Reprogen-Ethics and the Future of Gender
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Frida Simonstein
Editor

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New genetic technologies have implications for all fields in medicine, but when they are combined with reproductive technologies, the prospects are staggering. Indeed, the combination is so different from that of either technology alone that it deserves a new appellation: reprogenetics

(Lee Silver, Remaking Eden, 1998)

Not only are enhancements permissible but in some cases there is a moral duty to enhance . . . enhancement is also an opportunity that it is in the interests of society and government to take . . . parents would act ethically if they were to attempt to achieve such an objective for their children . . .

(John Harris, Enhancing Evolution, 2007)
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The origin of the present volume can be traced back to the 2006 Congress of the International Association of Bioethics in Beijing. At that meeting, there was a special session on human enhancement in which panelists addressed important issues, such as biopsychological enhancements. The possibility of regulating emotions through pharmacological means, biases that may affect our judgments against human enhancement, health care inequalities that will follow from the adoption of genetic technology, the social impact and cost if the new technology is accepted, and women’s equality by genetically becoming as strong as men were all discussed [1]. John Harris, who has recently claimed that there are ethical imperatives that will inevitably lead to the further deliberately chosen evolution of the human species [2] concluded is resumed the right word? that session. None of the participants was interested in addressing the woman’s role in such a scenario; which is not necessarily surprising as one session alone cannot discuss all the issues related to a subject. Yet none of the defendants of enhancement, up to the time of writing these lines, have ever addressed women’s crucial involvement in enhancing. Moreover, Harris’ claim above seems to imply that it is women’s duty to enhance future generations. This implies that all women would be required to reproduce only by means of IVF. Nevertheless, despite the far reaching implications for women, Harris does not mention their role.

It is the purpose of this volume, therefore, to offer a comprehensive platform of discussion on the main and neglected factor in the equation of enhancing, namely its ‘vessel’. The book presents topics that are often discussed separately in bioethics, but are totally interrelated: assisted reproduction, enhancing and gender.

**Reprogenetics and Enhancing**

Reprogenetics refers to the merging of reproductive and genetic technologies [3]. These can prevent or ensure the inheritance of particular genes in a child. According to Lee Silver, the main motivation of reprogenetics is ‘the desire of parents to give all possible advantages to their children’ [4]. While reprogenetics may avoid having a child with severe impairment, it may also pave the way for genetically enhanced future generations.
Enhancing may be necessary and even morally required [5], but it remains highly controversial [6]. Some forms of enhancing, however, are more acceptable than others. For instance, genetic screening for inherited diseases and malformations, which is an indirect form of enhancing, is widely accepted. Screening for these diseases has become common in the developed world [7]. However, as more information becomes available, more tests are offered for rarer genetic diseases, some of which are milder and/or treatable. As a result, there is a growing package of genetic tests that are becoming normative in some circles. In Israel, 94.4% of secular and educated women take a wider package of genetic tests [8].

Genetic Screening: Are Women Worse Off?

Some people claim that too many genetic tests affect women badly. Larisa Remenick has studied the reasons why women pursue genetic screening in Israel and she argues that the availability of genetic screening for rarer and/or treatable diseases makes Israeli women worse off [9]. Yet, Remenick’s claim does not take into account that those who will have to shoulder the consequences of not testing (by looking after a chronically ill child) would most probably be the women, even with the best supportive health care available (which is not often the case).

In her study, women articulately explain that they want to keep ‘out of trouble’ by avoiding giving birth to a child with disease, even if this means stopping a pregnancy [10]. Thus women’s attitudes are practical and ‘prophylactic’. While many people may disagree with and/or dislike such reasoning, this approach does not necessarily make women worse off. Women also observe that men care less about genetic testing because the burden of care, in the event that a child happens to be born with a disease, would fall mostly on the women. Thus, widening the package of genetic tests seems to be helping Israeli women to make decisions based on their own needs and best interests. This is in contrast to Remennick’s conclusions.

Other Ways of Enhancing: PGD and IVF

Other ways of enhancing, however, are a very different story.

Enhancing either by choosing an embryo through pre-implantation genetic diagnosis (PGD) or by genetically enhancing gametes or embryos (when and if it becomes safe) could effectively protect future generations from ill health [11]. However, this way of enhancing will have to use techniques of in vitro fertilisation (IVF) in order to choose and/or implant an enhanced embryo (see Chapter 1). This is quite different from testing for genetic disease, which requires only a blood sample in most cases. IVF is an invasive procedure, unhealthy, inefficient, demanding and extremely unpleasant for the women involved [12]. This way of enhancing could hardly be in the women’s best interest since a not-enhanced child could be reasonably healthy [13].