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The Perfect Body: Biomedical Utopias

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THE BODY AND RELIGION

Edited by
Regina Ammicht-Quinn and Elsa Tamez

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Introduction: The Body and Religion

REGINA AMMIGHT-QUINN AND ELSA TAMEZ

The globalized world also produces globalized images: globalized images of men and women, and globalized images of human bodies. The break which runs through the world becomes visible in these images of bodies. It is a break which does not simply separate 'us' from 'the others', but time and again also runs through individuals.

On the one hand there are the images of the perfect body, produced by a lifestyle – predominantly, but not only, in the Western industrial nations – which puts a preoccupation with the body at the centre and regards the body as acceptable only if it conforms to clear norms. And on the other hand there are the images of the emaciated, injured, tortured and broken body which come to us – predominantly, but not only – from the impoverished countries and crisis areas of this world. The images could not be more different: here the models in advertisements whose perfect bodies become the criteria for beauty, happiness and salvation, and there the destroyed bodies in whose wretchedness pain, humiliation and death become visible. It is a bitter irony that both the richest and the poorest bodies are often painfully thin and exposed to the danger of perishing from lack of nourishment.

In recent years people have become increasingly aware that our perception of the body, whatever it may be, is not simply 'natural', but has its roots deep in culture. Nevertheless the most elementary bonds between human beings become evident in the basic outlines of corporeality – being born and dying, growing and flourishing, the desires of the body and its pains. Thus for all their diversity the images of the body in the globalized world are not images which stand in unconnected juxtaposition; they are double images in which the shadows of the other images are always visible.

Whereas all over the world the questions of hunger, sickness, persecution, oppression and migration are far from having been solved, above all in the Western industrial nations attitudes towards the body have clearly changed: the body is no longer a fate but the result of actions. Here the body as a

whole – and not just its genitalia – becomes a moral problem. In becoming the result of actions, the body gets established as a project. This project of the body aims at perfection – the perfect design for a body which is striven for not only in the media and the beauty industry, but also in the research and health industry.

For a long time Christianity and theology have practised restraint in the interpretation, criticism and active transformation of these twofold globalized images of the body. This may be because Christianity has its own difficult history with the body. For a long time the spiritualizing and the control of everything material was central to the history of Christian piety. The body itself was above all the tangible and perceptible place of human sinfulness, exposed to the drives and an obstacle on the way to salvation.

Today, however, we are in a situation in which more and more frequently concern with the body becomes the cult of the body, and the body is worshipped and sacrificed to in the hope that this will bring salvation. Whereas for some people the possibility of shaping the body becomes central, for others its vulnerability remains at the centre. The awareness of how much shaping the body can damage it and how emphatically its vulnerability shapes it has not yet developed sufficiently.

However, one thing has become clear. Over and above the discussion of sin and control, the body has become an important theme of Christian theology and spirituality. It is urgently necessary for theology critically and in full self-awareness to become involved in current discussions about the body and current practices relating to the body, which are often destructive. Here three things are needed. First, an accurate perception of what is happening, the development of a distinctive hermeneutic which allows a clear theological understanding of contemporary, global and also secular reality; secondly, a self-critical grappling on the part of theology with its own history, in which often both biblical elements of a way of thinking bound up with the body and even the idea of incarnation itself are exploited to promote hostility and contempt for the body; and thirdly, the utopian strength to make the rich Christian tradition fruitful for the present. This issue of *Concilium* seeks to contribute to this development.

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I. Phenomenological Investigations

The Perfect Body: Biomedical Utopias

HILLE HAKER

Introduction

Two motifs run through more recent developments in biomedicine: one is the motif of *control* of the body and its functions; the other is that of the active *shaping* of bodily processes at the level of molecular biology and genetics, or even at the organic level, viz. in physiognomy. Now there may be a dispute as to whether the motifs of the control and shaping of the body, which in any case also represent goals, are really utopias, or whether they are not the obsessive ideas of researchers deeply moulded by the history of Western science, who are unwilling to accept the finitude of human beings and therefore also feel that any apparently 'natural' limit is a challenge to research as a whole. But in the self-understanding of those engaged in biomedical and genetic research these goals have positive connotations, so it is worth looking at precisely what they mean.

If we don't play God, who will? I haven't seen God intervene in anyone's life. People pray to God to prevent tragedies. Right now, in the sense that there are personal genetic tragedies, scientists have the ability to affect the outcome.'

Amusement at the style which characterizes the hybrid self-assessments of those involved in genetic research rapidly gives way to horror if we consider the assumptions underlying their aims. At a distance from the specific trends of research these become clear.

I. 'The central dogma of genetics' and the twofold reduction of biotechnology

When biomedics have the human 'body' in view, they focus above all on that aspect which has the connotations of sickness, fragility, and perhaps also ugliness. The body of a severely handicapped child which contradicts not only notions of health but likewise (or even more) normal notions of beauty, represents a threat, whereas the eternally young and therefore apparently immortal body which has been improved genetically, bio-chemically or by hormones, seems attractive. The sick or aged body contradicts the social fetish, i.e. the youthful ideal of a culture of the body which sees the body not as the manifestation of the individuality and history of a person but as an instrument of power which is used in action. However, the greatest control over the human body and the greatest possibility of shaping it now no longer lie on the surface, as it were on the skin, but under the skin, in the specific selection of characteristics and in genetic programming. For this reason it is no coincidence that the beginning of life and, in at least a more prominent way, the end of life are at the centre of the efforts of biomedics working with human genetics.

However, the specifically biomedical way of dealing with the human body has succumbed to a twofold reduction. It no longer perceives the body in the real sense but rather de-corporealizes the body by reducing it to its material nature, to the pure *res extensa* (to use Descartes' term). The materiality of matter with which researchers deal is thus removed from its context of living in the world, namely the body as the manifestation, the expression and medium of the perception of the self and others. Any association with corporeality, the 'non-instrumental relationships with one's own body' and the experience of the body is thus stopped from the start.²

Biomedicine is concerned with the body in a fragmented form: organs, tissues, cells and chromosomes. Granted, genes stand as *pars pro toto* for the body, the functions of which are to be understood and which is to be changed, but this is body no longer considered as a whole. What Crick has called 'the central dogma of genetics' is of great significance for the more recent history of genetic research. Although today this 'dogma' can be regarded as a failure at the scholarly level, it continues undiminished to have an influence at the practical level. Here the origin of life is derived from the 'letters' of the 'book of life': 'DNA makes RNA, RNA makes proteins, and proteins make us.'³

With such statements genetic research is basing itself on assumptions which are highly controversial in scientific theory generally. As Martin

Altmeyer has demonstrated, it ignores the questions raised by the simple theory of causality, which have led to the development of system theory and chaos research and which show that attention must be paid to the self-organization of organisms and to the compensation of physical processes at other different levels. Emergence, the origin of the new, also cannot be explained with simple genetics, with the central dogma of genetics.

If the effect were potentially always already present in the cause which generated it, in other words if we had the development of an innate feature, nothing new could emerge. There would be no room for emergence, which is what ontogenesis is about.⁴

What is suggested in the dogma 'one gene, one effect' is history as it were read forwards:

Almost every cell in our body has a complete set of genes, and this chemical programme determines the change of matter, the growth of the individual cells and their interaction with neighbouring cells.⁵

But in fact genetic research reads the history of the body backwards in precisely the same way as other non-materialistic histories of the body. A conclusion is drawn from the phenotype, say of a child or an adult with Down's Syndrome, to the genotype, and this in turn, in the happy instance of locating relevant characteristics at the levels of the chromosome or gene, can give information about the development of further phenotypes.⁶

Because the early scientific assumptions of genome research can today be taken to have been refuted, genetic research now is far removed from scientific statements about the way in which the genome functions. Such research is therefore also a long way from understanding the way in which the body functions, and understanding its changes. Rather, it is becoming increasingly clear that particularly reflection on the character of the genome as a model – which essentially consists in the analogy between biological systems and computers – shows up the limitations of science. This form of materialization which at the same time de-corporealizes may be scientifically illuminating, but especially the statements in human genetics about the development of illnesses and handicaps are ultimately aimed at a *practical* understanding of ourselves, a self-understanding which is not stamped only by materiality but by the interplay of 'body and spirit' and by the experience of the body.

As a first result we can state that biomedicine dissolves the body as a whole along with the body as a factor of the experience and perception of the self by the human being, whose complement is to be seen in the body. Biological

processes are abstracted from the body, but this abstraction is not reversed at the end of the chain of action.

But what utopias emerge in biomedicine? Here the most far-reaching biomedical utopia of the perfect body starts at the beginning of life, but it also extends into old age.

II. Biomedical intervention at the beginning of human life

1. *The donation of nuclei*

At the beginning of human life we are nowadays in the position of being deliberately able to avoid or to encourage particular characteristics. This begins with the selection of the sperm and ova, which are donated within reproductive medicine. In contrast to the context of transplantation medicine, the donation of nuclei is not linked with poverty but is more a phenomenon of the middle or upper class: donations are sought (and found!) from young, usually white, men and women with the highest possible level of education. Potential recipient couples can get very detailed information about donors and can make a choice in accordance with their wishes. Here it is easy to see how the 'central dogma of genetics' has an almost unbroken influence on practice, to the degree that the starting point is a genetic determinism which no one would any longer take seriously at a basic level. The utopia of perfection, the control and shaping not only of human life but of human beings, is the undercurrent here, and it is encouraged by the relevant clinics, which have a commercial interest. The well-known sperm banks of various Nobel prize-winners are enlarged by donors with above average intelligence quotients whose physical characteristics are associated with dominance. Often undisguised racist thinking is expressed in these commercialized branches of reproductive medicine.

2. *Genetic diagnosis*

But there are plenty of possibilities of intervention for biomedicine beyond the donation of nuclei, for example in preserving the distinctive 'genetic condition' of a couple. Thus it is possible to select the sex of a child before pregnancy, a practice which in Western countries so far has been limited to genetic characteristic of sickness which are gender-conditioned, but which is increasingly being used as an element of family planning. In countries with a patriarchal structure the selection of gender before and during pregnancy is being used as a means of combating poverty; sometimes it is even the only

possibility of avoiding a threat to existence. Where girls represent a risk of poverty, the selection of sex is by no means gender-neutral and is often even propagated actively by women. By contrast, in Western countries girls are often actually wanted. It is easy to see how social norms can be realized in and with biomedicine.

A distinction has to be made between two spheres of such norms. First, there are possibilities of intervention within a narrower understanding of biomedicine limited to illness and handicap. Thus by means of pre-implantation diagnosis or pre-natal diagnosis it is possible to detect the carriers of characteristics of illnesses, even when these characteristics do not cause the illness in the carriers themselves. We are in a position – or think that we are in a position – to diagnose *in vitro*, i.e. even before the beginning of a pregnancy, dispositions towards the development of breast cancer, skin cancer and certain heart diseases. Embryos which display such a predisposition are destroyed. There are already DNA chips that will certainly be improved further in coming years, on which a variety of genetic characteristics can be stored and then be called up again. Geneticists who are developing these tests are usually biologists or physicians, but they are involved in research and not in the clinical care of patients. Nevertheless – under the flag of reproductive autonomy – the decision about dealing with the genetic knowledge is left to the couples and to patients who want assistance in procreation. Here it is forgotten that, or no mention is made of the fact that, at this point of decision the decisive moves have already been made: the distinction between sickness and health at the level of molecular biology leads almost automatically to couples accepting tests and, of course, also agreeing to the rejection of those embryos which have been classified as genetically 'inferior'. Were there not the assumption of monocausality between gene and development, we would not attach such tremendous importance to the genetic state of a single cell at the beginning of the development. Rather, we would ask about the interplay with proteins, and later about many other factors, including social factors, which extend far beyond the biological context. We would ask about biological and social compensations for particular genetic characteristics. But because a hidden genetic determinism is at work, and because this works as a myth which is seductive or threatening, depending on the context, as a kind of ossified meaning which has become nature in Roland Barthes' sense, the selective actions follow directly from the genetic analyses.

Secondly, the selection of gender represents the norm which is not orientated on the paradigm of health but on the non-medical notions of

characteristics of descendants. Thus even now one aim of pre-implantation diagnosis is seen as selecting an embryo in respect of its characteristics as a possible tissue or organ donor for brothers and sisters who have already been born.

3. Germline therapy and genetic enhancement

Not only has diagnosis, followed by selection or rejection and positive choice, become possible; a deliberate alteration of the genetic condition is one of the fields of practice which is now being worked on. This is so-called germline change, sometimes also called germline therapy. Here too there is the narrower biomedical aim of the 'final' removal of genetic characteristics of sickness which have caused suffering in a family for generations, and the further aim of change in the sense of deliberate improvement beyond the characteristics of sickness or handicap. This genetic enhancement may perhaps have previously been ruled out. Nevertheless, such an intervention is in line not only with the technical possibilities but also with a monocausal genetic dogma and a culture which instrumentalizes the body and – in areas ranging from genetic equipment to the design of the body – subjects it to norms which show clear traces of violence.

4. The use of embryonic cells by others

If we talk of the biomedical utopias at the beginning of human life we must also note that embryos in the biological sense can provide useful cell material which can serve in the future for medical treatment in the context of tissue and organ transplantation. By contrast, in the context of stem cell research the thought is not of the 'manufacture' of human beings as tissue donors; here so-called superfluous embryos or specially produced embryos are used exclusively for acquiring stem cells and are destroyed in the process. Their further cultivation or development is not technically possible, nor is it intended. This total instrumentalization of embryos also shows a form of biomedicine which on the one hand may not be content with the imperfect and precisely because it has unlimited aims is in search of unusual ways of perfecting biomedicine which violate taboos, though on the other hand the actions involved cannot be perceived as such violations of taboos because of the materialistic presuppositions of the methods. Here too the social norms are present which lead beyond the sickness or characteristics under investigation towards an increasingly strong stigmatization of the human beings involved.

III. The expulsion of the human being from matter

In pre-implantation diagnosis, statements about development are made on the basis of one or two cells taken from an embryo. Now in traditional medicine the prognoses about the possible course of a human life relate to a patient or a client who of course *exists*, a man or a woman who has a body, the processes of which are diagnosed. But in the case of the genetic diagnosis of an embryo the scientists not only deny the cluster of cells that they have taken for biopsy this specific human mode of corporeality; in addition, they also deny that it belongs to the human species, at least in the sense of its moral relevance. Thus the totipotent embryonic cells have no place to belong to existentially or morally; they are u-topian in a new sense. Biologically their place is between a nucleus and a body cell. This intermediate state raises many questions: does the fact that the cells of the embryo are totipotent, in other words have the potentiality of developing into human beings, qualify them for a high degree of protection? Is this potentiality to be interpreted solely in biological terms, or is not rather to be seen against the background of our experiential knowledge, which brings before our eyes the irreversible continuity of the development of the embryo? But perhaps we get entangled in irresolvable contradictions only because we have subjected the moral assessment to biological criteria. Surely a human life cannot be assessed morally in accordance with the criterion of its biological capacities and its state of development? Here at the latest the twofold reduction of the relationship of human beings to their bodies and of corporeality to materiality becomes a case for moral judgment. Moral judgment cannot be abstracted from the *context* of the gene and from biological characteristics generally, any more than it can reduce human beings to their biological characteristics.

Now at the beginning of life there is the problem that human beings have no experience of being in the body because the consciousness is not yet developed. But it is our experience of being in the body, arising from a continuity in our development, which cannot be fragmented. In so far as our relationship to ourselves is of a bodily kind, and in its corporeality is historical, the beginning of human life, which is so removed from our consciousness and our memory, is a limit, just as death is also inaccessible to our consciousness. This limit, though, which is necessary for the constitution of the self, does not lie outside the self, but is rooted in the concept of the self as beginning and end.

In the biomedical model, cells from the embryo are nothing more than biological material which – if all goes well – is subjected to the active control of research. The life sciences are put in quite a different category from the

humanities, which in their traditional character recall a past time. Today it no longer seems possible to mediate between these two paradigms within science, nor is such a mediation seen to be necessary by the life sciences. Ethics, too, falls under the verdict of the 'superfluous' or the 'additional', which is also subject to the pressure of social acceptance (on which not least the means for advancement or legal conditions depend). In reflection on the good life it is in no way perceived as an alternative. In this way it becomes clear that the perfect body which is striven for in biomedicine as an implicit or even an explicit utopia is an ideology which has immunized itself against questioning. It can be unmasked as an ideology only through a radical change in perspective, from biology to philosophical anthropology, and from anthropotechnology to a 'creativity of action'.⁷

IV. The ageless society

Biomedicine not only intervenes in the biological processes at the beginning of life, but also embraces almost all the spheres of life. However, after the beginning of life it is above all interested in the end of life. But in contrast to clinical medicine biomedicine is not concerned with questions about help in dying or the quality of life in old age, but rather in the question of the aging and dying of cells.⁸ If the drosophila fly is of immeasurable importance for the genome problem, the threadworm has become the model for aging after the success achieved in the middle of the 1990s in stopping the aging process of this worm. For some years now, biomedical research has been on the offensive in this sphere. Thus the American Academy of Anti-Aging Medicine, which by its own account has more than 8,000 members, describes its mission as follows:

The American Academy of Anti-Aging Medicine promotes the development of technologies, pharmaceuticals, and processes that retard, reverse, or suspend the deterioration of the human body resulting from the physiology of aging, and provides continuing medical education for physicians.⁹

Interestingly, 90% of the membership is drawn from physicians or researchers in the sphere of health. The sponsors of this important movement are also worth mentioning: in addition to an Alzheimer Prevention Organization these are some biotechnological enterprises, but also universities which carry on biomedical research (Harvard University, Manchester University), or the International Olympic Committee. The organization is aiming at a

'new', ageless society with a life-span of up to 150 years and reproductive cloning as an ingredient of immortality. It is no coincidence that here, in the cloning of human beings, biomedicine and gene technology at the beginning of life meet up with biomedicine at the end of life.

Because these and similar notions like the utopia of the perfect body inherent in biomedicine are influential, it is necessary to grapple with the image and myths which emerge in them. One means of grappling with them is to analyse the images and the constructions of the body and the threat which seems to be posed by the body living in the world and its bodily experience. Here it is necessary to evaluate the practical effect of 'the central dogma of genetics', despite its theoretical failure. Ethics must be concerned with re-transferring the images of perfection into their social context. Then it could prove that a 'good life' need not necessarily be identified with the immortality of one's own gene, that finitude, corporeality and mortality have values of their own, and that the twofold reduction of the human being to the body and the body to biological matter comes at a price which we are not prepared to pay – or at any rate, for the sake of our own selves, must not be ready to pay. This is the price of humanity in the sense of normative equality under the condition of individual difference; it is the price of human dignity.

Translated by John Bowden

Notes

1. James Watson, quoted in A. Petersen, 'Biofantasies: genetics and medicine in the print news media', *Social Science and Medicine* 52, 2001, pp. 1255–68: 1255.
2. For detail see A. Barkhaus, 'Körper und Identität: Vorüberlegungen zu einer Phänomenologie des eigensinnigen Körpers', in S. Jaross and L. Welzin, *Tanz Politik Identität*, Hamburg 2001, pp. 17–51. I am grateful to A. Barkhaus for drawing my attention to this article.
3. Quoted by Evelyn Fox Keller, *The Century of the Gene*, London 2000, p. 76.
4. M. Altmeyer, 'Im Geschosshagel der Sequenzierroboter. Der neue Scientismus ignoriert die Ergebnisse der modernen Wissenschaftstheorie', *Frankfurter Rundschau*, 22 May 2001.
5. F. Crick, *What Mad Pursuit. A Personal View of Scientific Discovery*, London and New York 1988, quoted in S. Graumann, *Die somatische Gentherapie. Entwicklung und Anwendung aus ethischer Sicht*, 2000, pp. 92–121. Graumann sets the central dogma of genetics against the background of alternative possibilities of interpretation and criticisms. Cf. also Fox Keller, *Century of the Gene* (n.3).
6. For details U. Wolf, 'The genetic contribution to the phenotype', *Human Genetics* 95, 1995, pp. 127–48, is still very important.

7. H. Joas, *Die Kreativität des Handelns*, Frankfurt am Main 1992.
8. P. A. Möller (ed.), *Die Kunst des Alterns. Medizinethische Diskurse über den Alterungsprozess in exogener Einflussnahme*, Frankfurt am Main 2001.
9. Cf. the relevant information on <http://www.worldhealth.net/a4m/ovcrview.html>.

The Superfluous Body: Utopias of Information and Communication Technology

KLAUS WIEGERLING

When two aircraft flew into the World Trade Centre on 11 September 2001, very few people thought of how at the moment of impact bodies were being shattered and burned. It all looked as unreal as a Hollywood film. When from a distance one saw people escaping the inferno by leaping from a great height in final desperation, one had in mind images of great stunts. And even the collapse of the two tremendous towers could have been a scene from Emerich's *Independence Day*. From a distance the horror seemed as awe-inspiring as the painting of a battle, and only one's mind told one what was happening. Even in what is perhaps the most virtual region of the globe, at the symbolic centre of economic power, people were dying in large numbers and 'physically'. We can be certain that this terrible experience will bring with it a further development of media technological utopias which try to overcome the vulnerable human body, under deadly threat, this vehicle which leads to death.

Introduction: the body – a key theme

Since the 1980s the body has been a key theme, and not only in the context of discussions about information and communication theory. At present the body is considered above all from two perspectives. First there is interest in the physiological determination of human beings, which is the theme of the debate over gene technology and biopolitics. And secondly there is interest in the volatilizing of the body in the way in which the media accelerate our lives, the way in which the body is dissolved as information in cyberspace.

In the debate over both gene and media technology, schemes are put forward which move away from the guidelines of the experiential sciences. In these schemes a clear division between 'science' and 'science fiction' is no longer possible. Regardless of how we assess such theoretical schemes, there is no disputing the fact that they are having effects on scientific policy, the