

## REVIEW

*Feminists and Science: Critiques and Changing Perspectives in India.*  
(Vols. 1 & 2) by Sumi Krishna and Gita Chadha (Eds.) (Sage Publications  
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In his 1979 keynote address "Class Science and Scientific Truth" delivered to The New York Marxist School's Conference on Dialectical Materialism, Richard Levins argues that, although mediated by intellectual, material and social relations, science still produces some "real truths about the world" (Levins, 1981, p. 9). This essential contradiction "between science as the growth of human knowledge and science as ideology of oppression" is at the heart of feminism's contested relationship with science (Levins 1981, p.9). More often than not, feminist scholarship emphasizes one aspect of the contradiction while ignoring the other. In India, these dichotomous stands are exemplified in the writings of Vandana Shiva on the one hand, and on the other, the scholarship of Meera Nanda. While Shiva sees modern science as inherently violent in its reductive methodology, its denigration of

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traditional knowledge systems and its destruction of nature for private profit, Nanda rails against Brahmanical Hinduism that has legitimized oppression of women and Dalits (formerly known as "untouchables") and sees science as a liberating force in the fight against obscurantism and caste oppression. Modern science according to Nanda "is the standpoint of the oppressed." (Nanda, 2002, p. 92)

In this milieu *Feminists and Science* is a salutary intervention. The two volumes offer an expansive exploration of science, society, and gender in India that emphasizes the heterogeneity in feminist thought and practices as well as in scientific disciplines and institutions. Against the homogenization of both modern science and local knowledges, implicit in the critiques offered by Shiva and Nanda, *Feminists and Science* recognizes hierarchies in the disciplines and institutions of modern science (Swaminathan, Vol. 1) as well as in local, traditional knowledges (Krishna, Vol. 2). As Krishna notes, "Local knowledges are layered and complex but not always democratic" and "the tension between the local community as both emancipatory and patriarchal is not easy to resolve" (Krishna, Vol 2, p. xix). *Feminists and Science* thus endeavors to understand, elaborate, and explore the nexus of gender, knowledge and power in and across boundaries of modern science and traditional ways of knowing. It is "a labor of love" as Gita Chadha writes, emphasizing the plurality of theoretical, analytical, and disciplinary approaches that informs this collection of essays (Chadha, Vol. 2, p. xxxiii).

*Feminists and Science* is the outcome of a conference and two workshops on the general theme of feminism, knowledge production, and transformation that brought together feminists from a wide array of academic disciplines, non-governmental organizations and state departments. The final workshop was centered on peer review of articles submitted by the participants to develop a dialogical mode of understanding and knowledge-making.

Taken together the essays in the two volumes cover an impressive range of topics from women in science, the culture of science, feminist epistemologies and practices, the pedagogy of science, feminist science

fiction to writings on developing different, more inclusive ways of doing science. An excellent introduction by Sumi Krishna in Volume 2 makes explicit the overarching scope and purpose of *Feminists and Science*. Its purpose, she writes, “is to work towards a more comprehensive and grounded understanding of gender and science in India” (Krishna, Vol. 2, p. xii). Toward this end *Feminists and Science* explores the ways in which science is both similar to and different from other social institutions, how gender gets represented in science and, in turn, how scientific methods and practices are mediated by gender. Although the twenty-six essays that comprise the two volumes are case studies rooted in specific historical, social, cultural and institutional practices in India, the theoretical and analytical frameworks employed by the authors draw liberally upon international feminist scholarship in science studies. The latter has the effect of making that which is unfamiliar familiar and allows feminists across the globe to engage with the specificities of feminist scholarship in science studies in India without essentializing its difference.

Under the rubric "Women in Science" are experiential as well as historical essays on women water professionals, veterinarians, astrophysicists and psychiatrists. These essays articulate the interaction between the structural (social institutions) and disciplinary (bureaucratic, regulatory) dimensions that prevent women scientists from becoming full participants in their chosen disciplines. Here disciplinary particularities highlight the more general and systemic aspects of gender discrimination and at the same time reveal the built-in hierarchy in science itself: the less prestigious a field is in the pecking order of “the three-dimensional hierarchy of discipline, function and level” (Swaminathan, Vol. 1, p. 215), the more amenable it is to democratizing processes. Articles pertaining to the culture of science highlight the hegemonic (i.e., ideological and cultural) barriers women face in their career choices. Here the specific ways in which merit and creativity are defined and assessed in the sciences is decidedly gendered. Women’s stellar performance is attributed to their bookishness, while that of men to their inherent

conceptual clarity (Subramanian, Vol. 1). The essays also elucidate the normalization of discourse about science where critical questioning is delimited to enhance the view shared by most that “science and scientists would lead humanity up the path to abundance and equity” (Shastri, Vol. 1, p. 123). The greater good attributed to science has the effect of silencing gender, caste, and class discrimination within the sciences.

The critiques of science are nuanced and refreshing. Chayanika Shah’s insights into *in vitro* fertilization therapy, its attendant reconfiguration of the very meaning of fertility and the subtle or not so subtle conflation of creating a baby of the requisite genetic material with the natural process of conception raise far-reaching questions about the politics of gendered bodies, the construction of desire, and the feminist dilemmas surrounding these technologies that offer women choice by allowing them to exert control over their own bodies. In a markedly different context, issues of childbirth and midwifery are also central to Meena Gopal’s study of caste and gender in South Tamil Nadu. She draws attention to knowledges and practices of the “lower castes” produced under conditions of hierarchical control and coercion, extracted by the “upper castes” as caste obligation, and largely ignored and silenced in feminist practice and deliberations until recently. Here, considerations of livelihoods, markets, labor, political economy, bio-medical technologies and caste-stratified knowledges engender a host of ambivalences and contradictions that demand flexibility and adaptability in feminist thought and practice.

*Feminists and Science* also addresses issues of women’s reproductive labor in medicine, recovery of contributions and experiences of women physicians in colonial and independent India, deliberations on pedagogies in science and technology, development of feminist research methodologies, women’s ways of knowing, etc. This remarkable breadth of *Feminists and Science* is matched by the depth and thoughtfulness of its scholarship with one caveat. The question of caste haunts the collection of essays both explicitly and implicitly. However, except in

Gopal's work, it does not get the serious engagement it deserves. The shared histories of caste and gender oppression are palpable as much in science and technology as in other fields of inquiry. The lack of engagement with the burgeoning literature on caste and gender in India and race, gender, and science studies is an untoward omission. Nonetheless *Feminists and Science* is an admirable and ambitious project that will go far in establishing the field of feminist science studies in India.

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## Bio

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