Chapter X
Ethical Aspects of Genetic Engineering and Biotechnology

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ABSTRACT

In assessing the ethical implications of genomics and biotechnology, it is important to acknowledge that science, technology, and bioethics do not exist in a vacuum and are not socially, politically and ethically neutral. Certain technologies have a greater social impact, may require the State to intervene in the private sphere, and may be differentially accessible to users. Also, science and technology can change our relationship with other people and with our environment. Hence the importance of ethnographic, historical, and cross-cultural studies for the analysis of today's thorniest bioethical controversies. This chapter discusses some of the most controversial issues surrounding the use of genetic technology in human procreation and gene patenting, including eugenics, genetic consumerism, animal-human hybrids (chimeras), the commodification of life, disability and genetic testing.

A breeder of people should possess a supermanly foresight. But it is precisely those persons who are ethically and spiritually superior that are conscious of their weaknesses, and would not volunteer for such a tribunal, much the same as earlier on it was certainly not the best people who pressed for the office of Grand Inquisitor

(Oscar Hertwig, German cell biologist, 1849 – 1922).

What is the ape to man? A laughing-stock, a thing of shame. And just the same shall man be to the Superman: a laughing-stock, a thing of shame.

(F. Nietzsche, *Zarathustra's Prologue*, 3)

INTRODUCTION

Even a casual observer would not fail to notice the pervasiveness of bioethics in contemporary

society. How did bioethics come to take on such significance in Western societies? This is a rather puzzling phenomenon given that, in a pluralist society, philosophy cannot deliver incontrovertible moral verdicts and the philosophers' views are no more binding than those of the man in the street (Maclean, 1993). As logician Charles S. Peirce noted long ago, absolute certainty, absolute exactitude and absolute universality cannot be attained by reasoning and, in a world in which human reason and knowledge are socially, culturally, and historically embedded, it would be misguided to expect bioethicists to provide objective and rigorously codified precepts and indications. Their speculations can only tell us what they believe is right and fair, and their logical demonstrations must be first evaluated against the empirical evidence. Accordingly, this paper only provides one among many possible interpretations of the ethical issues involved in genetic technology, one that is rooted in a specific tradition (Continental/Mediterranean Europe), period of time (early twenty-first century), and discipline (political anthropology).

Following an account of the history of the trans-national movement known as eugenics in the opening section, the chapter then proceeds to examine the future of eugenics as a consumer purchase (designer babies) and the limits of parental decision-making, epitomised by the upbringing of Francis Galton, the founder of modern eugenics. The third section, entitled "Human nature and speciation," provides a brief outline of some of the issues arising from the Human Genome Project and also covers the debate, which is still in its infancy, on the possible redefinition of personhood and human nature that might be required by future applications of genetic engineering. Questions concerning the commodification of body parts are discussed in the third section. In the fourth section, entitled "Disabilities and genetic testing" I draw the reader's attention to the impact that biotechnologies are likely to have on the life of people with non-standard bodies and minds. In the concluding remarks I engage with libertarian bioethics, seek to identify some of its most glaring shortcomings and urge bioethicists in general to pay greater attention to social, cultural and political factors in their ethical deliberations.

A BRIEF HISTORY OF EUGENICS

The term "eugenics" was coined in 1883 by Sir Francis Galton (1822–1911), after the Greek εύγενής, meaning "wellborn". The logo of the Third International Congress of Eugenics, held in New York in 1932, defined eugenics as "the self direction of human evolution." Negative eugenics was concerned with the elimination of inheritable diseases and malformations and involved prenuptial certificates, birth control, selective abortion, sterilization, castration, immigration restriction and, in Nazi-occupied Europe, involuntary "euthanasia." Positive eugenics would instead encourage the propagation of desirable characteristics via tax incentives for "fit parents", assortative mating and, in the years to come, cloning and germline engineering.

A combination of Eternal Recurrence – human beings as expressions of an immortal germplasm – and natural teleology of history – biology as destiny – stamped the arguments of early eugenicists and genealogy researchers, who linked folk hereditarian beliefs about the transmission of patrimonial and biological inheritance and the religious notion of the inheritability of sins. They fostered notions of evolutionary throwbacks and of populations as bundles of lineages, and arbitrarily equated genealogical perpetuation with social distinction. When these deterministic explanations of human behaviour were finally challenged, eugenics did not lose its appeal. Mainline eugenics gave way to 'reform eugenics', family planning and population control, characterized by a greater emphasis on environmental factors, birth control, the rational management of human resources, and the repudiation of an overtly racist language. This