

Critical Discussion

SCIENCE WARS AND BEYOND

by HAROLD FROMM

BARBARA H. SMITH, A professor of comparative and English literature at both Duke and Brown, has read widely in philosophy and the sciences. “Scandalous knowledge” is her phrase to describe not the “science wars” (to use the title of the notorious Spring/Summer 1996 issue of *Social Text*) but the epistemology wars. The chief antagonists in these wars consist, on the one side, of traditional proponents of “classical” philosophy’s normative, analytic, justifying, and stable methodologies and proponents, on the other, of such twentieth-century constructivist epistemologies as those of Ludwik Fleck, Thomas Kuhn, Michel Foucault, David Bloor, and Bruno Latour. “The scandal,” Smith explains, is classical philosophy’s “apparent inability to show how, when and why we can be sure that we know something or, indeed, that we know anything” (p. 1). In her well-executed Introduction, perhaps the best chapter in the book (for its panoramic picture of today’s “Theory of Knowledge” conflicts), Smith prepares us for her espousal of constructivist methodologies but first distinguishes between “epistemological constructivism”—a philosophical methodology with an antagonism toward universal rationalities, philosophical “realism,” in-itselfness, or

Scandalous Knowledge: Science, Truth and the Human, by Barbara Herrnstein Smith; viii & 198 pp. Durham: Duke University Press, 2005, \$21.95 paper.

Fear of Knowledge: Against Relativism and Constructivism, by Paul Boghossian; 139 pp. Oxford: Oxford University Press, 2006, \$24.95.

the Correspondence Theory of Truth—and the cultural critique often called “social constructionism,” a distinction she acknowledges to be sometimes difficult and hazy. Social constructionism, a highly political activity, is critical of traditional notions of the normative and is engaged with the workings of cultural critics, ethicists, feminists, gender theorists, critics of institutional power, and the “goes without saying” of mainstream assumptions in the treatment of race, sexuality, the “natural” and the innate. In a word, the global conflict she describes is between “reason” (a contested term) and politics (not very contested, except for who and what are political), between the putative eternal verities of thought and the contingencies of daily life. Whereas a “constructivist” sociologist of science would stress the social, collective, intersubjective, institutional *aspects of scientific knowledge*, questioning “the standard understandings and treatments of such terms as *fact, discovery, evidence, proof, objectivity* and, of course, *knowledge and science* themselves” (p. 7), the “social constructionist” would be more likely to focus on class, politics, economics, and culture seen as a *congeries of power structures*.

Smith is particularly distressed by the claims of traditional philosophy when she asks, “May it not be the case that the strict distinctions and divisions of labor that underwrite philosophy’s self-honoring role in the study of science and knowledge beg all the relevant questions and, where maintained, insure philosophy’s self-confinement?” (p. 10). She sees knowledge as assembled from multiple sources: philosophy, science, social sciences, human animality and subjectivity but she is not suggesting an abandonment of the notion of “truth,” just a curbing of the notion of absolute knowledge, or knowledge of things-in-themselves (though even traditionalists believe being known can’t be an aspect of a thing-in-itself.) In the process of constructing truths, “reason is not ‘abandoned’ for ‘irrationalism’; scientific knowledge is not ‘equated with’ myth or ideology; and so forth . . . but are reconceived as variable gradients rather than fixed, distinct and polar opposites” (p. 11). She prefers to speak of the “superiority” of certain claims rather than their fixed universality via “rationalist-realist-positivist epistemology.” As her overall theme, Smith wants to defend constructivist epistemology as the appropriate one for the twenty-first century and, to a slightly lesser extent, the goals of social construction, while deriding as unfounded the attacks against their purported relativism, nihilism, fatuous egalitarianism, and political correctness. Her performance is undeniably impressive but her success is mixed.

The stronger first half of the book mounts a plausible defense of

constructivist epistemology. Starting off with a quick survey of “Pre-Post-Modern” relativists from Heraclitus to Wittgenstein, Smith moves on to twentieth-century modernist questioners of objectivist-universalist epistememes, from Heidegger and Einstein to Franz Boas, Edward Sapir, Lenin, and in the arts Woolf, Stravinsky, Joyce and Picasso, in order to support her contention that revisionist epistemology is nothing new. But it is unclear how far she really wants to go when she summarizes the position of Ludwik Fleck, her main spokesman, as “the scientist’s perceptions of the physical world are no more objective than those of anyone else since, like anyone else’s, they are shaped by a particular experiential history in a particular social-epistemic community” (p. 27). Before devoting a major chapter to this early twentieth-century neurobiologist and medical historian, Smith briefly reviews some of the intellectual and political attacks against the “relativity” of modernism’s revolutionary figures in order to typify the attackers’ conservative objections (objections that today seem obsolete as applied to these now canonical figures) and points out the similarity of these objections to the ones raised by philosophers such as Donald Davidson and Jürgen Habermas against constructivist epistemologists such as Thomas Kuhn, Paul Feyerabend, Nelson Goodman, and Richard Rorty. Later, she will take on “conservative” (this time I require scare quotes) critics of the science wars, but with much less success, because we are still living in the midst of an everyday politics that turns evenhandedness in dealing with the past into polemics in dealing with a present.

The chapter on Ludwik Fleck is a richly instantiated account of this still little known thinker’s view of facts as “events in the history of thought.” In his *Genesis and Development of a Scientific Fact* (1935) Fleck espoused a “comparative epistemology” whose truths are the emergent developments of interpretive communities that can think only the thoughts for which their histories have primed them (e.g., Plato could not have described reality in terms of artificial intelligence). An independent external reality is not denied but, as a thing-in-itself, it is inaccessible to direct thought and must be approached in a roundabout way, the roundabout in question consisting of an historical methodology that shapes thought but inevitably becomes refined or superseded, a process not even Newton nor Einstein could escape. (Though perhaps I should add that “historical methodologies” themselves do not develop from a blank slate or the merely social but, rather, from a brain with indigenous structures and propensities produced by an evolved body.) In Smith’s words, “The central ontological/epistemological implication of Fleck’s

work and of constructivist thought more generally is not that there is nothing 'out there.' It is, rather, that the specific features of what we interact with *as* reality are not prior to and independent of those interactions but emerge and acquire their specificity *through* them" (p. 51). But is this really so radical a point of view? In fact, to me it seems like the increasingly standard one, whether expressed or implied. It certainly doesn't mean that the sciences never get things "right," but that "right" is a relative term. Planes fly and stay in the air because engineering problems have been solved. The engineers have got it right, I'd say. But right can never mean final knowledge that exhausts all the potential descriptions or improvements of things, since the potentials are infinite, coming as they do from brains with timebound knowledge produced through bodily faculties of seeing, hearing, feeling, thinking. Except perhaps for the axioms of math and logic, things can always be gotten more right. Nor does "right" really mean, I'd continue to say, that even those who get it right understand the in-itselfness of the phenomena in question. So from literary criticism to molecular biology, disciplinary conclusions are in constant flux from right, to more right, to even more right. If they reach stasis they're dead.

Even the Correspondence Theory of Truth, Smith tells us, does not have to be entirely rejected because "it is serviceable in a wide range of informal contexts: for example, in justifying one's statements or beliefs to associates, children, untutored laypersons and perhaps oneself ('Yes, it's true, the car keys are on the hall table—go and look for yourself'). The notion does present difficulties, however, when invoked under conditions of seriously conflicting truth claims joined with seriously disparate grounds of epistemic authority and seriously divergent prior beliefs, general assumptions and relevant aims and interests" (p. 47).

Smith traces Fleck's influence or congruence in Thomas Kuhn's notion of radically new paradigm shifts and Michel Foucault's idea of epistemes and regimes of truth but keeps assuring us that truths are not simply made up or invented from personal fantasies, that they are descriptions of reality. Her conclusion is modest: "It seems unlikely that any *one* view of truth—realist, positivist, pragmatist or any other—will be universally established as true, at least not very soon" (p. 77).

The second half of *Scandalous Knowledge* crosses into the more stormy and conflicted fields of "Science Studies" or the sociology of science, which in turn melt into social constructionism, which further dissolves into frequently nasty politics. Science Studies are not so much concerned with a pure epistemology and theory as with the presuppositions and

worldly practices of the various science disciplines, with the conflicts between the older and younger generations insofar as these live by different epistemes, and with the everyday politics of life in hierarchical professional disciplines. This conflict can be seen even in the title of Smith's "Cutting-Edge Equivocation: Conceptual Moves and Rhetorical Strategies in Contemporary Anti-Epistemology" (p. 85). In its cautious way the chapter could even be taken as a battle guide for the academically oppressed professional caught between traditional and radical constituencies, forced into equivocal "moves" and "strategies" of display and concealment that simultaneously try to win over or merely not offend *avant* and *derriere* gardes by appearing to walk in the middle of the road. But equivocal hybrid positionings, Smith feels, are likely to end up as mutually canceling.

One can begin to see stress lines in Smith's situation as a woman torn between loyalty and support for other feminist academics while trying to remain even more loyal to accuracy, truth, and honorableness. It's a tough tightrope to walk. She notes how even the most eminent anti-traditionalists (Rorty, Latour, Damasio) engage in a "ritual exorcism" in which they try to disparage aspects of their own extremes to seem more moderate. And so, less surprisingly, she sees certain feminists as tormented between Charybdis and Scylla, for if *they* disparage traditional rationality (as distorting and *parti pris*) they themselves lose a vehicle for criticizing the traditional positions they can't abide and for defending themselves against charges of relativity, thereby forfeiting the "claims made for the intrinsically privileged knowledge of women *as such*" (p. 98). And toward some of their more equivocal claims Smith can be forthrightly negative. In the end, her recommendation to feminists is to have the guts to pursue their agendas anyhow but from a position of alertness to the professional vectors, reminding us that the "constructed" in "constructivism" doesn't mean any old cockamamie idea that enters your head, even if the popular press tends to see it that way.

As Smith turns to the conflicts between the humanities and the sciences, the center fails to hold and her discourse becomes increasingly precarious. Her characterization of the ways in which the humanities and the sciences view each other with suspicion and condescension is both amusing and convincing. To the humanists, the sciences seem simplistic, reductive, philistine, and conservative—and the Science Studies that emanate from the humanities strike scientists as ludicrous, ignorant, and disrespectful. But it goes without saying that despite Smith's ability much of the time to treat both sides fairly, there are limits to empathy

and though her handling of Gross and Levitt's *Higher Superstition: The Academic Left and its Quarrels With Science* concedes the authors may now and then deviate into sense, she writes off their critique of Science Studies as uninformed and based on the equivalent of pop media soundbites. Furthermore, Smith dismisses out of hand Alan Sokal's hoaxing parody of Science Studies (a mere "caper" as she sees it) in the aforementioned issue of *Social Text*, as if it were not a damaging performance of rhetorical virtuosity and had nothing whatever of value to say about the smoke screen of vacuous jargon that conceals so much humanistic contempt for science. Summing up their purported malfeasance with a dismissive wave of the arm, she writes: "What, then, remains of these charges [from Levitt, Gross, and Sokal]? Very little, it appears. Indeed, the 'science wars' can be seen as something of a mirage: arising from ignorance and arrogance; amplified by opportunism, both academic and journalistic; and fought against a largely phantom enemy with much artillery fire but few strikes. The sensational charges were clearly scattershot and often, on inspection, empty." Alas, when I reviewed the science wars issue of *Social Text* in "My Science Wars" (*Hudson Review*, Winter 1997), what I found (my own solipsistic mirage?) in article after article of Science Studies attacks against Gross and Levitt was political correctness, fatuousness, and mendacity. (Nor can Bricmont and Sokal's *Fashionable Nonsense*, their later substantiation of Sokal's claims, simply be swept aside by yet another arm wave.) On the subject of the science wars the reader will do much better by turning to Ullica Sederstråle's *Defenders of the Truth: The Battle for Science in the Sociobiology Debate and Beyond* (Oxford, 2000).

On E. O. Wilson's *Consilience*, an attempt to unify all the arts and sciences within one grand science-structured epistemological cosmos, Smith aligns Wilson with Tooby and Cosmides ("The Psychological Foundations of Culture" in *The Adapted Mind*), whom she accuses of "complacent condescension," scientific arrogance, and general philistinism. "Contrary to the arguments of Wilson or Tooby and Cosmides, there is no reason to think there is some single all-purpose 'best' way for human beings to get to know their worlds . . ." I think, despite the attractions of "consilience," she is reasonable that to banish all the "'soft' understandings and open-ended ponderings" of the humanities and replace them "with 'hard' causal explanations" from the sciences would be a serious net loss (p. 126), and it will never happen in any case unless human brains can be redesigned. But Wilson, one must remember, was in large part reacting to the humanities-generated

intellectual mush driving the science wars. And today, with ignorance and anti-science views being politically legitimized from the top down in the United States, a Wilsonian perspective is sorely needed.

Smith's attack on evolutionary psychology shifts into high gear in her penultimate chapter, "Super Natural Science," already showing its age since its original publication in 2000, given the complex developments and refinements of recent years. She again has it in for Tooby and Cosmides but is particularly hard—too hard, I would say—on Steven Pinker's *How the Mind Works*, though some of her quarrels with Pinker hinge on his carelessness or his inconsistent use of figures of speech. So she needles him for metaphors that make the mind appear as an entity in its own right (which he doesn't believe) rather than a function of the brain, singling out (from Tooby and Cosmides as well) the metaphysical spookiness of the concept of "modules" that purportedly account for mental predispositions. Are they "real" or are they just words? And if real, of what substance are they made in a non-dualistic system that has foregone Cartesianism? She is particularly exercised by the computational theory of mind, which can explain chess games or the calculation of income taxes, "But activities of that sort constitute only a fraction of what might reasonably be understood as intelligent behavior . . ." (p. 136). This is the territory in which Daniel Dennett and David Chalmers have been skirmishing for years. Like Chalmers, Smith wants to account for consciousness as "experience," something that computers don't enjoy (though Dennett would have words about this). This is the "Hard Problem" of consciousness studies that she feels (without naming it as such) has been neglected by these evolutionary psychologists and their just-so stories produced by "reverse engineering." There is a world of introspection, aesthetic experience, ethics and whatnot that does not seem to be entailed by modules or computers. Smith concedes that reverse engineering may help to explain "various features of human social behavior" but "In the case of the humanities, current self-distinctions from the natural sciences reflect, among other things, the continued power of the idea that *articulating* and *understanding* the world of *human experience* is irreducibly different from *describing* and *explaining* the phenomena of *human behavior*" (p. 146). Unfortunately, Chalmers' elevation of "experience" into a category of cosmic reality strikes me as a solution as bad as Cartesianism, a new kind of ghost in the machine—and the problem of "experience" remains unsolved.

Experience is ultimately the Achilles heel of this highly-charged book. It causes Barbara Smith to aim all her guns at the sciences and their

defenders, with almost total exculpation of the humanities, since the humanities represent the disciplines whose raw materials are human “experience.” (What would she do with right-wing fundamentalist religious “experience”?) She writes off Gross and Levitt, Wilson, Tooby and Cosmides, Pinker, Sokal and others who criticize the humanities for the belief that culture can graft just about anything onto a blank-slate brain, caricaturing them as engaged in a war against phantoms of their own imagination. But the actual reality of this supposed phantasm has recently been given a demonstration of almost platonic ideality.

The May, 2005, issue of *PMLA*, the literary profession’s flagship journal, reproduced the presidential address that Robert Scholes delivered at the 2004 convention of the Modern Language Association. The talk, entitled “The Humanities in a Posthumanist World,” dealt with the declining prestige and power of the humanities. Because it had little more than a passing remark on the sciences, namely a reference to George Steiner’s pungent observation that unlike the sciences, in the humanities anybody can say anything, I wrote the journal a letter of complaint that appeared in *PMLA*’s issue of January 2006: “Reading Scholes’s address, one would hardly know that the intellectual universe has been turned upside down over the past twenty-five years by Darwinian evolution’s ‘modern synthesis’ and the latest developments in the cognitive neurosciences. Like the head-buried proponents of intelligent design, academics in the humanities don’t want to know that literary texts, far from being autotelic or merely a part of cultural history are—like everything else produced by organisms—the products of biological history, which means the history of the body and its materially constituted brain.” Scholes’s shocker of a reply pulls the rug right out from Smith’s exculpation of the humanities: “Yes, we were natural for eons before we were cultural—before we were human, even—but so what? We are cultural now, and culture is the domain of the humanities” (p. 299).

It’s hard to believe that Barbara Smith could be happy with this reply. Because when the then president of the chief professional organization in the literary humanities can state such a view to its thirty thousand members (not to mention all the nonmembers who read the journal), the problem is more real than mere “phantoms.” It’s once again the top-down ignorance that Wilson was at pains to address in *Consilience*.

Paul Boghossian’s *Fear of Knowledge: Against Relativism and Constructionism*, by some fluke of pre-established disharmony, reflects a rumble between Barbara Smith and himself that took place in *South Atlantic Quarterly* in 2002. Replying to Smith’s “Cutting Edge Equivocation,” now

a chapter in her book, he in turn provoked a hectoring and verbose reply from Smith that was essentially a trashing of analytic philosophy. He alludes to this rejectionist mentalité when he writes of “the growing alienation of academic philosophy from the rest of the humanities and social sciences, leading to levels of acrimony and tension on American campuses that have prompted the label ‘Science Wars’” (p. 8). Boghossian’s brief book makes some use of his *SAQ* reply in order to develop his stance as an analytic philosopher looking at constructivism (or constructionism). It was the very existence of this professional discipline that Smith wrote off as obsolete.

Fear of Knowledge opens with reference to a denial by Native Americans of the “extensively confirmed archaeological account” of their aboriginal arrival in North America via the Bering strait about 10,000 years ago. Boghossian quotes an official of the Cheyenne River Sioux as saying, “We know where we came from. We are the descendents of the Buffalo people. They came from inside the earth after supernatural spirits prepared this world for humankind to live here.” Boghossian then quotes Roger Anyon, a British archaeologist who has worked for the Zunis: “Science is just one of the many ways of knowing the world.” The Zunis’ world view is “just as valid as the archaeological viewpoint of what prehistory is about” (pp. 1, 2). Boghossian is not intimidated by the fact that an academic can always be found to embrace absurdities (consider, for example, Michael Behe and Intelligent Design) and he uses this conflict of “truths” as the germ of his book.

Although he is largely responding to the concept that Smith called “social construction” and its belief that knowledge can never be separated from the social, cultural, and political context out of which it arises, Boghossian actually is testing the limits of her “epistemic constructivism.” While he acknowledges many occasions on which social construction is a valid and plausible procedure, as when it “exposes the contingency of those of our social practices which we had wrongly come to regard as naturally mandated” (p. 129), his main concern is with mind-independent reality and the logical procedures that enable us to justify our sense of factuality and truth about that reality, even if we cannot know things as they are in themselves. Wittingly or not, even social constructionists, he reminds us, make use of these ineluctable constraints of rationality in their own anti-rationalistic defenses. Although the heart of his book consists of the examination and critique of sentences and propositions having to do with truth—and the rationality that lies behind them—there are numerous areas of agreement

with epistemic ideas proposed by both Smith and Ludwik Fleck. Still, everything has its limits and Boghossian's job here is to point them out, sometimes devastatingly, as when he observes, "for if the powerful can't criticize the oppressed, because the central epistemological categories are inexorably tied to particular perspectives, it also follows that the oppressed can't criticize the powerful." Shall we accept a double standard, he asks: "allow a questionable idea to be criticized if it is held by those in a position of power—Christian creationism, for example—but not if it is held by those whom the powerful oppress—Zuni creationism, for example" (p. 130).

Reading two books about truth and culture as antagonistic as these makes Wilson's attempted reconciliations, *mutatis mutandis*, seem more plausible and needed than ever. (A number of the documents referred to in this review may be seen online at <http://hfromm.net/professional>.)

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