From an Autopsy of the Old Eugenics to the Challenges of the New Science of Genetics

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Book Reviewed: *From Chance to Choice; Genetics and Justice* by Allen Buchanan, Dan W. Brock, Norman Daniels, and Daniel Wikler. Cambridge University Press, 2000.

The book *From Chance to Choice: Genetics and Justice* mainly addresses the challenges that the new genetics poses, or could pose, to traditional ethical precepts. It also explores how new ethical principles evolve in response to new scientific and technological challenges and new social practices. The basic premise from which Buchanan and his associates begin their analysis is the very simple but key assumption that the ethical understanding of every age is a corollary of concrete social problems. They also underscore the point that the new ethics that comes thereof should in turn guide and shape the social practice within which it itself develops. Reflective equilibrium comes in here – a procedure that helps us to revise ethical theories in terms of specific moral judgments, and, on the other hand, this is a procedure in which our specific moral judgments are sharpened in terms of ethical theories.

In the face of the new genetic science and the possible advance it might soon rise to, the book asks whether the present day moral bed is well made to enable us deal with unusual moral dilemmas and perplexities. One way of picturing the best possible extremist situation that societies could turn to is to construct imaginary scenarios. Accordingly, the book provides us with five such constructions or pictures. Among these, Scenario No. 1, for example, confronts us with an imaginary community of 'cult' devotees who

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decided to use cloning technology in order to reproduce its leaders in numerous copies so that the cult, and hence the group, could be sustained. The possible moral dilemma that arises from this is whether government authorities should give a free rein to such an attempt. In case of nonintervention, there follows the danger of the unknown – questions such as, "Where do we stop applying genetic technology?" "What if, to use the often used scenario, one employs it in order to raise an army of Nazi like soldiers?" are worth considering. In case of endorsing intervention, on the other hand, we are faced with the dilemma of whether we have to trample on the rights of communities to indoctrinate them with beliefs either through ordinary means (like preaching) or using genetic technology in the form of cloning those highly devoted followers of the cult.

The other scenario worth mentioning here is the enforcement of "mass genetic screening" so that potential parents can have the foreknowledge about certain diseases before they decide to bear children. A closely related but far more controversial scenario is the one which advises people to have "the perfect baby." The issues at hand are, Where do we stop to accept a child as a perfect one? Where is the limit? Who sets the standard for the perfect child? Is it intellectual sharpness or physical robustness that counts? What if, for example, deaf parents would like to bear deaf children like themselves?

These are not of course the only scenarios in view. The authors have hypothesized more of them. One might as well go further and put up other interesting scenarios. As always, the rational behind such construction of ideal situations is, among other things, to see the extent to which our moral judgments and theories are prepared to grapple with entirely novel conditions. The scenarios are, in other words, moral laboratories.

The book does not limit itself to the exploration of the implications of these scenarios, however. Interestingly enough, it shuttles us back to the age of eugenics so that we can reflect upon the future shock that the new genetics science might give to our moral stamina. Eugenics is a science of improving the human race by selective breeding. The term was coined by Francis Galton in 1883 (about fifteen years after he launched it as his research programme). He then characterized it as a "science of improving stock – not only by judicious mating, but whatever tends to give the more suitable races or strains of blood a better chance of prevailing over the less suitable than they otherwise would have had" (Quoted in Buchanan *et al*

2000: 30). Buchanan and co discriminate between two types of eugenics, namely positive and negative eugenics. Positive eugenics is "encouraging the most fit to have larger families," whereas negative eugenics is the act or science of "curbing the fertility of those judged least fit" (p.32).

Eugenics was also a social movement in Britain and the United States beginning around the end of the nineteenth century (p. 31). Soon it spread to Northern Europe including countries such as Denmark and Germany. Eugenics had been closely associated with racist projects in countries such as the United States, Germany, and Sweden. Around the first few years of the 20th century, involuntary sterilization was part and parcel of the medical, or rather political, thinking and practice of these countries. In Nazi Germany, especially, it was widely practiced in view of attaining "racial hygiene."

> Eugenics was central to the entire Nazi enterprise, joined with romantic nativist and racist myths of the purebred Nordic. The emphasis on "blood" called for a purifying of the nation's gene pool so that Germans could regain the nobility and greatness of their genetically pure forebears (p.37)

A programme known as the 'euthanasia of the unfit' had been realized in order to exterminate young children in Germany. This finally led to the Holocaust which was intended "to prevent further adulteration of the 'pure' German nation with inferior genes" (p.37).

This does not however mean that eugenics was entirely devoted to such evil ends. It might have also been pursued with good intentions. The initial interest of scientists in eugenics could be taken as a case in point. The issue at hand here is: What can we learn from the old eugenics so that we can transport them to the new genetic science?

Assuming that the two scientific enterprises do have something in common, Buchanan and co are trying to examine, or to take their own expression, to take an ethical "autopsy" of eugenics in order to draw the implications for the new genetic science. What makes the analysis interesting is that eugenics is used both as a scenario and a historical phenomenon. As a scenario, eugenics could help us to imagine and explore the possible moral dilemmas that the new genetics could bring about. As a

historical phenomenon, it would help us to visualize the damages as well as the merits that the future of genetics may have in store for us and make the necessary preparations.

From Chance to Choice thus deals with eugenics as a spectacle through which we could look into the ethical dilemmas that the new genetics could bring about. In this regard, it raises the very important question "Why was eugenics wrong?" In asking this question about eugenics, the text is in a way posing it against the new genetic science, which the authors sometimes call clinical genetics. Five different theses are put forward here.

As its title hints, this review will focus on what Buchanan and co-authors have coined as "ethical autopsy" of eugenics in light of which we can explore the possible direction and developments that the new genetic science might follow. In this regard, we will discuss the five theses formulated by way of answers to the question "Why was eugenics wrong?" in order to grapple with the question "Why will, or where could, the new genetics science go wrong?"

Thesis No. 1: Replacement, not therapy. According to this thesis, eugenics is preoccupied with the idea that better people should be conceived and born. That means, it is not a programme that tries to improve the genetic quality of any people. Its motivation is to work on those who already were considered "better stock" and not a therapeutic one for those who are supposed to have defective genes. Certain frightening consequences could be mentioned. First, those who are presiding over the programme might go for the wrong traits either when simply acting in good faith or out of evil intentions. Parallel to this, it is very legitimate to raise similar ethical concerns surrounding the future genetic science: What if geneticists select the wrong traits? Who can determine which traits are good or bad?

The second worry is that since those who practice eugenics might opt for, out of prejudice, a few selected traits, they could ultimately come up with uniformly characterized breeds of people. In this case, the value of diversity would be seriously threatened. Similarly, when it comes to the new genetic science, the value of diversity could be seriously undermined. This is not a new concern of course. The danger of xeroxing people has become one of the often cited scenarios that most science fiction books and

films addressing the theme of genetics have been trying to show for some decades now.

Thirdly, when eugenics is practiced in order to breed the better stock in society, the problem of stigmatization naturally surfaces. What about those at the bottom of the ladder in the genetic make up? Aren't they exposed to stigmatization and reduced to highly traumatic conditions? And, worse still, couldn't their marginalization ultimately force them to die away as a community? These same questions could also be applied in the case of developments in the new genetics.

According to Buchanan *et al*, these problems could be legitimate concerns. But then, the authors seem to argue, these possible problems wouldn't be unique to eugenics (as well as to genetics). For them, these problems might have as well been engendered by other projects and policies: "Some of the same concerns about stigmatization could be raised in opposition to programs that seek to ameliorate conditions, such as deafness, among existing people: for why try to 'cure' a person of deafness unless it is undesirable to be deaf?" (p.47). On top of this, so the authors seem to argue, the concerns under discussion might not be plausible concerns at all.

Thesis No. 2: Value pluralism. This thesis reminds us of the threat that eugenics could have to pluralism, i.e. pluralism in terms of individual characteristics of human beings as well as their values and ideals. According to Buchanan and co, this is not of course an implausible issue even for the new genetics. The question worth considering at this point is: 'Who is going to determine the attributes or criteria for creating the best possible human being?' The authors believe that this question must be a real concern for the future of genetics: "...pluralism of ideals and values may turn out to be a crucial issue. Parents who choose not to avail themselves of genetic screening or engineering for avoiding short stature in a child might be condemned by neighbors for failing to ensure that their child would be 'normal'." (p. 49).

Thesis No. 3: Violations of reproductive freedoms. As pointed out above, forced sterilization was one of the atrocities that eugenicists had done in the United States and some West European countries around the beginning of the last century. It is therefore true that eugenics clearly violated the

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reproductive freedoms of economically downtrodden and racially discriminated people. One of the central concerns of human rights activists and ethicists is whether what had been accomplished by eugenics could be reproduced by the new genetic science. Yes, the atrocity in question might not be repeated in its crude form. Genetic clinics might instead employ very subtle methods in order to identify and sterilize those whom they consider as bearers of defective genes so that they could not reproduce. In this regard, speaking in terms of ethics, there are certain values at stake if reproductive freedoms are violated. In the first place, 'individual self-determination or autonomy' would easily be jeopardized. Secondly, the contribution that reproductive freedom has in terms of the maintenance of the well-being of individuals would be undermined – for example, having a reproductive freedom bestows one with an immeasurable psychological satisfaction. Thirdly, the principle of equality between women and men would be negatively affected. That means, if reproductive freedom is under attack, existing unjust gender disadvantages would simply be perpetuated because women are obviously much more vulnerable as far as reproduction is concerned. Solving this problem would also help to mitigate variety of gender discriminations that are not specifically related to reproduction. (pp. 214-222)

Thesis No. 4: Statism. Many eugenic projects in the past were mainly supported by governments which were principally responsible for many of the crimes committed. Now the question is: Could rolling back governments from intervening in genetic engineering projects help us to minimize possible misdeeds? Buchanan and co maintain that "denying a role to the state might hasten eugenic evils rather than protect against them." On the other hand, bestowing a strong role to the state might not still help to avert crimes completely, resulting in an ambivalent situation.

Thesis No. 5: Justice. Eugenics cries wolf that the genetic pool is degenerating. It therefore warns that humans should submit to mass screening programmes. The central ethical concerns at the time were: Who would gain from such programmes? Who would be victimized? In fact, at the time eugenics was a popular movement and a research programme, members of the "underclass" as well as supposedly racially 'inferior' groups were constantly subjected to sexual segregation, forced sterilization

and murder because these were supposed to be the people "whose genes were not wanted" (p.52) whereas people who are at the apex of the hierarchy of social classes (including the eugenicists themselves) were supposed to benefit. Thus, in the name of creating a "better society," a great deal of injustice was committed. The distribution of burdens and benefits in the public health sector was unjust. Claiming that their principal concern was public health, eugenicists faced the problem of striking a balance between personal liberty and public interest, if at all the latter is public interest.

Having seen the central moral concern that eugenics gave rise to, we now ask as to what we can transport to the new genetic science. Buchanan and co writes:

> In our view, the key issue in appraising the shadow cast by the eugenics movement on clinical genetics have an individual focus as opposed to a social one. The social goal is not automatically suspect. What matters is whether either goal is pursued justly. In particular, the fact that the prospect for better health – even enhanced functioning, apart from health – in the next generation is a worthy goal, other things being equal, does not in itself show that this goal would justify restrictions on liberties, social inequalities, or other measures that are suspect from the perspective of justice (p. 55)

Crucial issues of justice within the context of the new genetic science include violation of reproductive freedoms, the issue of control over genetic data, and whether natural inequality has any significance in determining distributive justice. Since I have discussed the first issue, i.e. the potential that clinical genetics may have in infringing reproductive freedoms, I will pass to the other two. The question "Who controls the genetic data?" would be one of the central questions to the new genetics science because the scientific and technological development in the field would lead to the screening of people en masse. This would in turn lead to the formation of divided genetic pools. People who have been proved to be healthy as a result of genetic tests would exclude those whose tests reveal that they are vulnerable to different diseases. The fact that these tests reveal one's genetic identity and hence encroach on one's right to privacy and confidentiality of personal information may categorize the matter as a concern of only

medical ethics. However, when we especially think of the divide between those who know that they are of a better genetic stock form those whose tests reveal otherwise, it would be deep down a concern of distributive justice. Subjecting people to genetic tests would obviously turn many vulnerable to discrimination by employers, insurance providers, etc. This fear, that the new genetics could be exclusionary like the old eugenics, is already felt with respect to the level of development that clinical genetics has at this moment. As Buchanan and co explore the matter in chapter 7, disabilities rights movements have played a great role in alerting people towards this problem. Referring to members of such movements, the text stresses further:

> Indeed they have been pioneers in exploring the morality of inclusion that most moral theorists have lamentably neglected. While the theorists have concentrated on the problem of how to distribute the burdens and benefits of social cooperation among those who have ready access to the cooperative framework, disabilities rights advocates have rightly emphasized that there is a more basic moral issue: How can our cooperative frameworks – and above all our attitudes toward those who have disabilities – be modified so as to achieve greater inclusion? (p. 303).

The other question is, since initial researches in the field of genetics is publicly funded, should genetic services (such as gene therapy) be given to those who can afford to pay? At the international arena, whether benefits of genetic engineering in the fields of medicine and agriculture should be shared with poorer countries (probably on the basis of globalizing Rawls' difference principle) is another critical question worth considering under the domain of distributive justice.

Most of these questions are more or less standard moral questions related to the issue of distributive justice. Whether we have to include natural inequality in the domain of justice is, however, an unprecedented issue that the book under review is inviting us by way of a fresh ethical banquet. And it is this apparently novel concern that I am going to discuss in order to close this review.

In the past, natural inequalities were not treated as relevant variables for, or as part and parcel of, the domain of distributive justice. Buchanan and co start their reflection on their new point of view by criticizing John Rawls for overlooking natural inequalities in his matrix of distributive justice. Rawls

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in fact notes that it is unfair to use natural abilities and talents as a basis for distributing social goods. This does not however mean that he is taking natural inequalities as factors worth calculating. Buchanan and co write:

> ... a closer reading of the text [Rawls' *A Theory of Justice*] suggests that Rawls does not seek to address natural inequalities under the heading of equality of opportunity. Instead, he appears to restrict equal opportunity to efforts to counteract the opportunity-limiting effects of unjust social institutions (i.e. the social structural version), while noting that the operation of a distinct principle of justice, the Difference Principle, will do something to mitigate the effects of natural inequalities. (p.68)

On the basis of the arguments of philosophers such as John Roemer, Richard Arneson, and G.A. Cohen, Buchanan and his associates contend that equal opportunity must not be restricted to equality between those with the same talents and capacities:

> ...an individual's place in the distribution of natural assets can severely limit her opportunities even in case in which she does not suffer from anything that would uncontroversially count as genetic disorder or a disease....Under such conditions, those whose genetic constitutions prevent them from reaching the needed threshold of abilities will experience significant limitations on their opportunities unless something is done to overcome this impairment. (p. 71)

In many of the industrialized countries, medical interventions are actively employed in order to compensate for the disabilities individuals suffer from. In the age of the new genetic science, interventions in the form of genetic enhancements or gene therapy might create enormous possibilities in order to bring individuals to a similar initial condition.

Paradoxically enough, such positive promises would at the same time introduce so many complications in the organization of society and the moral life of its members. New legal and ethical dilemmas would crop up. Society would be forced to choose between positive or negative genetic interventions (which means whether society has to encourage the healthy ones to reproduce and preclude those who carry defective genes), between the public health model (a model that calls for genetic, or for that matter medical intervention for society as a whole) or the personal service model (a

model or programme that targets the individual), between treatment and enhancement of genes, etc. (p. 307).

Authors of *From Chance to Choice* have, however, taken these distinctions as nothing more than 'rules of thumb', which in turn should depend on more fundamental principles of morality. Since these rules themselves depend on "higher-level principles of morality and justice" (p. 308), so they contend, we need to go beyond known principles of ethics and look for new or more appropriate ones. In other words, the basic principles and values of moral and social philosophy would be challenged for they would have only little or no significance to the new situation that genetic revolution would occasion. As pointed out at the beginning of this review, *From Chance to Choice* puts the principle of reflective equilibrium to use so as to show that fundamental moral principles and values must be subject to change in light of the new state of affairs that the new genetic science would create.

By way of summing up: We would like to bring up a couple of problems that we think are overlooked or dealt with only inadequately. On the basis of the moral autopsy of eugenics, Buchanan and co have tried to defend the new genetic science. They argue that it is not something flawed by itself. Society can make use of genetics for a good or bad end. Thus, these writers seem to suggest that genetics, as a science or new technological development, is something neutral, a position which is reminiscent of the stance in philosophy of technology, namely technology is not good or bad in-itself. And yet, Buchanan *et al* very well recognize the immense potentiality of genetic engineering to give birth to new moral problems and dilemmas. But how can something neutral give rise to novel moral discourses? Such a question must have been accommodated in the line of argument that these authors follow.

The other problem is more fundamental. The social context in which the book discusses about genetic interventions is "a just and human society." Now one may raise the pun[‡], if the society in which genetic interventions are made use of is a just and human society, it is difficult to presume that there could be injustice. In other words, as long as the society is just and

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[‡] we have also come across a commentary that emphatically addresses this problem as one of the flaws of the text. This is: Wenz, Peter. 2005. "Engineering Genetic Injustice," *Bioethics*, Vol 19, No. 1.

human, genetic enhancement could be done to everybody – hence there would no be any room for injustice. On the other hand, if genetic enhancement is for those who can afford, it means the society in question is not just and humane, in which case clinical genetics will rather create immense space for gross injustices like it was in the case of eugenics. Again here, the authors do not seem to anticipate such a challenge and hence do not try to address it. Unlike the setting we are provided with here, more severe and basic moral dilemmas could be thought of were it a society in which a variety of unjust acts are committed.

Nonetheless, despite such ambiguities, *From Chance to Choice* is a seminal work discussing core ethical issues surrounding the new genetics. Central moral concerns like autonomy, freedom of choice, beneficence instead of harming others, and justice have been addressed, and addressed very well along with technical-scientific stuff that the development of the field has achieved and, in some cases, might be coming to achieve in the future.