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## My Science Wars

**A**lthough it was in the early eighties when I began to feel a growing disaffection with the radicalized academic left, a decisive nausea-inducing body blow was administered by the *PMLA* of January 1989. In that infamous issue appeared a letter signed by twenty-four feminist academics attacking the eminent Shakespeare scholar Richard Levin, for “Feminist Thematics and Shakespearean Tragedy,” which had appeared in *PMLA* the year before. Levin’s essay, the work of a well-tempered, open-minded, and liberal supporter of many radical reforms in the academy, was a penetrating critique of the feminist identity politics that were trying to wrest Shakespeare into the persona of a feminist scourge of sexism and patriarchy. Levin’s temerity in taking on the distortions of identity politics was threatening enough, but his Enlightenment style and Swiftian wit, which he brilliantly deployed to dismantle the tendentious and self-serving hermeneutics of the “dictatorship of virtue” (a phrase I borrow here from Richard Bernstein) that constitutes avant-garde millenarianism in the U.S. academy, served further to inflame the hypersensitive skins of his holier-than-thou critics, who brook no criticism because they are already in possession of the absolute truth they deride in all other cases. Three gems from that rather lengthy letter beg to be quoted, although they cannot begin to convey the noxiousness of the whole:

We argue that gender difference is a historically specific cultural construct with diverse forms and representations and damaging consequences for characters in plays, subjects in the Renaissance, and for us—and Levin—today. . . . The view that “science” and “rationality” can comprehend “complex factors in human development” without the messy intrusion of “gender and ideology” is an Enlightenment dream, long since turned to nightmare. . . . We wish to know why, in view of the energetic, cogent, sophisticated theoretical debate that is currently taking place within and among schools of Renaissance criticism, *PMLA* has chosen to print a tired, muddled, unso-

phisticated essay that is blind at once to the assumptions of feminist criticism of Shakespeare and to its own.

If ever a critical essay had been radically (in all senses) misrepresented in the interest of identity politics, Levin's piece on feminist thematics in Shakespeare was certainly a locus classicus. Far from being tired and unsophisticated, Levin wrote then and continues to write now with vitality, wit, insight and precision. This misbegotten attempt to badmouth and silence him was a performance of the radical academy at its "final solution" worst. (Academic final solutions don't require gas chambers, just lots of gas.) And when I saw the moral character of the opposing sides, I asked myself then as I regularly do now: If forced to make a choice in delegating power, into whose hands would I be willing to put myself? In cases like this, the question is hardly even worth asking.

Only a few years later I was invited to contribute an essay to a collection dealing with Gerald Graff's pedagogy of "teaching the conflicts." Rereading a number of his essays that formed the basis for the collection, I was struck by Graff's democratic and egalitarian insistence that postmodern literary theory, far from being "obscure, technical and abstruse, and therefore too advanced or esoteric for the average college or high school student of literature," could be made perfectly intelligible and accessible because "all teaching involves popularization." Yet when well-educated critics like David Lehman and Robert Alter ventured to write books highly critical of the avant-garde canon, Graff brushed them off as "pretty bizarre" and "totally ignorant." And the inevitable question for me was, "Easy for students but impossible for David Lehman and Robert Alter?" "One begins to fear," I added, "that what Graff really wants is not conversation or diversity, but *absolute conformance and identity*."<sup>1</sup>

Now, in 1996, I witness the fortress mentality of the culture wars reaching some sort of apogee in its latest phase: *Science Wars*.<sup>2</sup> This, the title of the Spring/Summer issue of *Social Text*, was generated as a response to *Higher Superstition: The Academic Left*

<sup>1</sup> *Teaching the Conflicts: Gerald Graff, Curricular Reform, and the Culture Wars*, ed. by William E. Cain (New York & London, 1994), pp. 74, 76.

<sup>2</sup> *Social Text*, 46-47, Vol. 14, Nos. 1 and 2, Spring/Summer 1996. Most of the essays in this issue of *Social Text*, along with some new ones, were subsequently published as a book in the fall of 1996 by Duke University Press. According to the editors, Alan Sokal's essay was never intended to be included in the book version because of its marginality to the theme of science wars.

*and Its Quarrels with Science*, by Paul R. Gross and Norman Levitt, published in 1994 and still producing a lot of heat. Gross, a biologist at the University of Virginia, and Levitt, a mathematician at Rutgers, are the designated inheritors of the mantle of Richard Levin, and the sixteen contributors to this volume are more or less the brothers and sisters of the twenty-four signatories of the protest letter to *PMLA*, though the effect is not quite so toxic, despite a few pretty dotty moments. Indeed, Gross and Levitt, as scientists who speak the issues and languages of the humanities with exemplary sophistication as men of wide-ranging culture, write an Enlightenment prose rivaling Levin's in its clarity, insight, and barbed wit. And its relatively measured coolness, like Levin's, has so enraged some of their respondents in science studies that *they* have called *Gross and Levitt* "hysterical." Add to all this the now notorious parody of science studies (unwittingly accepted by the editors) by Alan Sokal, a physicist at NYU, which rounds out this issue of *Social Text*, and you've got the makings of a postmodern reign of terror. "Off with their heads!" resounds from every side, and what should be sage metaphysical lucubration begins to sound like the pandemonium set off by the rape of the lock.

Although a number of reviewers were scandalized that Andrew Ross and the other editors behind *Science Wars* were unable to recognize Sokal's contribution as a hoax—and a few overheated critics on the right seemed to think it portended a takeover by the barbarian hordes and the collapse of Western civilization as we know it—there is no obvious reason why Ross and the others *should* have recognized it, since it sounds remarkably similar to much of what is written in cultural studies. (That was the point, wasn't it?) Nor should one assume that the rest of this issue of *Social Text* is an unmitigated disaster—because it's not. Although it has its share of loony tunes (as Stanley Aronowitz likes to say), as a specimen issue of an academic quarterly journal it could probably be defended as better than average. It's certainly not uninteresting. Still, even the best of the essays reveal that a substantial quantity of what passes for sense in cultural studies is indistinguishable from nonsense—and when the nonsense is the *right* nonsense, business can go on as usual, as Sokal's clever parody admittedly suggests. If this means there is something rotten in the state of cultural studies, so what else is new? There is plenty of rotteness elsewhere as well. Unfortunately, the

uproar provided more fuel to the fortress mentality, and Ross and Bruce Robbins wrote replies that won't add much to their reputations. Stanley Fish, the Arch-Jokester/Trickster of Academe (who just happens to be Executive Director of Duke University Press, the publisher of *Social Text*), wrote a sophisticatedly defensive (one is tempted to say "bankrupt") letter to the *New York Times*, complaining—of all things—that Sokal's joke wasn't funny. So again, what else is new?

Levitt and Gross's book impressed me with its liberal point of view and its defense of the basic reasonableness of science, even while acknowledging the errors and evils that flow from science's complicity with unbridled capitalist technology. That their critics denounce them as neoconservatives hardly carries much weight, since similar critics denounce Sokal as well, even though he taught math in Nicaragua under the Sandinistas and would appear to have impeccable leftist credentials. Nothing except absolute belief in the latest radical doctrines (which will be supplanted tomorrow by new ones) can placate a left that simultaneously believes there are no foundations for believing anything. Most of the quarrel between the two sides, however, stems from a misunderstanding that is reflected over and over again throughout the essays in *Science Wars*. Levitt and Gross are mainly concerned with the intellectual processes that lie behind the procedures of the sciences, that is to say, the type of rationality—whereas their critics are concerned with the undeniably catastrophic consequences that have followed from many scientific discoveries (while playing down the stunning benefits that have made us who we are, e.g., pampered bourgeois with the leisure to take sides in the science wars over latte, instead of spending the day gathering sticks for cooking dinner). The critics see the *uses* of the sciences as "socially constructed," as well as the choices of projects to be funded and the directions in which such fundings push research. These criticisms seem quite well founded and Levitt and Gross are generally in agreement with them. But however faulty Western "reason" may be, they nevertheless remind their critics that penicillin works just as well in Third World countries as it does here, so the "reason" that lay behind its discovery must have a genuine connection with the natural world and not be just a socially constructed convention of Western capitalist patriarchy.

Among other things, Levitt and Gross object to the notion that

feminist science employs a different “reason” from male science. When Evelyn Fox Keller in her biography of Barbara McClintock accuses biologists of using figures of speech that betray their masculine predispositions, like the term “master molecule” for DNA, Levitt and Gross reply that “DNA as ‘master molecule’ is shorthand for ‘initial information source,’ nothing more; it carries no implications of ‘dominance.’” Praising McClintock’s work, they add that “there is no convincing mark on it of feminity, as McClintock herself was the first to insist. Her closeness to the experimental material, her willingness to ‘listen to it,’ is characteristic of the work of some scientists and less so of others. There are no data suggesting that women scientists display the characteristic, in general, more often than do men.” One of the more absurd essays in *Science Wars* goes so far as to examine figures of speech in Levitt and Gross’s book itself in order to prove that they are just male sexists and can consequently be ignored as unreliable. But, again, if one were forced to put oneself into the hands of Sarah Franklin, its author, or those of Levitt and Gross, no sane person would choose to be at the mercy of what passes for “reason” in Franklin. There may be lots of reasons, but some are more reasonable than others.

Throughout their book, Levitt and Gross point out that even the most fanatical deep ecologists, even the most outraged AIDS protesters, rely on the reports and discoveries of the sciences about species, ozone, the greenhouse effect, AZT, plate tectonics, the age of the earth, etc., “issues that would be unknown and unknowable but for the accomplishments of professional science.” Knowledge of this type is not regarded as socially constructed even by protesters but as the best information available about the “real” world. It’s not as though Levitt and Gross believed that the sciences know the noumenal essence of the universe, but they do believe there is a “real” connection between the descriptions offered by the sciences and the way the universe is. That the act of knowing mediates between knower and known and is thereby perspectival is not the same thing as saying that nothing valid can be known about anything. “We simply observe that science is, as all the world’s experience clearly tells us, overwhelmingly the best trick we so far know for getting the upper hand against disease. And we *know* that the politicized, overtheorized ‘criticism’ that is our subject offers nothing at all in that direction. Its main effect has been to assure aspiring cultural

critics that they can play a significant role in combating AIDS without having to do anything so tiresome as, for instance, abandoning the joys of lit-crit for careers in medicine or molecular biology.”

Andrew Ross does not perform very well in *Science Wars*, neither as editor providing an introduction nor as contributor. His “A Few Good Species,” with its scattershot critiques of every passing whim and his congenital one-upmanship, finally comes to naught, a characteristic failing of excessive energy working on too little substance (or too much insubstance). In his general introduction, he gives his blessing to the blurring of the distinction between theoretical and applied science that permeates this volume as a whole, a distinction that a few contributors go so far as to disallow altogether. “Once it is acknowledged that the West does not have a monopoly on all the good scientific ideas in the world, or that reason, divorced from value, is not everywhere and always a productive human principle, then we should expect to see some self-modification of the universalist claims maintained on behalf of empirical rationality,” Ross writes. But to my mind the second part of this sentence has no logical connection with the first. “Empirical rationality” (if by this he means the rationality that guides empirical investigations) has no obvious connection with the disposition of the fruits of that rationality or the values that yield such fruits. But then Ross is a prolific rather than a precise thinker. He also complains about the undemocratic character of science, insofar as it fails to allow local constituents to have a say in the development of scientific knowledge (Would he approve of creation science being taught in the schools?), and he pretends, here as elsewhere (see my account of Ross in *The Hudson Review*, Volume XLIX, Number 2, Summer 1996), to great sympathy for “alternative forms of rationality,” such as New Age spiritualism and alternative medicines, but in a privileged “have” like him this is a familiar form of seemingly cost-free egalitarianism, a highbrow slumming, an inverted snobbery. If he were unfortunate enough to eat some half-baked chicken laced with salmonella, would he race away for a grand consult with Deepak Chopra or would he hie himself off to the Emergency Room? In a pinch, even an Andrew Ross is constructed (socially or otherwise) on a solid foundation of good sense. (I say this while acknowledging the value to science of citizen input and attention to alternative medicine.) And the recurring democratic-

egalitarian pretensions of Ross and others in this volume, with their Promethean fantasies of bestowing speech upon the inarticulate huddled masses, seem more like the narcissism of bemused intellectuals seeking allies than a realistic program of social amelioration. Everyone not born yesterday knows that the first utterance of newly empowered proletarians to fatuous ego-inflated intellectuals is inevitably, "Go screw yourselves."

Ross's final verdict is that, piqued by reduced government funding, scientists have begun a backlash against the badmouthings by the science-studies left for fear of losing their wonted perquisites. This may or may not be completely false, but it is far from being a convincing exculpation of the high jinks of certain practitioners of science studies. And in referring to the "shrill tone" of Levitt and Gross, Ross belies the experience of my own prose-attuned and music-oriented ear that has been listening for most of a lifetime to how people say the things they say. If Gross and Levitt are "shrill," what would Ross have to say about Sandra Harding, whose raving essay opens this Ross-authorized collection?

"It is ironic," she begins, "that the major criticism of the new social studies of science and technology from the antidemocratic right in fact provides yet more evidence for the value of these science studies." For me, "antidemocratic right" did not bode well for the level-headedness or credibility of this essay, especially when goofily reiterated in "the antidemocratic right's recent clarion calls for the citizenry to join in stamping out feminism," which reads like a parody from "Doonesbury." Nor was I heartened by "Democracy-advancing social movements . . . have argued that the natural and social sciences we have are in important respects incapable of producing the kinds of knowledge that are needed for sustainable human life in sustainable environments under democratic conditions." ("Democracy" has really hit the fan around here.) Harding, incredibly enough, is a professor of philosophy at the University of Delaware, which doesn't speak well for the current state of precise thinking amongst people who nowadays can pass as philosophers. Her first two footnotes defy credulity: "I use *antidemocratic right* and *democracy-advancing* movements or tendencies in a somewhat simplistic way throughout this discussion," surely the understatement of the year. And the second note offers yet another modification of her intemperate off-the-wall philosophizing: "Local knowledge systems . . . are by no means always more accurate and effective than modern

scientific knowledge, but sometimes they are.” And sometimes professors of philosophy are hard to distinguish from idiots (but not always)! Why say stupid things in the first place if you are going to take them back in footnotes?

Writing like Harding’s needs to be kept in mind when Stanley Aronowitz calls Alan Sokal “undereducated,” when Andrew Ross calls Levitt and Gross “shrill,” and when George Levine refers to Levitt and Gross’s “hysteria” or calls their critique of science studies “unintelligent.” But almost everything can be forgiven, even stupidity or mendacity, if you are a member of the club and play the right game of identity politics. After all, critics like Aronowitz, Ross, and Levine are apt to regard education as Althusserian state-supported ideologies, canons as repressive patriarchal power-ploys, and the idea of “what every American should know” as a lowbrow reactionary enterprise suited only to excommunicated literary scholars like E.D. Hirsch. What on earth, then, can they be driving at by using such “exclusive,” “elitist” conceptions as “undereducated” and “unintelligent”? If education is just a state-supported power grab, true freedom would consist of being as “undereducated” as possible. Let the prize be awarded to Harding, not Sokal.

In reality, however, Harding gradually comes to her senses as her essay moves along. Once the obligatory pieties have been gotten through, a little space still remains to say a few “intelligent” things instead of frothing on like Newt Gingrich. “Different organizations of knowledge generate different illuminating representations of nature,” so there is not just one grand version of rationality. This turns out to be her main theme, an eminently acceptable one, however familiar as “situated knowledge” in Donna Haraway and many other sources. I doubt if even those demons, Levitt and Gross, would have any quarrels here.

Steve Fuller’s essay, “Does Science Put an End to History, or History to Science?,” has its strengths as well as its problems. The thesis that “science” (i.e., scientific rationality) lacks any ultimate or unitary nature is bolstered by an account of the way in which the Japanese made use of Western technology while rejecting the epistemology and the Reason-with-a-capital-“R” that lay behind the history of science in the West. Yet even this superior narrative is compromised by its share of the equivocation and identity politics that permeate this collection. What is one to think of Fuller’s candor or “intelligence” when—after alluding to Hertz,



Planck, Ostwald, and the Curies, a mostly male group—he refers to their generation as “the last to be trained as ‘the complete scientist,’ someone who could construct *her* [my emphasis] own theories”? Or when he refers to “physicists, chemists, and biologists” as “her”? The “dictatorship of virtue” can’t have it both ways—if the science establishment has systematically excluded women over the course of its history, how is it possible to refer to the generic scientist as “her”? Or when four out of five scientists just mentioned are male, how can one’s self-respect or sense of the ridiculous allow one to allude to them as “her”? How many mutually exclusive virtues is it necessary to pack into one little radical soul? Apparently, sexually exclusive language is allowable if the exclusion is politically correct, even if most male readers will not regard themselves as being addressed when they encounter female pronouns.

Although Hilary Rose, like many of the other contributors, clouds the distinction between scientific theories and social policies, she writes from a more nuanced British feminist position, able to acknowledge that “it does not follow that because scientific claims are socially shaped they are interchangeable with myths or even stories.” As a sociologist, furthermore, she argues that lay people, such as sheep farmers or people suffering from obscure illnesses, often have an expertise derived from specialist experience which can extend the knowledge of professional scientists. For closed professional ranks to ignore them would be detrimental not only to social needs but to the interests of the sciences themselves, a useful application of the often murky call of this collection for greater “democracy.”

Dorothy Nelkin’s elaboration of science studies’ critique of scientific rationality is a somewhat unpersuasive display of wounded innocence: “To some scientists this social constructivist approach appears to be a hostile attack on science, and they are responding aggressively. Indeed, their counterattack is remarkable for its emotionalism, hostility, moral outrage, and polemical tone.” Nelkin badly needs a reading of the letter from twenty-four “constructivist” Shakespeare feminists to Richard Levin to see emotionalism, hostility, and moral outrage in operation among her friends. And when she complains that “‘outsiders’ who study science are convenient scapegoats, and waging war is an easy way for scientists to avoid critical self-inquiry,” I would call her attention to the “polemical tone” of Gerald Graff and his

associates in cultural critique when they address the presumption of “outsiders” like David Lehman and Robert Alter for having opinions about deconstruction. But Nelkin, like the others in this volume, is more concerned to blur the distinction between scientific rationality (with a small “r”) and the social circumstances of the sciences than to be accurate. “Rather than organizing to confront the politics of the corporate state or the growing influence of religious fundamentalists,” scientists have organized to defend their turf, she complains. Surprise, surprise! Like Langdon Winner, who speaks of Levitt and Gross as “malicious,” Nelkin appears to think that when dogs bite back after being kicked in the face they ought to be disposed of as vicious.

The most clear-sighted and helpful essay in this volume is probably the one by Richard Levins (not to be confused with the aforementioned Shakespeare scholar, Levin). His “Ten Propositions on Science and Antiscience” attempts, with much success, to clarify the terms of the entire debate. Most analyses of science, he reports, either emphasize its objectivity while neglecting its mistakes and misuses, “or else they use the growing awareness of the social determination of science to reject its claims to any validity. They imagine that theories are unrelated to their objects of study and are merely invented whole cloth to serve the venal goals of individual careers or class, gender, and national domination.” I wish some of the other contributors to this volume had had a chance to read Levins before shooting their mouths off. Levins’ only puzzling remark occurs near the end: “All theories are wrong which promote, justify, or tolerate injustice.” Would two and two have to be five if four promoted injustice? And what is injustice, anyhow? Only today I read in the *New York Times* that new laws prohibiting female circumcision in Egypt are regarded as unjust by people who have been practicing it for centuries and want to continue that practice. How would Levins handle that one?

I pass over George Levine’s essay very quickly, dispirited by the arrogance and hauteur of his misrepresentations of Levitt and Gross. Implying what several others in this collection claim outright, that political correctness is mostly imaginary (while himself demonstrating its ongoing presence), this distinguished professor is content to sully his well-earned reputation as a literary scholar by traducing a pair of science scholars who come off as more dignified and trustworthy than he. Only at the end does he

manage a balanced, if gratuitous, assessment of Andrew Ross. Though why he should think Ross is more worthy of serious attention than Levitt and Gross I am unable to explain.

Stanley Aronowitz's substantial and measured essay concedes that "it is difficult to deny that science has produced impressive results: rockets do reach the moon; penicillin can treat syphilis," etc. His claim "is not that science is uninfluential, only that its discoveries themselves and its influence are not unimpeachable. The import of the new social studies of science is to have shown that none of these discoveries amounts to a steady march toward Truth." Agreed. (Would anyone with a brain disagree?) Yet to refer to science as "one story among many stories" is at the same time both correct and misleading: music, geography, sports are other stories that represent other areas of reality. But is science just one story among many with regard to, say, Christian Science? Evangelical religion (or even mainstream religion)? Creationism? Goddess worship? There remains the attempt, even in Aronowitz, to blur the distinction between the fruits of the sciences, the politics of the sciences, and the nature of scientific rationality (even with all its errors and messiness). This is the tendentious lint that science studies needs to pick out of its meliorist fabric and which, for now, leaves me with an insuperable problem:

Namely, that somehow, for all its pious mouthings of "democracy," the academic left has become a profoundly mendacious and totalitarian establishment, crushing all voices other than its own. It is the ugly mirror image of the radical right. I ask myself once more—whose hands would I be willing to put myself into? Andrew Ross's? Sandra Harding's? George Levine's? Bruce Robbins'? Would their protestations of democratic egalitarianism let me be myself and hold onto ideas different from theirs (as Levitt and Gross and Richard Levin so obviously would)? Or would they simply dismiss me as "an outsider," hysterical," "malicious," "unintelligent," "undereducated" and so forth, attempting to deprive me of a voice the way Stanley Fish caballed against the National Association of Scholars at Duke or the way the party-line crazies at the University of Texas tried to crush the opponents of the politically correct freshman composition text they were about to foist upon their students? If radical academia represents the best that today's democratic egalitarianism can offer, all I can say to them is, "Shove it!"