

THE CASE AGAINST GENETIC PERFECTION

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The ghost of eugenics has not yet been laid to rest. Far from it! It is sticking up its ugly head in ever new ways. Today it is not taking the form of enforced sterilizations of criminals and mentally disabled people. And unlike the state envisaged in Plato's Republic, today's state does not by devious and deceptive means promote the breeding of those deemed to possess superior characteristics.

Today's eugenics is what is called liberal eugenics. This means that it is not enforced by agents of the state. Liberal eugenics presently takes the form of prenatal and pre-implantation screening and diagnosis with a view to avoiding births of children with genetic or other illness. Of course, prenatal diagnosis is a two-edged tool. It may either be used to promote a healthy pregnancy and a safe delivery or it may be used as a diagnostic tool with a view to selective abortion. Today's health services are eugenic inasmuch as they assist in the elimination of unborn children on grounds of foetal abnormality. That is, they assist in the elimination of unborn children with undesirable conditions, such as Down syndrome, Cystic fibrosis and dwarfism. The list of such conditions is long--and it is getting longer and longer. The medical profession and parents-to-be cooperate in the practice of liberal eugenics. There is no use of force. But in most western countries the pregnant mother is encouraged to have tests to rule out certain diseases in the unborn child. Indeed, today it is an institutionalized practice to offer tests that may indicate foetal abnormality. And if these tests are positive, they are followed up with more precise diagnostic tests. It is because tests with a view to selective abortion have become an integral part of maternal health service programmes that they deserve to be called eugenic.

Needless to say parents want healthy children. And so does society. To be sure, parents want nice looking, healthy, pleasant and clever children. There is nothing wrong in that. But the question is to what length parents and the medical profession should go in order to promote births of perfect children? At present liberal eugenics takes the form of negative eugenics. It seeks to avoid imperfection by means of 'weeding out' unborn children with certain conditions. There is, however, talk about the possibility of supplementing liberal negative eugenics with a form of liberal positive eugenics. There is talk of making sure that children will be born with superior or above normal mental and physical abilities as well exceptional physical health and attractiveness.

Gene therapy is thought to hold out hope of curing or eliminating many diseases as well as improving future generations. That is to say, tomorrow's eugenic practices may include not only negative eugenics to avoid births of children with various forms of imperfection, but it might also include positive eugenics involving genetic manipulations with a view to promoting or ensuring births of perfect children. Now doubt there are many people who would welcome this prospect. And why should we not seek to have perfectly healthy children and, if possible, perfectly intelligent and beautiful ones as well? What could be wrong with that?

Professor John Harris for one sees nothing wrong with genetic interventions for either purely therapeutic or enhancement purposes. He heartily welcomes not only the prospect of genetic alterations aimed at eliminating genetic illness, but he also welcomes the prospect of genetic alterations aimed at producing children with socially desirable traits such as above normal intelligence or musicality. He says "the overwhelming moral imperative for both therapy and enhancement is to prevent harm and confer benefit". He even says that he "defends human enhancement" and that "not only are enhancements permissible but that in some cases there is a positive moral duty to enhance".



I would not disagree with him when he says that overwhelming imperative for therapy is to prevent harm and confer benefit. And if he welcomes vaccination as a form of enhancement, I would not take issue with him either. Vaccination to avoid various kinds of infectious disease has been a life-saving invention. It should be welcomed as such. Enhancement taking the form of promotion of above normal musicality or blue eyes and blond hair is, however, a different matter. There are good reasons for having serious concerns about enhancement taking the form of genetic manipulations aimed at producing children with certain superior intellectual or physical capabilities or exceptionally good looks.

First of all, I think it is overly optimistic to hope that in the future it will be possible with the help of genetic manipulations to design children at our pleasure. In particular it would seem overly optimistic, indeed unrealistic, to hope that we shall one day be able to design and produce children with extraordinary intellectual skills, just as today we are able to design and produce motor cars with superior acceleration. It seems rather unlikely that something like intelligence—whatever it is—can be linked to just one or two genes that may easily be manipulated. The enormous progress in genetics in this century, and the last, has, however, promoted the belief that our genes determine nearly everything about us as individual human persons. But to attribute all or most human characteristics or conditions, mental and physical, to genes is to underestimate the importance of other kinds of cause and explanation for these traits. This is true for multifactorial human illnesses and physical traits such as height, which might be partly related to diet. It is undoubtedly even truer in the case of intellectual skills and other personality traits and behavioural characteristics.

There is a danger of overestimating the extent to which we are genetically determined. Belief in genetic determinism could result in an overriding emphasis on ensuring that children have good genes. As a consequence the traditional emphasis on good parenting and education could become less important. We must not over estimate nature at the expense of nurture. No technological fix can replace good parenting and good education.

Indeed, in this paper I shall argue that the tendency to geneticize promotes hubris and Promethean aspirations and that there are social and moral dangers linked to aspirations to produce genetically perfect children, that is, children born with superior abilities or extraordinary physical appearance and health.

I agree with John Harris when he says that too much has been made of the distinction between gene therapy and genetic enhancement. To begin with, the same kind of gene manipulation might be used in either case. In either case germ-line gene therapy technology- that is, technology that involves altering the genes in sperm, ova or the early embryo in order to eradicate a hereditary disease- might be used. And the effects of this kind of gene manipulation would be hereditary, which is a major cause for concern. Should things go wrong the adverse effects would be carried on to future generations. The case is different with somatic gene therapy. It is like conventional therapies inasmuch as it only affects treated individuals. That said, somatic gene therapy might also be used for both therapeutic and enhancement purposes. It might be used to cure a genetic disease as well as to enhance a trait such as muscular strength.

A second reason for not making too much of the difference between genetic enhancement and gene therapy is that our perceptions of health, illness, normalcy and perfection are to a degree relative, wherefore in reality we can draw no sharp line between therapy and enhancement. There are borderline cases such as the correction of crooked teeth. There are other cases, such as vaccination, which we might find difficult to place clearly in either camp. That said, there are clear-cut cases as well. There is obviously a difference between attempts to eliminate diseases such as cystic fibrosis and thalassaemia, on the one hand, and attempts to promote or impose skills such as musicality or traits such as blond hair, on the other.



Unlike John Harris I would, therefore, say that there are good reasons to be more concerned about genetic enhancement than about gene therapy to cure or eradicate disease. And yet there is cause for concern about germ-line gene therapy as well and this is not only because of the medical risks that might be involved. All forms of genetic manipulation might involve medical risks. In the case of somatic gene therapy technologies the only people at risk of medical mishaps are the particular individuals treated. In the case of germ-line gene therapy technologies future generations are at risk. While these medical risks are real and should not be underestimated, I want, however, to point to the social and inter-relational risks of both genetic enhancement and germ-line gene therapy to eradicate disease. These kinds of risk are another reason for not overstating the difference between genetic enhancement of future generations and germ-line gene therapy to eradicate disease in future generations.

To be sure some of the worries that tend to be voiced specifically vis-à-vis genetic enhancement of future generations are also in place in the case of germ-line gene therapy used to eradicate disease. Yes, applicable to both is the warning given in the Vatican document *Donum Vitae*, of 1987, that while our new technologies 'might constitute progress in the service of man', they may also 'expose him to the temptation to go beyond the limits of reasonable domination over nature'. Also applicable to both is the warning given in the more recent document *Dignitas personae* of 2008. Here we are warned that the child-to-be should be recognized as our equal and, hence, that 'no one may subject the coming of a child into the world to conditions of technical efficiency which are to be evaluated according to standards of control and dominion'.

In order to highlight the kind of concern I have in mind, it is best to start by looking at the case of genetic enhancement. A major objection to genetic enhancement is that it would involve wrong attitudes towards the child. This is because it would mean treating the child as product expected to meet certain standards, standards that might be socially conditioned or purely subjective. At issue are human attitudes and aspirations that might undermine the welcome of the child as a gift and deny it the respect it deserves as another person and as such our equal in human dignity. At stake are intergenerational relationships. To create a child with a view to it meeting certain standards of perfection is not to treat it as an equal. As noted in *Dignitas personae*, genetic enhancement would 'imply an unjust domination of man over man'.

This is obvious if we compare education with genetic enhancement of a child's intellectual skills. Attempts at germ-line genetic enhancement would be attempts at altering the initial potentials of our children. Education, by contrast, promotes the initial potentials that they are originally given by nature. More important still, education, the traditional way of seeking to influence and improve the young, involves inter-personal communication. Proper education, rather than psychological manipulation, or the exercise of authoritarian manipulation and pressure of a 'tiger mother', means engaging with the learner as a person. It is a two-way personal process. It entails inter-personal communication. It does not curtail the intellectual freedom of the learner. It is by treating the learner as a person and allowing him to respond to what you set before him that he will learn.

Genetic enhancement, by contrast, is totally depersonalizing. To treat the child as something to be programmed by means of genetic manipulation in order to make it perfect is not to treat it as another person made for inter-personal relationships and communication. It denies the child the freedom to respond. It means treating the child as mere material, rather than as someone with whom to inter-act. Failing to give the child an unconditional welcome, it means seeing the child not as a gift but as fabricated product.

There is a similar cause for concern in the case of germ-line gene therapy. The use of this technology, even for purely therapeutic purposes, could also involve wrong attitudes and aspirations. That is, attitudes and aspirations that undermine the welcome of the child as a gift and deny it the respect it deserves as a person and as such our equal.

Indeed, zealous use of germ-line gene therapy to produce the perfectly healthy child could serve as the other side of the coin compared with prenatal testing combined with selective abortion to avoid an imperfect child. Since today we allow liberal negative eugenics by way of weeding out those viewed as less than perfect, the fear is that tomorrow we might resort to liberal positive eugenics by means of both genetic enhancement and germ-line gene therapy used for strictly therapeutic purposes in order to breed what we see as perfect children.

That is, germ-line gene therapy, like prenatal testing, could turn out to be a two-edged tool. If used to eliminate clear cases of burdensome genetic disease such as Cystic fibrosis and thalassaemia, germ-line gene therapy might be acceptable and welcomed. But were it used to overcome any kind of genetic trait viewed as a weakness or as an imperfection, it would effectively be used in the same spirit as genetic enhancement. And just as it is sometimes suggested that it is irresponsible to bring a Down syndrome child into the world when it could have been avoided, in the future those who fail to avail of germ-line gene therapy (as well as those who fail to avail of genetic enhancement to produce perfect children) might be castigated as irresponsible. Moreover, if parents felt that it was their duty to produce nothing but a perfectly healthy child, they would not easily accept whatever came or was given them by God or nature. The less healthy child, who failed to live up to expectations, would risk being shunned or even discarded post partum.

In other words, there is the risk that germ-line gene therapy in order to eradicate disease might in the future be used as a means of liberal positive eugenics. This is a cause for concern since, like negative eugenics, positive eugenics would involve discrimination and a failure to unconditionally accept and welcome the child. Any form of eugenics involves discrimination based on the view that some individuals are unwelcome or are less welcome than others. Eugenics, whatever form it takes, means usurping powers over the lives—and deaths—of others, while failing to recognize our creaturely limitations and the fact that true perfection is not of this world.

The traditional remit of medicine is that of healing and of alleviating painful or debilitating symptoms if healing is impossible. By contrast germ-line gene therapy treats not actual patients, but future people. This makes all the difference. It is why we should tread carefully in the case of germ-line gene therapy. True, the elimination of disease is very different from the elimination of people with disease. True elimination of disease is a kind of restoration of health, whereas enhancement is associated with efforts to produce something over and above ordinary health and normalcy. Nonetheless, genetic modification of future generations in order to eliminate whatever we perceive as a disease weakness would involve commodification of the child. Like all eugenic aspirations it would both reflect and promote the view that some lives are not worth living.

Not content unconditionally to accept the child-to-be as a gift, it would seem that we are increasingly on a quest for the perfect child. But the attempt to create the perfect child, or the perfectly healthy child, is an attempt to play God. As such it is an attempt at unreasonable domination over nature. Speaking in Christian terms, it represents a failure to recognize the image of God in each and every human being irrespective of his or her skills, looks or health. But as noted by Pope Benedict XVI, 'if I have no contact whatsoever with God in my life I cannot see in the other anything more than the other, and I am incapable of seeing in him the image of God'. And unable to see in the other the image of God I easily fail to recognize his human dignity. And when I do so fail I might be tempted to treat him instrumentally or find in him a value primarily insofar as he pleases me or satisfies my desires, aims or ambitions. So the question is: How will gene technology aimed at perfecting the health of future generations be used in the hands of a technocratic and secular world?

That said, we might ask ourselves what kind of society we would like to live in. Those who wish for a society of perfect health overlook that the disabled, the ill and the frail have much to contribute to human society. Those who suffer from disease and infirmity may teach us bravery in face of adversity and stoicism in face of suffering. By appealing to our hearts when calling out for love and help, they may also teach us to be more humane and caring. If widely used to rub out differences and make everyone conform to particular ideals of physical and mental health and perfection, germ-line gene therapy, and enhancement gene technology, could arguably impoverish our society.

That said, as rational creatures we fight and resist frailty and disease. And rightly so! Saying this, I am not contradicting what was said above. Disease is not a good in itself. But it can serve as a means to make us better people. Moreover, we should accept that we shall never be able to eradicate all disease and human frailty. Frailty and death are part of our human creaturely condition. Allowing some imperfection is to accept our creaturely and mortal nature and to make room for all.

Of course, the use of technology may, as Pope Benedict XVI says, be seen as 'a response to God's command to till and keep the land (cf. Gn 2:15)'. This is, however, with the caveat that 'entranced by an exclusive reliance on technology, reason without faith is doomed to flounder in an illusion of its own omnipotence'. Godless belief that we are self-sufficient and all powerful could tempt us to go beyond the limits of reasonable domination over nature and so over future generations.

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