

# Transgressing the Boundaries

## THE IDENTITY OF AN ELECTRON IS SOCIALLY CONSTRUCTED

Alan Sokal succeeded in publishing this in *Social Text*, a "prestigious" progressive journal

There are many natural scientists, and especially physicists, who continue to reject the notion that the disciplines concerned with social and cultural criticism can have anything to contribute, except perhaps peripherally, to their research. Still less are they receptive to the idea that the very foundations of their worldview must be revised or rebuilt in the light of such criticism. Rather, they cling to the dogma imposed by the long post Enlightenment hegemony over the Western intellectual outlook, which can be summarized briefly as follows: that there exists an external world, whose properties are independent of any individual human being and indeed of humanity as a whole; that these properties are encoded in "eternal" physical laws; and that human beings can obtain reliable, albeit imperfect and tentative, knowledge of these laws by hewing to the "objective" procedures and epistemological strictures prescribed by the (so called) scientific method.

But deep conceptual shifts within twentieth-century science have undermined this Cartesian-Newtonian metaphysics (Heisenberg 1958; Bohr 1963); revisionist studies in the history and philosophy of science have cast further doubt on its credibility (Kuhn 1970; Feyerabend 1975; Latour 1987; Aronowitz 1989; Bloor 1991); and, most recently, feminist and poststructuralist critiques have demystified the substantive content of mainstream Western scientific practice, revealing the ideology of domination concealed behind the facade of "objectivity" (Merchant 1980; Keller 1985; Harding 1986, 1991; Haraway 1989, 1991; Best 1991). It has thus become increasingly 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. These themes can be traced, despite some differences of emphasis, in Aronowitz's analysis of the cultural fabric that produced quantum mechanics (1988b, esp. chaps. 9 and 12); in Ross's discussion of oppositional discourses in post-quantum science (1991, intro. and chap. 1); in Irigaray's and Hayles's exegeses of gender encoding in fluid mechanics (Irigaray 1985; Hayles 1992); and in Harding's comprehensive critique of the gender ideology underlying the natural sciences in general and physics in particular (1986, esp. chaps. 2 and 10; 1991, esp. chap. 4).

SEE: THE SOKAL AFFAIR

Wisdom of the Krell  
IN THE BEGINNING WAS IRONY

