

Book Review | *Molecular Feminisms: Biology, Becomings, and Life in the Lab*, by Deboleena Roy (University of Washington Press, 2018)

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The problem that motivates Deboleena Roy's project in *Molecular Feminisms* is "the lack of attention paid to developing feminist practices in the natural sciences" even as recent feminist scholarship has witnessed a "call to return to the body and to biology" (p. 135). Practicing wet lab scientists, Roy points out, have made their careers examining bodies and biological processes; the quandaries they face are not those of how to remember, recall, or include bodies and biology in their work but instead how to reconcile their research practice with feminist ethical and political principles. The dilemmas feminist scientists face concern the methods and technological procedures that are both central to their research and the object of thorough and often well-deserved critique by feminist science studies scholars. Roy gives voice and analytic life to such dilemmas by engaging the specific question that haunted her as an emerging feminist scientist: Given what feminist critics have told us about how research on reproductive technologies commodifies and exploits women's reproductive capacities, especially in economically precarious populations and in postcolonial and so-called developing nations, "should feminists clone?"

For Roy, such ethical and political questions about laboratory methods are best approached via a detour through feminist-inflected Deleuzian metaphysics. The

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relational ontology that Deleuze offers and that has been coaxed into a feminist shape by the likes of Rosi Braidotti and Elizabeth Grosz draws our attention to the fuzziness of the boundaries between objects, species, organisms, and environments as well as to the remarkable and persistent propensity towards change in bio-things. This metaphysics can spark recognition in lab scientists who, “with their hands-on experience of working with live organisms and dealing with the difficulty of experimental reproducibility,...are accustomed to witnessing the fluidity, vulnerability, and unfixed ‘nature’ of life” (p. 72).

What is particularly useful, according to Roy, is the Deleuzian distinction between the molar and the molecular, the former being the scale of objects and people with seeming boundary integrity and the latter being the scale or perspective in which categories, distinctions, and centers of gravity constantly morph. The terms “molar” and “molecular” resonate with scientists because they, too, use the terms, with the former designating concentration levels in a standard volumetric measure and the latter referring to the micro-units whose concentration is what is measured. There is not an exact isomorphism of meanings between the Deleuzian and chemical definitions, but they are close enough to allow Roy to deploy them analogically as a means for scientists to negotiate back and forth between the micro scale of the molecules at work and play in the petri dish and the meso and meta scales of politics. Indeed, suited up with this Deleuzian conceptual vocabulary, Roy takes her reader on a journey through the landscapes where feminist theory, post- and decolonial theory, and feminist science and technology studies intersect to illuminate the politics of and in knowledge production.

Roy argues that the Deleuzian distinction between the molecular and the molar allows feminist scientists to specify the socio-cultural and political-economic contingency of the concepts that scientists use to represent their research and to pose questions. Roy thus proposes that feminist scientists draw on what they know of the surprising molecular messiness of biological processes under the microscope and then use the interplay between the molecular and the molar perspectives to trace concretely the often equally messy political-economic, historical, and post/colonial stakes of prospective research findings. In thus tracing the threads of inspiration and implication up through scales to the political-economic and historical, scientists will be alerted to the ways in which histories of gender and racial exploitation and imperial self-justification have already inflected scientific research programs; they will consequently be able to ascertain how terms such as “natural” or “human” constrain research questions without seeming obviously normative. Roy suggests that in using the scale of the molar to shed light on molecular questions, feminist scientists can perceive that

seemingly impossible or impermissible wet lab research questions (about whether the cells in particular brain areas are sensitive to estrogen, which is her example) turn less on what might be the case and more on what has been taken (politically, historically) as settled.

Roy portrays these molecular-to-molar sojourns as a means for feminist scientists to reorient themselves to their own research matters, not necessarily changing what they do or how they do it but providing an ethically and politically informed framework for deciding what they do. So, on the question of cloning, Roy first talks molecules and throws cold water on the notion that cloning is a disfiguration of nature: at the molecular level, all DNA replication is a copy of a copy, which means that there is no original to be warped (p. 132). The question then is not whether copying is in itself bad but how the copying is done. Zooming up to the molar level, Roy observes that plants, agricultural and domestic pet animals, and vulnerable populations around the world are already subject to “forced modification and commodification,” which is to say that copying of various sorts is already done even if it is not always characterized as cloning (p. 151). Furthermore, in the relatively unregulated gathering of exotic genomes for research, we can see that imperialism is not just a relic of history but instead is alive and well (p. 200). Situating molecular-scale questions within the molar world of history and political economy pushes researchers to re-examine their own relationship to the micro-subjects of their laboratory research. It also gives researchers a means to specify the larger purposes and implications of their research agenda. In such multi-scalar mapping—in what is essentially a reconfiguration of the context of discovery—bacterial cloning that is undertaken for research that might support women’s reproductive rights takes on a different ethical and political valence. Equipped with this new set of perspectives, feminist scientists can decide for themselves which questions to engage and which techniques and technologies to use to pursue them.

At first glance, it may seem that Roy’s interventions serve to provide a means for scientists merely to justify what they intended to do all along. Roy herself acknowledges that “The point may not be to create ‘new or better’ methods, but rather to work within the dominant tradition—in this case, the scientific method—and gain what fresh knowledge they can from accepting the loss that accompanies the use of this method” (p. 82). But to gloss her argument as a form of exculpatory self-justification for scientists would be a mistake.

Although Roy’s intended reading audience is broad, she writes most pointedly for scientists who are feminists and who also want to engage in major wet lab

research; she wants these researchers to know that “the dilemmas that will occur by working with the traditional technoscientific practices and tools in the natural sciences should not become paralyzing and their disappointments should not stop the feminist scientist from continuing to stand in front of a lab bench” (p. 82). Faced with the prospect that feminist scientists might throw up their hands and walk away from the scientific enterprise because of the difficulty in reconciling the art of science with the critical impulses of feminism, Roy’s urgent focus on lab practices is vitally important: the daily material practices of lab work expose broadly accepted feminist injunctions and prescriptions about science as overly abstract pieties. Roy’s insistence that feminist scientists pay attention “to matters of scale” (p. 19), her recommendation that they shift between the molecular and the molar, enables feminist scientists to wander paths that bypass the orthodoxies that often organize molar-scale feminist politics and that, more distressingly, undermine feminist scientists’ autonomy and their confidence in the worth of their work. The multi-scalar intellectual perambulation Roy proposes may be disorienting, but “the movement that will occur from getting lost in this place and posing the question ‘How do I proceed?’ may bring with it a new ethical orientation toward matter” (p. 82), an orientation that, in turn, could elucidate for practicing scientists what might be a worthy research project to undertake. By the same token, Roy’s elaboration of the productivity of transversal analysis prods her readers more generally to apprehend how attention to the minutiae of molecular-scale laboratory practices might generate more finely grained critical engagement with the politics that can be found in and evolves from scientific research.

Roy situates her project in her personal intellectual biography as well as in a meticulous rendering of the contemporary theoretical landscape, with filigrees of inspiration from the Indian subcontinent and diaspora. In many respects, the book is a meta-discourse about science practice: how to think about how to think about it. But in its attention to lives lived, scholarly literatures, biochemical transformations, and political histories, it is concrete and accessible. Overall, *Molecular Feminisms* is a joyful book, thrumming with the pleasure of intellectual adventure. And as a celebration of interdisciplinary scholarship and an affirmation of the generativity of scholars reaching across research domains, the book is an instantiation of its governing metaphor—that of stoloniac grass. (Yep. I won’t explain it here. Read it; you’ll get it.)

Author Bio

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