

New Dimensions of Body-Perception in the Present Biotechnological Context

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Abstract

Biotechnologies have introduced at least two new perspectives on body-perception. The first is determined by the new methods of analyzing, investigating and interpreting the body. We know more and more about our body and we can predict some of the diseases that we or our children are going to develop. We tend to believe we can find our destiny in our genes. The second perspective concerns the new “products” of biotechnology, which can justly be called biofacts. A biofact is a living artefact, a new kind of being that is no longer autonomous and which is designed and engineered in a laboratory. These new perspectives on body-perception urge a reconsideration of the ontology of body. In my opinion, this ontology is dualistic. My thesis is that the materialization of the body, its reduction to a material substratum, and its separation from rationality and emotions, has turned the body into an artefact. I will describe in the first sections of this paper some aspects and key stages of this transformation, namely: 1) the externalisation of the body; 2) its interpretation and treatment as a machine and artefact; 3) the programming and reprogramming of bodies; 4) the social body; 5) undefined bodies (transsexuality); 6) hybrid bodies, and 7) bodies no longer alive (the “Body-Worlds” exhibition). In the last two sections of my paper, I stress the importance of ontology for ethical debates. We manage to realize the potential danger of the new technologies only if we know what kinds of entities they are related to. I follow Levinas’ definition of ethic as *optic*. Without an adequate perception we cannot gain adequate definitions of the new types of entities and of the new existential situations created by biotechnology. And as long as our language is inexact, we cannot formulate relevant ethical imperatives.

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1. The ontology of the body

Nothing seems simpler and more natural than the perception of our own body. That which is reflected in the mirror when we can look at ourselves, and which sustains our daily activities, we designate not only as a body, but as our own body. At the same time, we perceive somehow that we are more than a body, more than our material and measurable part. Our body is also something we have in common with other people as the object of perception. But we hardly ever wish to be reduced to this perception. If we have to give reasons why, we would say that there is also *something else* in us, and the body is just a cover or a vehicle of that which is generally called soul. For those who do not believe in the existence of the soul there are the alternative notions consciousness, ideas, sentiments, thoughts etc. They belong to us even if we cannot see them, even if others are not able to perceive them. In a large cultural tradition, the postulation of the soul's existence has made possible the transcending of the corporal immanence, which also had as a result, that the body has been in some measure transferred to a secondary ontological system. However, the colour of the skin or the shape of the body were often involved in *ad hoc* metaphysical systems¹ and used as criteria of differentiation along the ages.

But what happens when corporality itself becomes a means for transcending corporality? The body is transcended not only towards or from the direction of the soul, but through the extreme possibility of its modification the body becomes the aim of transcending the body itself. Medicine and the modern biotechnologies made possible some transformations of the body which were almost unimaginable some decades ago.

In my study I am going to refer to two types of corporal transformations. The first one regards transsexuality as the radical change of corporal identity and, especially, the *public perception* of the body. The second transformation type concentrates mainly on the private perception of corporality, namely the wish to preserve the body as an object after one's death, to transcend the immanence of a perishable material in a quasi-aesthetical form. As an illustration I shall refer to the

¹ I use the term "metaphysics" in a wider sense here, meaning system of ideas which explains some immanent data by appealing to a transcendent authority, be it either God, as in the case: someone has a certain physical infirmity as a "punishment".



Borbála Varga: *Heat*

travelling exhibition of plastinated human bodies which was and probably still is the most visited exhibition: *Körperwelten*.¹

2. The body as part, machine, artefact

The tendency to separate ourselves in two distinct natures does not correspond only to the two different sources, through which I perceive the body, the senses on the one hand, and the ideas and sentiments on the other hand, but it is deeply rooted in the European culture. Plato saw the body as the prison of the soul, and Descartes differentiated distinctly between *res extensa* and *res cogitans*, though he was always confronted with the eternal problem of the “communication” between the two substances. The Platonic metaphor of the prison introduced to this context the problem of freedom as the tension between the aspirations of the soul and the possibilities of the body. The Cartesian dualism,² in my opinion, should not be reduced only to the dimension of physical communication, the problem of localizing this communication in a “pineal gland”; on the contrary, it should be recovered for the general idea of communication as we understand it in the present. If we consider communication an exchange of messages, then we must suppose that two different substances will transmit different messages. Similarly, *res extensa* and *res cogitans* are also responsible for the decoding of these messages. Let us suppose that the message of the *res cogitans* are the “ideas” and the message of the *res extensa* are the “symptoms”. Of course, they can only be expressed clearly through language, but the body has the advantage of a direct imagery, even if this direct imagery too becomes explicit by the application of some interpretative codes. The red colour of the face can be the sign of a febrile state, of a physical effort, of an exaggerated timidity in certain contexts or of the excessive consumption of alcohol.

In the paradigm of the present day media the body and the corporal manifestations are more and more accentuated. It is sufficient to look at the advertisements to see that not the words, but the semantic ambivalences of the body have the central place. For the moment it seems that the messages of our “extended” substance have a greater impact, at least on an emotional level, than the impact of the “thinking” part.

¹ Translated: Body Worlds.

² Descartes himself did not use the term *dualism*. It seems that the English linguist and Orientalist, Thomas Hyde (1639–1703) introduced the term through the study: *De Vetere Religione Persarum*, Oxford, 1700.

What seems to belong only to the avatars of a history of philosophy, with all the strange things the human mind could invent in the course of time, has however entirely pragmatic consequences in the actual biotechnological context. The thesis I propose here is that the materialization of the body, discussed as a material substratum and separated from the attributes of rationality and sentiments – a separation that had took place in the tradition of some dualist ontologies – has led to its transformation into an *artefact*. In what follows I am going to sketch some perspectives and aspects of this phenomenon, starting from the body regarded as the cover of the soul or as a machine to its transformation into a museum object in extreme forms. The ontogenetic states of the body, for example the embryonic phase or even the foetal one, can be reduced to a simple group of cells and treated as any other part of the matter, namely manipulated, made into artefacts etc. In my opinion the attempt to settle a set of naturalistic-scientific criteria based on which certain stages of the human life can be protected leads to this artefact state too. Maybe paradoxically, a double crisis is made visible through this fact. Firstly, we have to deal with the problem of determining and classifying the stages of the human life according to criteria which do not exclusively belong to it. The embryogenesis or the ontogenesis are processes which we can find in several other species. Their significance is a strictly scientific, biological one, and moral criteria or practical imperatives cannot be based on them. The methods by which we determine whether a scientific criterion is fulfilled or not – as well as the scientific certitudes which are valued by a certain community of researchers – do not imply moral attitudes, at least not others than those which belong to the ethic of research or to other deontological norms specific to the profession. But our behaviour towards the other members of the community, our attitude towards life and death cannot be explained only on the basis of our scientific convictions. The cultural, religious, social, political, economic etc. factors influence in an equal measure our moral gestures and attitudes.

The second crisis, generated by the attempt to define a “threshold” or some “steps” as regards the respect of the dignity of human life on the basis of some scientific criteria, refers to an axiological question, namely: which attributes of the human life should have priority or would compel us to an action which would treat them with respect? In a powerful anthropocentric tradition it is admitted that the privileged place of human beings is due to reason, as a distinct element which would differentiate us from the other species. Thus, the protection of life

in the prenatal stages should take into consideration – in this logocentric scenario – such a criterion. A new reductionism tends to establish practical criteria here, even with the risk of an argumentative inconsistency. Reason is reduced to its biological support, namely the central nervous system. Because of this, criteria such as the formation of the central nervous system or the demonstration of a cerebral activity seem to have priority. According to this we ought to treat the human being with dignity and respect only when reason and consciousness are clearly and undoubtedly detected. But this “scientific” criterion, which requires a separate axiological status, is also submitted to contingency if we look back to the history of culture. Why should the detection of cardiac activity not be as valid a criterion as the former? The heart as a symbol has a powerful cultural tradition. Or why should not the anthropoid form of the embryo or the ability to feel pain be more suitable criteria in the protection of human life? As a matter of fact, the formation of the central nervous system or even the detection of cerebral activity does not guarantee the presence of consciousness, which cannot be definitively demonstrated in the moment of birth (sometimes not even later). In my opinion, the brain, the heart, the human form of the body etc. are only symbols which have to be deciphered in a certain interpretative paradigm, in a long cultural tradition, and which need no scientific certificates to function. Scientists, as they belong to a culture, cannot be immune to the cultural models of their age. Cultural symbols are ever present, in most of the cases unconsciously. The pretension of “scientific” objectivity tends to impose itself as a necessary and universal pretension of rationality. From here originates the idea that the acknowledgement of the necessity and universality of naturalist-scientific criteria could function in such a paradigm of thought as a solid base for the ulterior establishment of moral imperatives.

These discussions have concretized around the debates on the embryonic research, but also on the attitude towards the end of life, respectively on patients in a coma or on those whose survival depends on machines, on the dispositions patients made in their will, as well as on organ transplants. I wanted to underline the fact that the attempt to find solid bases for our moral imperatives often ignores the danger of an improper search. The specifically human existence and the forms of behaviour implied by this cannot be understood or explained, reduced or deducted from the special or general investigation of other types of existence.

The idea of the body regarded as a *machine*, or, more correctly, as machinery has also its origins in modernity. The model which fascinated the late Renaissance and the philosophy of the Baroque was that of a body seen as a clock, perfectly adjusted and adjustable, and, consequently, reparable. This mechanistic perspective of understanding corporality has an interesting literary illustration in Mary Shelley's novel *Frankenstein or the Modern Prometheus* (1818). The decomposed body could be recomposed, and if the vital energy requires ominous galvanic processes, then the reproduction of these conditions should result in the recreation of life. Though this part of the novel is quoted most often, what Mary Shelley accentuated was the impossibility of separating life and biography and implicitly that these are closely connected. The creature did not become monstrous because of its imperfection, but because of loneliness, because of the impossibility to establish relationships with other beings.

3. Programming and reprogramming the body

The way we talk about the body today describes it in analogy to a computer. The increasing knowledge of the complexity and the ensuing predictability of biological processes, as well as the epistemic metaphors of the age are the basis of this representation. In this way, it is possible not only to anticipate the states and the form of the body, but they can even be programmed and reprogrammed. Among the moderate methods of "programming" the body are: diets, fitness techniques, anti-aging therapies. Another category consists of the somewhat more invasive techniques: from injecting some substances such as Botox under the skin to plastic surgery, the shortening or elongation of the body by sectioning the femur and even the promised genetic therapy with the aim of eliminating hereditary maladies. In other words, "programming" the descendants' perfect bodies. Representing the body as the analogue of a computer adds to its extreme reification the idea of an unlimited morphological availability. The body is not only transformable in principle, but the – functional, but mainly aesthetic – transformation becomes an ideal in itself, and this does not happen only in the post-humanist scenarios. The body is often regarded as a machine which should serve our interests perfectly. The main "inconveniencies" which lead to the wish to transform the body could be grouped in two categories. On the one hand there are the objective aspects, such as maladies or certain functional defects, on the other hand there are the rather subjective aspects, such as conformation to certain aesthetic ideals

of the age or the refusal to accept the normal temporal alteration of the body, what ensures the success of the ant-aging therapies as well.

4. The social dimension of the body

The thus “elaborated” form of the body becomes a sign of the social status, of financial power or of a certain social category. Nevertheless, the perceptive criteria or schemes differ according to sex and the tradition or the economic and political situation of a country. If the governing persons’ stout bodies are the sign of power and welfare for economically developing societies, the women accompanying these personalities are expected to have the corporal form of fashionable mannequins. The women of the nouveaux riches in these societies often resort to plastic surgery and implants. As an opposite model, in the highly developed countries, slenderness is a sign of intellectual distinction, of a balanced and moderate life, while female “naturalness” (drastic restriction of make-up, hair dyeing etc.) only a short while ago was a sign of feminist emancipation, of freedom and independence.

5. Undefined bodies: transsexuality

The medical progress and the militants for minority rights in general made it possible to perceive and understand the body in a new way. We are referring to the acknowledgement of transsexuality, and with this, to the giving of medical, psychological, social and even legal support in order to make possible the changing of the biological sex.

Many of those who choose this change feel as if they have been imprisoned in an alien body: female souls in male bodies or vice versa. Through psychological counselling, followed by hormonal treatment and operations by which the anatomic sex is changed, the contemporary body tries to adapt itself to the exigencies, wishes or representations of the respective person. Therefore, the greatest part of our corporal determinism can be theoretically transgressed. To be a man or a woman seems to be no longer an irreversibly given fact, but a contingent thing. However, a paradoxical situation occurs: those who would like this transformation to be performed upon them have very clear representations and boundaries of the feminine and the masculine. From where does the need of transcending the body with respect to one of the most pregnant points in the construction of its identity – namely sexuality – arise?

A possible explanation – if we exclude some “medical” causes, as well as hormonal dysfunctions or certain psychopathologies – would

be the temptation to experience some feelings reckoned to be totally different. Feminist trends accentuated, sometimes even beyond the reasonably acceptable limits, the uniqueness, the specificity and the untranslatability of the feminine. As pregnant as this is, and even more rooted in tradition there is a myth of masculinity associated with power, strength, rationality, objectivity etc. It is possible that exactly the impossibility to be in conformity with such representations could cause the wish to transcend the boundaries of one's own sex. When we cannot live up to our own standards of masculinity or femininity, or, even worse, when we feel we fall short of the standards set to us by the others, the wish to redefine our identity, especially our sexual identity, appears.

From a philosophical point of view, the interesting part of transsexuality is the idea of transgressing corporal determinism, this time not according to the category of temporality or that of quantity, but according to an interesting combination between the categories of quality and relation. With the change of sex most of the social relations are redefined too, because the way in which you wish to be perceived and understood by the others is radically different. This would also explain why the men who have become women accentuate very much the newly achieved femininity and vice versa.

6. Hybrid bodies

It is a long time since there was such a thing as the “natural” purity of the body. Spectacles, fillings, metal rods used to remedy fractures, hearing-aids, cardiac stimulators etc. are the artificial parts that help the good functioning of our *natural* body. If for some philosophers and anthropologists the use of tools is the decisive factor in the process of our humanization and in defining ourselves as humans, then we could say that a possible “posthuman” stage would be marked by the more and more accentuated hybridization of the human body. The machines, our artefacts, besides helping us in “controlling and dominating nature”, can also aid us in controlling and dominating our own nature. Such attempts are not at all new, but the exaggerated, global use of and the ever easier access to these techniques has nevertheless a new dimension.

Auditory implants have already had remarkable success and some bionic body parts have also been used for some time. If the parts of our body can be replaced by computerized artefacts, then why should we not consider the next step? Transhumanist tendencies have already developed a fascinating literature on this topic. What is disturbing in our body is the fact that we sometimes face maladies or unbearable pains and

that our body is perishable. What is fascinating is in fact the way in which our neurons work and produce our “software” part. Working on computers taught us that these contents can be “saved” on a certain data carrier, that in this way they can be protected against temporality or the different accidents of the “hardware”. Could we not apply the same measures in the case of consciousness? If the *res extensa* causes us so much trouble why should we not combine or, in special cases, even substitute the organic one with an inorganic one, always effective, which can be updated and improved permanently as a software?

The transhumanist metaphysical project seems to be a modern one, bold and very new, but, basically, it only means to turn the body radically into an artefact, completed with a gnostic soteriology adapted to the present age and metaphors. The salvation of the world and of the soul can be attained through knowledge. The supreme form of knowledge is represented by computer technology, ergo immortality lies in the silicon eon.

7. The body after and without life: the “Body Worlds” exhibition

The “Body Worlds” exhibition does more than to turn human body, life and death into a museum show, it is more than a possible attraction of the macabre. It is the product of our age through which the boundaries of the private space are redefined. TV shows such as Big Brother desecrated the intimacy of relationships under the pretext that anything can be transformed into a show, anything can be watched, transmitted, consumed as a live broadcast. The same type of curiosity and the same desire to consume such media products made possible TV shows “filming” the everyday life of a “famous” couple of the day. Where does this desire originate from? I am not necessarily referring to the desire to expose yourself to the media, but the desire to consume secretly at home, in the private and comfortable space, the life of other persons – persons who are not actors and the life which is not a movie. A possible hypothesis would be the lack of substance in one’s own life, the need of colour and action supplied by watching other people’s actions, imagining that one could be the same. Or maybe dreaming of dramatic episodes of one’s own existence, episodes left behind the walls of one’s own timidity.

If in the case of the mentioned TV shows the consumed object seems to be the relationship of other persons, the exhibition I am referring to seems to fascinate by exposing the human being’s mortal nature through a real show of the images of death. And as the exhibited

“plastinates” are anonymous, I am inclined to think that imagining one’s own death holds the fascination for visitors. But this represented death is dry, clean, odourless and without obligations, it “shines” in its aesthetic dimension.

Günther von Hagens began an interesting experiment of transcending death, not towards eternal life, but towards the eternal aestheticization of the body. Even if we may doubt the aesthetic quality of the exhibits, this is pretended directly, through allusions to other classical representations of the body, or indirectly, through situating the bodies in artistic poses: equestrian, athletic etc. representations. However, not death, but the body is made immanent. The first boundary von Hagens seems to have transgressed is the decomposition of the body after death. The preservation technique he uses is called plastination and consists of the replacement of the water and fat contained in the tissues with reactive substances, such as silicone rubber, epoxy or polyester resins. Besides this there is the technique of sheet plastination, through which the body is first frozen, then cut into slices of 2 to 8 mm thickness, these slices being submitted to the same processes of plastination, vacuum impregnation, pressure etc.

In this exhibition the deceased person’s body is transformed into an artistic object, exhibited not only in the natural form of a corpse, but made into a theatre of representations on the verge of artistry and even on the verge of decency. The muscles detached from the skeleton “fly” in all directions, of course under the aesthetic imperative of miming the dynamism of movement. A skinned man is playing chess, his brain, his seemingly strained nerves, the eyeballs striped of eyelids in order to show better his surprise and concentration being exposed to the visitor’s eye. A skinned and sectioned rider is sitting on a skinned horse. Finally, a pregnant woman in the last month of the pregnancy is exhibited in a pose designed to be sexy, as if she were lying relaxed on a sofa, that the child, who would have been near to birth, should be seen as well as possible in the sectioned abdomen.

The perception of these bodies satisfies one of the exigencies of contemporary civilization: everything is dry and odourless, aseptic and domesticated. What in von Hagens’ view should have served didactic and scientific purposes in medical faculties proved to be a profitable business; in this way “Body Worlds” became according to statistics the most visited travelling exhibition in the year 2004. There has been much discussion on the impact of this exhibition, on the possible sources of the fascination it holds for the public. The explanations range from scientific

curiosity to voyeurism, from the attraction exercised by novelty to the latent cruelty that lies in each of us, from the possible transcending of death by making it a fetish to the fascination of the macabre. It is hard to isolate only one of these characteristics in order to make it the exclusive explanation.

In fact, the practice of turning bodies into museum exhibits first began with the stuffed animals in the natural history museums. Thus, we have got used to seeing a dead being thus exposed as if it were yet alive. With the same object in view, to “get to know nature”, we have been accustomed to strange forms of death, to tamed and aestheticized deaths. Decomposition, the smell, the loneliness and the ugliness of death have almost become taboo. But the fear of death remains; this is probably what dictates this play of appearances, of exhibiting dead bodies as if they were alive. Moreover, this is the source of the complicity in our gaze before these exhibits. We marvel at the beauty of the bodies, of the feathers, of the furs, of the silhouettes or the exotism of the dead animals, we admire the landscapes painted on carton and the few “genuine” leaves which compose their habitat, imagining that we are there in the midst of nature, among them. All these because the fear of wild nature is also, as the fear of death, present in us. But the exhibited bodies, before belonging only to “natural sciences” had a life connected with a certain habitat, as, in the case of men, their bodies always have a certain social identity.

Coming back to von Hagens’ exhibition, what shocked was the absence of any element of identity. The bodies were exhibited as if they never had belonged to certain persons, they had the appearance of some machines used in anatomy classes – in fact they were presented as didactic material –, only that, with a closer look, you could discover that they had inscribed in their matter the history of the person who had once lived: filled teeth, rods or metal elements in their legs or articulations, anatomical imperfections which made those bodies individual. Men who lived as I live, who loved, suffered and maybe other people suffered losing them.

The respect given to the body is a component of the respect we owe to other persons as members of the same humankind. At the same time, the respect we have for the final phases of life and the dignity we confer even to dead bodies could start an ethical reflection. This respect for the end should be symmetrical with the respect for the beginning of human life. Why should we give less respect to the bodies in formation than to those in decomposition? Without requiring religious or biological

arguments, even without knowing whether an embryo can feel or think, the simple fact that an embryo is a form of the human body leads to the conclusion that its life must be respected. It is true that the connections between a being at the beginning of his/her life and the social environment, the community are very weak. They are constituted in most of the cases only by means of the parents' wishes and aspirations or of images intermediated by machines (for example, photos obtained in ultrasound scan). But the lack or the precariousness of social relationships is not an argument. The respect we should have for each stage of human life does not depend on the circumstance of sharing a certain culture or social environment with those persons. This respect derives from the possible identification with those beings. If I can recognize myself in other persons and if I can identify myself either completely or in certain stages of my life with those persons or their certain life stages, then I owe them respect.

8. From artefact to biofact

Besides the artefact-like quality of the human body I am going to discuss another problem as well, namely the creation of a distinct ontological place for that which has been named biofact. The term was initiated in the German specialized literature by Nicole Karafyllis (2003). As a systematic concept "biofact" describes an entity which was made possible by technology, namely the creation of some being in artificial conditions, as well as the programming and reprogramming of some living beings. The term biofact wishes to grasp this intermediary situation, this distinct ontological stratum, in which an entity is not only a thing, but also a living being, however, without having all the ontological attributes of a living being.

"Der Begriff Biofakt besteht aus einer Verbindung der Wörter Bio und Artefakt. Artefakte sind künstliche, ersonnene und erschaffene Objekte. Die konstituierten Objekte fielen bislang immer in den Bereich der Gegenstände. (...) Artefakte sind im allgemeinen tot. Biofakten sind biotische Artefakte, d.h. sie sind oder waren lebend. Die Kategorie der technischen Zurichtung des Lebenden ist zwar nicht neu (klassische Züchtung!), jedoch gab es bislang keinen systematisierenden Begriff, der auf die technische Einflussnahme auf das vormals natürliche Wachstum verweist. (...) Dieser begriffliche Mangel entstand u.a. deshalb, weil sich die Technikphilosophie bislang darauf konzentrierte, in erster Linie die

Technik zu systematisieren und “Natur” immer als “das Gegenüber” der Technik, von dem man sich abgrenzen konnte, hinzunehmen.”¹

Controlling the life of plants or even of animals is not something completely new. Hybridization, cross-breeding between different species has been practiced for a long time. But these situations were not as radical as those announced by the above mentioned examples: they can be recognized sometimes as some accidents of nature. The new technologies, such as the cloning of mammals or the implantation of human genes into animals, exceed by far the traditional techniques of manipulating living beings.

In order to be systematic I am going to differentiate five levels of analysis in biotechnologies: namely, *(natural-)scientific*, *legal*, *economic*, *social* and finally *existential* levels. All these comprise bioethical problems difficult to solve. If we place ourselves at the (natural-)scientific level, the terms of discussion concern “scientificity”, the aspirations to truth of certain theories or theses etc. For example, it is of interest whether a clone is viable or not, which is the most efficient cloning method etc. “True science” has not only a special charm, but also much power. It fascinates not only the scientists, but also the philosophers and theologians who try to find at this level a certain reservoir of arguments valid in the bioethical debates. Even if in some cases (natural-)scientific criteria may be valuable, they have two major inconveniences. The first one is that they are limited in time. A new, more adequate scientific theory will bring about other criteria with greater claim of veracity. The second major inconvenience is the fact that, for human beings, not only the sphere of science is relevant. Man has another cultural dimension as well, which is not confined to the scientific one.

The legal level of analysis for biotechnologies makes even more evident the cultural differences in the reception of these technologies, differences dependent upon history, tradition, the level of economic development etc. If certain countries, such as Germany, have a restrictive legislation in this domain, this is partly due to an accentuated ethical sensibility caused by the German society’s confrontation with the atrocities of the Nazi period. There are also countries with a very liberal legislation, such as the UK or Sweden, and there are countries which are not interested in elaborating a specific legislation either because they are

¹ Nicole Karafyllis (hrsg.), *Biofakte. Versuch über den Menschen zwischen Artefakt und Lebewesen*, Mentis, Paderborn, 2003, 12.

not quite aware of these problems, or because the economic situation does not yet allow the access to developed technologies. The laws already mean the institutionalization of bioethical aspects. Moral intuitions are substituted with moral imperatives which can be turned afterwards into a law. The legal aspects are then taken over by the social mechanisms and it is desirable that they should be interiorized as general norms of behaviour. The social aspects are often a preliminary to the legal aspects: public debates and demonstrations, newspaper and periodical articles, movies and TV programmes have a great impact on people and they make the *public opinion*. This is, on the other hand, a *doxa*, an opinion, an impression constructed in most of the cases emotionally, a product of media rhetoric, but it must be taken into account because it is a manifestation of the social which has an interest not only for politicians and public opinion polls. Society puts a certain pressure on the individual and on the decisions they have to make. Prenatal diagnosis for women who are older than thirty-three years is more than an option, it has almost become a kind of social obligation. This pressure put by society on the individuals leads to the existential level. The new biotechnologies put people in completely new existential situations.¹ They confront us with questions such as: How will a person imagine and plan his life when finding out by a genetic test that he has an incurable hereditary disease which he has transmitted or can transmit to his children. Moreover this disease will manifest itself soon and irreversibly? Such dramas may remind us of the classical Greek tragedies, only that in this case the happenings are determined by the “genes” and not destiny. We have left to the end the economic aspects of biotechnologies. As any technology, these too require a “market” for sale. They are very promising, though the concrete results are not as spectacular as the promises. But the interests of the pharmaceutical industry do not end here. The idea to patent a gene or a group of genes and to have in this way an exclusive gene for exploiting their investigation showed once more that the living being is frequently made into an instrument and an artefact.

“The man, the animal and the plant have been transformed into biofacts, into artefacts which grow and whose life was imitated,

¹ Rouven Porz, “Das Absurde erleben”. *Grenzsituationen, Sinnfragen und Albert Camus’ Absurdität im Bereich der Gendiagnostik*, in *Folia Bioethica*, SGBE–SSEB, Basel, 2004.

provoked, reproduced and stimulated.”¹ Man has always been a hybrid, a union of a cultural part with a natural one, a symbolic animal as Ernst Cassirer named us. But this symbolic animal seems to have lost both his dimensions, the natural and the symbolic one, becoming only a *symbolized artefact*, full of foreign significations.

Growth seems to be specific to living beings. But it is possible to replace natural growth with processes of growth which can be programmed or presented virtually. It is very difficult to separate in the case of biofacts their natural part from the artefact-like one. The art of manipulating the living being transformed certain biological concepts with a precategorical role such as growth or cellular differentiation into technical concepts such as observation, control, predictability etc.

Trying to encompass and to clarify the problem of biofacts phenomenologically, Karafyllis observed: considered phenomenologically, the biofacts are living beings, because they can be seen growing and they look similar to that which we have traditionally known, but they are not autonomous in their growth and formation, to the effect that they do not develop according to their own laws. Even their core or essence has been modified. “Biofakte sind zwar auch wachsend, aber nicht das Resultat einer selbst verursachten Ursache “Zeugung”, denn sie haben ja einen Urheber, einen Zielsetzenden, planenden Konstrukteur, der ihr Wachstum genau so und genau dann veranlasst.”² Even if they grow, this growth has not got its cause in itself, but it has a creator, a foreign constructor, a person who plans it and establishes its aims.

9. “Wo aber Gefahr ist, wächst das Rettende auch”

Where danger is near, there can be found salvation too, a line from Hölderlin tells. But it is often hard to see where the danger is; we have to distinguish real dangers from the phobias of the moment, to identify the divergent interests which orientate the glance towards some false dangers and problems. Some pretended dangers may be only gestures of reserve before the new or some unknown things. Many useful and necessary technical discoveries were regarded suspiciously at the beginning, but later on they have become the natural parts of our life and we have even become dependent on them. Are the dangers some

¹ “Der Mensch, das Tier und die Pflanze wird jeweils zum Biofakt, zum wachsenden Artefakt, dessen leben anteilig imitiert, provoziert, reproduziert und simuliert werden kann.” Nicole Karafyllis, *op. cit.*, 9.

² *Ibid.*, p. 16.

bioethicists see in the developing and application of biotechnologies dangers of this kind? It is difficult to give a categorical answer. The reifying character of contemporary science takes no account in my opinion of the fact that living things and beings have different ontological regimes. Without using arguments such as the dignity and sanctity of life, the simple pointing out of the complexity of life, of the difference between that which is alive and that which is not, moreover, of the awareness that we, as humans, share our survival with this biosphere are sufficient motives for us to show some reserve towards present day biotechnologies.

Bioethical discussions have drawn our attention to several critical points. If Hölderlin is right, the solution is to be found around these critical points. This does not mean only saving certain individuals or formulating some laws which would forbid what is dangerous and damaging, but it is more than this. Technique may have come too close to man. I do not mean only that it penetrated too deeply his body, but, moreover, that it overturned his perceptions, the perception of the world and self perception. We do not quite know what we see. Perfect vegetables which taste like cardboard, oversized flowers which cannot sustain their corolla and which collapse under their own weight, animals deformed by hormone alimentation, which can live only to a certain age, because their feet are too fragile for their overweight bodies, created according to the consumers' dubious architectural representations. The body of these beings is torn from the functional unity it had with its environment or with other beings and is programmed so as to satisfy economic or aesthetic criteria. That which should be perceived as an exceptional specimen, appetising or well developed, is shown to be, at a closer look or in interaction with other senses, only a deformed simulacrum.

An interesting dominant concept denotes in English the more or less "natural" products, namely "organic food". The concept is not well chosen, it is as strange as that of "bio-products" which is used in the German linguistic area. According to the exigencies of logic, the organic is opposed to the inorganic. Table salt, minerals etc. are inorganic products, which we consume. On the other hand not all that is "organic" is alive as well. The domain of organic chemistry is extremely vast, rubbers, polymers, plastic materials etc. belong to the organic domain. Strangely, the organic had been associated with good life, "natural life". Thus the logical opposite of "organic food" would be the vegetables, fruits, animals not grown, bred according to their natural laws, but

artificially, “produced” as artefacts, mass products, which through they simulated perfection deny the natural. The other denomination of natural products (“bio”) can also be explained in this way. In compliance with the new requirements of correct alimentation, only the products originating from beings which were born, grew and developed in harmony with their natural medium receive the label “organic” or “bio”.

“Biofakten sind eben nicht Roboter mit menschlichen Funktionen, bei denen man den artifiziellen Anteil auch phänomenal sieht. Sondern umgekehrt: Man sieht den artifiziellen Anteil nicht und findet ihn womöglich auch nicht einmal auf substantieller, molekularer Ebene, obwohl das lebende Subjekt in weiten Teilen künstlich zum Wachsen veranlasst oder zumindest künstlich zugerichtet wurde.”¹ Since the biofacts are not robots with human functions, their artificial part is not phenomenally perceptible. Even at a molecular level one might not perceive any difference between natural beings and biofacts. However, a public opinion poll taken in the USA has shown that, though phenomenally it is impossible to distinguish a normal cow from a cloned one, consumers rejected the idea of drinking the milk of the cloned one. People consider the unnatural birth method of animals a danger hard to define, but present. But our attention is not always drawn to these dangers.

We observe that we no longer know what we see. The object of our sight is the possibility of its perception. Moreover, the way in which I can perceive, determine or define a thing, a being or a person determines my action or the attitude I have towards these. Because of this, the phenomenological problem of constituting an object, determining it tends to go beyond the confines of ontology and to become a meeting point between “theoretical” and “practical philosophy”, between ontology and ethics. Emanuel Levinas states in the study *L'ontologie est-elle fondamentale?*² that the role of “first philosophy” should extend from ontology towards ethics. In his view ethics becomes a perspective, a way of seeing, the way in which I perceive the *other* as *other*. However, the other is an alterity not only through the fact that it manifests itself by means of a spatial or conceptual difference. The relation of alterity is neither spatial, nor conceptual.³ Schematizing our interactions with other

¹ *Ibid.*

² Emanuel Levinas, “L’ontologie est-elle fondamentale”, *Revue de métaphysique et de morale*, 56 (1951).

³ Idem, *Le temps et l'Autre* (1979), German translation by L. Wenzler, *Die Zeit und der Andere*, Felix Meiner, Hamburg, 1984, p. 55.

beings in the formula subject-object, we could be tempted to believe that the ego always appears as something singular. But Levinas emphasizes that we do not exist in the singular form, but we are always surrounded by other beings and things with which we have different relations. Through sight or touch, through sympathy or when we carry on an activity we are in the company of others. In this way the dynamic character of the alterity relation is underlined. In analogy with the event of sight, ethics is perceived as perspective. Seeing an object is a complex process and not an isolated event. Seeing an exotic plant, trying to determine it or to name it, to decide whether it is ornamental or comestible etc., all these are closely related with that which we already know, with our interests or wishes. Many objects that enter into the field of our visual perception are simply ignored, mainly if they have no significance for us or if they are things which belong to the everyday routine. Analogically, we consider a fact immoral when it draws our attention by being in contrast with that which we perceive as correct, right, moral etc. In order to notice this, a double distance or difference is required: that between me and the other, as alterity, and that between the other's situation and my own norms or principles. The contrast necessary for "ethical vision" is all the more pregnant as I am able to suppress the distance between myself and the other through empathy and to accentuate the difference between my principles and the scenario according to which the respective immoral act unfolds. Often our cultural tradition makes us to qualify certain things as immoral, or, on the contrary, makes us indifferent towards them. This could be exemplified by the: animal sacrifices, abortion, religious or sexual discriminations etc.

Biotechnologies bring about a disorientation of our ethical vision in a new sense. The double distance necessary for vision no longer happens in a triadic relationship (I – the other – my moral standards). It is yet premature to say that we have clear moral standards in this respect. The relationship becomes bipolar, only between me and the object of perception, but this object appears doubled to me. Something tells me I have an incongruence to do with. The first impulse I have in my endeavour to determine the fact or the object at issue is to classify it as "unnatural", without necessarily having nature in mind, rather trying to point out an atopy, a fissure in the constitution of that object or fact. It is easy to perceive the numerous problems caused by biotechnologies through this disorientation of perception. What is a fluorescent rabbit? What is a frozen embryo? What is a clone? In the first question the

category of *quality* is stressed, in the second the category of *place* and in the third that of *relation*. The theory of categories should be revised or readapted to the new ontological entities and to the new existential situations. Bioethical discussions cannot remain on an ethic level only, while the discussed objects have no clear ontological status.

The Aristotelian theory of causality, the doctrine of the four types of cause could also be useful for understanding the status of biofacts and the place of biotechnologies. *Causa materialis*, *causa formalis*, *causa efficiens* and *causa finalis*. Bioethics focuses mainly on the final cause. The question corresponding to it is: what good does it serve? Technology dominates *causa efficiens*. For technology only the conditions under which things are realizable are important: what is realizable must be realized. Heidegger remarks in his essay on technology: *causa efficiens* determines in the greatest degree the other types of causality. Its importance has increased to a degree that *causa finalis* is not even taken into consideration as regards the problem of causality.¹

What happens, however, with the other causes, the material and the formal ones? In the case of overweight flowers or chickens the matter seems to exceed the form. The normal form of a being is overloaded by matter, forced beyond the limits of supportability, of the aesthetic or of performance. The perfect tomatoes have only the appearance of the form, but their matter is a different one. In this way, technology, to which the efficient cause belongs, can modify the matter or the form in an aleatory manner, so that these two should no longer correspond to the perceptive unity we have been used to determine or to name a thing with. *Causa finalis*, as the idea of goodness, is ignored and substituted with the idea of profit, consume etc. But in the last few years the return to the “natural” seems to direct more and more the consumer’s behaviour. Could this be explained by an increasing doubt regarding the unlimited progress of technology and the paradigm of consume? Is the reification of life refused?

We started with the fact that we have been facing new dimensions of body perception lately. But through this idea we did not refer only to the human body, but also to living bodies in general. The dangers of a distorted perception of corporality affect men, plants and animals in equal measure. It is equally absurd to separate the human body from the spirit and to separate the body of other living beings from

¹ Martin Heidegger, *Die Technik und die Kehre*, Neske, Pfullingen, 1962, p. 8.

the laws specific to their life, from their intrinsic causality, or, in other words, from their life. This is the reason why a question such as “what can I see when I am looking at a fluorescent rabbit?” must be reconsidered. It is not an epistemological question, but an ethical question, because my actions are rooted in the phenomenology of my perception.

Translated by Ágnes Korondi