Published Review of
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By Louis Caruana

***From Chance to Choice: Genetics and Justice*. By Allen Buchanan, Dan W. Brock, Norman Daniels, & Daniel Wikler. Pp. xiv, 398, Cambridge, Cambridge University Press, 2000, £17.95 (US$29.95).**

Scientific knowledge of how genes work is giving human beings unprecedented power to shape future human lives, for better or for worse. People involved in government, business and science are facing new questions related to the application of genetic technologies to human beings. Our technical knowledge is growing fast, but does our moral wisdom grow at the same rate? The authors of this book, all renowned bioethicists, make a remarkable attempt to help professionals grow in moral wisdom.

The eight chapters taken together offer a systematic treatment of fundamental philosophical issues such as distributive justice, equality in opportunity, the rights and obligations of parents and the meaning of disability. The introduction starts by listing the major ethical principles employed in this book: the principle of justice, the principle of preventing harm, the limits on the pursuit of 'genetic perfection' and the morality of inclusion. Nowadays, when the human genome has established itself as an unavoidable topic in popular science, the authors do well to unmask at the very start the fallacies related to genetic determinism. The typical catch-phrase is: 'our fate is in our genes'. Such remarks might be excellent for promoting a worshipful attitude towards genetic science. They might be excellent for ensuring that genetic research receives a bigger share of the tax-payer's money. They cause, however, a resurgence of eugenic thinking. The authors do not mince their words. The shadow of eugenics is with us again.

In fact, in chapter two they engage in a useful historical autopsy of eugenics. The main starting points for eugenicists were two: fear of degeneration, and belief in the heritability of behavioural traits, both positive, like talents, and negative, like social misbehaviour. Social problems used to be considered basically biological in nature, thus requiring a biological solution. They used to argue also that reproduction, since it affects future society, should be controlled by the State, who should see to the 'improvement' of the gene-pool. The authors make bold in claiming that not all aspects of eugenics are unjust: 'there is something unobjectionable and perhaps even morally required in the part of its [the eugenic movement's] motivation that sought to endow future generations with genes that might enable their lives to go better' (p. 60). Chapter three introduces the theme of human nature. Are *natural* inequalities a concern for justice? The traditional view answers in the negative. Those born, say, with a less-than-average potential for intellectual ability, are not suffering from injustice. Genetic science, however, is challenging this view. For instance, genetic intervention to prevent or ameliorate serious limitations on opportunities due to disease is a requirement of justice. Certain fundamental elements of justice, like equality of opportunity, require genetic interventions in some instances, and regulating access to interventions in others. Simplistic views, however, are dangerous. The authors recall that the traits we find desirable in line with equality of opportunity – traits like altruism, initiative, cooperativeness – are complex dispositions involving evaluative judgements. They are not determined by one gene or even by a complex of genes.

Genetic interventions can be positive or negative. Both types occurred during the eugenic movements. The positive kind used to involve increasing the rate of reproduction of those harbouring the population's best traits and capabilities. The negative kind used to involve reducing the dysgenic effects on the gene pool by eliminating genetic diseases. In modern eugenics associated with genetic science, these two kinds of intervention are still present. The distinction is now between interventions for treatment and interventions for enhancement. The authors give good reasons to conclude that enhancements can be self-defeating or unfair. For instance, the pursuit of positional advantage through the enhancement of, say, height is self-defeating if everyone can do it. It is unfair if only the rich can afford it. The natural question, therefore, is: aren't parents free to use genetic intervention techniques to produce the best offspring possible? This is discussed at length in Chapter five. The crucial questions here include the following. Is there any consensus on what 'best' means? If a society

allows screening and selective abortion, will it not eliminate many lives that are worth living? The authors rightly consider this entire issue a special case of enhancement involving parents. They make the significant point that just as parents use environmental influences to ameliorate their children's future, as in education, so also they are entitled, in general, to use genetic influences, when available. Not all such efforts, however, are acceptable. For instance, efforts in pursuit of some desirable (or 'best') conditions may cause threats to public good. The most conspicuous example is the widespread, ultrasound screening practised in India to have selective abortion of female fetuses. The individual couple may gain advantages here, but society as a whole suffers from serious imbalance of sex ratios. The basic principle the authors defend in this chapter is the right to an open future: it is wrong for parents to limit opportunities that would otherwise be available to their children 'in order to impose their own particular conception of a good life' (p. 170). Parents have a duty to help their children develop capacities for practical judgement and autonomous choice as they face life's variety of possibilities.

In the next chapter, we find a systematic analysis of the scope, limits, and content of reproductive freedom. This freedom is being challenged by new genetic knowledge just as it used to be during the time of the old eugenics. The principle of protecting reproductive freedom is curtailed by the obligation to prevent genetically transmitted harmful conditions. It is true that in most cases, prospective parents will act in the best interests of their children. This however is not true in every case. Serious moral issues arise when there is a failure to prevent what the authors call wrongful life or wrongful disability. The authors have the merit of presenting this complex area by distinguishing between the crucial questions. Even though the dignity of unborn human life is not given the attention it deserves, which is a serious shortcoming, further research can hardly overlook this chapter. More ethical analysis is presented in chapter seven. How, when and by whom should genetic intervention technologies be employed? There is an allegation that the new genetics is exclusionary. Just like the old eugenics, the new genetics promotes exclusion rather than inclusion. People who are physically challenged because of some disability are now considered carriers of 'bad genes' just as they used to be by proponents of the old eugenics. The authors' analysis of this and related problems results in the awareness that the new genetics does indeed provide weapons for exclusion. Care and responsibility are essential. As regards public policy, the authors claim that a liberal society might embark on a pro-

cess of genetic perfectionism within the limits of justice so long as it does not facilitate serious harm and does not infringe on individuals' reproductive freedom. This may be done by encouraging rather than coercing or pressuring prospective parents to make use of enhancement technologies.

The two appendices at the end of the volume are of considerable value. For lack of space, I will mention only the second one. It is about method in fundamental ethics, at least as conceived of in this book. If moral reasoning were nothing more than the application of a small number of principles to all cases, old and new, it would suffer from over-simplification. It would not recognise (and therefore would not learn from) the real novelty of genetic discovery and technology. The authors insist that there is indeed no harm in articulating principles. They must, however, be articulated in line with reflective equilibrium. Various parts of the system of moral beliefs need to be continuously tested against other parts to ensure the highest degree of coherence. Here, some readers might object that such a method tends to place all moral principles on the same level of importance. The objection is valid, because there needs to be some safeguard against the majority trend becoming the only determining factor for basic moral principles. Admittedly, the authors do touch on this issue: 'it is, therefore, simply a mistake to assume that in carrying out democratically derived policies, the government or society is taking a stand one way or another on the justifications that the proponents of those policies advance to gain majority support for them' (p. 344). A majority decision is not necessarily a good decision. This is an important point. What is lacking is a mention of the responsibility of the State not only to remain neutral but also to support the genuine search for truth. Proponents and opponents of a given policy need to be publicly reminded of the importance of their mission. They need to be supported in their efforts towards the truth. Otherwise, we might end up with a situation where the State's neutrality contaminates the entire society with moral lethargy. Young people would grow up believing that seeking the truth via responsible debate is a non-starter. For those who are convinced that truth does exist in moral matters, this is a very disturbing prospect.

The above summary can hardly do justice to the number of worthwhile arguments presented in the book. The authors' project of not producing an anthology of separate articles, but a multi-authored book succeeds well. The result is certainly not the last word on bioethics; but, as an updated systematic survey of genetics-related

moral questions, this will remain for years a very useful point of reference for professionals in philosophy, bioethics, law, and political science.

Louis Caruana
Pontifical Gregorian University, Rome