

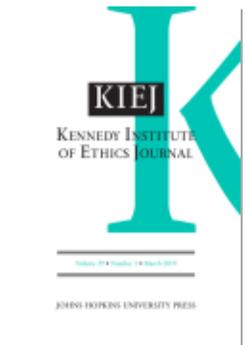


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Rethinking Reprogenetics by Inmaculada de Melo-Martin
(review)

Zahra Meghani

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Book Reviews

Inmaculada de Melo-Martin, *Rethinking Reprogenetics*, Oxford University Press, 2016

Rethinking Reprogenetics: Enhancing Ethical Analyses of Reproductive Technologies is a compact, rigorously argued volume that packs quite a punch. Inmaculada de Melo-Martin aims to provide a crucial corrective to the analyses of bioethicists who have taken to cheerleading the development and use of reproductive technologies (7).¹ She argues that they should instead carefully evaluate the goals that particular nations want to achieve by means of reproductive technologies and consider whether there is warrant for the trust placed in social institutions to address the unexpected consequences of the use of those technologies.

To realize those two aims, de Melo-Martin incisively dissects bioethics analyses that uncritically espouse reproductive technologies. She exposes their disconnect from scientific facts about human biology and gene function (de Melo-Martin has a Master's degree in Biology, with a concentration in molecular genetics). She also demonstrates that those analyses either do not take seriously or overlook the harms, risks and uncertainties associated with the use of reproductive technologies for women as well as the children who are the 'product' of those technologies. Additionally, she makes the case that such bioethics analyses betray a lack of understanding of the moral and socio-political complexities of the use of reproductive technologies in gendered, ableist, racist, and classist societies.

Following the introductory chapter, de Melo-Martin carefully explains what currently available reproductive technologies can do. Then, in Chapters 3 to 8, she outlines and critiques the arguments made by proponents of reproductive technologies, specifically, Nicolas Agar, Allen Buchanan, Nick Bostrom, David DeGrazia, Ronald Green, John Harris, Guy Kahane, John Robertson, Julian Savulescu, and Lee Silver. de Melo-Martin states that her critique has three prongs. First, it is informed by a scientifically accurate understanding of human biology and the science underlying reproductive technologies as well as its potential, risks, harms, benefits and uncertainties. Second, it is attentive to the ways in which the development and use of those technologies is gendered, and third, it recognizes that normative concerns and social contexts shape, and, in

turn, are configured by science and technology. As part of her evaluation of bioethics analyses that uncritically endorse the use of reprogenetic technologies, in Chapter Seven, de Melo-Martin argues in some detail that technologies in general are value laden. Proponents of reprogenetics appear to assume that the use of technologies can be value neutral.

In the final chapter of the volume, de Melo-Martin provides her readers with an alternative to bioethical analyses that ignore relevant particulars. She provides the outlines of a bioethical analysis of reprogenetic technologies that is sophisticated in its attention to the complex socio-political and ethical issues that shape the development and use of those technologies.

Chapter Four is a fine example of de Melo-Martin accurately presenting her opponent's position and then skillfully exposing its errors and omissions. One of the arguments that she examines in this chapter contends that the use of reprogenetic technologies by individuals to have a child of a particular sex² falls under the umbrella of procreative liberty and thus there should be a strong presumption against societal interference. de Melo-Martin makes the case that her opponent is not justified in making that claim because he has not provided evidence that the activity at issue is crucial for advancing the value that the right is meant to protect. Her larger point is that rights-based claims cannot be grounded merely on the intensity of the desire of individuals to affect a particular end, and that instead they must be based on the value relevant to the right invoked.

de Melo-Martin also finds wanting arguments that assert that parents have a moral obligation to have the (genetically) most perfect offspring possible. While such arguments are ostensibly addressed to parents, their target is primarily women of reproductive age. To state the obvious, those arguments in effect amount to a moral mandate of sorts to (a particular group of) women to lie back and think of the 'higher good' and permit their bodies to be subject to reprogenetic technologies. There is more than just sexism at work there. Given that in many nations, including the US, the use of reproductive technologies (coupled with genetic diagnosis) is available primarily to women of a certain class and given the racial disparity with respect to access to medical intervention, the exhortation to produce the (genetically) best possible children takes on a very morally troubling hue. It is also worrisome given the ethically reprehensible history and current practices of many nations with regards to the reproductive rights of persons with disabilities. de Melo-Martin points out that bioethicists err when they propose that all women should have access to those technologies as the

solution to those problems. They overlook a host of larger complex moral and socio-political questions. One such issue is the ethical and political warrant (nationally and internationally) for the use of scarce medical and scientific resources to attempt to use genetic engineering to ‘create’ children with enhanced cognitive capacities. Availability of adequate nutrition, clean water, medical and preventative care, stable and safe home environments and communities, and education are some of the factors that play a crucial role in determining academic performance of children (as does the mother’s health and general well-being prior to and during pregnancy as well as postnatally). Of course, the use of reprogenetic technologies by socially privileged individuals to realize their desire to have children with whom they share genetic material must not be accepted unquestioningly either. While that desire is conceptualized as a purely biological urge, and thus, not considered a fruitful subject of discussion, it is a socially constructed and sanctioned desire. She rightly contends that societies must interrogate that desire and the socio-political contexts that produce it.

de Melo-Martin is warranted in castigating bioethicists who theorize about the ethics of reprogenetics without taking the trouble to educate themselves about, among other things, the mechanics of sexual reproduction (such as meiotic recombination, which IVF leaves untouched), the complicated relationship between genes and other cellular “machinery”, and the complex, entangled relationship between genes, environmental factors, and phenotypes. Moreover, such bioethicists fail their profession in an important regard when they present genetic engineering as the solution to alcoholism, antisocial personality disorder, memory, intelligence enhancement, or substance addiction. There is no simple genetic fix for such problems because they are the product of a complex, complicated mix of biological and social factors. The failure of (some) bioethicists to familiarize themselves with the basic science of human biology, including gene function, even though they write about them is confounding. Such off-target bioethics recklessly veer into the realm of science fiction. de Melo-Martin contends those flawed analyses can have serious ethical and political consequences if they are used by institutions or nations to inform policy decisions or formulate regulations that govern research and use. If the uncertainties associated with the use of reprogenetic technologies are not acknowledged or if the attendant harms and risks are glossed over, they will not adequately protect women or the children they conceive using them.

By critiquing this flawed sub-strain of bioethics, de Melo-Martin, in effect, raises the larger question: how do such papers see publication daylight in mainstream bioethics journals? Clearly, at least some of the responsibility lies with the wider bioethics community involved in the review and editorial process. However, some of the blame must be placed at the door of researchers who permit the media to exaggerate the promise of their projects in the hopes of drumming up public support that translates into funding dollars.

Perhaps the most compelling feature of *Rethinking Reprogenetics* is that it is a demand for scientifically accurate and socio-politically engaged bioethical analyses about the use of reprogrammed technologies so that the public can engage in informed deliberations about funding such research and the use of the technologies and techniques they produce. Those normative decisions should not be left to scientists, bioethicists, or policy makers. While de Melo-Martin has argued that the public should be involved in making those decisions, she would be warranted in going further and arguing that in democracies the public discussions and decision-making should be particularly attentive and responsive to the concerns of the groups that would be disproportionately affected by the decisions and which have developed critical analyses of the dominant cultural narratives that assert that women are under a biological imperative to reproduce, there is a responsibility to have the (genetically) best possible children, and scarce medical and scientific resources should be devoted to the development and use of reprogrammed technologies.

Rethinking Reprogenetics will be of considerable interests to any academic audience concerned about the use of genetic technologies (or techniques) for the purposes of genetic diagnosis (or engineering) or the use of reproductive technologies. Moreover, it has relevance for policymakers, IRBs, researchers and the public in general. However, to reach the general public, a title that would easily convey to laypersons the subject of the volume would have been desirable.

All in all, given the many virtues of *Rethinking Reprogenetics*, the volume as a whole or at least chapters from it should be standard reading for undergraduate or graduate bioethics courses. Sections of it could also be used in ethics courses as an accessible and engaging model of careful ethics analysis.

Zahra Meghani
The University of Rhode Island
Kingston, Rhode Island

NOTES

1. I.e., in-vitro fertilization (ivf) employed in conjunction with genetic tools that are focused on reproduction rather than research (p.19).
2. For considerations unrelated to sex-linked mutations.

Kevin C. Elliott, Daniel Steel, eds. *Current Controversies in Values and Science*, Routledge, 2017.

As a general claim, most philosophers of science accept that science is not value-free. The disagreements lie in the proverbial details. The essays in *Current Controversies in Values and Science*, edited by Kevin Elliott and Daniel Steel focus on such details. Like other volumes in the Routledge Current Controversies in Philosophy's series, this one asks ten well-known philosophers of science to engage with various questions. Each question receives roughly positive and negative responses, though the authors' nuanced answers make clear that the contrasting views also involve significant agreement.

The first question asks whether we can distinguish epistemic from non-epistemic values. Hugh Lacey argues that such methodological distinction is not only possible but also desirable. For him, different attitudes are appropriate regarding scientific theories and attention to these different attitudes demonstrates the importance of the distinction. Epistemic—or rather cognitive—values are those that allow us to evaluate how well a scientific theory provides understanding of a particular phenomenon. Non-epistemic values, and in particular social values, on the other hand, allow us to evaluate social arrangements and social institutions and practices. Only cognitive values, Lacey contends, are relevant to deciding whether a theory is *impartially held* of a set of phenomena. But scientific theories can be more than just impartially held. They can also be *adopted*, i.e., used as basis for further research, or *endorsed*, i.e., used to inform decision-making. According to Lacey, non-cognitive values are relevant to the justification of the attitudes of adopting and endorsing, even if they do not play a proper role in impartially holding a theory.

Phyllis Rooney agrees that a general methodological distinction between epistemic or cognitive values and non-epistemic ones is possible, but she questions the usefulness of a sharp distinction. Her contention is that rather than a strict delineation, we find a “robust borderlands area” between