

Man on the throne of God? The societal implications of the bio-medical revolution

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Abstract: *The article deals with the possible influences on society of developments in the bio-medical field and especially cloning, ‘the book of life’ and eugenics. It is argued that the present resistance against these developments may diminish under the influence of biologism which is on the rise. The author investigates these societal influences in four fields: the welfare state (will the notion of collective solidarity disappear?), citizenship, meritocracy (can we expect new class divisions?) and democratic politics (the rise of new political cleavages).*

Keywords: *Bio-medical revolution, cloning, biologism, welfare state, citizenship, meritocracy, democratic politics.*

Sommario: *L’articolo tratta delle possibili influenze sulla società degli sviluppi nel campo bio-medico e particolarmente nella clonazione, “il libro della vita” e dell’eugenetica. Si considera che la presente resistenza a questi sviluppi possa diminuire sotto l’influenza del biologismo in crescita. L’autore analizza queste influenze societarie in quattro campi: il welfare state (scomparirà la nozione della solidarietà collettiva?), la cittadinanza, la meritocrazia (si possono avere nuove divisioni di classe?), e la politica democratica (il sorgere di nuove divisioni politiche).*

Parole chiave: *Rivoluzione bio-medica, clonazione, biologismo, welfare state, cittadinanza, meritocrazia, politica democratica.*

Introduction

A scenario normally starts with one or two prominent developments or innovations and following that their possible influence on society will be investigated. In that context the expression 'looking into the seeds of time' based on Shakespeare's *Mac Beth* can be used. By that we refer to a development which at this moment in time is not much more than a 'seed', but which may grow out into a powerful plant or tree, to use this botanic metaphor again. The 'antenna' for such seeds of time is one of the most important skills of futurists.

If we look at the most prominent topics futurists (and not only they) dealt with over the last decades, one can say that typical for the seventies of the former century was the newly discovered ecological problems, that the eighties were characterized by the information revolution and the nineties by globalization.

Our forecast is that the first decades of the 21st century will go into history as the era of the bio-medical revolution. Naturally innovative developments in the bio-medical sphere have taken place since the beginning of modernity but since the turn of the century these developments have gained momentum to such an extent that deal here with a real revolution, or in dialectical terms, the former quantitative leaps have made place for a qualitative jump. In that context, it is interesting to note that breakthroughs in the bio-medical sphere have become headlines in our daily newspapers.

Many breakthroughs in history have their starting point at a specific date. One can think of the fourth of July for the US, Quatorze Juillet for France, November 9 (the fall of the wall) for Germany and in general Central- and Eastern Europe. I foresee that February 23 1997 will also go into history as a date which changed the world. On that date the headlines of our newspapers announced that for the first time in history a mammal (the sheep Dolly) had been cloned. Since then we are regularly confronted with headlines announcing another breakthrough in the bio-medical field. One can think about the fuzz around the 'Book of Life' and most recently the headline: 'Embryos are cloned from cells of Humans' (*Herald Tribune* November 26 2001).

When reading the literature it is striking that experts in the field regularly proclaim that certain developments are either impossible or will not take place

within the foreseeable future, whereas a few years or even months later the assumed impossible breakthrough did take place.

Let me illustrate this with an example. Lee Silver, professor at Princeton University in molecular and evolutionary biology (so clearly an expert) wrote in his book 'Remaking Eden' about the cloning of Dolly: on the last Sunday in the month of February, in the third year before the end of the second millennium, the world woke up to a technological advance that shook the foundations of biology and philosophy' (Lee 1998: 91). Lee (who has a clear feeling for drama) adds to that: 'It was impossible we thought for a cell from an adult mammal to become reprogrammed, to start all over again, to generate another entire animal or person in the image of the one born earlier. How wrong we were' (Lee 1998: 92). Especially this second quotation is very typical for the unexpectedness of many breakthroughs, even by experts.

Although it is clear that this bio-medical revolution is not happening unnoticed, it is striking that the discussion on its societal consequences has a relative low profile. As far as I can judge, only in Germany the new possibilities of cloning and eugenics have given rise to vehement discussions of which the philosopher Peter Sloterdijk has become the center and the main target, as he has been accused of promoting the idea of the 'Uebermensch' (Sloterdijk 1999; Stephan 1999).

Moreover the discussion there (as well as elsewhere) is dominated by philosophers and ethicists, which implies that the main question is what is morally and ethically permissible in this respect. Sloterdijk (1999) has called his famous lecture on this topic 'Regeln für den Menschenpark' (Rules for the human park). The question is however, whether this idea of 'Regeln' i.e. 'codes of conduct' is the most pressing problem in this respect.

Anyway, here we have opted for dealing with a different question (as indicated, the societal consequences of this bio-medical revolution), but before dealing with that, a few other questions have to be dealt with first.

What is to be expected?

To start with, what is to be expected in this field? The most important breakthroughs in the bio-medical field take place in three related fields: cloning, the

human genome project and the most controversial of the three, eugenics. The possible and probable future developments in these fields can be expressed best in terms of the developmental stages of the medical sciences.

Momentarily we can observe already the transition from a more *curative* approach to a more *preventive* approach. DNA-research makes it possible that we soon enter the stage of *predictive* medicine, which is primarily devoted to detect the chance of certain illnesses and defects at an early stage, but which may also be used to detect the chance of socially undesirable behavior as the outcome of certain genetic characteristics. On the basis of developments in the field of cloning, DNA-research and eugenics, combined with those in the field of information technology a new stage known as the *design phase* is to be expected in the not too far future. In this context the term *designer child* is used. It refers to the possibility to create either a special type of human being, based upon a certain plan, or change an already existing human being, fetus or later in life into someone with the desired characteristics.

Relevant for our discussion is that often a distinction is made between negative and positive eugenics. The first type refers to intervention in those genes which are responsible for certain hereditary (and for that matter predictable) diseases and defects. Breakthroughs in that field are a matter of the very near future. The second type can be called *genetic enhancement*. Here we deal with manipulation of our genes in order to alter certain physical and mental characteristics which are considered undesirable but also improvable.

Innovations in this field are a matter for the not so near future, but since the bio-medical revolution is taking place with a such an accelerating speed, there are good reasons to assume that those innovations are a matter of the coming decades and not of the second part of this century. Moreover, it should be emphasized that it is difficult to draw a clear borderline between negative and positive eugenics. There seems to be a grey in between zone. This is important, since the present resistance against these innovations is very different in this respect, i.e. limited with regard to negative and huge concerning positive eugenics.

Resistance

This brings us to the point that a good scenario not only deals with expected innovations and inventions in a certain field, but also with the societal reception and acceptance of those innovations. Momentarily there is undoubtedly great resistance against almost all of the innovations in the bio-medical field. To give just one example, when the news of the cloning of the sheep Dolly reached the world, both president Clinton and the European Parliament came up with proposals to prohibit the cloning of human beings. Nevertheless there are good reasons to assume that this resistance will diminish in the near future. Moreover I foresee that even if it continues, it will become somewhat irrelevant.

Let me clarify both statements, starting with the last one, the growing irrelevance of the resistance (and for that matter the making of rules and laws to prohibit these developments). I shall focus on the most controversial of these bio-medical developments: eugenics.

Our image of eugenics which is, according to my Webster dictionary, 'the science that deals with the improvement of races, especially the human race, through the control of hereditary factors' still seems to be determined by Huxley's 'Brave New World'. It seems to me however that the chances of such a top down eugenic policy by a totalitarian regime as described by Huxley is not very likely in our time, with one possible exception: China, because of its 'one child policy'. This policy has in itself nothing to do with eugenics, but it is relevant here, because it has made the minds of the people 'ripe' to accept government intervention in fields which in most countries are considered private and for that matter not subject to (direct) intervention from above.

The new situation of the 21st century is that we do not deal with a top down process, but with 'eugenics from below'. We are dealing now with individuals often in their role as parents who may make use of eugenics for the optimal development of their children. It is quite likely that most countries which call themselves 'civilized' will make rules and laws to canalize these developments, but the question is if and to what extent these rules are effective in a globalizing world. Let me give an example to illustrate this. Recently Severino Antinori, an Italian medical doctor, announced in an interview that he intends to open a clinic for the cloning of human beings. When he was told by

the reporter that he might not get a permit, since cloning is forbidden in Italy, he answered: if the Italian government is making it impossible for me, I shall be compelled to move my clinic to Cyprus where they have less strict rules.

This is exactly the point. Even when there are strict rules concerning cloning, eugenics, etc. in certain countries, there will be always countries where they do not exist and where clinics can be opened to carry out these type of operations (which are a relative low cost affair, so governmental support is not a necessary condition) and where people can fly to. It reminds me of the laws most European countries have with regard to forbidding female circumcision. Some of my students who did research on this topic found out that many Somalian refugees in our country take their daughters to their home country Somalia, to have them operated there (if the term operation is at all appropriate). There is little to nothing to prevent them from doing that.

The general conclusion is that hoping and expecting that strict rules and laws will be able to canalize, domesticize or even prevent these developments is not very realistic in a globalizing world with open borders.

The rise of biologism

My second point deals with the question whether the presently existing resistance will prevail or slowly diminish. I expect that the last trend will be the stronger one, i.e. I do foresee an underlying trend in our society undermining this resistance. I am thinking of what I call: the rise, fall and resurrection of biologism in the last century.

We are dealing here with the basic question in the sciences: what explains human behavior on an individual and collective level and how can we intervene in that process? Is human nature or is the social, economic, political, etc. environment the determining factor in this respect? Up until deep in the thirties different forms of biologism which explained human behavior primarily in terms of hereditary characteristics were a respectable, not to say dominant current in the social sciences, in politics and in the societal discourse in general. It should be emphasized here that ideas and theories especially in the field of eugenics were not only popular among National Socialists and in general adherents of totalitarian regimes, but also among organizations

and individuals with an outspoken humanist and democratic reputation like the Swedish government, the English Fabian Society and the author George Bernard Shaw, to mention only a few. A possible explanation can be found in the observation that in social democrat and protestant circles the notion of the malleability and improvement of man and society was more developed than in conservative and catholic circles.

After the Second World War we see a strong decline not to say an outspoken taboo on any form of biologism. A typical example of this taboo is the so called Buikhuisen affair in the Netherlands. In the seventies the psychologist and criminologist Buikhuisen, renowned professor at the university of Leyden launched a proposal for bio-social research in order to explain the causes of criminal behavior. He wanted to find out in a children's home for juvenile delinquents why some children are more aggressive than others and to what extent that might 'predict' future criminal behavior. In short, he wanted to identify possible criminals at an early stage. Well the opposition both societal and academic against these ideas and proposals (which by the way were formulated in a very cautious way) was so overwhelming that he was forced to resign. It meant the end of his academic career and nowadays he has an antique shop and, as he declared himself, he is not looking back in anger.

Twenty years later, at the end of the nineties, there was a re-evaluation of this affair. Most of his colleagues and even some of his most vehement critics agreed that Buikhuisen was ahead of his time, that nowadays his proposals would have been hailed and that he might receive huge research grants.

O tempora! O mores! This story is meant as an indicator for the resurrection of biologism in the social sciences. It seems that our bad memories of the Nazi period are fading away. Whether we deal with the discussion on intelligence or more specific the IQ, or the role of parents and teachers in education to mention only two fields where the changes are very visible, the general trend seems to be that hereditary factors play an increasing important role in explaining what human behavior determines. 'It is in my/our genes' is an often heard expression and in May ways a typical slogan of our time.

To come back to our question here, my argument is that the resurrection of biologism over the last decade paves the way for accepting different forms of genetic intervention.

Why and under what circumstances genetic intervention?

Since genetic intervention is nowadays a process from below, one can ask why and under what circumstances people would opt for it. It seems to me that this is related to the level of competitiveness of a society. The tougher the struggle for the relatively few places at the top (be it in education, sports or in the field of professions) the greater the chance that genetic manipulation or more precise genetic enhancement will be used.

Recently a topsporter (the Norwegian skater Kos) predicted on television that, may be not the coming, but certainly the then following Olympic Games will be confronted with genetic therapy of topsporters, who want to improve their physical strength by ‘producing’ more muscles, etc. It is to be expected that in a very competitive society like Japan, where the struggle for a place at the best schools (with Tokyo university as the ultimate summit) is so tough that parents discipline their children rigorously already from a very early age, the resistance against the acceptance of genetic manipulation to improve the capacities of their children will be low. To quote a parent who had delivered a baby with the help of artificial insemination of sperm from a donor who was selected on the basis of his high IQ: ‘why is it okay for people to choose the best house, schools, the best surgeon, and not to have the best possible baby’. In the case of Japan the parent could add: why should I train and discipline my child already at an early age to make him or her with average capacities reach the top, when I can help him or her to have a more relaxed life by providing him or her with more superior talents.

We know that Japan is an extremely competitive society. It is however to be expected that under the growing influence of liberalism and globalization the general level of competitiveness in modern societies will increase in the coming decades. This implies that the Japanese model may become the ‘normal one.

The societal consequences of the bio-medical revolution

Finally our main question, what are the societal consequences of the bio-medical revolution. Here the influence will be investigated in four fields: the welfare state, citizenship, the meritocracy and democratic politics. To answer our

question on the possible influence on the welfare state, we first have to look at its basics. What makes the system tick and what keeps it together? In a welfare state the system of social security is based on state regulated collective risk or in ideological terms, on solidarity and brotherly love: the strongest shoulders should carry the heaviest burden. It is also based on the principle that human beings are a biological given with certain inborn and unalterable defects, weaknesses, limitations, or more neutral, features both mentally and physically.

The question now is what may happen to this collective solidarity with the less privileged when this notion of a biological given is no longer or at least less valid. The essence of genetic manipulation is that human beings are no longer what they are but are alterable also in an biological sense. In general, one can expect that the notion of solidarity with the weak will decrease in the coming decades under the influence of the new possibilities of genetic intervention. In a sense this is part of a broader set of trends like the growing role of liberalism, unrestrained capitalism, increasing individualism and emerging post-modern value systems. This all points in the same direction: less collective solidarity. Defects and limitations may be seen as the product of a personal decision or at least the decision of one's parents and for that matter subject of individual and not of collective responsibility.

Related to this is the question of rights and entitlements. The welfare state is based on *social citizenship* to use T.H.Marshall's expression (Marshall 1964; Van Steenberg 1994). Citizens in modern welfare states do not only have civil and political rights but also an extended number of social rights, like the right to the best possible health care and education. In general these rights and entitlements are supposed to promote the greatest happiness, which in our type of society is associated with a good health, a good education and a good job. Up to now the welfare state has honored these entitlements by creating the material and organizational infrastructure for them in the form of schools, hospitals etc.

The question is now if and to what extent is this 21st century version of the 'pursuit of happiness' still a collective responsibility. Will genetic therapy either in the form of the 'removal' of certain forms of hereditary defects or in the form of genetic enhancement, be the responsibility of the welfare state or of the individual? If we assume that it will primarily be the responsibility of the individual, the question can be raised whether this may lead to new forms of class conflicts. We shall come back to that.

A third set of questions and problems is related to the notion of a meritocracy. As Daniel Bell has stated (in his 'The Coming of Post-Industrial Society', Bell 1973) the post-industrial society is inherently and for logical reasons a meritocracy, in which the principle of ascription is fully replaced by achievement. Moreover it is a knowledge society, i.e. based upon systematic and codified knowledge. This implies that one's stock of knowledge is decisive for one's place on the social ladder.

Whereas the industrial society had many social ladders, which implied for the individual that there were many ways for social climbing, in the post-industrial society there will be one remaining social ladder based upon knowledge; the ultimate triumph of the meritocratic principle. Such a meritocracy is also based on the liberal principle of equality at the start, meaning that all individuals should have equal opportunities without discrimination, i.e. also without so called positive discrimination. Important in this respect is that, different from the common opinions on this point in the seventies and eighties, recent research shows that someone's intelligence (expressed as one's IQ) is for the greatest part (something like 80) the outcome of hereditary factors (nature) and only for a small proportion the result of one's social environment (nurture). On the basis of this, Bell concludes that the social status ladder in the post-industrial society will be more and more based upon hereditary differences in intelligence, the entrance to knowledge and for that matter it will be a rather static ladder.

The implications of this are interesting in the light of what we have been discussing so far. If this is the way post-industrial societies will develop, the pressure for the individual to do something about one's IQ, the main entrance to the higher social strata, or in other words to accept and even hail genetic engineering will increase. For many people social climbing will be only possible with the help of genetic enhancement. A meritocracy is very visible in the field of selection for jobs and the most important instrument for selection on meritocratic principles is the curriculum vitae. In more competitive societies like the US, this instrument exists already for decades, but also in less competitive societies like the Netherlands it has become popular over the last years. Nowadays even freshmen have their own cv.

What can be foreseen in this context is that in the future, dealing with selection procedures one has to come up with a genetic passport as an addendum

to one's cv. Whereas the present cv shows what one has done in life so far, a future genetic passport may show not only what hereditary characteristics one has, but also what one (or one's parents) has done about that.

Daniel Bell foresees a new class division in the Post-industrial society primarily based upon hereditary intelligence. For the coming decades a new class division and class conflict can be foreseen between the 'GenRich', who have been genetically enhanced and the 'Naturals' (to use Lee Silver's terminology, Silver 1998: 240), who for some reason (financial or principal) have refused to follow that path.

The last point I want to raise here deals with democratic politics. The era of biotechnology may change the basics of the traditional political cleavages in modern democratic societies. The distinction between the left and the right or between liberalism and social democracy has already become somewhat obsolete whereas in recent decades the cleavages between the modernists (including the liberals and the social democrats) and the conservationists or greens have come more to the forefront. Following that line of development, it is to be expected that in the future the most fierce political debates will be among the adherents and the opponents of some form of genetic engineering. We can already observe that this opposition, which for the time being is primarily focussed on the production of genetically manipulated food, leads to strange 'bed fellows', i.e. it brings conservative christians and pro-life adherents into one political camp with greens and environmentalists.

Let me end by stating that this article marks only the very beginning of a research project on what I see as the most fascinating development in the first decades of the 21 century, dealing with the question whether humankind is entering the era of 'Man on the throne of God' .

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