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Women, Science, and Myth: Gender Beliefs from Antiquity to the Present edited by Sue V. Rosser

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REVIEW

Women, Science, and Myth, edited by Sue V. Rosser, offers a comprehensive introduction to relations between gender, science, and society and the related barriers to the reinvention of science as an inclusive practice. The first section of the book examines these relations historically, from antiquity to the present, and the second thematically, through the lens of biographies, disciplines, institutions, human biology and medicine, and feminist philosophies of science. The two sections, and the empirical and theoretical work therein, are joined by their shared focus on women's participation in and absence from scientific pursuits and the related effect on scientific findings and theories, specifically regarding women's bodies, interests, performance, and roles. Further, the authors address how women's absence from science as practitioners and subjects of research has provided scientific and legal bases for inequities in education, health care, and careers, particularly in science. Biographical sketches throughout the text of both famous and lesser well-known women document the participation of women in scientific practices since antiquity, and detailed case studies show the surprising variation of women's inclusion in the sciences. Far from a linear progression, the authors document increases in women's participation in some earlier periods and more traditional places. For example, there are fewer women today in computer science in the United States than there were two decades ago, while women in developing countries in Africa and Asia are

participating in large and growing numbers, and some more traditional societies, such as Israel, Italy and Spain, have had higher percentages of women scientists and engineers than some less traditional societies. The combination of detail and breadth within the book's unique structure bring to the fore the systemic nature of the relations between gender, science and society across time and place without simplifying the complex situated differences and contradictions that characterize their interrelations, and challenge the reinvention of science as an inclusive practice.

The authors of *Women, Science, and Myth* are part of various initiatives to reinvent science to include multiple perspectives and talents towards a more accurate and just understanding of the natural world. Dr. Rosser, a Zoologist, scholar, and leader in American curriculum reform in the sciences, was one of a small group of biologists, who in the nineteen-seventies, as part of a larger movement that questioned the universal validity of scientific findings based solely on male subjects, examined ways in which paradigms in the biological sciences supported male-centered assumptions and reified women's roles in science and society. Each of the members, who included Ruth Bleier, Anne Fausto-Sterling, Evelyn Fox Keller and Bonnie Spanier, first discredited the myth of gender differences in intellect and interests that allegedly disadvantaged women as scientists. They went on to develop research on respective topics that continue to inform academic and public understanding of the ways by which the dominance of men as scientists and research subjects bias scientific findings and naturalize societal values, particularly regarding women's lives and roles. The group's findings challenged the claimed objectivity of science and focused attention on its social costs. Their work resonates with scholars today across disciplines, many of whom have initiated successor science projects that promote the institutionalization of research about women, gender, and marginalized groups within the sciences with the goal of achieving greater equity in science and society.

Many members of Dr. Rosser's original group have worked to integrate women into the content of science teaching and research as one strategy towards their full representation in the sciences. Dr. Rosser has found that most science education reform is designed to help women and underrepresented groups adapt to the existing culture of scientific institutions, rather than using feminist perspectives to achieve systemic curricular and policy change. Her six-stage model of curriculum transformation articulates the strategies employed in *Women, Science, and Myth* to move past Stage I, at which point women's absence from science is not recognized, toward Stage VI, at which point science is rebuilt to include a diversity of perspectives and talents. Stages II through V comprise specific content of the book's chapters, which are: Recognition of male bias in science; identification of barriers to diverse participants and perspectives; the unique contributions of women scientists; and comparisons of feminist versus traditional research paradigms and findings. The pedagogical strategies the authors employ include case studies of male bias in science,

the recovery of lesser-known accomplishments of women scientists and the barriers they faced, visual images of women in science, and a focus on issues relevant to women lives. Institutionally, the book brings science into women's studies and other social science courses, and will inspire and critically inform students who are currently enrolled in science programs. While, as Dr. Rosser notes, change is slow, *Women, Science, and Myth* is a positive step towards informing the next generation about the complexities of and the need for institutional change in gender and science scholarship and the stakes for social and environmental justice.

The recovery of women's achievements in science within their social and historical contexts is one of the many strengths of this book, and it is also an area that could be further developed in the interest of institutional change in science. The biographical sketches of women scientists recover women's participation in scientific practices, dispel myths of inferiority, and inspire women and other underrepresented groups in science to undertake scientific careers. By complementing these sketches with those of wives of scientists, such as Emma Darwin and Mileva Einstein, who are currently widely characterized as having no role in their husband's scientific work or at best as "sounding boards," and documenting their roles as collaborators in the production of scientific knowledge would further deconstruct the signification of scientists as male, as well as scientists as autonomous actors and knowledge as separate from the social world. The inclusion of their voices can lend to new links and networks between groups and institutions within science and society that may contribute to the diverse and widespread support required to realize systemic change in science.

The clarity with which complex theories and interrelations between science and gender are explained in this text make it appropriate for rigorous high school classes, as well as introductory undergraduate and graduate courses. It is equally appropriate for women's studies, public policy, and social science courses, including sociology and social studies of science, technology and medicine. It is a valuable resource for libraries. Ideally, it will be assigned in introductory science classes.

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