

which specific scientific disciplines have provided justification and support for women's oppression. There are two quite different ways to come to such a study. First, one can assume that science is basically as it presents itself, an objective, value-free enterprise. In this case, problem areas are viewed as aberrations, as a falling away from a standard which need not itself be questioned. Most commonly, however, in feminist critiques the analysis of specific uses of science against women is linked with a more general feminist critique of science itself, particularly ideas of scientific objectivity and the legitimacy of the idea of control in present science.

Blier clearly takes the second approach and she offers her case studies as examples of a more general problem with science. The opening chapters offer a critique of sociobiology and of popular theories about the brain, 'human nature' and sex differences based on theories of brain lateralization and hormone functioning. These 'scientific' theories have received very wide attention with their assertion that inequality in general and women's roles in particular are biologically determined and hence inalterable. The shoddiness of such arguments is documented in detail in Blier's book and one can only wish that her work would get as wide a circulation as the popular media that circulate biological determinist theories of women's inferiority. Although the subtitle only mentions biology, the book also deals with bias in anthropology and primatology as well, since these are also major contributors to 'scientific' theories of women's biological inferiority.

As a critique the book is invaluable—there is nothing else that brings all of this material together in one place. The book does not offer an extended critique of science generally but, in the introduction, outlines the critical feminist argument and offers these areas as illustrations. In the final two chapters Blier does offer some theoretical considerations both about the relationship between science and society and about the require-

ments for a feminist science. These are probably the weakest parts of the book and I would argue at length with some of the apparent assumptions about the primacy of sexuality in Chapter 7. Such disagreements are only to be expected, however, in an area where feminist theory is still growing rapidly and Blier's book is an important step in the development of that theory.

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Discovering Reality. Feminist Perspectives on Epistemology, Metaphysics, Methodology, and Philosophy of Science. Edited by Sandra Harding and Merrill Hintikka. *Dordrecht: D. Reidel Publishing Co., 1983. Pp. 332.*

This is a text many of us have been waiting for. It will be especially welcomed by philosophers and sociologists of science who teach women's studies.

All of the papers in this anthology deserve recognition. In the first two essays, both Linda Lange and Elizabeth Spelman argue that the sexism found in Aristotle's thought cannot be disassociated from the rest of his writings as philosophers have attempted to do in recent apologetics. In the third essay, Judith Hicks Stiehm extends the critique of the first two papers to an examination of the manner in which Aristotelian assumptions about the natural order of things and women's and men's place in that order infuses contemporary political analysis with a distortive male-biased view of the problems of justice.

In 'Have Only Men Evolved?', Ruth Hubbard takes on main-stream evolutionary theory and its errant child, sociobiology. Hubbard argues, in a vein familiar to most feminist critics of so-called 'value-neutral' science, that science is a social construction of reality and that evolutionary theory and sociobiology reflect the values of

its adherents. Hubbard argues that much of Darwin's theory of sexual selection sounds, not surprisingly, like "the wish-fulfillment dream of a proper Victorian gentleman" (p. 55). She further illustrates how the androcentric bias of sociobiology distorts observation and explains away counter-example.

Michael Gross and Mary Beth Averill in 'Evolution and Patriarchal Myths of Scarcity and Competition,' also challenge the value-neutrality of evolutionary theory and discuss the role of two patriarchal images in evolutionary thought both from a historic perspective and in current theory. Gross and Averill argue that the association "of nature both with hyperfecundity and with food scarcity" served "a typical patriarchal theme of male control of reproductive choices for the sake of abstract political-economic goals combined with the capitalistic defense of middle-class accumulation, expansion, and domination" (pp. 74). Among other things, Gross and Averill argue that the images of scarcity and competition currently operate as ideological underpinning for exploitation of the environment. They conclude with a call for feminists to reconstruct evolutionary theory on metaphors of cooperation, identification with nature and conservation of the environment.

Ann Palmeri carries the discussion of values in science to the social sciences with 'Charlotte Perkins Gilman: Forerunner of a Feminist Social Science.' This article will be of particular interest to historians and sociologists of social science. There has been a growing recognition of Gilman's work in the last few years and Palmeri does a nice job of showing the relationship between Gilman's concern for social reform and the particular values we find manifested in her theoretical sociology.

Louise Marcil-Lacoste challenges the commonplace reactions to feminism and argues that feminism is neither repetitive of men's writings about justice nor is it merely a corrective to male

bias. Rather, she argues that in analysing feminist writings "one detects the presence of three basic epistemological categories (historicity, materiality, values) by which they can be seen as, at least, announcing new forms of rationality" (p. 126).

In 'How Can Language Be Sexist?,' Merrill and Jaakko Hintikka make a case for the argument that language is "at least sexually biased and sensitive to sex differences in the very respects that are most closely related to the structure of our ontology" (p. 146). Thus, the challenge in this article goes farther than questioning sexist uses of language. Rather, what is being argued here is that the history of ontology is sex-biased.

Janice Moulton argues that philosophy accepts adversarial or combative behaviour and attitudes as essential to philosophical methodology. To the extent that one cannot be defeated by an adversaries' counter-examples, philosophers assume that the position they hold is a sound one. Moulton challenges this view and argues that not only is the adversarial method psychologically harmful for the participants but it also is epistemologically limited. Through a discussion of examples, Moulton argues that "the Adversary Paradigm not only ignores some forms of good reasoning, but fails to evaluate and even encourages some forms of bad reasoning" (p. 161).

In a similar vein, Kathryn Pyne Addelson argues that the metaphysical commitments of scientists and researchers affect the questions asked and the answers given. "Because problems investigated by a tradition are related to the metaphysical and methodological commitments of its researchers, some understanding of nature will have a better chance for support than others" (p. 179).

Evelyn Fox Keller discusses the relationship between sexual metaphors and science as an

explanation of the predominance of males in science in 'Gender and Science.' Although many of us are familiar with the objectification of nature by "masculine rationality" and the identification of the female with nature, Keller's discussion presents the position clearly.

Somewhat less familiar is the position developed in the next paper where Keller and Grontkowski argue that the privileged status of vision as a metaphor for truth and knowledge corresponds to the objectification of rather than identification with that which is being studied. Further, as a metaphor for intellection (e.g. "the eye of the mind," "the light of reason"), vision also supports the development of mind-body dualism which is introduced to guarantee the indubitability of knowledge claims. While the authors argue that there is no evidence to suspect that the dependence of visual metaphor is explicitly patriarchal they claim that such dependence is "consonant with other more explicitly patriarchal biases" (p. 221).

Both Naomi Scheman and Jane Flax in the next two chapters give a feminist psychoanalytic interpretation of individualism in philosophical psychology and political philosophy. Since most readers will be familiar with the feminist interpretation of male development in patriarchal society, I will not elaborate on these articles. Both articles argue for the recognition of how male gender identity becomes magnified into the ideological underpinnings of traditional philosophical psychology and political philosophy.

In the last two articles, both Nancy Hartsock and Sandra Harding argue for the necessity of creating a new epistemology. Hartsock believes that feminists can create a "specifically feminist historical materialism," using Marxian meta-theory as a methodological starting point. Harding argues in 'Why Has the Sex/Gender System Become Visible Only Now?' that while feminist inquiry has led to critiques of morality, science and politics, it has not yet developed the new

epistemology which feminism requires. She states that this "new epistemology must be one which is not fettered by the self-imposed limitations of empiricist, functionalist/relativist or marxist epistemologies" (p. 311).

In general, the text is a well-balanced, interdisciplinary treatment of the "theories, concepts, methods and goals of inquiry" within traditional philosophy, science and social science. The articles go beyond critiques of the content and practice of patriarchal scholarship. There are critical examinations of the underlying sexism in traditional theories of knowledge and methodology which provide the framework for the sexist content prevalent in science and philosophy. There are also attempts by these authors to set out the requirements for feminist epistemology, metaphysics, methodology and philosophy of science.

This is a text which should be required reading in senior under-graduate and graduate women's studies courses. It will also prove helpful to feminists doing research in both philosophy and science.

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Machina Ex Dea. Feminist Perspectives on Technology. Edited by Joan Rothschild. *New York: Pergamon Press, 1983. Pp. 233.*

Few would deny that we live in an increasingly technological age. In the expanding world of microelectronics, the connections between technology and culture are all too often obscured. The basic premise of this collection of essays edited by Joan Rothschild is that technology, because of its organic link to capitalism and patriarchy, reinforces male supremacy. The twelve essays in the volume—which derives its title from the feminization of a Greek dramatic metaphor symbolizing the relationship between