The Sokal Affair and the History of Criticism

John Guillory

The sciences are small power, because not eminent, and therefore, not acknowledged in any man.... For science is of that nature, as none can understand it to be, but such as in a good measure have attained it.

—THOMAS HOBBES, Leviathan

1. The Spontaneous Philosophy of the Critics

The Sokal hoax shares with other controversies of our time the typical feature of erupting suddenly with the threat of dire consequence, only to disappear quickly and nearly completely from public consciousness. No longer perceived as a crisis of the day, the affair is more likely now to elicit weariness with this particular battlefield of the culture wars. I revisit the controversy with the purpose of grasping its continuing claim upon the present even as it recedes into the limbo of the recent past. This claim is nothing other than its significance in the history of criticism. If the Sokal affair belonged to a certain moment in the culture wars, it also has a place in the longer history of conflict between the sciences and the literary humanities or what goes conventionally by the name of the two cultures debate. Yet the relation between the Sokal affair and this longer history is by no means obvious. I will argue in this essay that in the Sokal affair the matters at issue in the two cultures debate were confused with those at stake in the culture wars. A clarification of the actual relation between these distinct conflicts will reveal that the Sokal affair has less to tell us...
about the politics of science, or science studies, than about the history of criticism.

The discussion to follow assumes on the reader's part a general but not a detailed recollection of the texts comprising Sokal's hoax and the responses. Because any account of the controversy, even the barest narrative summary, will already have embarked on an interpretation, I will remind my readers before proceeding further of those aspects of the affair most pertinent to the interpretation I advance here. Chief among these is the fact that the title of the Spring 1996 double issue of Social Text in which Sokal's hoax article appeared, entitled Science Wars, deliberately connected controversies within science studies to the culture wars.2 The framing of the Social Text issue by the notion of science wars—a term not previously in wide circulation—highlighted new (at least to many in literary study!) and sometimes controversial work in the history, sociology,


2. Andrew Ross remarks on "a new arena of conflict some have dubbed the Science Wars, a second front opened up by conservatives cheered by the successes of their legions in the holy Culture Wars" (Ross, "Culture Wars' Spill Over: Science Backlash on Technoskeptics," The Nation, 2 Oct. 1995, p. 346). I am not aware of earlier uses of this term in print.

and anthropology of science, some of it associated with the so-called Edinburgh school of the sociology of scientific knowledge (usually abbreviated SSK) or with the French "network" school associated with Bruno Latour, some of it with feminist critiques of science, and some of it with versions of cultural studies largely based in U.S. literature departments. Emerging from several disciplinary contexts, these projects were (and still are) capable of being advanced independently of each other. The gathering of these projects together in Social Text is crucial to understanding the effect of Sokal's hoax article, which in a similar "interdisciplinary" fashion assembled disparate citations from theorists in literary studies and science studies under a single rubric, "postmodernism"—a term highly inappropriate for at least some of his references, although extremely resonant in the context of the culture wars and of academia's relation to this conflict.3

It will perhaps already be evident that I am not concerned with adjudicating the ethical questions raised by the strategy of the hoax. Nor do I find rhetorically interesting the article's intentionally absurd statements about its nominal subject of quantum gravity; though extravagant, these statements would perhaps have deceived most readers outside the physics and mathematics community. I will observe, however, that Sokal's article was widely misrepresented as a parody, even by Sokal himself. There are only a few moments in the essay when it rises to parody; if parody had been Sokal's consistent mode, the essay would certainly have been unpublishable in a serious venue. Sokal's usual procedure was rather to paraphrase or to quote liberally from the familiar canon of postmodernist theorists.4 His paraphrases were, in fact, scrupulously accurate. If the editors of Social Text were utterly at sea with quantum physics, they were certainly qualified to ascertain the accuracy of Sokal's representation of postmodern thought, and their judgment on this matter was pronounced by accepting the article for publication.

3. The editors' strategy of framing science studies in the context of the culture wars was reinforced, moreover, by the positioning of Sokal's article in the volume's ultimate place, where it could be seen as summing up the theoretical and political implications of what preceded by virtue of its laudatory invocation of postmodernism. This position might also be read as an afterthought. Whatever the intentions of the editors, the summary theoretical statements contained in Sokal's essay give the volume a shape very different from the edition of Science Wars republished by Duke University Press (Durham, N.C., 1996), from which Sokal's essay was, of course, omitted.

4. Consider the following sentence from "Transgressing the Boundaries": "In quantum gravity, as we shall see, the space-time manifold ceases to exist as an objective physical reality; geometry becomes relational and contextual; and the foundational conceptual categories of prior science—among them, existence itself—become problematized and relativized" ("T," p. 218). Only the extension of familiar language such as "problematized" and "relativized" to quantum gravity brings such passages close to parody. The idiom of the article is on the whole like a disciple's admire imitation of the master theorists, the effect of which is usually reductive. Sokal describes his hoax article more accurately in the Lingua Franca article as a "pastiche."
While the publication of the hoax article was enabled by the failure of the editors to detect its spurious physics, its deeper embarrassment arose from Sokal’s capacity to reproduce postmodernism as a discursive bloc, in effect, the ideology of a party in the culture wars. This was exactly the same polemical effect as that produced by framing science studies with the term science wars. As a litany of certain familiar positions in a polemical field, the general tendency of Sokal’s essay commanded assent rather than aroused suspicion. But whose assent? In retrospect, the scandal cannot finally be laid at the door of the editors alone, as it was precisely the widely credited positions expressed in Sokal’s article that imparted to the hoax the symptomatic significance of a little Lysenko affair. At the same time, it must be observed that the party embarrassed in the hoax was not the academic Left in toto; nor was it science studies in particular. The consequence of public ignominy was suffered largely, in fact, by the literary academy and by a number of humanistically oriented enterprises in other disciplines such as philosophy and anthropology. That Sokal’s target was primarily the humanities is bluntly stated in the first sentence of the Lingua Franca article: “For some years I’ve been troubled by an apparent decline in the standards of rigor in certain precincts of the academic humanities” (“P,” p. 62). Now this is not to deny that some scientists were, and remain, quite unhappy with science studies and suspicious of what they see as the left politics of some in these fields; it is simply to recall that many of those who do science studies have little interest in postmodernism and that many of these scholars do not see their work as presenting a left political critique of science.

The scandal of the Sokal hoax was marked, then, by a confusion between the discursive bloc of postmodernism and the field of science studies.5

5. The academic Left was already under attack by a sector of the science professoriate, notably represented by Paul Gross and Norman Levitt in their tract, Higher Superstition: The Academic Left and Its Quarrels with Science (Baltimore, 1994). See also The Flight from Reason and Science, ed. Gross, Levitt, and Martin W. Lewis (Baltimore, 1996). Neither of these interventions had the media play of the Sokal hoax.

6. And again several paragraphs down: “Social Text’s acceptance of my article exemplifies the intellectual arrogance of Theory—postmodern literary theory, that is—carried to its logical extreme” (“P,” p. 63).

7. One of the more dubious tactics Gross and Levitt employ in their book is to lump together science studies of all types with offending work in the humanities, essentially tarring the former with the sins of the latter. The point of this tactic is to bring any left-affiliated academic project into disrepute. But their comments on science studies are, in fact, much more cursory (and sometimes simply uncomprehending, as in their reading of Steven Shapin and Simon Schaffer, Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life [Princeton, N.J., 1985]) than their remarks on poststructuralist and postmodern theorists. The same relative lack of interest in science studies proper is evident in Sokal and Jean Bricmont, Fashionable Nonsense: Postmodern Intellectuals’ Abuse of Science (New York, 1998), which devotes only two of its twelve chapters to figures in science studies. The remaining chapters, as the title suggests, are dedicated to the task of denouncing French theory.
studies. When the scandal filtered through to the mass public sphere, the
 distinction between these fields was erased, and the stakes of the scandal
 were defined simply in terms of a quarrel between the sciences and the
 literary academy, the two cultures. But this confusion must be understood
 as already implicit in Social Text's framing of science studies by the term
 science wars. It was scarcely surprising that in the public sphere the scandal
 was seen as another instance of the literary academy's "politicization" of
 the cultural field, yet another expression of the radical "postmodernism"
 emanating from literature departments. Science studies itself, as it is ac-
 actually and diversely practiced, disappeared as the main target of media
 attack. The public misconstruction of science studies thus unwittingly
 confirmed the literary academy's desire to annex science studies to a theo-
 retical program internal to its own discipline (roughly indicated by the
 name of postmodernism), as well as its desire to conscript science studies
 into the culture wars (the scene of its external politics).

The double strategy of appropriation and conscription was enabled,
 as we can now demonstrate, by a certain intersection between the fields of
 postmodernism and science studies. In retrospect, this was a dangerous
 intersection, the site of a collision rather than a convergence. The area of
 intersection was, of course, epistemology, the most dangerous of the games
 philosophers play. One wonders whether the Sokal hoax would have had
 quite the mobility it manifested in the public sphere if Sokal had not declared
 in the second paragraph of his article: "It has thus become increas-
 ingly apparent that physical 'reality,' no less than social 'reality,' is at
 bottom a social and linguistic construct" ("T," p. 217). The acceptance
 of the article for publication was regarded as proof that the editors of Social
 Text, supposedly representing the literary academy, endorsed nothing less
 than a lunatic disbelief in the physical world, a position so extreme that
 it could easily be cited in the mass media—and so it was, repeatedly—as
 evidence of the absurdity to which literary studies and cultural studies
 had sunk. The concept of "reality" quickly became the fetishized term in
 a public debate that was far removed from the philosophy of science and
 mired from the beginning in low-level philosophizing on the obtuseness
 of the physical world.

While it would be easy to dismiss the public response to the Sokal
 hoax as an expression of the very anti-intellectualism that fuels the cul-
 ture wars (it was that), it must be admitted that the hoax article's antireal-
 ist declaration simply restated an epistemological position the literary
 academy might very well believe that it holds in common with some ver-
 sions of science studies. Sokal's triumphant, though of course ironic, dec-

8. In retrospect it is worth remarking the strangeness of the fact that a literary scholar
 such as Stanley Fish should rise to the defense of science studies, in which he had previously
evined little interest; see his op-ed piece, "Professor Sokal's Bad Joke," New York Times, 21
laration of this position proved an effective accelerant in spreading the scandal; but in retrospect it was this statement more than any other in Sokal’s article that had to be affirmed by the literary academy. It was this statement above all others that pointed to a possible alliance of science studies with the postmodern bloc. And because the antirealist position had achieved something close to the status of consensus in the literary academy, it did not have to be backed up by fully elaborated philosophical arguments; it could simply be stated.

The philosophical positions implicit in a given discipline’s knowledge-claims are complicated by the status of philosophy itself. Though it is one discipline among many, it has strong historical claims to the position of primus inter pares. Consequently, the resort of the disciplines to epistemological defense is always subject to a kind of oversight by philosophy itself. As an instance of such oversight, one can do no better than a late essay of Althusser’s, in which he cross-examines the philosophizing of scientists under the arch but appropriate rubric of “the spontaneous philosophy of the scientists.”11 Spontaneous philosophy as Althusser defines it is inseparable from scientific practice and stands in relation to it as a kind of ideology, though not an ideology that translates simply into positions on a political spectrum. This ideology has two complexly related components: an internal, which is the scientist’s account of scientific practice, and an external, consisting of the specifically political and social commitments of scientists. Althusser is careful not to reduce the internal component to an effect of the external ideology.

If there is a “spontaneous philosophy of the scientists,” I suggest that the Sokal affair brought to light an analogous “spontaneous philosophy of the critics.” Let us acknowledge, if this is still a question for anyone, that science as a practice is never wholly autonomous, that it does not transcend political or social context. But that was not the issue in the Sokal affair. The issue was rather the necessary political implications of realist epistemology, as this is supposed to underlie the practice of science (just as, conversely, antirealist epistemology is assumed in the critique of science). The spontaneous philosophy of the critics consisted not simply in antirealism per se but just as much in the assumption that epistemological positions have a necessary relation to political positions.

9. The possibility of an alliance against scientific realism depended chiefly on the fact that the notion of social construction was a commonplace in both fields, a question I will take up in the second section of this paper.

10. Defenses against Sokal’s attack generally lapsed into what can only be called mediocre philosophy. Joseph Natoli’s riposte to Sokal’s naïve realism is typical: “Raw reality never exists for humans except in a worldly and therefore transformed, mediated way” (Joseph Natoli, A Primer to Postmodernity [Oxford, 1997], p. 119). This is so inoffensive—it is at best warmed over Kant—that one wonders what all the fuss was about.

Sokal hoped to discredit postmodernist discourse by claiming in his *Lingua Franca* article that realism, so far from entailing an inherently reactionary politics, was the more authentically left position. This strategic repositioning of realism was more challenging than Paul Gross and Norman Levitt’s avowedly antileftist polemic, but it also oddly mirrored the axiom long prevalent in the literary academy of a necessary correlation between epistemology and politics. The hoax had the salutary effect of making the “spontaneous” entailments of this axiom very clear, namely, that an antirealist epistemology (alternatively expressed as antifoundationalism or relativism) is a requisite for any progressive politics and, conversely, that realism, foundationalism, or universalism underlie—at the level of the episteme, as it were—all that is regressive in our society. Because these philosophical positions (and their opposites among the scientists) were typically overstated and underargued, they could easily be reduced to caricature, which was quickly disowned on both sides. The scientific realists were only too happy to concede the cultural context of science, just as the cultural antirealists were delighted to concede the reality of the physical world. But if the controversy could have been resolved by displacing speech acts to the register of common sense, it would never have been propelled into the arena of public scandal. Spontaneous philosophy is something more than common sense, if also less than adequate philosophy. It is a discourse that is generated casually, in the context of practice, or urgently, in the context of a legitimation crisis.

While there were real stakes in the philosophical positions espoused in the Sokal affair, these were perhaps not what the antagonists imagined. Most immediately, the integrity of philosophical discourse itself was at stake. The philosophical complexity of the question of the real was sacrificed to a preemptive linking of epistemology to politics. Realism, of course, names a recurrent problematic of philosophical discourse, but in the history of philosophy realist and antirealist positions have taken a number of very different forms, by no means equivalent in their occasions or implications (political or otherwise). Let us only recall here the conflict between realism and nominalism in late Medieval thought, which seeded the intellectual ground of early Protestantism; between realism and idealism in post-Kantian philosophy, in reference to which the names of Hegel or Marx can be invoked; and between realism and empiricism in the history of science itself, exemplified by the dispute between Planck and Mach. Scientists have included in their number quite sophisticated phi-

12. “I’m a leftist because of evidence and logic, not in spite of it” (“P,” p. 64).
13. Spontaneous philosophy, it should be stressed, is enabling, despite its problematic simplifications. The fusion of notions derived from both Derrida and Foucault, for example, in much literary criticism enables certain projects to go forward, even though the differences between these two figures cannot easily be reconciled, if at all.
14. The political context of Mach’s rigorously antirealist epistemology seems reassuring at first, since Mach’s politics were strongly democratic in tendency. But what are we then
Philosophers, not all of whom have been philosophical realists. The reduction of realism to the status of commonsensical belief signals a regression from the sophistication of philosophical debate; this regression is nothing other than the trajectory of spontaneous philosophy in the context of crisis.

Is the antirealism of literary and cultural studies, as a spontaneous philosophy, vulnerable to a similar reduction to common sense? The spontaneous philosophy of the critics evidently leans for support on a number of manifestly sophisticated and diverse philosophical projects within the general field of poststructuralist or postmodern thought. Still, it is not the usual business of the critics to enter into these philosophical debates in any extensive way. Postmodernist thought passed into U.S. literary and cultural criticism transformed into "theory," which by virtue of an alchemy of dissemination made very complex arguments available in the form of touchstonelike position statements. These position statements typically recede to the background in the everyday business of the discipline, which is the interpretation of cultural works; they tend to be brought forward again only in contexts of controversy, or in defense of the aims of criticism. Since it often consists of calling into question what passes for common sense, the spontaneous philosophy of the critics might seem, on the face of it, more sophisticated than its analogue among the scientists. Yet I want to insist here upon its spontaneous character. This is to say that the calling into question of common sense is nothing other than the common sense (or "consensus") of the literary professoriate. Like the common sense of the laity, it circulates as what is given for this discourse community.

2. The Reassertion of Cultural Criticism

It is a peculiarity of the literary academy today that the spontaneous philosophy of the critics derives from an apparent rupture with the commonsense tradition of Anglo-American empiricism and a reaffiliation of

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supposed to make of Pierre Duhem, whose antirealist or "fictionalist" philosophy of science was accompanied by far right politics? On the development of physics in relation to philosophy, see Theodore M. Porter, "The Death of the Object: Fin de siècle Philosophy of Physics," in Modernist Impulses in the Human Sciences, ed. Dorothy Ross (Baltimore, 1994), pp. 128–51. 15. It is worth remarking in looking back over the relation between scientists and philosophy in the last 150 years that scientists of the period between 1850 and 1950 were much more actively engaged in philosophical discourse than their successors. Conversely, by the mid-twentieth century, Anglo-American philosophers had become almost exclusively oriented to the philosophy of science. The decline of interest among scientists of the postwar period in philosophy surely made them more vulnerable to cruder versions of spontaneous philosophy; but during the same period they also became very effective communicators in the public sphere. No one who considers the relations between the disciplines and the public sphere can fail to be struck by the fact that humanist intellectuals have by contrast been largely unsuccessful in communicating the value and content of their work to the public.
criticism with a line of continental philosophers. While it would be difficult to overestimate the rupture indicated by the name of theory, it nonetheless remains possible to detect beneath this discontinuity a certain enduring orientation of critics within the general intellectual and political field, a remarkable continuity in the discourse of criticism from the nineteenth century to the present. This continuity underlies the recurrence of the two cultures conflict. At the origin of the conflict was the ascent of the natural sciences in the later nineteenth century to a preeminent position among the discourses of truth and the simultaneous decline in the social prestige of the cultural critic, a figure who for much of the previous century dominated the public sphere. I am sure I do not need to rehearse here the origins of cultural criticism (or Kulturkritik) in the romantic reaction against the transformative effects of the Industrial Revolution, or the polemics initiated by Coleridge and Carlyle against Bentham and Mill, renewed by Arnold against Huxley, and erupting again in the “two cultures” debate between C. P. Snow and F. R. Leavis in the early 1960s. The point I should like to make lies somewhat at a tangent to this history as it is usually understood, that is, as a debate between the advocates of technology and progress against those who champion humanity and tradition. It is easy to see that the contemporary critic has little sympathy

16. For the decline of the cultural critic, see the biased but still useful study of John Gross, The Rise and Fall of the Man of Letters: English Literary Life Since 1800 (Chicago, 1969); see also Morris Dickstein, Double Agent: The Critic and Society (New York, 1992). Thorstein Veblen was already commenting on the ascendancy of science to cultural prominence in his 1906 essay, “The Place of Science in Modern Civilization”: “On any large question which is to be disposed of for good and all the final appeal is by common consent taken to the scientist” (Thorstein Veblen, “The Place of Science in Modern Civilization,” in “The Place of Science in Modern Civilization” and Other Essays [1919; New Brunswick, N.J., 1990], p. 3). For an account of the epochal shift in the landscape of knowledge, see David Hollinger, “The Knower and the Artificer, with Postscript 1993,” in Modernist Impulses in the Human Sciences 1870–1930, pp. 26–53. Hollinger understands “modernity” as inaugurating the reign of the “Knower” over the “Artificer”: “To look to man or woman as ‘knower’ for cultural leadership is to expect relatively less from man or woman as soldier, as manager, as entrepreneur, as priest, as parent, as artificer, as clown. This faith in the cultural capacities of man or woman as knower I propose to call cognitivism” (pp. 33–34). Of course, not all of what modernity means can be comprised by the notion of cognitivism, but this notion does illuminate the formation of disciplines in the modern university in a way that will be developed below.

with the latter position. And yet the Sokal affair undoubtedly replayed the two cultures debate, though not as an exact repetition of the positions in the Snow-Leavis controversy.

Any assertion of a thorough break between “cultural criticism” and literary postmodernism is belied by this newest outbreak of conflict between criticism and the sciences. This conflict is no longer located primarily in the journalistic public sphere, as it was in the nineteenth century, but in the university. Yet even as a university discipline, criticism must be seen as a reassertion of “cultural criticism” when it aspires to offer a critique of society. This critique was formerly distinguished by a tendency to focus periodically on the claims and effects of science at the same time that it progressively enlarged its scope over the two centuries. Cultural criticism came to target much more than the machine, regarded as the mere avatar of scientific or industrial civilization. The cultural critics went on to take utilitarian philosophy, instrumental reason, and ultimately reason itself as the objects of critique. I suggest that the periodic lapse of this critique into the expression of hostility toward science represents a recurrent falling off in the sophistication of cultural criticism, which after all has given us Adorno as well as F. R. Leavis. While the reductive claim that the ills of society can be traced to the triumph of science is a notion that few would credit today outside the cult of the Unabomber, science has reemerged as the object of cultural criticism.

In our time, antagonism to science is not an expression of Ludditism, however, but rather a response of the cultural disciplines in the university to the scientific monopoly on truth; it expresses the fear that criticism will be relegated to mere opinion, a discourse that cannot claim to be knowledge. It can be argued that this anxiety already troubled Arnold

18. Cultural studies’ break with the elitism and conservative politics of cultural criticism can be acknowledged here without compromising the more difficult point I want to make, which is that a continuity of orientation toward science persisted through this transformation. For the relation of postmodernist criticism to mass culture, see Andreas Huyssen, After the Great Divide: Modernity, Mass Culture, Postmodernism (Bloomington, Ind., 1986).

19. It must be remarked that the emergence of a commonplace distinction (itself often dubious) between technology and science has permitted what we call cultural studies to remain a version of cultural criticism while declaring a break from its precursor. Just as cultural studies inverted the relation between high and mass culture, in order to affirm what cultural criticism had rejected—the supposed depredations of mass culture—so technology has come to play the role of the “low” in relation to the “high” function of science. Cultural criticism of the nineteenth century more often identified, or confused, science with technology. The celebration of technologies such as the internet as the site of cultural play makes cultural studies appear to be quite the opposite of its residually Luddite precursor; but it is only the distinction between technology as the site of play and science as avatar of reason that makes it possible for cultural studies to submit science to a skeptical critique without seeming to risk identification with cultural criticism.

20. Leavis comes uncomfortably close to conceding that the epistemic status of criticism is opinion, however sophisticated or educable opinion might be. So he writes in Two
and the cultural critics of the later nineteenth century; but the triumph of the sciences in the twentieth-century university represented a much greater challenge to those critics who hoped to make criticism itself into a university discipline. That institutional identity imposed a greater epistemic burden on critical discourse than was ever borne by its journalist precursors. This burden could be discharged in two very different ways, either by developing criticism itself as a science (a strategy only ambiguously and abortively pursued) or by cultivating its historical distinction from science as a disciplinary difference, the difference signalled by the notion of the "humanities." The epistemic anxiety of criticism was alleviated in the end (though of course not completely) by institutional means, largely by strategies of professionalization that were unavailable to the cultural critics of the nineteenth-century public sphere. But the transformation of criticism

Cultures? that "a judgement is personal or it is nothing; you cannot take over someone else's. The implicit form of a judgement is: This is so, isn't it?" (p. 48). The movement in U.S. criticism away from criticism as judgment to criticism as interpretation is an attempt to address this problem, as I hope to demonstrate elsewhere.


22. As in I. A. Richards's work and in some versions of structuralism. The reader should note that I am speaking here of criticism and not of literary study. Two versions of scientific literary study existed in the university before the advent of New Criticism, philology and literary history, both of which were defined in their heyday as empirical and even scientific disciplines. Criticism, by contrast, was a discourse of judgment rather than analysis or demonstration, and it was not until the initial ventures of Richards that literary critics could contemplate making criticism itself scientific. Richards's rapprochement with science was short-lived, however, and criticism more usually adopted an adversarial relation to science in the twentieth century.

23. A definition of the humanities must be specified for the purpose of my argument because the grouping of disciplines under this heading no longer conforms to a coherent distinction among methodologies. For example, American analytic philosophy thinks of itself as closer to science than to the traditional humanities, while history often conceives itself as closer to social science than to narrative or literary forms. In this essay I understand the category of the humanities as comprising literary and cultural studies based on a methodology of interpretation. The significance of this specification will be taken up in section four below.

24. Public sphere critics, as journalists, might consider themselves in some sense to be professionals, but this sense of professional identity differs considerably from the professional identity of university professors emergent in the later nineteenth century. I have given an account elsewhere, in a work in progress on "Literary Study in the Age of the New Class," of the relation between scientization and professionalization in the disciplines. These two strategies developed in tandem in the later nineteenth century when literary study modelled itself on the other sciences but diverged in the twentieth, when criticism partially displaced the scientized versions of literary study (philology and literary history) then dominant in the university while simultaneously claiming the status of a professional discourse.
into a discipline and of critics into professors did not resolve the epistemic dilemma, because the distinction between *episteme* and *doxa* became the basis for the system of the disciplines, permanently organized by the second half of the century around the division between the sciences (natural and social) and the humanities. The status of individual disciplines was only nominally or bureaucratically equal in this new constellation; their actual inequality (leaving aside issues of funding) was indicated by the fact that the names of the disciplines could be made to express allegorically the stakes of any epistemic conflict, even conflict within a single discipline. This allegorization of the disciplines continues into the present. When the economist Paul Krugman in a recent interview wanted to describe his quarrel with fellow economist Lester Thurow, he invoked a war “between the essentially literary sensibility that we expect of a card-carrying intellectual [Thurow] and the scientific-mathematical outlook that is arguably the true glory of our civilization [Krugman].”25 Whatever we may happen to think of this polemical tactic, it betrays the omnipresence of the epistemic conflict underlying the formation of the modern disciplines.

The derogation of the humanities as mere *doxa* is often accompanied by praise for their cultivating function, the latter usually described in the vaguest possible terms. It is important, I believe, to understand that these two attitudes are related to each other as recto and verso. In *Higher Superstition*, for example, Gross and Levitt allow that the humanities are “indispensable to our civilization and to the prospects of living a fulfilling life within it” but go on to question whether the humanities professoriate as it exists today is so indispensable for this function: “If, taking a fanciful hypothesis, the humanities department of MIT (a bastion, by the way, of left-wing rectitude) were to walk out in a huff, the scientific faculty could, at need and with enough release time, patch together a humanities curriculum, to be taught by the scientists themselves.”26 To be sure, this “fanciful hypothesis” is egregious in every way, but less perhaps for its blatant political animus than for its assumption that the knowledge content of the humanities is nugatory. While those who work in the humanities are certainly not to blame for this perception, neither have they successfully explained to themselves and to others what kind of knowledge it is that they produce.

The intractability of the epistemic problem is related to the residual identity of criticism with cultural criticism, particularly in its reincarnation as cultural studies, which is at once the putative successor to a more narrowly defined literary study and the true heir to the latter’s nineteenth-

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century precursor. The emergence of cultural studies belongs to any account of the Sokal affair in an important way. Cultural studies raised the stakes of epistemic conflict in the disciplines by extending the interpretive techniques of literary criticism to the social world.27 If cultural studies aspires to be the study of culture generally, however, it is not the same study of culture one finds in sociology or anthropology; it is not social science. The transition in U.S. literary study to cultural studies announced a desire to repossess the territory once claimed by the cultural critic, but more recently by social scientists—the human world.28 By reasserting a claim to speak authoritatively about society as whole, this mode of criticism adopted an implicitly adversarial relation to social science, which was explicit in its predecessor. We have only to return to the scene of discipline formation in the earlier twentieth century to recover the origins of this conflict, when both literary criticism and the social sciences achieved the status of university disciplines, often in competition with each other.29

In the light of this history we can see that it was precisely the epistemological implications of science studies, rather than any of its local arguments, that made it seem a desirable ally for the literary academy. The philosophical implications of science studies seemed to confirm positions within the discursive bloc of postmodernism in such a way as to allow science studies to be set apart from the general tendency of social science, particularly in the U.S. The systematic misrecognition of science studies hints that a struggle with social science was an unstated or repressed referent of the Sokal affair, a struggle that took the manifest form of an alliance with the sector of social science—science studies—that seemed to call into question the epistemic pretensions of the natural sciences (or science as such). Thus the fact that the social sciences in the U.S. had long ago usurped the authority of the cultural discourses to speak on matters of human concern continued to be repressed, while the old conflict be-

27. Sokal's Lingua Franca expose acknowledged the significance of cultural studies in its title: "A Physicist Experiments with Cultural Studies."


29. There is an important difference in this context between the development of the disciplines in Britain and in the U.S. For a discussion of this point, see Collini:

As represented by Leavis, for example, literary criticism could and did compete with the cultural authority of the natural sciences (as C. P. Snow, among others, could testify), and while there was very little sign before, perhaps, the late 1960s that sociology had succeeded in imposing its vocabulary upon larger cultural discussions, there was considerable evidence that literary criticism had done precisely that during the 1940s and 1950s. [Collini, "On Highest Authority: The Literary Critic and Other Aviators in Early Twentieth-Century Britain," Modernist Impulses in the Human Sciences 1870–1930, p. 169] In the U.S., of course, sociology achieved institutional preeminence much earlier, with the success of Parsons and the functionalists. On the relation between literature and social science, see the important study by Wolf Lepenies, Between Literature and Science: The Rise of Sociology, trans. R. J. Hollingdale (Cambridge, 1988).
between cultural criticism and science was revived. The very different character of a conflict between literary study and sociology is suggested by a comment C. Wright Mills made in response to the Snow-Leavis controversy: “In the past, literary men as critics and historians made notes on England and on journeys to America. They tried to characterize societies as wholes, and to discern their moral meanings. Were Tocqueville or Taine alive today, would they not be sociologists?”

This question haunts the practice of literary study in a deep and unacknowledged way.

We return here to the question of a recurrent antagonism to science posed earlier in order to understand why the Sokal affair turned on the assertion of an antirealist epistemology, reduced to the threadbare position-taking one finds in the discursive bloc of postmodernism. In fact it was the most provocative expression of this antirealism (from which one might have to retreat at times into common sense) by which criticism sought to engage in both the conflict of the faculties and the culture wars. If science no longer plays the role for criticism of an ultimate cause of modernity’s ills, it does still play the part of “a sign of the times” (Carlyle), as the very discourse irremediably tainted by the realism, foundationalism, and universalism that are supposed to be at the base of social ills. In this allegorization of the disciplines, criticism is not only a discourse incommensurably different from science but also the discourse that “calls into question” the fundamental assumptions supporting the social prestige and disciplinary superiority of science. The stakes in this conflict were not in any profound sense philosophical but rather disciplinary: the possibility of an alliance between cultural studies and science studies. If that alliance had been successful, criticism stood to advance its effort to recover the human world as its proper object even while undercutting the basis for the scientific study of that world. But the Sokal affair turned the tide of this battle in another direction.

3. Social Constructions

It would certainly be placing too great a burden of significance on the Sokal affair to suggest that it brought cultural studies as a whole into

31. This point is more complex than I am able to treat adequately; but one additional factor in the rise of cultural studies can be acknowledged here, namely, a crisis in the social sciences themselves, the conspicuous exhaustion of the dominant empiricist paradigms of social analysis in the U.S. academy. This crisis created a kind of vacuum into which cultural studies rushed; unfortunately, it remains the case that the latter’s paradigms of analysis are almost entirely derived from poststructuralist theory and that they continue to exclude other figures, such as Habermas or Bourdieu, who do not fall within the discursive bloc of postmodernism. It should also be pointed out that the exhaustion of empiricist social science prepared the way for encroachment from new methodologies of natural science, arising from cognitive science and from the field of information theory.
permanent disrepute. Nonetheless, I do think it is the case that one effect of the hoax has been to enjoin upon those who do cultural studies a certain caution in framing the terms and the goals of their enterprise. Nowhere is this caution more evident than in the virtual disappearance of the term "social construction" from serious venues of criticism. This is not to say that the hypothesis of social construction does not still underlie much work in cultural studies, but that the phrase itself is difficult to utter now without some embarrassment, like the refrain of a too popular song. At least a portion of this embarrassment can be attributed to the effect of Sokal's relay of the term to the mass public sphere, where it was irrevocably linked to an extreme antirealism or skepticism about the claims of scientific knowledge.\textsuperscript{32} Realism, on the other hand, could be presented by Sokal shorn of any philosophical puzzles, as nothing more than common sense: "There is a real world; its properties are not merely socially constructed; facts and evidence do matter" ("P," p. 63).

In order to clarify the role played by the concept of social construction in the temporary alliance between cultural studies and science studies, it will be necessary to undertake here something like an archaeology of the term, the origins of which are somewhat mysterious.\textsuperscript{33} The prevalence of the phrase social construction in both science studies and cultural studies might convey the impression to anyone unfamiliar with these fields that they must have developed in association. As we know, however, the new social studies of science to which the Social Text special issue drew attention predated the emergence of cultural studies in the U.S. by at least a decade.\textsuperscript{34} That the concept of social construction appeared at different moments in both of these disciplinary locations is a fact that needs to be explained, not a reason for identifying the claims or interests of the two fields.

The appearance of the term social construction in the literary academy is roughly contemporaneous with the emergence in the mid-1980s of cultural studies in the U.S. While this new discourse originated in literature departments, cultural studies insisted that the political responsibility of criticism was best served by taking culture as its object rather than the


\textsuperscript{33} The origin of the term in sociology can be located in the work of Peter L. Berger and Thomas Luckmann, \textit{The Social Construction of Reality: A Treatise in the Sociology of Knowledge} (Garden City, N.Y., 1966). The "reality" to which Berger and Luckmann refer is our everyday sense of what is real, rather a different sense than the physicists'. Berger and Luckmann's work belongs to the tradition of the sociology of knowledge, deriving from Karl Mannheim.

\textsuperscript{34} Sergio Sismondi points out that the notion of social construction had become common in science studies by the late 1970s; see Sergio Sismondi, \textit{Science without Myth: On Constructions, Reality, and Social Knowledge} (Albany, N.Y., 1996), p. 58; hereafter abbreviated S.
work of literature. What literary critics actually did under the sign of cultural studies, however, was to extend techniques developed for analyzing literary texts to other cultural objects and practices. I am not interested so much in debating the legitimacy of this move as in observing that the practice of cultural studies was enabled by a tacit analogy between the obvious constructedness of the literary artifact and the constructedness of normative (usually this meant repressive) identity categories. Because the concept of construction was tacitly identified with the notion of representation, the relegation of literature in cultural studies amounted to its unwitting universalization. If social construction was the Archimedian lever by which the world itself—the world as culture—was to be dislodged from its normative complacency, the effectiveness of this lever was largely dependent on the strength of the analogy between literary representation and social construction. The methodology supporting the social construction hypothesis in literary study emerged, therefore, out of the immanent development of the discipline; it consisted of nothing other than those methods of textual interpretation perfected during the period of High Theory. The concept of a “social text” was itself a result of that immanent development.

The extension of textual interpretation to the larger domain of culture and the emergence of a politically motivated cultural studies must also be situated in relation to certain external pressures, both institutional and political. Unfortunately, I can only enumerate these pressures here, without offering even a minimally adequate account of them. They include (1) the increased demand for credentialing in technical as opposed to humanistic fields; (2) the increasing demand on the literary professoriate to remediate the language skills of an ever expanding and more demographically diverse university population, effectively deemphasizing the study of literature; (3) the continued transfer of de facto acculturation functions from high culture to mass culture; and (4) the decisive shift to the Right of the political public sphere during the later seventies and eighties. All of these conditions combined to refocus the literary professoriate on questions of multiculturalism and of mass culture. The effect of these externalities was not only to undermine further the status of literary study as a discourse of knowledge—which could only weaken it in the modern system of university disciplines—but also to create an opportunity for the reassertion of “cultural criticism.” The resulting discourse of cultural studies imagined itself ideally as circulating like its nineteenth-century precursor in a mass public sphere, although that sphere was in actuality restricted mostly to the classroom, the conference, or the scholarly journal.

If the appearance of the social construction motif in the literary

academy coincided with the emergence of cultural studies, we have not yet demonstrated how this concept was related to its apparent cognate in science studies. One explanation for the convergence of these parallel lines is obvious enough: The qualifier social in social construction always implied an antithetical concept of the natural. Yet the latter term was hardly identical in most contexts of usage to the concept of nature in the natural sciences. Constructionist critique more usually understood the natural opposed to the cultural or the social as a kind of metaphysical foundation, that is, an aspect of culture placed beyond question or "naturalized" (we shall return to this sense of nature later). Still, these two natures have overlapped in some historical circumstances. Particular scientific theories, for example, have on occasion supported practices of racism, sexism, or homophobia (among other ills) by grounding identity categories in a biological nature. Yet the critique of science's complicity in certain oppressive social practices is not the same as a critique that extends to the status of scientific truth generally.

The tendency of the social construction concept in cultural studies was ultimately, as we have noted, to equate the political and the epistemological. If race was once a category of biological science (it still is for some scientists, though very few), might not the manifest constructedness of this category, which resembles a fiction, be indistinguishable from the constructedness of any object of scientific theory, including genes or quarks? The notion of social construction points in this direction; but for the most part, work in cultural studies was inhibited from extending its critique beyond those areas of science directly concerned with categories of social identity—in large part, no doubt, because such work was too remote from the disciplinary training of literary critics.36 Hence early work in cultural studies betrayed little substantive interest in the generative texts of science studies, such as Bruno Latour and Steven Woolgar's Laboratory Life: The Social Construction of Scientific Facts (1979) or Andrew Pickering's Constructing Quarks: A Sociological History of Particle Physics (1984). This fact makes all the more mysterious the derivation of the term social construction in literary study; if the term was indeed borrowed from science studies, this adventitious appropriation concealed divergent disciplinary programs.37

36. In the meanwhile, the construction hypothesis enabled interesting and valuable work in cultural studies dealing with some aspects of scientific practice, most notably with the medical representation of AIDS and with scientific and quasi-scientific conceptions of gender or sexuality.

37. When Stephen Greenblatt writes that "identity is itself, as we have seen, a social construction," his use of this term seems in advance of its technical, disciplinary signification (Stephen Greenblatt, Renaissance Self-Fashioning: From More to Shakespeare [Chicago, 1980], p. 209). But perhaps by 1980 the term was already, as a result of its occurrence in science studies, in the air. In this weightless state it could easily be appropriated by literary critics not otherwise interested in science studies. A more precise route of transmission would be
The notion of social construction current in science studies, to which we now turn, permitted science studies in the later seventies and eighties to subject the genesis of the most undisputed and established "facts" of even the hardest of the natural sciences to historical or sociological scrutiny. By the later eighties the topos could be found throughout the social sciences as the descriptor of many different projects. Confronted with this extraordinary proliferation of uses, which Ian Hacking has recently attempted to sort out and clarify, we might be tempted to entertain a kind of Foucauldian hypothesis, according to which the prevalence of social constructivism across the disciplines constitutes a kind of miniature epistememe.38 One might even recognize in constructivism nothing other than a symptom of the "postmodern condition"—the systematic calling into question of the very Enlightenment values habitually invoked in the spontaneous philosophy of the scientists. Not all social constructivist projects, however, receive their warrant from postmodernism or entail a skeptical epistemology. Rather, their burgeoning numbers testify, I would suggest, to a crisis in the social sciences themselves, as they both embrace and resist the extension of natural scientific methodologies to the domain of the social.39

The gathering of cultural studies and science studies within the idealized enclosure of interdisciplinarity—which was certainly on the agenda in the Science Wars volume—erased the specificity of this disciplinary crisis, which indelibly marks the way in which the social sciences have appropriated postmodern thought and even literary modes of interpretation. The social sciences have their own strategies of mimesis and distinction in relation to the natural sciences. That relation is characterized more by ambivalence than by simple antagonism, a condition that accounts for the much greater internal differentiation of the social sciences by comparison with the humanities. The tendency to differentiate is harder to identify. If we return to the massive, seminal anthology, Cultural Studies (ed. Lawrence Grossberg, Cary Nelson, and Paula Treichler [New York, 1992]), we find only three contributors out of forty who bring cultural studies into contact with science studies: Donna Haraway, Emily Martin, and Andrew Ross. Among these only Haraway cites any other work in science studies, specifically that of Bruno Latour. The relative absence of traffic between science studies and cultural studies is all the more striking, given the currency of the social construction hypothesis in both.

38. See Ian Hacking, The Social Construction of What? (Cambridge, Mass., 1999). Hacking attempts to clarify the stakes in diverse forms of constructivism, particularly the philosophical or epistemological implications of constructivist arguments. His scrupulously hygienic account clears up a good many of what he calls philosophical "muddles," but one comes away from his study impressed by how relatively incommensurable are particular uses of the constructivist topos.

39. There is abundant evidence of this crisis, particularly in sociology, beginning with Alvin W. Gouldner's The Coming Crisis of Western Sociology (New York, 1970). For three recent discussions, see Donald N. Levine, Visions of the Sociological Tradition (Chicago, 1995); Nicos Mouzelis, Sociological Theory: What Went Wrong? Diagnosis and Remedies (London, 1995); and Charles Lemert, Sociology after the Crisis (Boulder, Col., 1995).
pressed chiefly in the conflict between qualitative and quantitative methodologies, which does not signify in the humanities at all. But it is also visible in the large methodological differences between sociology and anthropology, or between these two disciplines and economics. And it appears again in the new social studies of science, which established a differentiated sector of social science located complexly at two interfaces, one with the natural sciences and the other with the humanities (the latter represented by philosophy and history).

Taking up this last point, we can observe that while the aforementioned Edinburgh school (SSK) and the network school of Latour and Woolgar both invoke the topos of social construction, their methodologies are, in fact, hard to reconcile. For the Edinburgh school, the topos conveniently summed up the project of a scientific study of science. It is well known that what is called science studies in the Anglo-American context was inaugurated by a turn away from a philosophy of science oriented toward problems in classical epistemology and away from a history of science dedicated to explaining how scientists succeeded in producing truth about the natural world. The turn was in the direction of sociology. In a manner typical of disciplinary polemics, the turn to sociology recast previous study of science in terms that perhaps understated the liveliness of its controversies and sometimes overstated its residual positivism and progressivism. But this impression may well have been created largely among those who were not sufficiently sensitive to the rhetoric of these disciplinary polemics and who came to science studies with little knowledge of figures such as Carnap, Popper, Quine, Feyerabend, Lakatos, or, for that matter, Kuhn (whose work is still more invoked than read). In any case, the turn to sociology with SSK’s “strong programme” represented a genuinely new direction in the study of science, which quickly resulted in important new work of historical sociology.\(^\text{40}\)

There are several perspectives from which one might want to criticize the new science studies, for example, that of Margaret Jacob, who rightly notes its exclusion of macrosocial contexts such as the nation.\(^\text{41}\) While I am in sympathy with some of these critiques, it is not my purpose here to pursue them. My point is rather that in the constitution of new fields the disciplines can be played off against each other; this strategy

\(^{40}\) Most exemplary is Shapin and Schaffer, *Leviathan and the Air-Pump*; see n. 7.

\(^{41}\) Margaret Jacob writes, “In the general literature that synthesizes the history of science, we now do not address why, for example, Boyle and Newton were English and not Dutch—that is, why England in the mid-seventeenth century became the locus classicus of scientific and institutional creativity” (Margaret C. Jacob, “Science Studies after Social Construction,” in *Beyond the Cultural Turn*, ed. Victoria E. Bonnell and Lynn Hunt [Berkeley, 1999], p. 98). The preference of the new science studies for microsocial contexts such as the laboratory—in effect, for contexts that are “cultural”—suggests that the recession of the social horizon from much recent work in social science was perhaps the cost of renewing qualitative methodologies.
holds out the possibility for great advantage but it also entails great risk. In the case of SSK, its claim to scientific status was contingent on its supersession of philosophy, particularly the epistemological debates that defined the subfield of the philosophy of science. In the Anglo-American academy, the locus of philosophy at the interface with science rather than literature constituted both a strength (association with science’s preeminence among the disciplines) and a weakness (philosophy of science does not itself produce scientific knowledge). The turn to sociology seemed designed to avoid the weakness of a merely subordinate relation to science by aggressively demoting scientific knowledge itself to an object of knowledge; but it also required that SSK had to give up the philosopher’s privilege of producing an epistemological defense of its own knowledge claims, precisely in order not to fall back into an identification with philosophy of science.

The difficulty of this strategy can be seen in the work of David Bloor, the most important theorist of SSK, and himself originally a philosopher. Bloor makes the strongest possible claim for the scientific status of SSK, that it gives a causal account of scientific knowledge on a par with causal accounts in the natural sciences: “The sociologist is concerned with knowledge, including scientific knowledge, purely as a natural phenomenon.”\textsuperscript{42} This claim underlies the “constructivism” of SSK, which has the notorious but necessary entailment of relativizing the truth value of scientific knowledge (by way of the “symmetry postulate”) at the same time that it reaffirms the fundamental identity of science as the causal explanation of phenomena. It is as though the answer to the epistemological question of whether or how knowledge in the natural sciences can be true had been sealed in an envelope, and the very scientific claims of SSK depended on never breaking that seal.

Obviously this version of constructivism, premised on a thoroughly naturalistic conception of scientific explanation, is rather remote from its cousin in cultural studies, which only has use for that part of the constructivist agenda that seems to call into question the epistemological preeminence of science. Bloor, on the contrary, values science so unrepressedly that he refuses to exempt science itself from scientific explanation. This amounts in the end, however, to a rearrangement of the hierarchy of the sciences, since it is only sociology that can produce the objectification of the sciences themselves (including, of course, the sociology of science, according to the “reflexivity” clause of SSK’s constitution). Up to a point this strategy is highly persuasive (Pierre Bourdieu makes a similar claim for his reflexive sociology), but its success depends on how convincingly it evacuates philosophy from its practice, as the discourse that is neither science nor the scientific study of science. What does it mean, then, when epistemology returns, when the practitioners of science

\textsuperscript{42} David Bloor, Knowledge and Social Imagery, 2d ed. (1976; Chicago, 1991), p. 5.
studies are drawn into making statements that sound like conventional philosophical argument, when they are forced to defend versions of antirealism or cultural relativism? Unfortunately, the supersession of philosophy, which constituted the sociology of science, also prevents its practitioners from fully reoccupying the abandoned terrain of epistemology, and thus they are compelled to express philosophical positions in truncated form and sometimes to rehearse simplified versions of arguments long familiar in the philosophy of science.

Perhaps we need not take the more provocative of these philosophical statements too seriously. Sergio Sismondi has suggested (along with Hacking and others) that many versions of constructivism, in practice, are entirely compatible with realism or empiricism. He goes on to point out that provocatively antirealist position statements tend to be the ones “least thoroughly argued for, and often least central to constructivist sociologists’ and historians’ practice, playing a peripheral rhetorical role” (S, p. 50). Yet these “rhetorical” statements are just those that have made science studies controversial and just those that have made an alliance between cultural studies and science studies seem desirable. While it may not compromise the value of particular sociological or historical projects, the failure of science studies to refrain from philosophizing does have consequences for the conflict of the faculties. In that context, antirealist rhetoric circulates as an expression of social science’s ambivalence in relation to natural science, which in turn provokes a censorious response from the scientists. The controversial reception of science studies (the science wars) was more the result of this epistemic conflict of the faculties than of political antagonisms.

When literary critics hear the rumor of this battle in the distance they may interpret it as portending victory for their party. But they would be wrong. The conflict of the social sciences with the natural sciences is


44. Jan Golinski suggests sensibly that we should regard constructivism strictly as a methodological procedure and not as a set of epistemological principles. See Jan Golinski, Making Natural Knowledge: Constructivism and the History of Science (Cambridge, 1998), p. 6. The problem is that some versions of constructivism have never been able to abide by this self-limitation.

45. While I would agree with Sismondi that constructivism of the strong or “neo-Kantian” sort is largely irrelevant to the practice of science studies and is often nothing more than a “gloss overlying accounts” (S, p. 126), I would insist that the real use of this “gloss” is in the conflict of the faculties. Philosophers such as Sismondi or Hacking want to sort out and resolve if possible the very problems that provide the desired occasion for disciplinary polemics. The absence of a disciplinary context for understanding these polemics is why Hacking finds the Sokal affair ultimately inexplicable, especially its politics. He writes that while he is “deeply sympathetic to both sides” in the debate, he has “nothing to contribute” to it (Hacking, The Social Construction of What? p. 96).
not identical to the conflict of the humanities with the sciences. This point can be confirmed even in the case of Latour's "network" theory, which is admittedly much closer to postmodernism, or the literary pole of the disciplines. If Bloor exited philosophy by way of a certain reading of Wittgenstein, Latour engineered a similar though more ambiguous exit by means of a theoretical sublimation of conflict within the French philosophical field.\textsuperscript{46} Bourdieu has remarked that this field is characterized by "the constant opposition between a pole close to science, concerned with epistemology, the philosophy of science, and logic, and a pole close to art and literature in its objects and mode of expression."\textsuperscript{47} Latour kept this opposition in play by entering the field of social science where it was closest to the latter pole, in "participant observer" studies or ethnography. This permitted him and his collaborators to devise a version of science studies in which the storytelling of the ethnographer reflexively projected an image of science as storytelling, thus soliciting an analogy to literary fiction.

Network theory was designed to be theoretically more resistant than SSK to redescription in terms of conventional epistemology. So Latour and Woolgar declare that "the particular branch of philosophy—epistemology—which holds that the only source of knowledge are ideas of reason intrinsic to the mind, is an area whose total extinction is overdue." But they insist that this is "not an attack on philosophy"—far from it.\textsuperscript{48} Philosophy must continue in some fashion as an "ontological" project, expressed in the radical overcoming of binaries such as that between society and nature, which permits Latour and Woolgar to represent both scientists and their objects as equally "real," as actors or actants.\textsuperscript{49} In this

\textsuperscript{46} Both Bloor and Latour started out as philosophers. Bloor writes, "Wittgenstein referred to his work as one of 'the heirs to the subject which used to be called philosophy.' My whole thesis could be summed up as the claim to have revealed the true identity of these heirs: they belong to the family of activities called the sociology of knowledge" (Bloor, \textit{Wittgenstein: A Social Theory of Knowledge} [New York, 1983], p. 183).


\textsuperscript{49} See Latour, \textit{We Have Never Been Modern} (Cambridge, Mass., 1993); elsewhere Latour writes, "The idea that science studies may ignore philosophy altogether, or be content with philosophy of science, or not build up its own metaphysics and ontology is foreign to me" (Latour, "One More Turn after the Social Turn . . .,") in \textit{The Science Studies Reader}, ed. Mario Biagioli [New York, 1999], p. 288). One might pause to wonder here at the ambition of Latour's project, which seeks nothing less than to "overcome" the binarisms of all previous philosophies with a few sweeping gestures pronounced alongside the business as usual of ethnographic case studies (see p. 280). It is hardly surprising that the philosophy resulting from these asides—which simply declare any distinction between nature and society obsolete—is far too underworked to move the mountains contouring the landscape of modernity. The performative force of this overcoming is rather like Louis XIV's declaration that with the revocation of the Edict of Nantes all the Protestants in France were converted to Catholicism.
way, an ersatz philosophy provides the social science to which it is allied with its polemical positions at the same time that the disciplinary affiliation with ethnography stands as a firewall against the reduction of Latour and Woolgar’s narratives wholly to the status of literary fictions.\textsuperscript{50}

The supersession of epistemology has not prevented Latour’s theory from being redescribed in epistemological terms; but it emerges at the other end of this redescription as, surprisingly, \textit{realist} rather than antirealist—an example of what Sismondi calls “creeping” realism (S, p. 121). Let us call this an ontological rather than an epistemological realism, however, in deference to the terms of Latour’s theory. In any case the irony of this realism is lost in the context of the science wars, where Latour’s version of science studies is invoked on behalf of antirealist and social constructivist polemics. The ironies mount up when one considers that this most postmodern version of constructivism was compelled by its inner logic to discard the notion of \textit{social} construction altogether. As Latour and Woolgar write in a 1986 postscript to \textit{Laboratory Life}, “‘social’ was primarily a term of antagonism, one part of a binarism. But how useful is it, once we accept that \textit{all} interactions are social?”\textsuperscript{51} Obviously not very, since the word \textit{social} was dropped from the later editions of \textit{Laboratory Life}, now subtitled \textit{The Construction of Scientific Facts}.

Still, what looks like a thorough deconstruction of the society-nature binarism arguably universalizes the social at the latter’s vanishing point and thus achieves the same reordering of the hierarchy of sciences as in SSK. While Latour’s version of this strategic reordering aimed to escape the epistemological quibbling into which SSK is sometimes drawn, his emphasis on narration in preference to explanation provoked strong criticism from the representatives of the sociology wing of science studies.\textsuperscript{52} It would seem that the choice between anthropological methods and sociological methods is more than simply a difference in the repertory of science studies. Conflict within science studies has important stakes relating to the very possibility of social \textit{science}. But the contextual significance of this conflict—the ongoing crisis of the social sciences—disappears when science studies is imported into the field of literary and cultural

\textsuperscript{50} The disciplinary success of network theory depends, then, on soliciting the analogy between ethnographic and literary fictions without collapsing these two discourses together. In that sense distinctions are maintained at the \textit{disciplinary} level that need not be maintained at the level of ontology, where society and nature, or scientists and their objects, are happily equated.

\textsuperscript{51} Latour and Woolgar, \textit{Laboratory Life}, p. 281.

studies, and where any version of science studies tends to be conscripted into the two cultures conflict.53

The relative incompatibility of different constructivist programs and their divergent disciplinary assumptions is hard to deny. The science wars have subsumed these differences in what seems to be an alliance of the social sciences and the humanities against the long dominant natural sciences. But the preeminence of natural science is also a social problem because its effects, for good or ill, are so great; and this gives any struggle with science, even within the disciplinary context, a potentially social or political significance. The tactics employed in this struggle likewise have implications, large and small. There is an undeniable tension, for example, between the radical constructivism of SSK, which submits both successful and unsuccessful scientific theories to the same "symmetric" causal accounting, and the feminist critique of science, which relies on identifying the distortion of science by social bias for its political effectiveness. Sandra Harding reminds us of this difference in the Science Wars issue of Social Text: "After all, feminist and antiracist science studies have called for more objective natural and social sciences, not less objective ones!"54

The evident weakness of a thoroughgoing skepticism for the purposes of political critique makes its preeminence in literary and cultural studies difficult to comprehend. This suggests that some form of moral realism is being held in reserve, even as the most radical antirealism is advanced to the front line of disciplinary polemics. The confusion of these two

53. It is not my purpose in this essay to articulate an alternative position with respect to the debates within or around science studies; but I do think it is worth noting in passing some philosophical positions relegated to the sidelines of the debate, for example Sismondi's "deflationary realism" or Roy Bhaskar's "critical realism," developed in The Possibility of Naturalism (London, 1979) and Reclaiming Reality: A Critical Introduction to Contemporary Philosophy (London, 1989). Hacking's position might also be included here; Hacking grounds his defense of realism on experiment ("intervening") rather than theory ("representing"). See his Representing and Intervening: Introductory Topics in the Philosophy of Natural Science (Cambridge, 1983). Finally, see the work of James Bohman, most notably New Philosophy of Social Science: Problems of Indeterminacy (Cambridge, Mass., 1991), which attempts to construct a philosophical frame for work in social science without falling back into empiricism or forward into relativism. See also his essay, "Holism without Skepticism: Contextualism and the Limits of Interpretation," in The Interpretive Turn: Philosophy, Science, Culture, ed. David R. Hiley, Bohman, and Richard Shusterman (Ithaca, N.Y., 1991), pp. 129–54.

54. Harding, "Science Is 'Good to Think With,'" Social Text 46–47 (Spring/Summer 1996): 18. Harding continues: "They want sciences that are competent at detecting the culture-wide presuppositions that shape the dominant conceptual frameworks of disciplines and public discourses. Such presuppositions, if unexamined, function as evidence, 'laundering' sexism or racism or class interests by transporting them from the social order into the 'natural order'" (p. 18). Andrew Ross writes in same issue of Social Text: "In opting for a program of social realism that eschewed value-laden and moralistic critique, SSK's passive 'explanation' of science's social and cultural construction met with charges of political quietism" (Ross, introduction to "Science Wars," Social Text 46–47 [Spring-Summer 1996]: 11).
stances is faithfully reproduced in the most notorious sentence of Sokal’s hoax article, partially quoted above and which I now quote in full:

> It has thus become apparent that physical ‘reality,’ no less than social ‘reality,’ is at bottom a social and linguistic construct; that scientific knowledge, far from being objective, reflects and encodes the dominant ideologies and power relations of the culture that produced it; that the truth claims of science are inherently theory-laden and self-referential; and consequently, that the discourse of the scientific community, for all its undeniable value, cannot assert a privileged epistemological status with respect to counterhegemonic narratives emanating from dissident or marginalized communities. [“T,” pp. 217–18]

Let us remind ourselves that this summa of quotations from the postmodern *Zeitgeist* expressed the tendency of Sokal’s article that had to be affirmed, however flatfooted the rhetoric. Among the solecisms of the passage, we can single out as most conspicuous the illogical connection between the first and subsequent clauses. Historians of science who might concede at least some of the claims in the latter clauses would probably still laugh the first out of court. There is no necessary logical connection between the philosophical antirealism of the first clause and an acknowledgment of the political or social embeddedness of science. Yet both of these complex notions have been routinely unfolded from the phrase “social construction.” This phrase came too tripplingly to the tongues of too many, and here it is again tripping us up very badly. With such soothing and familiar language a trap was laid for the editors of *Social Text*, committing them to the tacit endorsement of a teasingly extreme antirealism, a position with which cultural studies at large seemed to toy as a provocation, as a means of eliciting the naïve realism that could then be condemned as politically reactionary. The physicists were provoked, the mathematicians were provoked. They emitted a burst of “spontaneous philosophy” like an agitated lump of uranium. Sokal’s hoax called the bluff of the provocation, however, after which it was too late to protest, “of course we believe in physical reality.” As the responses to the hoax amply demonstrated, there is no way up from a discourse that has sunk so low.

In its meandering path from social construction to “dissident and marginalized communities,” Sokal’s notorious sentence merely restated the dubious correlation of epistemology with politics in much current cultural theory—so much theory and yet not enough theory! It was precisely this correlation that permitted the science wars to be presented as just another site of the culture wars. There is, let us insist, no simple identity of persons or opinions between the antagonists in the science wars and the antagonists in the culture wars. To be sure, the science wars have attracted conservative scientists like E. O. Wilson to the culture wars; but even if the majority of scientists were so inclined politically, this
would hardly prove that their politics derived from philosophical realism. In any case, scientists differ significantly in their commonly held beliefs from the vast right-wing sector of American society. On the far Right, Americans are often quite selective about what parts of science they choose to credit, if any. So let us admit that the science wars were never simply an extension of the culture wars.

If the theme of social construction in literary and cultural studies seemed to justify linking the science wars to the culture wars, we might be disposed now to dismiss it as a false cognate of its simulacrum in science studies; but that is not the point I would like to make. Rather, what demands to be brought forward is the consequential ambiguity of the concept of nature that sprawls across the disciplines, an ambiguity that authorizes the interpretive procedure eventuating in the notion of social construction. That procedure can be expressed formulaically as follows: For any relation between a and b, if a is asserted to be the cause or legitimizing ground of b, then it will be possible to call b into question by showing that a is really the effect of b, not its cause. This elegant procedure works for nearly any a or b, but the variables ultimately stand in for the terms nature and culture respectively. Indeed, the political claim for this procedure is most evident when the variable a is a placeholder for the concept of nature.

55. We need not, then, deny that the import of E. O. Wilson's sociobiological speculation is socially conservative; but neither should we underestimate the difference between Wilson and the culture warriors in the legislatures, for whom any version of Darwinian evolution is nothing less than the gospel of Satan. This point would be even more apparent in the case of the physicist Weinberg, whose critique of science studies (see n. 1) is particularly harsh but whose vehemently atheist modernism would make him a dubious ally for the reactionary side in the culture wars. Once we leave the precincts of the academy, we might be inclined to take a rather different view of the social power of science in its largest signification as knowledge. In the great world, it is still the case, as Hobbes wrote, that "sciences are small power." The struggle of cultural modernity is still as much against the forces of ignorance and prejudice as it is against the manifest power of science and the abuse of that power.

56. On the political tendency of professionals generally, with a breakdown for particular professional groups, see Steven Brint, In an Age of Experts: The Changing Role of Professionals in Politics and Public Life (Princeton, N.J., 1994). Brint demonstrates that professional groups in the U.S. today tend to be conservative on economic issues, libertarian on social issues. He does not comment on whether or how far scientists diverge from this norm. The political tendency of the humanist professoriate will be taken up in the final section of this essay.

57. Recent controversies over the teaching of evolution in the public schools have confirmed this point. The New York Times reports the results of a poll which disclosed that 68% of Americans prefer that creationism be taught along with evolution and that fully 40% would prefer that only creationism be taught. See George Johnson, "It's a Fact: Faith and Theory Collide Over Evolution," New York Times, 15 Aug. 1999, sec. 4, p. 1.

In a certain respect, the procedure I have just described can be seen as nothing other than a descendant of the skeptical critique inaugurating modernity—that is, the critique of tradition. In this context, nature signifies what is given or unquestioned in the social domain, an order of things. The residue of this philological history is dispersed throughout ordinary language, for example in the adverbial form naturally, which typically invokes the givenness of the social order: “Naturally, I was offended by his remarks.” This usage concentrates in one word the entire normative force of culture but without necessarily invoking the nature of natural science. A difficulty arises when this adverbial nature is simply conflated with the nature of natural science. While the latter concept is not identical to the socially given, it has become a given of modern culture; as such, this nature is just as deservedly the object of critique as its predecessor. There is no question that cultural norms (what is natural in the old sense) can be reinforced in modernity by grounding them in the nature disclosed by natural science. This is just the basis for the political critique of science. The utility of the semantic confusion for cultural studies extends well beyond this critique, however, because it provides an opportunity for reasserting the antagonism to science of the old cultural criticism. If it is science’s nature that underlies the naturalization of all cultural practices, then it is easy to see that an alliance between cultural studies and science studies would be very desirable indeed.

But is science the social constructor of the nature that is supposed to exist beneath and before culture, as culture’s physical (that is, metaphysical) foundation? If science is indeed the social constructor of nature, and the source of the realist epistemology that equates nature with the prediscursive, the material, the real, then cultural studies finds here its most potent political adversary as well as the proper scene of its political intervention. Unfortunately, even were critics to succeed in convincing everyone who will listen that there is nothing that is not socially constructed, it is likely that human beings would continue to naturalize social categories and practices. For that reason there is in my view little political gain to be had in denying the difference between the concept of quarks, on the one hand, and the concept of race on the other. Race does not need science to construct it; quarks do. The obliteration of this difference marks the reduction of a political problem such as racism to an epistemological problem—the social construction of science’s nature. A history of racism would point to another possibility, that scientific racism is the effect of which it is taken to be the cause.

59. The “nature” of natural science was indisputably “socially constructed” in the Early Modern era in the sense that the nature devoid of spiritual agencies and occult forces exists for some cultures but not for others. Just how difficult it was to construct this nature can be glimpsed in such works as Robert Boyle’s A Free Enquiry into the Vulgarly Receiv’d Notion of Nature (London, 1686).

60. Cause and effect in this formulation might be conceived in terms of Althusser’s
If the most radical version of constructivism has ambiguous implications in the political field, its application is obvious in the conflict of the faculties. The elevation of social construction from methodological procedure to epistemological principle criticized by Sismondi empowers the humanities to contest the epistemic dominance of the sciences. From the summit of epistemology the critics can taunt the scientists, “You have the numbers, but we have the heights.”

Constructivism in this context derives its power from the tradition of skepticism, which it rehearses in the spontaneous mode. This is why cultural critics feel that they need not make any other knowledge claims for their discourse than the negative claim of critique—of calling into question—a gesture that often enough concludes rather begins argument. The skeptic, however, can win every battle and still lose the war. The desire to know drives the enterprise of science, and science prevails historically despite the impressive philosophical advantage of skeptical argument—which, as philosophers know, is virtually indefeasible. Granted the importance of skeptical argument in the history of philosophy, its appearance in the present conflict of the faculties testifies to a crisis of knowledge in the humanities rather than in the sciences. In the last century this crisis has passed through two phases: In the earlier twentieth century the crisis gave rise not to skepticism but to fideism, the prevailing tendency of the New Critics. But history also reveals that skepticism and fideism are mutually implicated positions, which makes the skepticism of the literary academy at the end of the century a less reassuring alternative to fideism than it might at first seem, only the second phase of the ongoing crisis of cultural knowledge.

“Structural causality.” It takes nothing less than the social totality to produce the phenomenon of racism, and scientific racism functions within this totality as both the effect and the support of racism generally.

61. There would be little reason to dissent from a constructivism aimed at demonstrating how social norms and practices are naturalized. As I have pointed out, this procedure descends from the inaugural moment of cultural modernity and it is closely related to the “procedural skepticism” of science itself. It is precisely this close relation between skepticism and science that makes it difficult to construct a political critique of science—though of course, all the more necessary. For a different version of such a critique than the one prevalent in the U.S. academy, see Ulrich Beck, Risk Society: Towards a New Modernity, trans. Mark Ritter (London, 1992). Beck’s notion of “reflexive modernization” envisions a scientific critique of science, one that is not based in the discourse of cultural criticism.

62. The subject of the relation among practical criticism, New Criticism, and the sciences is too large to take up here. Criticism of this era was deeply concerned with defending culture against the encroachment of science. The dominance of Eliot in cultural theory of the period indicates how thoroughly the fate of culture was perceived to be implicated in that of religion. For a typical polemic of the period, see John Crowe Ransom, God without Thunder: An Unorthodox Defence of Orthodoxy (London, 1931).

63. The mutual implication of skepticism and fideism is of course most famously exemplified by Montaigne. On the subject of skepticism in the Early Modern period, see Richard H. Popkin, The History of Scepticism from Erasmus to Spinoza (Berkeley, 1979).
4. We Have Always Been Postmodern

The endgame of skepticism is played from a position of weakness, which can be given a precise occasion in the system of the disciplines. It arises from the difference between the methodology of the sciences (observation, experiment, quantification) and the methodology of criticism (interpretation). In the epistemic hierarchy of the disciplines, interpretation was long ago derogated to the status of a dubious knowledge, perhaps only a species of opinion. Thus it has been notoriously difficult to give an account of the knowledge produced by interpretation that would not immediately invite invidious comparison with the sciences. This situation had two consequences in the U.S. academy that bear on the present argument. First, the social sciences were led to discard interpretation as much as possible from their methodological repertoire. And, second, the humanities came to be identified as the disciplines whose only method was interpretation.

I draw attention to this familiar feature of the system of disciplines in the U.S. because it will permit us to understand the appeal of a disciplinary strategy that would otherwise seem self-undermining. In the last several decades, interpretation has been reconceived as an instrument for the skeptical critique of knowledge-claims; to this end it functions very differently from the procedure of that name in Dilthey or Weber, both of whom saw interpretation as a means of producing knowledge. Since then interpretation has been enlarged into a holistic principle governing all sites and modes of knowledge production. In the supremely confident phrase of Stanley Fish, "Interpretation is the only game in town." Hence even the natural sciences can now be seen as depending in certain epistemologically fatal ways on the moment of interpretation. Such a "universal hermeneutics," as Charles Taylor calls it, has ample precedent in the philosophical tradition, and its various strands have been conveniently woven together in our time under the name of postmodernism.

64. For an excellent study of how scientism came to dominate the social sciences in the American university, see Dorothy Ross, The Origins of American Social Science (Cambridge, 1991). It is easy for us to forget now that interpretive sociology in the U.S. was once more important than it would seem from the vantage of the later twentieth century. The influence of Weber was very great on the functionalist school of Parsons; even more interestingly the "symbolic interaction" school of Mead and Goffman, and the "ethnomethodology" of Garfinkel anticipated many of the themes of cultural studies, which has been compelled by virtue of its ignorance of this tradition to reinvent some of this work (for example, the notion of "performance," developed by Goffman).


It is not my intention here to refute postmodernism as a universal hermeneutics but rather to demonstrate that the holistic conception of interpretation is a crucial feature of the spontaneous philosophy of the critics and that it subtends the association between a skeptical critique of science and the discursive bloc of postmodernism targeted by Sokal's hoax. Let us stipulate that postmodern thought probably cannot be defined adequately as interpretive holism; my concern is rather with postmodernism, as it circulates in the American academy.\textsuperscript{67} The ism is not intended as a gesture of dismissal but as the indexical sign of a definite process of group formation.\textsuperscript{68} Sokal unintentionally captured what goes into this process by reducing postmodern thought in his hoax article to a series of quotations and paraphrases representing a spuriously coherent set of positions. This was not a parody of postmodernism but a picture of it.\textsuperscript{69}

Postmodernism can be understood as another name for the spontaneous philosophy of the critics. It is a set of beliefs, methods, and styles that collectively produce solidarity in the marginalized humanist sector of the professoriate.\textsuperscript{70} The concept of spontaneous philosophy gives us a

\textsuperscript{67} The name postmodernism is crucial to my argument only in the sense of being the latest in a series of names—theory, poststructuralism, New Historicism, deconstruction, cultural studies—behind which one can discern spontaneous philosophy.

\textsuperscript{68} Some are less comfortable with this identification than others. Replying to Sokal, Bruce Robbins and Andrew Ross write that "It is highly ironic that Social Text should now be associated with a kind of sectarian postmodernism that we have been at pains to discourage for many years" (Bruce Robbins and Andrew Ross, "Mystery Science Theater," p. 56). We can sympathize with the sentiments of any particular critic who may not wish to have her work reduced to a school or movement; but this stance is a habitual and even necessary defense against the inevitable effects of dissemination. Let us remember that by the 1960s in France almost no self-professing structuralists were to be found in all the domain of structuralism.

In this context one might also understand how Foucault's "critique of truth" came to be assimilated to a doctrinal postmodernism, despite some very considerable impediments to this assimilation in his thought. The fact that Foucault generally had little to say about the hard sciences, for example, would cast some doubt on his credentials as a thoroughgoing postmodern antirealist. In "What Is an Author?" Foucault writes: "Reexamination of Galileo's text may well change our knowledge of the history of mechanics, but it will never be able to change mechanics itself. On the other hand, reexamining Freud's texts modifies psychoanalysis itself, just as a reexamination of Marx's would modify Marxism" (Michel Foucault, "What Is an Author?" The Foucault Reader, ed. Paul Rabinow [New York, 1984], p. 116). Cultural studies has generally followed Foucault's choices in relativizing the most epistemologically problematic discourses of truth, such as those developed around the concept of sexuality. An alliance with science studies, had it succeeded, would have made the case for relativizing all of science in the Foucaultian manner much easier.

\textsuperscript{69} Sokal's essay thus replicated in little the manual or primer on postmodernism, of which one can find innumerable examples in the "Cultural Studies" section of bookstores.

\textsuperscript{70} The complex of conceptual and verbal characteristics described here is related to the sociological conception of lifestyle, to which belong not only beliefs but cognitive styles, verbal rhetorics, and formal and informal modes of association. For a similar argument, see Ludwik Fleck's pioneering work of 1935, Genesis and Development of a Scientific Fact, trans.
way of thinking about the large measure of belief or consensus that enters into disciplinary affiliation and the distance between this cognitive state and more fully elaborated philosophical argument (postmodern or otherwise). "Spontaneous" postmodernism is thus represented not by works of Foucault or Lyotard but by the citation of their names as authorities. It resides equally in tokens of verbal exchange—"social construction," "antifoundationalism," "calling into question"—the value of which is established within the imagined community of the discipline. It inheres, as we have just seen, in the interpretive holism that underwrites the struggle of criticism with science. And, finally, spontaneous postmodernism declares itself when the descriptive concept of the postmodern—as the name of a historical order—modulates into a term of elective identification, the postmodernist. 

If postmodernism names the current spontaneous philosophy of the critics, it is rather more difficult to give a corresponding name to the spontaneous philosophy of the scientists. And yet we need only go back to the mid-twentieth century to recover the name for which we seek: positivism. The fact that the constellation of discourses to which we might attach this name has long since faded from the philosophical scene scarcely matters, for we are not concerned with philosophical exponents such as Ayer, Schlick, Neurath, or Carnap. We shall understand positivism here as the name of a spontaneous philosophy of the scientists, related but not identical to philosophical schools of that name from Comte to logical positivism. Spontaneous positivism is rather the reduction of elaborated philosophical arguments to a disciplinary common sense. The rise of pos-

Fred Bradley and Thaddeus J. Trenn, ed. Trenn and Robert K. Merton (1935; Chicago, 1979). Fleck picks up Mannheim's notion of a "style of thought" (Denkstil) as a means of describing the formation of concepts in discrete scientific groups.

71. This is not to say that there is no relation at all between postmodern thought and spontaneous postmodernism. The connection between skepticism and fideism, for example, is easy to see in Richard Rorty's later work, which advances a "frank ethnocentrism" as a necessary entailment of relativism. See "Solidarity or Objectivity?" in Post-Analytic Philosophy, ed. Jonathan Rajchman and Cornel West (New York, 1984), pp. 3–19. I suggest that each discipline, or complex of related disciplines, constitutes a kind of "ethnos," perhaps a good deal more culturally integrated than the society Rorty imagines.

72. At the MLA conference where I delivered an earlier version of this argument, I heard one speaker begin a paper with the phrase, "As a good postmodernist." We all know what this avowal means; but how did postmodern thought achieve the status of a belief-system such that one might be a "good" postmodernist? We might begin by acknowledging that something is at stake in the divergence between historiographical accounts of postmodernism, such as David Harvey's, or Fredric Jameson's, and celebratory accounts such as those modelled on the discourse of fandom.

positivism in the nineteenth century as a disciplinary common sense swept away the old conflict of the faculties made famous by Kant—between the "higher" (theology, medicine, and law) and the "lower" (philosophy) faculties—and inaugurated a new struggle that resulted ultimately in the modern division of the disciplines into the sciences and the humanities. The advantage of now replacing the tedious debate between realism and antirealism with a history of positivism and its antagonists is that we shall be able to see that criticism belongs to this history, even today.74

My discussion of this question has two aims: first, to dissolve once and for all the supposedly necessary link between epistemology and politics (or, more precisely, to insert the mediating factors between these terms); and, second, to demonstrate that the positional skepticism of postmodernist literary and cultural studies is a losing strategy in the conflict of the faculties, one that relegates humanistic disciplines to the status of opinion or, worse, a kind of theology. The appropriate alternative to this strategy is to define and develop a knowledge of culture fully integrated into the spectrum of human sciences.

I begin with a cautionary tale on the subject of positivism, derived from Fritz Ringer's important and moving study, The Decline of the German Mandarins.75 Ringer tells the story of the German academic community during the period between 1890 and 1933, when it was dominated by the group he calls (after Weber) the "mandarins." These were the humanistically trained professors who saw themselves as the "bearers of culture" (Kulturträger) for German society, the advocates of education as Bildung. Their social importance in the nineteenth century was vastly greater than that of their counterparts in Anglo-American higher education, as they controlled access to civil service positions. At the height of their power, they achieved near social equality with the aristocratic class, but by the later nineteenth century their position in society was threatened by the increasing social influence of an emergent bourgeoisie as well as by the undoubted successes of the natural and social sciences.

These new sciences were described and also stigmatized as positivist, though positivism meant different things in different disciplines; it was sometimes openly avowed, sometimes merely implicit in a methodology.

74. For my purposes, positivism can be defined by two features, the hypothesis of the unity of scientific method and the identity of this method with the procedures of natural science. Of course, there are many versions of positivism between Comte and the logical positivism of Ayer and others popular during the interwar period. In the context of the Sokal affair, perhaps the most striking point to make about philosophical positivism is that it was rigorously antirealist; for the positivists, realism was just another expression of metaphysics. The terms of the current debate carry on the struggle with positivism but reduce it to a naïve realism, which its better philosophical exemplars never advocated. On the antirealism of the positivists, see Porter, Trust in Numbers: The Pursuit of Objectivity in Science and Public Life (Princeton, N.J., 1995), pp. 17-21.

It had as much to do with specialization as with fetishizing fact. In this conflict of the faculties, the neo-Kantian idealism of the German mandarins was pitted against an array of new positivist disciplines, including new social sciences such as sociology. The mandarins ultimately lost this conflict; but their fall was slow—a decline—and it gave rise to a crucial Methodenstreit in the social sciences that prevented German social science from taking the narrowly empiricist turn of its American counterpart.76

Ringer narrates the depressing descent of the mandarins into reaction, ending in their advocacy of a “conservative revolution” that was too close in spirit to fascist ideology to offer any effective resistance to it, however sophisticated it was in comparison to the mythopoiesis of the National Socialists. By contrast, the positivists stood consistently with the Republic against radical nationalism and anti-Semitism. Should we then conclude that the left political tendency of the positivists was entailed in the epistemological bases of positivism? Elsewhere Ringer addresses this question in connection with Carnap’s bemused observation that there was a “curious unanimity” of political opinion among his fellow Vienna positivists. Ringer writes, “We are easily tempted to assume that ‘positivism’ and similar orientations must have specific social and political implications. We tend to trace the ‘curious unanimity’ mentioned by Carnap to timeless psychological affinities, or even to epistemological relationships. In fact what we are dealing with in such cases is the historically contingent ‘logic’ of an intellectual field.”77 It would be difficult to overestimate the significance of this point. The relation between epistemology and politics is mediated by the historical determinants of the “field.” The temptation to see this relation as necessary or unmediated is the very mistake that in our own time allows us to forget that the disciplines have a history that overdetermines the positions taken within them.

Anglo-American humanist scholars never possessed the social prestige of the German mandarins. Criticism had little or no place in the modern university, and when it did succeed in finding a place between the two world wars it was very marginal. If the German humanists were mandarins, I would like to describe their Anglo-American counterparts as recusants, by analogy to the English Catholics who were excluded from many social and political privileges in the wake of the Reformation. The development of cultural criticism in the Anglo-American context was, in fact, tinged with Anglo-Catholic nostalgia, shamelessly espoused, of course, by T. S. Eliot.78 But the analogy of recusancy is intended more

76. The Methodenstreit erupted again in the 1960s with the “positivism dispute” among German sociologists, the very fact of which attests to the imperfect impress of positivism on German social science.


precisely to characterize the position of cultural critics in the university, in relation to the dominant secular modernism of the positivist natural and social sciences. Having lost their forum in the public sphere, the critics were forced to cultivate their opposition to secular modernity and to progressivist science in an institutional context in which there was little possibility of altering their subordinate position. More surprisingly, criticism during this period was forced to accommodate its oppositional discourse to the positivist modes of literary study—philology and literary history—already established in literature departments. This circumstance imposed an increasingly oblique style of opposition after the Second World War, a much less open conflict of the faculties.

At this point we are prepared to take into account the major upheaval in the history that determines our present situation. While the predominantly conservative political orientation of criticism continued into the 1960s, that orientation was completely reversed in the space of a decade, largely as a result of external factors (everything that is evoked by “the sixties”). The political orientation of the humanist professoriate shifted massively from the Right to the Left at the same time that the scientific professoriate was to some extent depoliticized (or in some sectors, propelled to the Right). After a long hiatus in which criticism had become accommodated to the postwar political order, the reemergence of cultural criticism in the seventies and eighties made it possible to renew the conflict of the faculties once again as a war between Left and Right, but with the political affiliations of the two cultures reversed. At the same time, the hierarchy of the disciplines favoring the sciences remained in place. No longer the recusants of the academy, the critics might be described after the sixties as enthusiasts—like the Nonconformist Protestants after the Restoration, they were still marginalized, but at the other end of the political spectrum.79

These are the conditions that overdetermine the link between epistemology and politics in the present milieu. From this history we must retrieve one other major event, the methodological revolution in literary study that replaced Anglo-American theory with French theory. The significance of this event was that it provided the literary professoriate with a powerful new weapon for contesting the epistemic superiority of the

79. This is why the Sokal affair fails to map politically onto the Snow-Leavis controversy. For an analogous version of the above argument, see Carl Schorske, “The New Rigorism in the Human Sciences,” in American Academic Culture in Transformation, ed. Thomas Bender and Schorske (Princeton, N.J., 1997), pp. 324–27. Schorske contrasts the social activism of prewar economics with its postwar scientism and, conversely, the “strange reversal of roles” among the literary professoriate, as it abandoned “aesthetic detachment” and “took up social-critical functions” (p. 325). I understand this reversal as marking the recurrence of cultural criticism, the condition of which recurrence was paradoxically the success of “aesthetic” criticism in competition with other, more positivist modes of literary study in the university. This “aesthetic” criticism, it must always be recalled, descended directly from the cultural criticism of the nineteenth century.
sciences. The dissemination of poststructuralist and postmodernist thought enabled criticism to undertake a critique of positivist modes of knowledge far more sophisticated than its New Critical precursors. Skepticism replaced the fideism of the New Critics, and this new epistemic position was fused with the new political orientation of criticism. The result of this systemic realignment was a new version of the conflict of the faculties, in which it became possible for criticism to imagine a more direct assault on the fortress of science, whose towers it believed had already been undermined by science studies. What we now call the Sokal affair represented at once the trajectory and the limit of this tendency in criticism. An alliance between science studies and cultural studies promised to strengthen the position of the literary professoriate in the conflict of the faculties by assigning an adversarial political role to science. Linking the science wars to the culture wars seemed to close the circuit between the epistemology underlying the division of the disciplines and the politics transcending them.

In my view, the division of the disciplines cannot be reduced to the difference between positivism and skepticism any more than it can be elevated to the great war of Left and Right. Its relation to both sets of antagonisms is more complex, more historically ambiguous. The fact that these several antagonisms are confused in the spontaneous postmodernism of the literary academy suggests that it is a mistake to channel these antagonisms through the conflict of the faculties. One lesson to be drawn from this fact is that criticism might now advance by withdrawing from the conflict. If positivism is a holistic or totalizing ideology that reserves the name of knowledge only for the results of the scientific method (narrowly defined), it does not follow that the critical disciplines must be based on a counterholism in which everything is interpretation, in which the very possibility of a positive knowledge is called into question.\textsuperscript{80} The

\textsuperscript{80} In no area has this interpretive holism been more indulged than in the appropriation by literary and cultural studies of quantum physics and the Heisenberg Uncertainty Principle, an appropriation that surely played its part in the Sokal affair, since the nominal subject of the hoax article invoked the magic word, “quantum.” In his contribution to the \textit{Science Wars} volume, Aronowitz makes a vigorous effort, with the help of Bohm and Hiley’s ontological interpretation of the Uncertainty Principle, to persuade us that “this interpretation of quantum theory has profound implications for the human sciences.” (Aronowitz, “The Politics of the Science Wars,” p. 212) It seems to me that the Uncertainty Principle has no implications at all for the human sciences and that the interpretation implicit in quantum physics is simply incommensurable with the interpretation of indeterminacy or uncertainty in the social domain. Aronowitz believes that this holism supersedes the binarism of physical reduction versus social construction, but it really only universalizes a principle of interpretation generated from the cultural instance. As such, it stands as the correlative of the kind of positivist holism advocated by Wilson in his recent \textit{Consilience: The Unity of Knowledge} (New York, 1998)—yet another version of the dream of a unified methodology of the sciences. By contrast, Bhaskar’s formulation is precise: “the human sciences can be sciences \textit{in exactly the same sense}, though \textit{not in exactly the same way}, as the natural ones” (Bhaskar, \textit{The Possibility of Naturalism}, p. 159).
principle of universal hermeneutics in any case represents a belated struggle with the ghost of positivism—at least so far as post-Quinean and post-Kuhnian philosophy of science is concerned. On the other hand, the Sokal affair revealed that the scientists themselves would resurrect a spontaneous positivism in response to a provocation from their critics.\textsuperscript{81} It seems doubtful that the ensuing controversy served any other purpose, however, than to prolong an unnecessary and unilluminating conflict.

Whether the scientists can move beyond their residual or spontaneous positivism is in the end their affair. I am more concerned, in concluding this argument, to state clearly what it would mean for literary and cultural studies to withdraw from the conflict of the faculties. It is not my sense that large professional groups such as university disciplines can be moved significantly to change direction without first recognizing where their interests are involved. My main objective in this essay has been to make the spontaneous philosophy of the critics visible to those whom it enables and constrains in order to see what would be possible if the constraints were recognized.

Let us above all acknowledge the danger of allegorizing the disciplines as representatives of inherent political or philosophical positions. The cost of this allegorization has been very heavy for those who do literary and cultural studies. Having failed to settle the epistemic status of criticism, which threatens always to fall to the level of mere opinion, the critics have embraced their abjection and turned it around into its opposite, into epistemic superiority. The division of the disciplines into sciences and humanities has been triumphantly reconceived as the distinction between knowledge and the critique of knowledge. It is by no means necessary to deny the value of critique in order to make the argument that the critique of knowledge is not the privilege of one discipline or group of disciplines.\textsuperscript{82}

81. In the Sokal affair, the spontaneous philosophy of the scientists has been carelessly identified with the historiographical concept of Enlightenment, as the rationalist precursor of positivism. Nowhere is the character of postmodernism as a spontaneous philosophy more evident than in the anathema that has come to be attached to the notion of Enlightenment, now equated with the most naïve realism and the most offensive politics. It should not be necessary to defend the Enlightenment in toto in order to restore to philosophical modernity both its discourse of reason and the possibility of a self-reflexive critique of rationalist universalism such as Herder inaugurated. On this subject we might invoke the entire oeuvre of Charles Taylor. For a comment on the conflation of modernism with the Enlightenment, see Hollinger, “The Knower and the Artificer,” p. 49.

82. I can only suggest briefly here two principles for future discussion of this point: (1) It is an inescapable condition of modernity that the critique of knowledge is most effective when it arises from knowledge-practice or expertise. This is just what Foucault was suggesting in his attempt to move from the model of “universal intellectual” to “specific intellectual.” It is no small irony of Foucault’s reception that the Foucaultianism of cultural studies has supported nothing less than the renewed claim of literary critics to the identity of universal intellectuals. (2) If it follows that scientists are the most effective critics of science, this still leaves the question of the proper location and form of such critique unsettled,
To insist further upon adherence to a series of more or less formulaic and therefore spontaneous positions—antirealism, relativism, antifoundationalism, interpretive holism—is to condemn literary and cultural studies to rehearse without surpassing the conflict of cultural criticism with science. To insist longer that progressive politics must be based upon a rejection of Enlightenment reason—a position that confuses a spontaneous version of positivism with science itself—is to marginalize literary and cultural studies ever more extremely and to relegate it to the status of a belief system or theology in relation to the scientific disciplines. My analogy of the humanist professoriate to the “enthusiasts” is intended to underscore this most unfortunate outcome of the Sokal affair.83

Politics in the guise of epistemology is just what has come to seem ludicrous in the public sphere. Abdicating the responsibility for defending claims to knowledge in favor of a provocative antirealism and a self-congratulatory skepticism, we critics cease thereby to question the beliefs that function as truth, common sense, or consensus for literary and cultural studies. We have all the comforts of certainty because we agree among ourselves. This is just where we stand, and where we will continue and this is above all a question of the public sphere. Literary critics may not be the most effective critics of science, but they may very well claim a specific expertise on the question of the linguistic conditions for communication in the public sphere. I suggest that this avenue of political intervention will be much more productive for critics in the future than skeptical posturing about the epistemological claims of the sciences.

83. The Sokal affair occasioned a regrettable split between the journalistic Left and the academic Left, as well as between different sectors of the academic Left. In both cases, the conflict turned on the reduction of science to belief or a levelling of the epistemological field upon which science and postmodernism confronted each other. The journalistic Left was represented by Katha Pollitt, "Pomolotov Cocktail," The Nation, 10 June 1996, p. 9 and by Barbara Ehrenreich and Janet McIntosh, "The New Creationism: Biology under Attack," The Nation, 9 June 1997, pp. 11-16. The occasion of the latter article was an incident in which a lecture by social psychologist Phoebe Ellsworth on a topic in biology was greeted with the extreme or "provocative" skeptical response, "You believe in DNA?" (p. 11). Of course this was a provocation, not a proposition, but it seems disingenuous to deny that it reflects a certain relation to science prevalent in literary and cultural studies. This is the very relation that permitted Ehrenreich and McIntosh, however unfairly, to associate academic postmodernism with creationism. Ehrenreich's misgivings were echoed by the sociologist Elizabeth Long: "What disturbs me most about such discussions of knowledge and tradition in the university is their quasi-theological tone. At a conference on science, a colleague of mine who studies high-energy physics found herself asked fervently, 'But do you believe in the Enlightenment?' 'Believe . . .' was her response" (Elizabeth Long, "Engaging Sociology and Cultural Studies: Disciplinarity and Social Change," From Sociology to Cultural Studies: New Perspectives [Malden, Mass., 1997], p. 24).

On the other side of this intramural conflict, and equally unfairly, the notion of “left conservatism” was advanced by some in order to stigmatize figures such as Pollitt, Ehrenreich, or Nancy Fraser for their critiques of postmodernist arguments. For this concept, see "Left Conservatism: A Workshop," Boundary 2 26 (Fall 1999): 1-61. Needless to say, there is no more point in questioning the left credentials of Ehrenreich and others than there is in questioning those of academic postmodernists.
to stand in the public sphere, if we fail to recognize that our spontaneous philosophy hardly makes up for a failure to define and defend the knowledge-claims of criticism.

In taking up this last question, I return to a point made earlier, that a struggle with social science has all along been the repressed referent of the Sokal affair (and the conflict of the faculties of which the latter was the symptom). The absence of an ongoing Methodenstreit in the U.S. continues to debilitate the system of the disciplines. For this reason the humanities have been perennially tempted to identify themselves with cultural criticism and its opposition to science, a position most recently supported by an interpretive holism generalized from the instance of the literary text. Because the social sciences and the humanities were thus polarized between naturalistic and interpretive methodologies, the terrain lying between between these polarized positions—that of an interpretive human science—remains underdeveloped to this day.

Without question, the disciplinary bridge over this gap is history, which has intermittently grounded literary and cultural studies. It seems evident in retrospect that the humanities have alternated between an orientation toward the positive knowledge of history and toward the function of cultural critique, sometimes in the same work; but there is no reason to assume that these motives are simply incompatible, much less that the assertion of a positive knowledge would lead us back into the desert of positivism. On the other hand, it would probably not be advisable to attempt a reconstruction of the disciplines by reinstating Dilthey’s strict division of the disciplines between Naturwissenschaft and Geisteswissenschaft, the latter based on historical interpretation or Verstehen. The social sciences have already come too far in demonstrating that the methods of natural science have a place in the study of human society. But it is certainly within our power to move in the direction of a complementarity of methodologies, in which the claims of different kinds of science, as also of different kinds of historical interpretation, can be assigned to appropriate objects and registers, and conflicting claims in the human sciences reconciled by negotiation rather than conflict.

With regard to the future of the humanities, it is perhaps worth entertaining the notion that this category for organizing disciplines has outlived its usefulness and that until we recognize literary and cultural studies as sciences too, the humanities will continue to stand in opposi-

84. An analysis of New Historicism would confirm this point, inasmuch as the occasional thinness of its history and anachronism of its identity categories is the price it pays for fulfilling its correlative mission of cultural criticism. For an interesting argument about the peculiar way in which the empiricism that enables New Historical work is transmogrified with another turn of the screw into personal “testimony,” another version of cultural criticism, see David Simpson, The Academic Postmodern and the Rule of Literature: A Report on Half-Knowledge (Chicago, 1995).
tion to science, as the occasion for ever renewed conflict of the faculties. It may seem merely trivial now to claim for interpretation the status of knowledge. But the history of the disciplines has shown us that this is not a trivial claim at all. If it were, interpretive holism would never have emerged as the last stand of the humanities in an age of science. Whether it will be possible now to give up the conflict of the faculties in favor of a smaller but surer place among the sciences is the question before us.

85. One of the respondents to the Sokal hoax, Ken Hirschkop, drew the correct conclusion on this matter: “Cultural studies should recognize that it, too, is science, and should drop the frequently encountered pretense that it is the natural ally, or worse still, the theoretical reflection, of the new social movements” (Ken Hirschkop, “Cultural Studies and Its Discontents: A Comment on the Sokal Affair,” Social Text 50 [Spring 1997]: 133).

86. This point is not, of course, a bureaucratic recommendation. The disappearance of the “humanities” no more entails the disappearance of history, philosophy, or literary study than Foucault’s disappearance of man entails the disappearance of human beings. Finally, it is worth reflecting on Laurence Veysey’s reminder in his seminal essay, “The Plural Organized World of the Humanities,” that our present concept of the humanities did not become current until the 1940s, and that “in their modern meaning of a concrete grouping of academic disciplines rather than their older meaning of classical language study, [the humanities] took on a more or less clear shape after the self-conscious arrival of the social sciences, not before” (Laurence Veysey, “The Plural Organized World of the Humanities,” in The Organization of Knowledge in Modern America, ed. Alexandra Oleson and John Voss [Baltimore, Md., 1979], p. 57).