

Review

Reviewed Work(s): *The Disunity of Science: Boundaries, Contexts, and Power* by Peter Galison and David J. Stump

Review by: Katherine Pandora

Source: *Technology and Culture*, Jul., 1998, Vol. 39, No. 3 (Jul., 1998), pp. 545-546

Published by: The Johns Hopkins University Press and the Society for the History of Technology

Stable URL: <https://www.jstor.org/stable/1215911>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



The Johns Hopkins University Press and Society for the History of Technology are collaborating with JSTOR to digitize, preserve and extend access to *Technology and Culture*

JSTOR

The Disunity of Science: Boundaries, Contexts, and Power

Edited by Peter Galison and David J. Stump. Stanford: Stanford University Press, 1996. Pp. xiv+567; illustrations, notes, bibliography, index. \$65 (cloth); \$24.95 (paper).

Nearly one hundred years ago William James asserted that “to believe in the one or in the many, that is the classification with the maximum number of consequences.” Certainly a tension over whether science can be best understood as a unified or a disunified enterprise has animated a contentious set of debates from the mid-nineteenth century onward, as Peter Galison notes in his introduction. The recent emergence of a body of work advocating “the view that there is something local about scientific knowledge” (p. 2) has provided a counterweight to the legacy of a vision of unified science that arose earlier in the century under the aegis of the Vienna Circle. The result is that much that had been taken for granted about the nature of scientific inquiry has come open to question within many disciplines. This edited collection, the product of a 1991 Stanford University conference on the topic of contextualism and disunity in science studies, is a thoughtful attempt to shape this debate and to move it forward.

The editors solicited “scholars representing various flavors of science studies” (p. vii), and indeed, the nineteen essays tackle a diverse array of topics, touching on such fields as archaeology, computer simulation, molecular biology, natural history, particle physics, and psychiatry. Although the book takes in a welcome breadth of territory, it does not quite allow a thousand flowers to bloom. The emphasis is heavily weighted toward science studies as viewed from the philosophy of science, with the sociology of science playing a secondary role, and the history of science a recurrent but somewhat diffuse presence. The sophistication of the presentations, however, makes the text well worth the attention of those interested in these issues, whatever their own particular intellectual frameworks.

Much in these debates hangs on definitions of unity, and the various changes rung on this theme from one essay to the next can be somewhat dizzying. Likewise, the participants’ ventures into some recent intramural battles in science studies may mean heavy going for the uninitiated reader. But readers will be handsomely repaid for their perseverance, given the number of interesting insights within the book’s pages.

Theoretical explorations make up the first two parts of the text, categorized under the headings “Boundaries” and “Contexts.” Among the many intriguing discussions is Galison’s theoretical explication of the activity that can flourish in the boundary areas between disunified scientific domains (which he characterizes as local “trading zones”), in which participants improvise a “pidgin” language that mediates the coordination of different groups’ practices. John Dupre advances a philosophical view, “promiscuous

JULY

1998

VOL. 39

realism," which emphasizes that "individual things are objectively members of many individual kinds" (p. 105), all of which are real, but none of which can be reduced to one determinative essence. Karin Knorr Cetina conducts a comparative ethnographic exploration of laboratory biology and experimental physics, which reveals divergent epistemic cultures existing under a shared rubric of empiricism.

A third section, entitled "Power," takes on such issues as the relationship between Otto Neurath's politics and his scientific outlook (Jordi Cat, Nancy Cartwright, and Hasok Chang). Timothy Lenoir and Cheryl Lynn Ross address the naturalizing work accomplished in museum making.

The larger ambition of this volume is to speak to the nature of the deep connections between the ideal of unity and the questions of science and politics. Galison observes at the outset that "the disunity (or unity) of science is fiercely contested ground because these attributes of homogeneity and diversity are so deeply tied to the images of authority of the sciences in relation to one another—and to the broader place of science in the world" (p. 3). James's generation grappled with this knowledge at the last fin de siècle, even as we continue these debates today. Building on the effort at cross-disciplinary communication represented by this volume will help us engage these issues more fruitfully in the coming century.

KATHERINE PANDORA

Dr. Pandora teaches in the Department of the History of Science at the University of Oklahoma.

Engaging Science: How to Understand Its Practices Philosophically

By Joseph Rouse. Ithaca, N.Y.: Cornell University Press, 1996. Pp. ix+282; notes, bibliography, index. \$39.95 (cloth); \$16.95 (paper).

In the past decade or so, Joseph Rouse has become one of the most prolific and controversial philosophers within the philosophy of science community of the United States. *Engaging Science* is a masterly summary and exposition of his contributions and critiques of others' contributions to the field. It is also his best presentation to date of the perspective he espouses, which he calls "cultural studies of science."

Rouse is a careful and cautious writer. Although it can be a challenge to follow the nuances of his argumentation, he can also be quite clear about the points he wishes to make. He begins this book with a summary statement of what he opposes: "For all their complexity and internal differentiation, [the] traditions [of postpositive philosophy of science] have important common themes and fundamental shared issues that mark the disputes among them" (p. 1). In a long footnote appended to this claim, Rouse lists the many authors whose work he discusses: the "inaugurators" of postpositivism, N. R. Hanson, Thomas Kuhn, Stephen Toulmin, Paul Feyerabend, and Michael Polanyi; its "developers," Imre Lakatos, Dudley