

Is a better future possible from Eugenics?

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Abstract

Eugenics to some degree is already long established and widely practiced, but is still an uncomfortable subject for many. Advance of technology has opened greater opportunities for well informed intervention and the range and capabilities of eugenics are likely to widen. We argue that continuance and intensification are inevitable with recognised benefits but equal dangers. How long before 'designer babies' become the norm? Should we continue along this path? If so, will it just be because we can, or as a strategy to secure our future? Our knowledge of biology and the human genome will bring everⁱ increasing power to reduce morbidity. Better recognition, consideration and discussion of the issues and practice is essential. But by who?

Introduction

There are two strong viewpoints about eugenics, the first may be generally described as the view that we should not interfere with nature's natural course. The second is that we should take advantage of our knowledge of nature to improve the human condition for the future. The second approach can adopt the anthropic principle that the current state of humankind is a valid natural state and using our knowledge to its full can't be criticised as unnatural. But we will soon be able to map a child's full genetic code at or prior to birth. We must then consider how far we should go in letting information found influence our actions and decisions on 'terminations', the more acceptable word for abortions of fetuses now in common usage.

Antenatally current practice includes taking a sample of maternal blood and to scan the foetus as early as safely possible. Interpreting the two tests together can inform on the 'risk' factor that the foetus may have a disability. This can be either physical or genetic. The fidelity of scanning has steadily improved and is likely to continue to do so. Parents are informed as a matter of course if malformations are found. Problems can now be identified at an early stage, well within accepted termination times. Standard good practice is to inform parents of the implications and likely outcome as well as the option to terminate a pregnancy. Few may now consider any of these normal procedures as unreasonable, but questions must arise as to how serious a deformity or problem must be to justify a termination. Terminations where no problems are evident, of healthy foetuses, are commonly a matter of the mother's choice in any case. Allowing a termination where a minor deformation or weakness may be identified would be hard to resist. Reynolds (2009) [1] suggests that this choice of action is a 'consumerist eugenics model' and that this can be seen to be funded by State public health policies although not enforceable. Reynolds promoted the development of a broad and common ethical framework to aid decision taking.

Hard Choices

The social and financial cost of care for those born with disabilities was not a consideration we had to face all the time technology was at a level where eugenics was a limited option. Things are already quite different and becoming more so. If we had a magic cure to ensure all babies were born strong and healthy we'd doubtless wish to take it. But there is always a price to pay. Eugenics may soon be at the stage where the ideal may be deliverable, but at what cost? Are our sensibilities ready to do what we soon may find is possible? We currently deal with each incremental change as it comes along, more behind closed doors than in the open. Hard choices must be made, but who should be taking them? The medical profession hold pole position with decision making led by strong ethical principles, but the degree of freedom is also limited by what the public will accept, if they are informed and asked. There is often no imperative or motivation for the professions response to incremental changes to be decided by those outside the profession.

For politicians eugenics often seems too much of a hot potato to address, so changes have crept in with little airing of ethical matters to help public viewpoints evolve to match technology, biological science and medical skills. Fear of political involvement may remain in memories of the emotive 'master race' policies of the Nazi party of the mid 20th century in particular. Those fears may act as a useful check and balance to discourage political over enthusiasm. The fears may also act to stultify advancement in what is a valid scientific field, the name eugenics alone can generate a range of emotive responses across society. A fundamental issues of social justice and human rights are involved a full Gaussian distribution of feelings and opinions will rightly exist.

Religion

The view of most western churches has softened in the last 50 years as the inevitability of scientific change is recognised and viewpoints evolve with new generations. Abortion is an issue of principle for many and it seems certain to remain so for a considerable period. The spread and gradually increasing acceptance of general birth control measures may somewhat decrease the need for more controversial interventions. Acceptance of eugenics in principle and practice may follow in the same way, allowing the slow but silent revolution to continue. But is that a good thing? Should there not be a wider and louder debate, if not a religious debate to sanction the continuous gradual change? Religion may be well not becoming too involved in a debate other than as a contributor when issues arise and new steps and choices are faced. The church had such a role in the 1930's condemning proposals for sterilisation in the name of eugenics in the UK.

Religions can also promote eugenics. As an example of a case of screening pre-fertilisation the prevention of Tay-Sachs disease in Hassidic Jews was addressed by the 'Chevra dor Yeshorim' program of pre marriage genetic testing with results kept secret but 'advice' on the suitability of marriage being given. Nature already makes such choices for us with chemical compatibility producing different tastes and smells. Can it be unreasonable to add to those effects to pre-empt problems in such a way?

Those born disabled

A consideration little discussed is the question of how those born with disabilities feel about overt discussions on reducing or preventing such births in the future. Such a view of eugenics may make those with most to bear in life carry the additional burden of feeling substandard and unwanted. It is certainly true that a physical disability may not be likely to affect mental power, intellect and the ability to contribute to advancement. Steven Hawkins condition is a disease, but what if it's existence can be detected within termination limits? Should we terminate all probably affected? The answer will lie somewhere between that point and the action of informing the parents if a serious case is detected. But a lot of ground lies between those two marker points.

The sensibility of those born disabled may be one of the best reasons not to air the issues too loudly or try to codify an ever evolving field. Soon there may be many hundreds of detectable conditions of which should be considered notifiable to the parents. There will be many thousands of living sufferers of those conditions to be considered. Will most warm to a policy which might have prevented their very existence? To balance that check, the screening for Downs syndrome is widely supported. But decisions on terminations have gone to the High Court, deciding in a 1981 case to allow an operation to save a Downs syndrome child against the parent's wishes as it could not be demonstrated that the life 'would not be worth living'.

Autism is another familiar condition which can be screened for, but the making of a decision to abort where found is another matter which the screening the forces us to address. Autism provides a good case for consideration as many with the condition can be seen as having genius in limited field. A good case could be argued that extreme compartmentation and specialisation, such as that now common throughout the sciences, both requires and benefit from a degree of autism to maintain a narrow focus, even if often at the cost of social skills. Again 'normality' is a subjective and relative, not an objective and absolute concept.

Who is the patient?

Making decisions in the 'patients best interest' is the standard approach but particularly in antenatal screening boundaries are blurred. The patient may be considered as the embryo, the mother, the family as a whole, and even in strategic cases society as a whole. Whose 'best interest' should prevail will be different and change, so requires discussing and monitoring in each case. As an example, for in vitro fertilisation the family will take an initial decision, then mother is the patient, but at some stage the unborn baby itself will become the primary concern.

If ultimately our responsibility is to successful propagation of the species then in strategic decision making mankind is the patient. How then do we take decisions as to the best interests of mankind? It is not entirely inconceivable that a decision taken genuinely in our best interests may prove to be our undoing. The propensity for humankind to propagate unintended and commonly even reverse outcomes needs to be addressed by gaining a far better understanding of nature itself well beyond the strict disciplines involved in eugenics. Nature has a proven ability to adapt. The question may not be should we control it but CAN we control it. We may also need to ask can we even attempt to control nature without causing change which we would classify as damage.

The perennial question then re-emerges, is the cure worse than the illness. Are we perhaps sealing our own fate and reducing our full evolutionary cycle by well- intentioned interventions based on our inadequate foundational understanding of nature?

History

Eugenics is not a recent phenomena. Sickly or malformed infants have by tradition been discarded or left to die by many societies for at least as long as records have been kept, including as policy and law as in warrior civilizations such as Sparta. Britain passed the 'Idiots Act' in 1886 at the beginning of institutionalising the locking away of the mentally 'inadequate'. A 'Lunacy Commission' was even set up, as studied by Roberts (2009) [2]. Physical disabilities, even including left handedness, have led to similar treatment. Mental health and intellect can be very difficult to assess and had these policies not been reversed it might appear that up to 80% of the current population of earth may presently be locked away as substandard in some way. Many may consider that to be a good thing! but sustainability might appear poor. We are all different. Who can really judge who else is intelligent or sane.

The first real 'Eugenics Laboratory was set up in the University of London by Galton in 1907 to study selective breeding. Sterilisation of the 'feeble minded' was well supported. Professional bodies such as the American Genetics Association showed great interest in the eugenics of race. Interestingly in February 2014 the Food and Drug Administration (FDA) met to consider conducting clinical trials to test out genetic manipulation techniques to prevent mitochondrial disease in offspring.

The evolution of opinions through time will continue. The very word 'eugenics' has itself bordered on unacceptability for many for some time. Cuckle (2001) [3] has categorically rejected attaching the label "eugenics" to prenatal genetic screening and testing because decisions to abort based on the results of such examinations is seen as the result of the mothers personal and private decision rather than an overt public policy.

Social conditions

We are principally considering the genetic and biological aspects of eugenics. It must be recognised however that it is widely argued, certainly with some truth, that family conditions and education can have as great an effect on the quality of life and contribution to human advancement as physical condition at birth. The addressing of such matters, so solutions to what are seen as problems are without direct medical or biological science and influence.

Removing children from parents also has a long history in many cultures for a number of reasons including those justified as being in the child's best interest in terms of development. Possibly the largest eugenic effect has been the policy in China of strict limits the how many children couples can bring up and of what sex. No greater scale of state control has been known. The perceived problem appears to have been largely resolved and policies relaxing, but familiarity with such practices numbs the senses to probably more readily allow us to accept it's introduction elsewhere in the future. But we are lead to more extreme aspects in other ways.

Extreme Eugenics

We restrict ourselves to brief references to the currently more extreme aspects in the outlying areas of eugenics. Euthenasia is one often considered as entirely separate but even ending the life of the aged early can meet the interests of society as well as the, assumed voluntary, person involved. And not only the aged are involved. Euthenasia applies at all ages, but is clearly far more common for the elderly, where clearly the 'quality of life' aspect has reduced as an issue.

We are then brought to the normally state sponsored matter of what is normally referred to as 'ethnic cleansing'. Little can engender greater repulsion than the concept of mass taking of life for ethnic reasons, yet the practice still goes on at varying scales all around the world. Most war and killing on the African continent is based on ethnicity. So we have an extreme marker of unacceptability at one end of the spectrum. Screening for severe physical defects and possibly Downs syndrome may be close to the other extreme of the distribution, giving another marker. Our framework for hard decisions then takes in the whole range of provisions in between, which is most of the field.

Designer babies

What most people will recognise as the result of advances in genetic science is the test tube baby, and then the control assumed over the characteristics and physical condition of the baby. Selecting a child based on its chances of having a long term illness such as Alzheimer's or diabetes is not far away. Most major medical societies, such as the American Society for Reproductive Medicine (ASRM) and the American Congress of Obstetricians and Gynecologists (ACOG), are reported to have wildly differing attitudes about when and where such techniques should be permitted. The ASRM for instance normally defers to a client's wishes on issues such as sex selection

It appears inevitable through genetic engineering advances that very soon it will be possible for a majority of couples to exercise considerable influence over most physical and even some mental characteristics of their new baby. Catalano (2012) [4] considered the prospect and implications, also discussing the potential benefits. Powell, Russell, and Buchanan (2012) [5] developed a strong argument that the benefits were worthwhile. It will also be possible for society, state sponsored or not, to exercise the same controls as parents. Are scientists and doctors really ready and able to control such a situation and ensure it works to the long term good? It appears probably not.

Wilkinson [6] has discussed the ethics of selective reproduction. Right or wrong there is doubtless great potential for the advancement of humanity from eugenics. However, with consideration of our past history we predict a host of serious and unanticipated problems will arise from poorly considered and over enthusiastic application. If our propensity for reverse outcomes continues the errors may well be fatal. Schichor, Simonet, and Canano (2012) [7] have questioned whether or not we should even 'allow' genetic engineering at all.

On the other hand if we can engineer greater intellect then the other potential dangers may be worth risking. Attitudes and personal weaknesses still seem to overcome intellect in all fields of

human endeavour, but our intellectual development seems to be immune from genetic engineering. The over-reliance on bare mathematics in particular as the 'only' language of physics has led intellectual development and the use of our minds into a woefully poor state. The acceptance of illogicality is symptomatic of the tendency of human nature to accept impossible situations by blinding ourselves to implications.

Techniques for widening our range of thinking methodologies need to be better developed and applied. We may then need to look to other fields than eugenics to find improved methods of thinking and to really improve our understanding of nature, and advance the condition of humanity.

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