

screening as largely acceptable and the notion that any step toward genetic enhancement necessarily involves flirting with the creation of gods and monsters. Contrary to much current public and scholarly opinion that genetic technologies may be used to avoid disease and disability but not to engage in so-called genetic enhancement (Walters and Palmer, 1997, esp. pp. 47-9, 134), Silvers argues that use of genetic technologies to *enhance* individuals' capabilities (at the molecular level) may be supported by both medicine's meliorist goals and the social goals of promoting fairness and ensuring individuals' abilities to engage in the activities of a participatory democracy. It is practices that have already gained widespread acceptance—e.g., negative eugenic programs that reduce the incidence of disease by preventing the birth of individuals with particular genotypes—that instead may be contrary to medicine's goals of enhancing human well-being. Building on themes in the arguments of Carlson and Silvers, David Wasserman examines the ethics of interventions that may prenatally correct or enhance at the molecular level. His focus differs from that of other contributors, however, for he is concerned first with the effect of such interventions on personal identity and next with the moral evaluation of harms that may result from such interventions (or perhaps, by extension, the choice not to intervene). Does prenatal therapy that alters genetic structure change the identity of the zygote, fetus, or person that is subjected to the intervention? What claims might be made on behalf of the fetus either *for* therapeutic intervention or *against* replacement (i.e., intervention that changes personal identity)? Wasserman's chapter thus contributes substantially to philosophical (and legal) debate about 'wrongful life,' while like Carlson, he emphasizes the practical import of such interventions, arguments, and potential harms in people's actual lives and decision making.

The final two contributions explicitly examine changes wrought by genetics for the important social practices of medicine and law. Paul Han discusses the challenges and opportunities that genetic findings offer for the prevention of disease and promotion of health and for the evolution of the practice of medicine. His chapter argues that not only are these preventive possibilities far from unequivocally positive, but medical *genetics* is far from being appropriately the sole focus of a critique exposing the negative sequellae that can accompany a preoccupation with prevention. Han argues against such genetic exceptionalism by questioning the distinct significance attributed to 'genetic risk' and by revealing assumptions made in the course of debates about the downside of genetic medicine—specifically, assumptions about genetic determinism, the proper goals and scope of medical intervention, and benefits or evils of medicalization. As Gifford argues with respect to the notion of genetic causation, Han reveals with respect to these concepts that much of ethical import in health policy and medical practice depends on how such concepts are understood. By attending to the shift in focus in preventive medicine from the health of individuals to the health of populations, Han sheds light on the ethical tensions inherent in public health genetics, an arena of public health research and practice that is garnering political support and financial resources (Khoury, Burke, and Thomson, 2000).

To close the volume, John H. Robinson and Roberta M. Berry draw our attention to another fundamental social practice influenced by developments in genetics: the law. They focus on challenges to traditional concepts in criminal law that are presented by advances in behavioral genetics and by the consequent evolution in our understanding of concepts concerning behavior, mental states, and morality. These challenges, they recognize, come from “below”—the realm of behavioral genetics as allied with neurophysiology—and from “above”—the realm of behavioral genetics as allied with sociobiology. They argue that the appropriate response to these challenges presented to traditional notions of moral and legal responsibility—and indeed to our conception of the moral person as the sort of entity capable of such responsibility—is to defend our social judgments of wrongdoing. The conception of personhood that informs our criminal code, our social practice of punishment, and our concepts of responsibility is a major cultural achievement, one deeply embedded in a web of moral and social norms, so that this view of moral personhood may not be easily defeated, or rendered rationally untenable, by increased understanding of the “genetic person.”

This final selection highlights a key theme of the volume: discoveries in genetics do not determine the course of dialogues about such fundamental concepts as health, normality, disability, responsibility, causation, nature and nurture, the environmental, or the genetic. Genetic discoveries inform and constrain these conceptual debates and the disciplines and discourses encompassing them; however, we determine—as acts of individual and collective choice—the meanings and the import that are accorded to genetic findings. We incorporate these findings and the mutating concepts associated with genetics into various disciplines and social practices, including law, medicine, and obviously, science itself. In turn, these disciplines and practices themselves not only evolve to encompass these new findings and different or more nuanced meanings, but also to pose and pursue constantly evolving ethical, social, and intellectual goals.

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REFERENCES

- Andrews, L.B., *Future Perfect: Confronting Decisions About Genetics*. New York: Columbia University Press, 2001.
- Beurton, P.J., Falk, R., Rheinberger, H.-J., eds. *The Concept of the Gene in Development and Evolution*. Cambridge: Cambridge University Press, 2000.
- Buchanan, A., Brock, D.W., Daniels, N., Wikler, D., *From Chance to Choice: Genetics and Justice*. Cambridge: Cambridge University Press, 2000.
- Hubbard, R., *The Politics of Women's Biology*. New Brunswick, NJ: Rutgers University Press, 1990.
- Keller, E.F., *The Century of the Gene*. Cambridge: Harvard University Press, 2000.

- Khoury, M.J., Burke, W., Thomson, E.J. "Genetics and Public Health: A Framework for the Integration of Human Genetics into Public Health Practice." In *Genetics and Public Health in the 21st Century: Using Genetic Information to Improve Health and Prevent Disease*, M.J. Khoury, W. Burke, E.J. Thomson, eds. New York: Oxford University Press, 2000.
- Lippman A. Prenatal genetic testing and screening: constructing needs and reinforcing inequities. *American Journal of Law and Medicine* 1991; 17:15-50
- Morange, M., *The Misunderstood Gene*. M. Cobb trans. Cambridge: Harvard University Press, 2001.
- Silvers, A. "A Fatal Attraction to Normalizing: Treating Disabilities as Deviations from 'Species-Typical' Functioning." In *Enhancing Human Capacities: Conceptual Complexities and Ethical Implications*, E. Parens, ed. Washington, D.C.: Georgetown University Press, 1998.
- Walters, L., Palmer, J.G., *The Ethics of Human Gene Therapy*. New York: Oxford University Press, 1997.
- Wolf S.M. Beyond "genetic discrimination": toward the broader harm of geneticism. *Journal of Law, Medicine, & Ethics* 1995; 23:345-53

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