efforts to link feminist analyses to the latter may change this situation (see, for example, Harding 2003, Nelson 1995, Nelson and Nelson 1996). Moreover, philosophy of science and science studies also have been resistant to engaging with challenges that have emerged from analyses of the effects of other kinds of social contexts on the cognitive, technical core of the natural sciences, such as those generated by anticlass, antiracist, multicultural and anti-imperialist projects (see Figueroa and Harding 2003, Harding 1998, Hess 1995). So feminist philosophies of science represent only one campaign against the "view from nowhere" through which conventional philosophies of science have staked their legitimacy.

The vigor of and overt emotional investment in many criticisms of standpoint theory invites reflection. The approach seems to function as a lightning rod to conduct into the public arena discussion of the strengths and limitations of conventional philosophies and histories of the natural sciences. Standpoint theory thus engages with anxieties of our era that one can see articulated in the "culture wars," including their science skirmishes, and in reactions to feminism,

to pro-democratic race and ethnic-based projects, and to anti-imperial and anticolonial projects (see Gross and Levitt 1994, Ross 1996). It is perceived by its critics not just as one more epistemology, philosophy of science, sociology of knowledge, or technical methodological recommendation, but as a danger to feminism and even to Western civilization (see, for example, Gross and Levitt 1994). Moreover, it is contentious not just to its critics outside feminism but also to feminist critics (Walby 2001), and even among its defenders (Hekman 1997, Longino 1993). In the fast-moving world of feminist reflection on theories, practices, and the consequences of research and scholarship, where few analyses have gone unchallenged within the field, let alone outside it, Alison Wylie (2003) notes that standpoint theory nevertheless has managed to achieve a certain distinction: "Standpoint theory may rank as one of the most contentious theories to have been proposed and debated in the twenty-five-to-thirty-year history of second-wave feminist thinking about knowledge and science. Its advocates as much as its critics disagree vehemently about its parentage, its status as a theory, and crucially, its relevance to current thinking about knowledge" (2003, 27).

Many would hold that such a reputation damages the promise of standpoint approaches to provide resources for philosophy of science, and thus dooms these feminist projects to continued marginality in philosophy. Standpoint theory must be deeply flawed to attract so much criticism, some think, unaware of the benefits of its widespread use in natural and social science research projects. Moreover, some criticisms raised about its abstract formulations can (although they do not necessarily) disappear in its actual research uses. This is notably the case for the perennial charges that it is essentialist and relativist, which are two of philosophers' persistent criticisms. Finally, for some philosophers, public controversy over a philosophic project is itself a demerit for the project. Such relevance marks the project as not really philosophic. Philosophy of science issues should not, indeed, cannot be settled in a court of public opinion, according to this view.

Yet there is another way to look at the continuing controversiality of standpoint claims. I shall argue that, contrary to the objections to its controversiality, the persisting ability of its central theses to stir up reflection and debate is in itself an important resource for philosophy of science. This is so for a two-part reason. First, standpoint theory on principle does not take sides in central troubling choices that postmodernism raises, especially for modern science and its philosophy, which is the exemplar par excellence of modernity's achievements. Rather, it continually negotiates between and tries to redirect some of the most powerful energies and directions of modern and postmodern projects.³ However, second, the nature and implications of such a move require the broadest possible examination and reflection by a maximally diverse group of society's stakeholders. The standpoint framing of such a move has managed to invite

ongoing debate and reflection from a surprisingly diverse array of intellectual and political projects.⁴ Such discussion is needed to clarify what is at issue, and for whom, in rethinking the Western intellectual and political legacy and its place in the world today.

A final preliminary note: Is there a tension between my interests in, on the one hand, the positive value of standpoint theory's controversiality, and on the other hand, my concern to present its arguments as reasonable, indeed, as more reasonable than others' interpretations of its claims? I propose not. It is tempting to read standpoint claims as ones that easily can be defeated by showing them to be false or absurd, a strategy many critics have pursued. Such readers are usually right, in my view, to find those readings of standpoint theory on which they settle to be implausible and unreasonable, and such criticisms have been widespread and long available.⁵ Yet controversy over the theory would not persist for three decades were these critics right in thinking that in defeating their reading of this theory they had succeeded in demonstrating the theory's worthlessness. Rather, the persistence of controversy points to strengths and powers of the theory that such interpretations failed to identify or confront. It is the most plausible and reasonable readings of the theory that are truly unsettling, for they are less easily defeated, and they conflict with other deeply-held beliefs and assumptions that we had thought the only plausible and reasonable ones. It is the most reasonable readings of standpoint theory that articulate significant ethical and epistemological dilemmas of our era, not to mention some of the most significant political challenges. It is in engaging with these aspects of standpoint projects that, I argue here, can make philosophy of science socially relevant.

It is risky to attempt to summarize a project that is so contentious even among its sponsors. Nevertheless, in the next section I shall briefly outline one reasonable (I hope) reading of main themes of the standpoint project for readers unfamiliar with it.⁶ The concluding section identifies three distinctive and valuable sites of controversy focused on or especially relevant to natural sciences that have been generated by standpoint theorists' efforts to negotiate between modernist commitments and their critics. These are the questions of what it means to expand philosophy of science's legitimate concerns into a kind of logic of discovery, what are the nature and role of group consciousness in the production of knowledge, and what can be a valuable form of social constructionism for the natural sciences and their philosophies. To be sure, these are not the only aspects of standpoint theory that have been found controversial. But they are ones especially pertinent to the relationship between philosophies of science and the world in which modern sciences, their philosophies, and their postmodern critics function.

STANDPOINT THEORY: SOME CENTRAL THEMES

The women's movement needed knowledge that was *for* women. Women had long been the object of others' knowledge projects. Yet the research disciplines and public policy that depended upon them permitted no conceptual frameworks in which women as a group became the subjects or authors of knowledge; the implied "speakers" of scientific sentences were never women.⁷ Such subjects were supposed to be generic humans, which meant men, or even, as Donna Haraway famously put the point, God: science was to perform the "God trick" of speaking authoritatively about everything in the world from no particular social location or human perspective at all (Haraway 1989). Yet feminists pointed out how the conceptual frameworks of the disciplines and of public policy never achieved such a transcultural perspective; they clearly represented easily identifiable social interests and concerns, and these were rarely women's. Worse, these conceptual frameworks often represented interests counter to those of women.

This particular kind of cultural specificity ensured systematic ignorance and error not only about women's lives but also about men's lives, in all their diversity, and about how any particular society's gender relations worked. In the dominant accounts it remained mysterious through which processes women's life choices became so restricted, albeit in different ways in different classes, races, sexualities, cultures, and historical eras. How did it come about that violence against women in every class and race in modern Western societies—usually committed by men from within their own social groups that women were supposed to be able to trust—was persistently interpreted by legal systems as women "asking for it" and "deviant men" doing it? How did it occur that a double day of work, one unpaid, was regarded as normal and desirable for women but not for men? How come women who were going through such expectable biological life-events as menstruation, birthing, or menopause were treated by the medical profession as if they were ill? What social processes made reasonable the belief that women made no contributions to human evolution?

The remedy, these theorists proposed, was to refuse to start off thought and research from the conceptual frameworks of the disciplines or of the public institutions serviced by the disciplines. Rather, the most innovative feminist work had started off instead from particular, culturally-specific, women's experiences, lives, or activities (or "labor")—and, for some, from the diverse emerging feminist discourses of their day. Such projects were not intended to end in ethnographies of women's worlds, though sometimes producing such accounts became a necessary preliminary step. Rather, women needed to understand the conceptual practices of dominant institutions through which their exploitation was designed, maintained, and made to seem natural and desirable to everyone. "Ruling," in our kinds of late modern, bureaucratic societies, is always medi-

ated by texts: principles, rules, required procedures, and the like. Conceptual practices are a tool of ruling in every kind of society, but in our bureaucratic ones texts have ascended to a far more central role.⁸

Thus, much of the early feminist research was understood to have “studied up,” focusing its explanations on dominant social institutions and their ideologies, rather than to have “studied down” by trying to explain the lives of marginalized groups.⁹ This is one important difference between “perspectivalism” and standpoint theory. The latter set out to chart the way the dominant institutions, including research and scholarly disciplines, their cultures and practices, organized and explained away the diverse ways women were oppressed and dominated. Whereas women had always been an object of observation and explanation in sociology, psychology, economics, political science, anthropology, biology, and even philosophy, much feminist research was understood to be part of post-Marxian Critical Theory, setting out to reveal the ideological strategies used to design and justify the “sex-gender system,” as Gayle Rubin (1975) had named it. This project of “studying up” distinguished standpoint from merely ethnographic research.¹⁰

Such projects require both science and politics, as Hartsock (1983/2003) put the point. As science, such projects were to see “beneath” or “behind” the dominant sexist and androcentric ideologies that shaped everyone’s lives in order to identify the actualities of women’s everyday lives. The false claims of dominant groups seemed to “become true” as dominant groups redesigned social relations to fit their vision of an ideal society. Thus, women appeared naturally irrational when denied the educations, jobs, and participation in public life available to their brothers. Economically privileged white women appeared physically weak when discouraged from developing their capacities for sports and physically challenging jobs.

Yet such sciences could not occur without political struggles. Politics was necessary to create the possibility of the formation of diverse forms of women’s collective group consciousnesses that would enable women in their different class, race, sexuality, and cultural locations to identify, value, and engage in the kinds of research that could enable them to see how to end their culturally-distinctive forms of sexist oppression. Thus, politics was conceptualized as itself part of research method, in an extended sense of the term to be discussed below (P. H. Collins 1991, Jameson 1988, D. Smith 1987, 1990b).¹¹ Of course, political struggle was also necessary if women were to gain access to the means to do such research—the research training, jobs in research institutions, research funding, and publication. We need not—indeed, must not—choose between “good politics” and “good science,” standpoint theorists have argued, for the former can at least sometimes produce the latter, and the latter, at least in some cases, requires the former. Standpoint theory shifts the question from how to eliminate politics from science to two different questions: which politics advance

and which obstruct the growth of knowledge; and, for whom (for which groups) does such politics advance or obstruct knowledge?¹²

Evidence for such claims was then appearing in the increasing documentation of sexist and androcentric results of research in biology and the social sciences and in public policies. Feminists were interested not just in explaining how sciences worked, leaving their projects and practices unchanged—as was the case with the new sociologies and histories of science, as well as with both traditional and postpositivist philosophies of science. Instead, feminists aimed to change scientific practice, to produce empirically and theoretically more successful research. The new research was needed for public-agenda feminist struggles for equal pay and legal protection at work, for an end to violence against women, for more informed attention to women's health and reproductive issues, for state support for homemakers, for equitable treatment of women and their children after divorce, and for many other desired social changes. Moreover, as feminist critics of the First World's development policies in the Third World began to examine the destructive consequences of the imposition in the Third World of First World scientific and technological assumptions and practices, it became clear that far deeper and broader changes in scientific practice and philosophies of science would be required if sciences were to speak also for the 70 percent or so of the world's most economically and politically vulnerable women, men, and children (see Braidotti et al 1994; Narayan and Harding 2000).

I have been trying to distinguish standpoint theory from the perspectivalism with which it is often confused. Four related features mark standpoint theory's innovativeness in this respect. First, as indicated, its goal is to "study up." Its concern is not to articulate women's or some other marginalized group's perspective about the group's lives, though this frequently is an important step in its process. Rather, it ambitiously intends to map the practices of power, the ways the dominant institutions and their conceptual frameworks create and maintain oppressive social relations. Secondly, it does this by locating, in a material and political disadvantage or form of oppression, a distinctive insight about how a hierarchical social structure works. Thus Patricia Hill Collins (1991) points out how sociology's labeling of Black women's lives as "deviant" permits blaming Black women rather than a racist and sexist social structure for the conditions of Black women's lives.¹³ Dorothy Smith (1987) and Hartsock (1983/2003) point out in different ways that women are assigned responsibility for daily life. Then sociologists and political theorists label such childcare and domestic labor as "natural," thereby exalting men's activities alone as distinctively human achievements. Third, it takes more than recording what women or members of some other oppressed group in fact say or believe to identify these distinctive standpoint insights. Oppressed groups frequently believe the distorted representations of social relations produced by dominant groups; we can change our minds about what our experiences were or how we want to think

about them. Moreover, standpoint approaches can be insightful even when one cannot access first-person reports by those from whose lives research starts off (through the use of historical records of peasants' or other "subaltern" activities, census data, etc.). So the perspectives of the oppressed cannot be automatically privileged as articulations of reliable claims. Finally, standpoint theory is more about the creation of groups' consciousnesses than about shifts in the consciousnesses of individuals. An oppressed group has to come to understand that each member is oppressed because she or he is a member of that group—Black, Jewish, women, poor, or lesbian—not because he or she individually deserves to be oppressed. The creation of group consciousnesses occurs (always and only?) through the liberatory political struggles it takes to get access to and arrive at the best conception of research *for* women or other oppressed groups, among the other goals of such struggles. Thus, feminist standpoint projects are always socially situated and politically engaged in pro-democratic ways.¹⁴

I cannot take space here to review yet one more time defenses of standpoint theory against charges of its purported essentialism, purported ethnocentrism, usefulness for the continued development of Marxian theory, or other such important issues that have repeatedly been addressed elsewhere.¹⁵ There are good reasons why these charges keep coming up, for to admit that this theory escaped such charges would be to enter a world where the desirability of modernist vs. postmodernist projects had been settled. But I have other projects here. Nor shall I discuss those relevant contributions standpoint theory makes to the philosophy of science that have already been discussed by others.¹⁶ Instead, I turn to identify three sites of its controversiality that offer distinctive resources to mainstream philosophy of science today.

SITES OF CONTROVERSY

1. SHOULD PHILOSOPHY OF SCIENCE BE REDUCED TO EPISTEMOLOGY? A NEW LOGIC OF (SOME KINDS OF) DISCOVERY

While many philosophers do not discuss the context of discovery, standpoint theorists think that such discussion is essential. Standpoint theorists intend to counter the mainstream reduction of philosophy of science to issues of justification and legitimation of scientific claims, that is, to epistemology.¹⁷ But whose "problems" get to count as scientific ones? Philosophy of science has largely ignored the context of discovery since the failed efforts of Norwood Russell Hanson (1958) to develop a "logic of discovery."¹⁸ In the social sciences, researchers are much more likely to assume that an era's choices of research problems are shaped by the concerns of those groups that sponsor such research. How changes in the social order make interesting and even urgent new research topics and methods—issues of the context of discovery—is a legitimate and lively topic in sociology, anthropology, political science/theory, and economics

(see, for example, Steinmetz forthcoming). It is hard to imagine that natural scientists and philosophers would not also think that sponsors' interests and desires shape the results of scientific research—military sponsors, industrial sponsors, medical sponsors—but it is hard to find any reflection that they have undertaken about how to control such influences. (Note that the issue here is the context of discovery, not of justification.) Taking one's stand as "against politics" intrusion into science turns out to be both ineffective and wrong-headed, because it obviously takes politics to get expensive research funded, and therefore some politics obviously does advance the growth of knowledge. Nor is the need for funding the only way an era's concerns come to shape what the era can and cannot know about nature and social relations. Women's and Black health advocates, environmentalists, and AIDS activists, not to mention explorers, militarists, and transnational profiteers, all have shaped research directions that have advanced the growth of the kinds of knowledge they wanted.

Perhaps those committed to the complete social neutrality of science are still enthralled by a conflicting rhetoric with which Hanson's (1958) project always had to contend. This rhetoric denied the desirability of identifying any such "logic," and thus being able to demand any kind of accountability from the context of discovery.¹⁹ This rhetoric expressed a principled disinterest in the origins of scientific problems, and stressed the importance of serendipitous discovery, the banishment of any kind of constraints that might restrict development of the insights of geniuses, and the virtues of the pursuit of truth for truth's sake. From the perspective of such ideals, requiring any procedures of accountability in the context of discovery, which the desired rationality of a logic of hypothesis production could make possible, would constrain processes and tendencies crucial to the advance of scientific knowledge.

As biologist Steven Rose and sociologist of science Hilary Rose (1976) have observed, this rhetoric seemed to make the natural sciences into the pursuits of leisure class gentlemen in ways characteristic of the humanities and arts. Scientific achievements were represented as being like the rationally inexplicable feats of literary or artistic inspiration by great poets and painters. This rhetoric distanced itself from—even opposed itself to—accounts of how the sciences routinely responded to the practical needs of military conquest, national defense, industrialization, European expansion ("Voyages of Discovery," "third world development"), control of diseases, and the like. This humanistic rhetoric, with its focus on the necessary liberty of individual scientists to obey no masters but their own intuitions, still is highly influential in the natural sciences and their public relations projects, if less often overtly articulated by philosophers. Yet the disregard for accountability in the context of discovery aligns contemporary philosophies of science with the older humanistic vision.

Of course, issues of how hypotheses are justified are also a concern in standpoint analyses. Yet the most distinctive of such projects focus on conceptual practices that shape what situations or conditions get identified as scientific

problems, what is supposed to be problematic about them, which hypotheses and concepts are favored, and how the research project is designed. All of these choices and decisions occur before sciences' methods kick in to control for scientists' "biases." Standpoint theory focuses on how the choice and control of research agendas are in the hands of research disciplines and the public institutions that they service, not in the hands of the rational hypothesis evaluators who are the imagined origins of and authorities on scientific projects in conventional philosophy of science accounts. To put the issue another way, standpoint theory extends the domain of scientific method back to the start of the context of discovery.

For example, Donna Haraway (1978/1989) uses a standpoint approach to show how in the United States and Europe the formation of primatology as a field of study was shaped by conventional racist and sexist assumptions about ideal reproductive behavior and by the desires of administrators of militaries, prisons, and industries to control the populations whose lives they managed. In Japan and India, different kinds of national preoccupations shaped very different topics and methods of primatology. Thus, systematic patterns of national interest have shaped the conceptual frameworks of primatology differently in different contexts. Rosi Braidotti et al. (1994) show how standard philosophies of sciences and technology permeate the development theory directing international policy supposedly bringing up to Western standards the quality of life in "underdeveloped societies." By isolating "pure nature" from the social contexts through which cultures conceptualize and interact with the world around them, development policy advances a distinctive kind of androcentric, Western economism interested mainly in scientific projects that increase narrowly measured economic productivity. Such a policy blocks the development of more realistic accounts both of "nature's order" and of social development. The purportedly value-free aspects of standard philosophies of science and technology are complicitous with such a policy. These make plausible to development designers Western imperial practices that actually increase the resources accessible to the "investing classes" in the North and their allies in the South, while decreasing them for the great majority of the world's citizens already the most economically and politically vulnerable.

Such standpoint projects can be understood to be proposing a "logic of (certain kinds of) discovery" here. They recommend by starting from the lives of groups marginalized and exploited through policies issuing from and legitimated by the conceptual frameworks of, for example, primatology and development sciences. Such research can detect the conceptual practices of these disciplines that serve the already economically and politically advantaged groups in global society. This "logic of discovery" can increase the pool of hypotheses to be tested, enabling insights about primatology and development sciences, and the purported regularities of nature that they chart, not otherwise easily available.

This way of understanding standpoint theory is supported by the explicit references to it as a method or methodology of research by its authors. Dorothy Smith entitles one of her papers “The Experienced World as Problematic: A Feminist Method” (1987). Hartsock’s influential paper cites the typical description of Marxian method: “The Feminist Standpoint: Developing the Ground for a Specifically Feminist Historical Materialism” (1983/2003). Rose conceptualizes the standpoint project as a scientific method: “Is a Feminist Science Possible?” (1987) As a method of research, standpoint projects enter the long debate over how to extricate natural and social science research per se from its colonial relation to its objects of study.²⁰

Standpoint theory’s proposal of a logic of (some kinds of) discovery *should* be controversial. It demonstrates how social inequality can damage the reliability of scientific hypotheses that look most interesting to dominant groups, and it shows how different cultures will tend to produce different patterns of knowledge and, equally importantly, of ignorance. This proposal for a “logic of discovery” locates the sciences at the heart of contemporary controversies over what are the best ways to advance pro-democratic social relations. It focuses not on the choices of individual rational thinkers, as does mainstream philosophy of science as constrained by its epistemological lenses, but on the collective “consciousness of an age” that selects “interesting hypotheses” for us outside the range, beyond the horizon, of the kinds of critical thought that disciplinary conceptual frameworks easily generate. This focus leads to the next issue.

2. THE ROLE OF GROUP CONSCIOUSNESS IN THE PRODUCTION OF KNOWLEDGE

Standpoint theorists, like many other contemporary social thinkers, have criticized the excessive individualism of Liberal political philosophy.²¹ Yet these projects have also produced an alternative to Liberal individualism’s subject of knowledge, one that escapes flaws of earlier proposed alternatives. It is possible that Liberal individualism thrives nowhere so self-confidently, albeit unacknowledged, as in conventional philosophies of science, including in the work of many postpositivist philosophers. This is so precisely because these philosophies have few resources for identifying and critically examining the complicity of their own conceptual frameworks with dominant economic and political projects. Nor has a nondeterministic alternative to the Liberal individual subject of knowledge emerged from science studies more generally, even though such scholars distance their accounts from other aspects of Liberalism.²²

Cultural critic Fredric Jameson identified this feature in a 1988 essay on the importance of feminist standpoint theory for the future of post-Marxian theories of knowledge. The last Marxian thinker to take on the challenge of articulating a standpoint theory was the Hungarian theorist, Georg Lukacs (1923/1971). Yet Lukacs’s project met with apparently unresolvable problems. Only in the

hands of feminist standpoint theorists, Jameson argues, has the issue of group consciousness been extracted from its deterministic and reductionist framing within the Marxian tradition²³ and used to develop a theory of the production of knowledge that is of use to progressive social movements: “. . . today one has the feeling that the most authentic descendancy of Lukacs’s thinking is to be found, not among the Marxists, but within a certain feminism, where the unique conceptual move of *History and Class Consciousness* has been appropriated for a whole program, now renamed (after Lukacs’s own usage) *standpoint theory*.”²⁴ Feminist standpoint theory thereby “opens a space of a different kind for polemics about the epistemological priority of the experience of various groups or collectivities” (Jameson 1988, 64).

This achievement is made possible, Jameson argues, by two features of the feminist account. Standpoint theory articulates the importance of a group’s experience, of a distinctive kind of collective consciousness, which can be achieved through the group’s struggles to gain the kind of knowledge that they need for their projects. Dominant groups as well as subordinated ones develop characteristic consciousnesses as their activities both enable and limit what they can know. So engaging in different activities makes possible the emergence of different consciousnesses. Such an account escapes the structural determinism of Marxian notions of the consciousness of the bourgeoisie and of the “masses,” and also, we can note, the apparently complete discursive determinism of excessively poststructural accounts.²⁵ Secondly, the feminist project succeeds “because of the central importance it gives to the problem of Western science itself and of scientific knowledge” (Jameson 1988, 64). The feminist project denies that a cognitive, technical core of modern Western science could itself be immune to social influences, as did the “externalist” Marxian accounts no less than the “internalist” accounts they criticized. Rather, this core is itself shaped and legitimated through the kinds of activities in which its sponsors, funders, and creators engage.

Identification of the processes through which women’s group consciousness are formed has provided a central theme in standpoint writings. Or, rather, “women’s group consciousnesses” plural, since Black and white, Jewish and Islamic, lesbian and heterosexual, middle- and working-class women importantly develop different group consciousnesses. An earlier section pointed to how this claim about the role of group consciousness in the production of knowledge distinguished standpoint from perspectivist approaches. Thus Dorothy Smith (1990a) points to the emergence of the “bifurcated consciousness” of women sociology graduate students who cannot see themselves or their lives in the depictions of social life provided in the most influential sociological theories. Such a consciousness can become the source of a project to map those conceptual practices of sociology that leave the discipline complicitous with the production and maintenance of androcentric hierarchical social structures.

Such androcentric conceptual practices deny the existence or value of the consciousness arising from the social activities assigned to women.

Smith has provided such maps in four volumes of essays produced over three decades (Smith 1987, 1990a, 1990b, 1999). Patricia Hill Collins (1991) also takes on such a project. She subtitles her influential study of sociological conceptual frameworks as they appear from the standpoint of Black women *Knowledge, Consciousness, and the Politics of Empowerment* (1991/1999). She does so in order to emphasize her argument that Black women can come to a group consciousness of their own conditions and possibilities that contrasts with the way these are represented in sociology's purportedly objective and transcultural accounts, and that empowers Black women to organize transformative social struggles. Hilary Rose (1983) argues that women as a group can come to a consciousness of their own bodily experiences that contradicts the accounts of bodily functioning provided by medical professionals and institutions, and that points to the possibility of women transforming the assumptions and practices of medical and health care institutions.

These writings are proposing a kind of subject of scientific knowledge and of history that is not the culturally "free," and in principle, completely visible—(knowable) to itself—Liberal individual centered in conventional philosophies of science. Nor is it the mirror image of the Liberal individual: the "collectivity" or "mass consciousness," unthinkingly determined by its material conditions and the feelings, emotions, and excitements of the moment.²⁶ Thus, standpoint projects raise the possibility of a subject of scientific research that escapes the conceptual framework shared by both Liberal individualism and the equally problematic structuralist and poststructuralist alternatives to it heretofore envisioned. Claims about the role of context-specific experience in the production of knowledge, and about how new kinds of such experience and insight can be gained through active engagement in political struggles, lie at the heart of contemporary debates over the kind of subject of knowledge and history that modernity requires vs. the kind that maximally democratic social relations require. Standpoint claims about the origins, nature, and role of group consciousness in the production of knowledge *should* be controversial.

3. REASONABLE CONSTRUCTIONISM

Standpoint theory shows the effects of group experiences on the natural sciences without committing "externalism" or an excessive constructionism, both of which appear to leave nature's order no significant role in the production and legitimation of knowledge claims.²⁷

Standpoint theorists do not believe standard internalist assumptions that the causes for the successes of the sciences can be found entirely "inside" the cognitive, technical core of sciences, in their ontologies, methods, laws, or

facts. The larger field of post-Kuhnian science studies has undermined such assumptions, pursuing Thomas Kuhn's directive with respect to any particular historical scientific project "to display the historical integrity of that science in its own time" (Kuhn 1970, 1). By now, such studies seem to have undermined any possible grounds to maintain that any aspect of the cognitive, technical core of science exists that can escape such demonstration of its integrity with its historic era.

Central here are studies of scientific method (Schuster and Yeo 1986), of standards for objectivity and neutrality (Novick 1988, Proctor 1991, Shapin and Schaffer 1985), the search for and standards of truth (Shapin 1994). Even standards for mathematical proof have been shown to be tied to particular practical projects (Kline 1980). Yet scholars using standpoint methods of "starting from the lives of the oppressed" have expanded the range of such projects. They have studied gender influences on theory choice in chemistry (Potter 2001), the constitution of fields of study such as primatology (Haraway 1978/1989), and the parasitic relation between the advance of modernity for some and the insistent retention of pre-modernity for others in the "transfer" of First World sciences, technologies, and their rationality to the "underdeveloped" world (see Braidotti et al. 1994 and Shiva 1989).

While undermining the internalist accounts, the standpoint projects also distance themselves from externalist accounts. They are not advancing political arguments at the expense of scientific ones. Rather, in a world of social inequalities and competing interests, scientific arguments always are also situated culturally and historically; they are inevitably socially engaged while also grounded in the realities of nature's order. As Haraway famously put the point, the problem for feminists "is how to have *simultaneously* an account of radical historical contingency for all knowledge claims and knowing subjects, a critical practice for recognizing our own 'semiotic technologies' for making meanings, *and* a non-nonsense commitment to faithful accounts of a 'real' world" (1991, 187). Since our hypotheses always extend past the evidence that supports them, many conflicting hypotheses can equally well describe any collection of data. Many possible hypotheses are consistent with nature's order, but no one that could be perfectly congruent with it (Hayles 1993). How we interact with the world around us shapes what we can and cannot know about it (Barad 1996).²⁸ To put the issue another way, our best hypotheses can only be regarded as temporarily less false than all (and only) the collection of hypotheses against which they have been tested.

Thus, standpoint projects try to, need to, avoid the excessive constructionism and consequent damaging relativism that have plagued less materialist-grounded accounts. Standpoint theory promotes what could be thought of as a constructionist materialism.²⁹ This should be controversial, because we need to

work our way into a different network of concepts than those that have required the damaging either/or choices of Liberal theory and its rationalist/empiricist philosophy of science. Such a network will make plausible, familiar, a matter of common sense, positions that now upset our familiar networks of beliefs and assumptions. But its plausibility requires, also, that we live in a world significantly different than the one that I and most readers of this essay now occupy at the center of a global empire. Standpoint theory is a transitional epistemology and philosophy of science that points toward a world where truth and power do not issue from the same social locations, as is now the case.

SHOULD PHILOSOPHY OF SCIENCE SEEK SOCIAL RELEVANCE?

I have been arguing that several of the particular kinds of controversial claims standpoint projects advance are valuable precisely because of their controversiality. They welcome or “hail” into dialogue and reflection a surprisingly broad array of groups. These groups are reasonably anxious about the implications for their projects of either giving up or continuing to completely support conventional philosophy of science assumptions.

These controversies emphasize the social relevance of standpoint theory. A socially relevant philosophy of science would have to achieve two goals, I suggest. In the first place, it must have the conceptual resources to recognize a full array of ways in which the sciences, including their cognitive, technical cores, participate in social relations. Secondly, it must have such resources to recognize how it, too, is fully participant in the social relations of the day. Philosophy of science, too, has a “political unconscious.”

For some philosophers and scientists, the very idea that philosophy of science should seek social relevance will seem a grievous mistake. They hold that the field should seek a technical expertise valued only or primarily by other philosophers of science. I, and others, would point out that such a position itself occupies a location on the political spectrum: it refuses to intervene in sciences’ present complicity with oppressive social projects, and thus is extremely useful to those interested in keeping “truth” issuing only from established seats of power. Thus, one could regard my title question as moot: philosophies of science, like any other form of human thought, are always already socially and politically situated, whether or not their authors intend them to be. Yet from that perspective too, standpoint theory’s controversiality is a valuable resource for philosophies of science.

NOTES

This essay develops a theme from “Standpoint Theory as a Site of Political, Philosophic, and Scientific Debate,” the introduction to Harding (forthcoming). I thank the anonymous reviewers of an earlier draft for their helpful suggestions.

1. Its first appearance was as “the standpoint of the proletariat” in the writings of Marxists. See Jaggar 1983 and Jameson 1988 for two accounts of these origins.

2. While most of these authors mentioned overtly claimed a standpoint approach, others (see, for example, Keller 1984) de facto used it without theorizing what they were doing in this way (see, for example, Braidotti et al. 1994 and Haraway 1989). Alison Wylie (1987, 2003) has continuously engaged with and helped to shape standpoint thinking.

3. This is not to deny that standpoint authors have taken sides in the modernism vs. postmodernism debates; for example Nancy Hartsock (1998) has defended modernism and Donna Haraway (1983) has criticized such tendencies in standpoint projects. Rather, my point is that the theory itself, in its fundamental commitments and projects, negotiates between these two powerful contemporary movements. Several observers have hinted at my point here. See, for example, Bracke and Puig (forthcoming) and Hirschmann (1997).

4. Other feminist philosophers of science have made similar observations. For example, Joseph Rouse (1996b) charges that preoccupation with defending or attacking positivism distracts philosophers of science from engaging with important new directions in science studies introduced by feminist and cultural studies of science, thereby increasing the irrelevance of this field to how science functions in the world. I would add that the preoccupation with positivism also obscures important insights developed by multicultural and postcolonial science and technology studies (see Harding 1998 and Hess 1995). Of course, other kinds of feminist science and philosophy of science projects continue to make valuable contributions to women’s lives and to our understanding of science. My argument is restricted to identifying the virtues for philosophies of science of the kinds of controversy that standpoint theory seems unable to shake off.

5. Examples of and discussions of many of these criticisms may be found in Harding (forthcoming).

6. Dorothy Smith (1997) has pointed out that general summaries of the standpoint project, such as I have given elsewhere and will give here, tend to obscure the particular disciplinary conversations within which it has been developed by sociologists, political theorists, and thinkers in other disciplines. I agree with her here. Standpoint projects are critical of the “conceptual practices of power” (Smith 1990b), and these practices are discipline-specific in important ways. Nevertheless, there are good reasons to think about the collection of these projects, as I am proposing here. However, readers should look at the specific disciplinary (as well as public policy) contexts that lead D. Smith, Hartsock (1983/2003), P. H. Collins (1991), Haraway (1978/1989), and others to distinctive standpoint concerns, and that contribute to disagreements between standpoint theorists.

7. I have provided overviews similar to this one in a number of places, most recently in the introduction to Harding (forthcoming).

8. See Dorothy Smith (1999) for an illuminating account of the emergence in nineteenth and early twentieth century industry of such forms of governance.

9. The “rulers” are “up” at the top of a hierarchical socioeconomic social structure and the “ruled” are “down” at the bottom in terms of social, economic, and political power in this lingo familiar in pro-democratic social research. Thus, to “study up” is to try to explain how the social structure of a society works rather than to explain the behavior and beliefs of its least powerful constituents, as conventional social sciences have usually done. Such projects tend to be critical, pro-democratic ones because the powerful usually think their accumulation of economic, social, and political pleasures, privileges, and riches requires no social science explanation and certainly not a critical one.

10. Or, rather, from ethnographic work that “studied down,” for some standpoint projects could be understood as producing critical ethnographies of institutions (including research disciplines). Dorothy Smith (1997, 1990a, 1990b, 1999) is one of the leading practitioners of such critical institutional ethnography.

11. Of course, feminism is not the only social movement to engage overtly in political struggles as part of its research methods; the environmental movement and gay health movement provide examples of the many other cases where social activism is necessary not only to create the conditions required for particular research projects, but also itself generates new understandings of the phenomena of interest. Many of the science studies historians, sociologists, and ethnographers chart similar intrinsic links between new kinds of science projects and new social movements (see, for example Latour 1988 and Shapin and Schaffer 1985 for well-known examples of such analyses).

12. “Standpoint” has come to be used as a technical term that stresses the politics and science it takes to achieve the group consciousness through which distinctive understandings of nature and social relations can be achieved, and yet also, colloquially, as a synonym for viewpoint or perspective, to refer to dominant perspectives as well as to those of oppressed groups. Authors sometimes use the term this way even while otherwise insisting on the importance of “science and politics” in oppressed groups’ struggles to understand nature and social relations. This is unnecessarily confusing. Even though the term has this double usage also within the Marxist tradition in which it originated, I will continue to use it here in the restricted, technical sense indicated.

13. She draws here on the influential work of Joyce Ladner (1971) and other African American researchers.

14. See Pels 2003 and Castells 1997 for valuable discussions of the “dark side” of standpoint projects (though Castells does not, as I would, identify the phenomena he charts as standpoint projects). American Patriot and religious fundamentalist movements also appeal to standpoint arguments in certain respects.

15. See, for example, discussions of such issues in many of the essays in Harding (forthcoming)

16. For example, May (1998) argues that standpoint theory has made the most significant and valuable shift in the history of thinking about reflexivity in the social sciences; his argument is applicable to the natural sciences also. Rouse (1996a), Haraway (1997), and Mark Elam and Oskar Juhlin (1998) point to important strengths of standpoint theory that the sociologies of science lack. (Rouse’s focus is on feminist philosophies of science more generally, in which he includes some standpoint writings.)

17. Rouse (1996b), following Michael Williams (1991), argues against the necessity and plausibility of philosophy of science's legitimation project—against, as he puts it, epistemology.

18. As one anonymous reviewer of this manuscript pointed out, the exception here is philosophers of science drawing on resources from cognitive science, such as Lindley Darden, Ronald Giere, Nancy Nersessian, and Paul Thagard.

19. Furthermore, the project appeared intrinsically flawed. It failed to account for the way the meaning and reference of "science" is continually both expanded and contracted. Moreover, no one had as yet produced a systematic way of generating fruitful hypotheses, which is precisely what standpoint approaches do (Caws 1967, 342).

20. For an early articulation of this problem in the social sciences, see Blauner and Wellman 1973. For one recent formulation of it, see Linda Tuhiwahi Smith 1999. Braidotti et al. 1994 surveys a number of criticisms of science's colonization of nature that have emerged from environmental movements.

21. I capitalize "Liberal" to clarify that it is a particular, historical political philosophy to which I refer.

22. Marxism's alternative subject of knowledge (the idealized proletariat, or, rather, the collective proletariat) is usually regarded as determined by his class position. On this reading, it is not just that one's class position both enables and potentially limits what one can know, as a contemporary standpoint theorist would claim, but more strongly, it determines that one will think like a member of either the bourgeoisie or the proletariat.

23. His point is not that Marx committed such a reduction, but that subsequent tendencies in his followers did so.

24. Jameson here refers to writings by Hartsock (1983), Jaggar (1983), and Harding (1986).

25. "Discursive determinism" is the position that it is impossible for individuals or groups to break out of, or even critically identify, the characteristic ways of thinking of an era.

26. That contrast is itself gender-coded: the masculine-coded Liberal rational individual vs. the feminine-coded collectivity, "mass," or mob, irrationally responding to feelings and emotions of the moment.

27. Older Marxian accounts have been accused of "externalism," that is, of the claim that historical forces alone are responsible for determining which claims get to count as knowledge. Sociologist of science David Bloor (1977) adopted a judgmental relativism that, he admitted, left his own arguments unsupported. Sociologist Harry Collins (1983) has argued for an extreme constructionism, which he rightly refers to as relativism, which also leaves nature's order no apparent role in creating scientific claims.

28. Political philosopher Nancy Hirschmann (1997) captures this point another way in her analysis of standpoint theory's revelation of the "materialist moment" in inquiry.

29. It can be tempting for readers unfamiliar with the Marxian tradition to think that "constructionism" refers to a kind of antirealism and that "materialism" is another word for realism. Giving in to such a temptation will make my arguments (and stand-

point theorists' arguments more generally) exceedingly hard to follow. Realism and antirealism are terms embedded in many conflicting philosophic and scientific theories. Few, if any, of these make some of the fundamental moves characteristic of standpoint theories. "Materialism" here originates in a different discourse—Marxism, where it is not a synonym for "realism." In some Marxian accounts, it is contrasted with "bourgeois realism." Here is a "fast and dirty" characterization of Marxian "materialism": a theory about how one's actual, historically specific interactions with nature and with social relations—such as caring for babies or doing philosophy within the specific set of gender, class, race, and other social relations in which one participates (similarly, factory labor or stock market investing would be conventional examples of class-based social relations)—can both enable and limit what one can know about nature and social relations. It would take the project of this paper way off track to attempt to locate "the materialist moment" here within those philosophic debates about realism.

REFERENCES

- Barad, Karen. 1996. Meeting the universe halfway; realism and social constructivism without contradiction. In *Feminism, science and the philosophy of science*, ed. Jack Nelson and Lynn Hankinson Nelson. Dordrecht, Netherlands: Kluwer Academic Publishers.
- Blauner, Robert, and David Wellman. 1973. Toward the decolonization of social research. In *The death of white sociology*, ed. Joyce A. Ladner. New York: Random House.
- Bloor, David. 1977. *Knowledge and social imagery*. London: Routledge and Kegan Paul.
- Bracke, Sarah, and Maria Puig de la Bellacasa. Forthcoming. Building standpoints. In *The feminist standpoint theory reader: Intellectual and political controversies*, ed. Sandra Harding. New York: Routledge.
- Braidotti, Rosi, Ewa Charkiewicz, Sabine Hausler, and Saskia Wieringa. 1994. *Women, the environment, and sustainable development*. Atlantic Highlands, N.J.: Zed Books.
- Campbell, Marie, and Ann Manicom, eds. 1995. *Knowledge, experience, and ruling relations: Studies in the social organization of knowledge*. Toronto: University of Toronto Press.
- Castells, Manuel. 1997. *The power of identity*. Vol. II of *The information age: Economy, society, & culture*. Oxford: Blackwell.
- Caws, Peter. 1967. Scientific method. In *Encyclopedia of philosophy*, ed. Paul Edwards. New York: MacMillan.
- Collins, Harry. 1983. An empirical relativist programme in the sociology of scientific knowledge. In *Science observed*, ed. Karin Knorr-Cetina and Michael Mulkay. London: Sage Publications.
- Collins, Patricia Hill. 1991/1999. *Black feminist thought: Knowledge, consciousness and the politics of empowerment*. New York: Routledge.
- Elam, Mark, and Oskar Juhlin. 1998. When Harry met Sandra: An alternative engagement after the science wars. *Science as Culture* 7 (1): 95–109.

- Figueroa, Robert, and Sandra Harding, eds. 2003. *Science and other cultures: Issues in the philosophies of science and technology*. New York: Routledge.
- Gross, Paul R., and Norman Levitt. 1994. *Higher superstition: The academic left and its quarrels with science*. Baltimore: Johns Hopkins University Press.
- Hanson, Norwood Russell. 1958. *Patterns of discovery*. London: Cambridge University Press.
- Haraway, Donna. 1978. Animal sociology and a natural economy of the body politic, Pts. 1 and 2. *Primate visions: Gender, race, and nature in the world of modern science*. New York: Routledge.
- . 1981. In the beginning was the word: The genesis of biological theory. *Signs: Journal of Women in Culture and Society* 6 (3): 469–81.
- . 1983. We think, therefore we are. *The Women's Review of Books* 1 (2): 3–5.
- . 1989. *Primate visions: Gender, race, and nature in the world of modern science*. New York: Routledge.
- . 1991. Situated knowledges: The science question in feminism and the privilege of partial perspectives. In *Simians, cyborgs and women*. New York: Routledge.
- . 1997. *Modest_witness@second_millennium: Femaleman_meets_Oncomouse™*. New York: Routledge.
- Harding, Sandra. 1986. *The science question in feminism*. Ithaca, N.Y.: Cornell University Press.
- . 1991. *Whose science? Whose knowledge? Thinking from women's lives*. Ithaca, N.Y.: Cornell University Press.
- . 1992a. After the neutrality ideal: Politics, science, and strong objectivity. In *The politics of western science, 1640–1990*, ed. Margaret Jacob. Atlantic Highlands, N.J.: Humanities Press.
- . 1992b. Rethinking standpoint epistemology: What is “strong objectivity?” In *Feminist Epistemologies*, ed. Linda Alcoff and Elizabeth Potter. New York: Routledge.
- . 1998. *Is science multicultural? Postcolonialisms, feminisms, and epistemologies*. Bloomington: Indiana University Press.
- . 2003. A world of sciences. In *Science and other cultures: Issues in philosophies of science and technology*, ed. Robert Figueroa and Sandra Harding. New York: Routledge.
- . ed. 2003. *The feminist standpoint theory reader: Intellectual and political controversies*. New York: Routledge.
- . and Merrill B. Hintikka, eds. 1983/2003. *Discovering reality: Feminist perspectives on epistemology, methodology, metaphysics, and philosophy of science*. 2nd ed. Dordrecht, Netherlands: Kluwer Academic Publishers.
- Hartsock, Nancy. 1983/2003. The feminist standpoint: Developing the ground for a specifically feminist historical materialism. In *Discovering reality: Feminist perspectives on epistemology, methodology, metaphysics, and philosophy of science*, 2nd ed., ed. Sandra Harding and Merrill B. Hintikka. Dordrecht, Netherlands: Kluwer Academic Publishers.
- . 1998. The feminist standpoint revisited. In *The feminist standpoint and other essays*. Boulder, Colo.: Westview Press.

- Hayles, N. Katherine. 1993. Constrained constructivism: Locating scientific inquiry in the theater of representation. In *Realism and Representation*, ed. George Levine. Madison: University of Wisconsin Press.
- Hekman, Susan. 1997. Truth and method: Feminist standpoint theory revisited. *Signs: Journal of Women in Culture and Society* 22 (2): 341–65.
- Hess, David J. 1995. *Science and technology in a multicultural world: The cultural politics of facts and artifacts*. New York: Columbia University Press.
- Hirschmann, Nancy. 1997. Feminist standpoint as postmodern strategy. In *Politics and feminist standpoint theories*, ed. Sally J. Kenney and Helen Kinsella. New York: The Haworth Press.
- Jaggar, Alison. 1983. Chapter 11. *Feminist politics and human nature*. Totowa, N.J.: Rowman and Allenheld.
- Jameson, Fredric. 1988. *History and class consciousness as an unfinished project. Rethinking Marxism* 1 (1): 49–72.
- Keller, Evelyn Fox. 1984. *Reflections on gender and science*. New Haven: Yale University Press.
- Kenney, Sally J., and Helen Kinsella, eds. 1997. *Politics and feminist standpoint theories*. Binghamton, N.Y.: The Haworth Press, Inc.
- Kline, Morris. 1980. *Mathematics: The loss of certainty*. New York: Oxford.
- Kuhn, Thomas S. 1962/1970. *The structure of scientific revolutions*. 2nd ed. Chicago: University of Chicago Press.
- Ladner, Joyce. 1971. *Tomorrow's tomorrow: The black woman*. Garden City, N.Y.: Doubleday Publishing Co.
- Latour, Bruno. 1988. *The pasteurization of France*. Cambridge: Harvard University Press.
- Longino, Helen. 1993. Feminist standpoint theory and the problems of knowledge. *Signs: Journal of Women in Culture and Society* 19 (1): 201–12.
- Lukacs, Georg. 1923/1971. *History and class consciousness*. Trans. Rodney Livingstone. Cambridge: MIT Press.
- May, Tim. 1998. Reflexivity in the age of reconstructive social science. *Social Research Methodology*. 1 (1): 7–24.
- Narayan, Uma, and Sandra Harding, eds. 2000. *Decentering the center: Philosophy for a multicultural, postcolonial, and feminist world*. Bloomington: Indiana University Press.
- Nelson, Lynn Hankinson, guest ed. 1995. Feminism and science. *Synthese: An International Journal for Epistemology, Methodology and Philosophy of Science* 104 (3).
- Nelson, Lynn Hankinson, and Jack Nelson, eds. 1996. *Feminism, science, and the philosophy of science*. Dordrecht, Netherlands: Kluwer Academic Publishers.
- Novick, Peter. 1988. *That noble dream: The "objectivity question" and the American historical profession*. Cambridge, U.K.: Cambridge University Press.
- Pels, Dick. 2003. Strange standpoints, or: How to define the situation for situated knowledge. *The Intellectual as stranger*. New York: Routledge.
- Potter, Elizabeth. 2001. *Gender and Boyle's law of gases*. Bloomington: Indiana University Press.
- Proctor, Robert. 1991. *Value-free science? Purity and power in modern knowledge*. Cambridge: Harvard University Press.

- Rose, Hilary. 1983. Hand, brain, and heart: A feminist epistemology for the natural sciences. *Signs: Journal of Women in Culture and Society* 9 (1): 73–90.
- . 1984. Is a feminist science possible? In *Love, power, knowledge: Toward a feminist transformation of the sciences*. Bloomington: Indiana University Press.
- Rose, Hilary, and Steven Rose. 1976. The incorporation of science. In *Ideology off/in the natural sciences*, ed. Hilary Rose and Steven Rose. Cambridge: Schenkman.
- Ross, Andrew, ed. 1996. *Science wars*. Durham: Duke University Press.
- Rouse, Joseph. 1996a. *Engaging science: How to understand its practices philosophically*. Ithaca, N.Y.: Cornell University Press.
- . 1996b. Feminism and the social construction of scientific knowledge. In *Feminism, science, and the philosophy of science*, ed. Lynn Hankinson Nelson and Jack Nelson. Dordrecht, Netherlands: Kluwer Academic Publishers.
- Rubin, Gayle. 1975. The traffic in women: Notes on the “political economy” of sex. In *Toward an anthropology of women*, ed. Rayna Rapp Reiter. New York: Monthly Review Press.
- Schuster, John A., and Richard R. Yeo, eds. 1986. *The politics and rhetoric of scientific method: Historical studies*. Dordrecht, Netherlands: Reidel.
- Shapin, Steven. 1994. *A social history of truth*. Chicago: University of Chicago Press.
- Shapin, Steven, and Simon Schaffer. 1985. *Leviathan and the air-pump: Hobbes, Boyle, and the experimental life*. Princeton: Princeton University Press.
- Shiva, Vandana. 1989. *Staying alive: Women, ecology and development*. London: Zed.
- Smith, Dorothy. 1987. *The everyday world as problematic: A sociology for women*. Boston: Northeastern University Press.
- . 1990a. *Texts, facts, and femininity: Exploring the relations of ruling*. New York: Routledge.
- . 1990b. *The conceptual practices of power: A feminist sociology of knowledge*. Boston: Northeastern University Press.
- . 1997. Comment on Hekman’s “Truth and method: Feminist standpoint theory revisited.” *Signs: Journal of Women in Culture and Society* 22 (2): 392–98.
- . 1999. The ruling relations. In *Writing the social: Critique, theory, and investigations*. Toronto: University of Toronto Press.
- Smith, Linda Tuhiwahi. 1999. *Decolonizing methodologies: Research and indigenous peoples*. Atlantic Highlands, N.J.: Zed Press.
- Steinmetz, George, ed. Forthcoming. *The politics of method in the social sciences: Positivism and its epistemological others*. Durham: Duke University Press.
- Walby, Sylvia. 2001. Against epistemological chasms: The science question in feminism revisited. *Signs: Journal of Women in Culture and Society* 26 (2): 485–510.
- Westkott, Marcia. 1979. Feminist criticism of the social sciences. *Harvard Educational Review* 49: 422–30.
- Williams, Michael. 1991. *Unnatural doubt: Epistemological realism and the basis of skepticism*. Oxford: Basil Blackwell.
- Wylie, Alison. 1987. The philosophy of ambivalence: Sandra Harding on “The Science Question in Feminism.” *Canadian Journal of Philosophy*, Supplementary Volume 13: 59–73.

- . 2003. Why standpoint matters. In *Science and other cultures: Issues in philosophies of science and technology*, ed. Robert Figueroa and Sandra Harding. New York: Routledge.
- Wylie, Alison, and Kathleen Okruhlik. 1987. Philosophical feminism: Challenges to science. In *Resources for Feminist Research* 16: 12–15.

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