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**The Concept of Life in  
Modern Medical Ethics and Bioethics**

**Abstract**

*Human persons are characterised by a bodily structure, and not merely as a cluster of neurons or as ghosts. The prefix ‘bio’ in ‘bioethics’ already points to that which is alive. Bioethics should therefore always keep in mind this direct relationship between life and the living body. The paper discusses two ethical consequences which result from the reduction of the human person from an organismic whole to a bodiless mind-brain being: when certain mind competencies or brain structures are not, not yet, or no longer identifiable, the legal protection and the right to life of such persons have been diminished.*

**Key words**

bioethics, Hans Jonas, brain death, living organisms, personhood, status of the embryo, corporeality (*Leiblichkeit*)

**I. Bioethics and questions of the body  
in its aliveness as a living organism**

Bioethics is concerned with questions of life, with the question about the nature of life. The question: “What is life?” is more than an ambitious philosophical “Glass Bead Game”. This instead is where fundamental ethical and judicial questions are examined. The question of how we should handle a stone is different from the one concerning our dealings with a living organism. As human beings, we are neither stones, nor are we purely spiritual angelic beings. In contrast both to the latter and to God who writers of the Bible tell us is pure spirit, we possess a living body through which we are accessible to ourselves and to others. We are (rational) living beings able to associate with other living beings. All the things we do – eat, speak, write essays, go for walks or have sex – are all determined by our corporeality. We are characterised by a bodily structure, and not merely either as a cluster of neurons or as ghosts. The prefix ‘bio’ in ‘bioethics’ already points to that which is alive. Bioethics should therefore always keep in mind this direct relationship between life and the living body.

Our living body is not something dead. It is alive. And we are able to experience this living body when we go for a long walk and are exhausted, when we drink a glass of wine, experience joy and sorrow. It is the way in which we experience that we and our body belong together. It is in our own living body that we are able to experience our “being alive-ness”. Without our (living)

body, we would not be able to live at all. This living body of mine differs, for example, from a stone in its life context, in its ability to feel, in its movements and emotions. A stone can be moved and can be the object of a search. My body cannot be misplaced. My (living) body is always immediately present to me. According to Hans Jonas, it is thanks to our (living) body's immediate presence that we are able to name that which is granted to no disembodied entity: that the point of life itself is an individuality centred in the self, contained in the self, and in contrast to the rest of the world with a clearly marked boundary between interiority and exteriority.<sup>1</sup>

Today, physical performance can easily be examined, controlled, and managed technically. This reality does not, however, enable us to get a grip on what is meant by corporeality (*Leiblichkeit* in German) and being alive. Experiences, which literally occur within the domain of our (living) body, remind us of our vulnerability, our conditionality and our limitations, but also of the gift we have of being free. Our bodily fluids, our excretions, our metabolism also remind us: a stone, a planet, a book and a computer do not have such faculties at their command. In contrast to the latter, already single cell organisms are sensitive to stimuli and maintain metabolic processes in relation to their environment. Therefore, all conscious, as well as unconscious, expressions of life may be interpreted as manifestations of freedom insofar as metabolism encompasses that which is not present in inanimate reality.

## II. The danger of a short-sighted understanding of the human being in bioethical discussions

Lately, bioethical discussions have been characterised by an increasingly widespread understanding that cerebral structures and processes alone determine your and my complete existence, our “being alive-ness”, and our humanity. In other words, human beings are reducible to mind-brain beings. According to this view, the brain has the leading role: it alone simulates and constructs everything. The brain, thus, not only distinguishes itself as an illusionistic actor, but also directs and is responsible for all decisions and actions. Such an encephalocentric vision obscures the organismal unity of all living beings. The human being, thus, becomes *nothing but* a mind-brain-being. Such an approach ignores the fact that *nothing but* pronouncements have little to do with scientific adherence to precision.

The non-physical approaches of Cartesian dualism and of physicalism have contributed to the expansion of the said view of the person. Today's neurosciences provide the reference point which apparently promotes this view of the human person with missionary zeal. Such a view goes well with a fundamental physicalist, but also with a dualist conviction, in which the mind-brain-paradigm – as I would like to define it<sup>2</sup> – still reflects the blatant division between the material extreme of a contracted material reality (*brain*) and a bodiless spiritual reality (*mind*). This position is either affirmed or an attempt is made to make it become part of the physicalist understanding.

Both the brain and the mind belong to the (living) body-soul unity of the human person. Mental manifestations of life are our manifestations of life. They belong to your and to my organism. It is true that we need our brain in order to live the way we do. But life demands much more than healthy and fully operational brain parts. As Aristotle emphasises, and as António Damásio, Thomas Fuchs and Günter Rager, for example, point out in current discussions: the organ situated under our skull is a living organ that interacts with the environ-

ment. And it is the living body, the body filled with life, which takes care of our essential metabolism. It is the living body which gives us the possibility of coming together with other persons and of penetrating our environments. This reality is almost completely ignored if the brain is so extremely foregrounded and the (living) body so extremely marginalised. We ourselves and our life manifestations cannot be narrowed down to that which takes place in our brain. To see human persons reduced to mind-brain beings implies denial of their living physical bodies, and in turn, negation of their alive-ness.<sup>3</sup>

As absurd as it may sound, the mind-brain-paradigm has been gaining in popularity. Its adherents are extremely active and committed, e.g., when they proclaim that the cerebrum alone is responsible for our reasoning and our freedom. Such an approach has no empirical or philosophical basis. The mind-brain-paradigm seems to have gained in dominance because it is supported by rationality; only that which falls within the mind-brain-paradigm is scientifically acclaimed and may thus expect financial support. In order to be regarded as being up-to-date in the (neuro)sciences, many of our contemporaries regard themselves as lackeys of the encephalon, and no longer as persons able to express the mental through the (living) body.

The mind-brain-paradigm results in a gruesome imbalance: in the case of certain illnesses, only a small aspect of the human being is taken into consideration, and not the human person as a whole (including relatives).<sup>4</sup> Thomas Fuchs points out that medical treatment which concentrates solely on the cerebrum (e.g., pharmacologically) neither can nor will have the desired healing effect.<sup>5</sup> We may agree with Fuchs that human persons must be dealt with in their organismic entirety. It must be emphasised that medicine should be concerned with the whole living human person, and not merely with the electrical activity of the brain or liver function tests. Hastedt points out that the strict separation of mental and physical illnesses has in itself become a relic of a dualism that is no longer feasible.<sup>6</sup> It is not a bodily machine or the cerebrum that has fallen ill or enjoys the best of health. You and I can become ill; and, in the course of this illness, our life and the life of those who are close to us can drastically be altered. It is against this background that Hastedt has

1  
Hans Jonas, *Das Prinzip Leben*, Suhrkamp, Frankfurt/M. 1997, p. 149. [“Der Punkt des Lebens selber: dass es nämlich selbst-zentrierte Individualität ist, für sich seiend und in Gegenstellung gegen alle übrige Welt, mit einer wesentlichen Grenze zwischen Innen und Außen.”]

2  
Cf. Marcus Knaup, *Leib und Seele oder mind and brain? Zu einem Paradigmenwechsel im Menschenbild der Moderne*, Alber, Freiburg – Munich 2012.

3  
Cf. Thomas Fuchs, “Kosmos im Kopf? Neurowissenschaften und Menschenbild”, *Zeitschrift für medizinische Ethik*, Vol. 52 (2006), No. 1, p. 5; Thomas Fuchs, *Das Gehirn – ein Beziehungsorgan. Eine phänomenologisch-ökologische Konzeption*, Kohlhammer, Stuttgart 2008, pp. 16ff.

4  
This becomes especially apparent in statements made by Gerhard Roth, who in the face of mental illness is concerned only with brain dysfunction and not the relationship of a person to either fellow human beings or to the environment: “Changing the psyche of the patient through eliminating malfunctioning of the subcortical limbic networks must, therefore, be the goal of all psychotherapy.” Gerhard Roth, “Wie das Gehirn die Seele macht” (lecture at 51. *Lindauer Psychotherapiewochen*, 2008), <http://www.lptw.de/archiv/vortrag/2001/roth.pdf>, p. 14.

5  
Cf. Th. Fuchs, “Kosmos im Kopf? Neurowissenschaften und Menschenbild”, p. 5.

6  
Heiner Hastedt, *Das Leib-Seele-Problem. Zwischen Naturwissenschaft des Geistes und kultureller Eindimensionalität*, Suhrkamp, Frankfurt/M. 21989, p. 314.

stressed that medical care that explains illness only with regard to pathogenic factors is unrealistic.<sup>7</sup>

I would now like to discuss two ethical consequences which result from the reduction of the human person from an organismic whole to a bodiless mind-brain being: when certain mind competencies or brain structures are not, not yet, or no longer identifiable, the legal protection and the right to life of such persons have been diminished.<sup>8</sup>

### III. The beginning of human life

You and I were born with a (living) body. And it is in our corporeality that we will die one day. Every birthday reminds us that life is a *gift*, which is received from others. *Life, love, and living body* (*Leben, Liebe, Leib* in German) are not only linguistically related. That through the physical love between a man and a woman new life can come into being should really fill us with awe.

In modern Western society, the beginning of the human living being does not always originate under favourable circumstances. The question most often discussed concerns the point at which a human being actually becomes a human person. Is there a stage at which you or I were not human beings? In this context, some authors speak of “fully-fledged” personhood. It is quite clear that such personhood begins only when certain *mental capabilities* are available, when, for example, a child is competent to deliberate on herself and her future. But is this situation really so self-evident? We shall see fairly soon that, according to this view of life, embryos and infants have been eliminated as candidates for “fully-fledged” human beings and persons. The consequence of this is as follows: their life does *not* have to be preserved and protected under all circumstances. Abortion or sexual abuse of infants which results in death is not a big “problem”. The situation does, however, become problematic when it becomes clear to us that children in a neonatal unit or infant ward, or even embryos, have a living body and a human face like you and I do. The gaze of a toddler gives us an indication of the life of his spirit. The (living) physical body of embryos is completely ignored by such authors. They are of the opinion that they can set the benchmark of the mental manifestations of life that must be present for a human person to be characterised as truly being a “real” human person. Is it not the case that these authors also lived through a stage of life when certain talents and abilities of theirs were only potentially and not actually present in their being? And could it be that, when these authors lie down to sleep at night or – something nobody would wish on them – should they fall into a coma, they too, in accordance with their own criteria, are no longer “fully-fledged” human persons: for in these stages of their lives, certain manifestations of life are not being utilised?

Another group of authors seems to have recognised that this benchmark is not really useful. However, the search for better evidence continues. From this group, one is of the opinion that a watertight argument can be found in the *development of the brain*. The motto of these people is: “When certain brain structures have been formed, then we are dealing with a fully-fledged human being!” Some authors are of the opinion that, in this context, it is necessary to remind ourselves of the issue of brain death (this will be discussed below) and to adopt the following equation: “If certain important brain structures are missing, or if their activity has come to an end, we are no longer dealing with a human person!” Supporters of this ideology seem to be totally impervious to the fact that the embryo is self-evidently *alive* even before it has reached the stage of the forming of cerebral structures. Damásio rightly points out that

life and the life instinct which are within the perimeter which characterises an organism precede the appearance of nervous systems and brains.<sup>9</sup> Like Damásio, we can say that we are here dealing with an organismic whole. Our brain is never quite “complete”, but develops throughout our lives. We are, after all, not static beings, but vibrant, dynamic human persons. And this is why the demarcations which have been discussed do not make sense.<sup>10</sup> Günther Rager<sup>11</sup> argues that the process of synaptogenesis is a process of continuous development. And here, the emphasis is on the word “continuous”. There is no such thing as a sudden “leap” in the development of the human person. Yet, this is precisely what bioethicists, such as Bernhard Irrgang, suggest when they speak of a ‘pre-embryo’.<sup>12</sup> By using the prefix ‘pre-’, he wishes to suggest to his readers that there is a stage in which we are not yet dealing with a “real” human living being, and that at some point a “leap” is made to full personhood. Irrgang is apparently unconcerned with everything being allowed from an “ethical perspective” before this “somersault” takes place. Rager sees this somewhat differently. He refers to the *alive-ness of the embryo*. According to Rager, we are dealing with an organism in its *living entirety*. And it is exactly this which creates the possibility for cerebral structures – and much more – to develop.

This allusion to a *living entirety* is extremely important, particularly from a scientific perspective. It would be rational to claim that, after the coming together of the germ cells, we are dealing with a new human living being. What has come into existence here is not merely biological “wetware”. Rager emphasises that it is a *new* biological entity. It is *new* because maternal and paternal genetic makeups have been brought together here. Similarly, Vollmert states that molecular biological research has shown that the biological nature of a living being is determined by the nucleotide sequence of its DNA chain. He emphasises that a living being who possesses a DNA sequence specific to human beings is a human being regardless of the stage of its embryonic growth process it may be at – i.e., from the very first moment of its fertilisation, the first cell is already a human person.<sup>13</sup>

Noting the following is of paramount importance: Rager and Vollmert’s observations apply irrespective of the question whether the human person has originated from the sexual union of a man and a woman, IVF or cloning. When the nuclear cells unite, a remarkable development is brought about which did not exist prior to this point in time.

“Contrary to the description of the embryo as no more than a cluster of cells is the finding that already at the blastomere stage cells begin to specialise and share out their respective tasks.”<sup>14</sup>

7  
Ibid., p. 311.

8  
Cf. M. Knaup, *Leib und Seele oder mind and brain?*, pp. 453–480.

9  
António Rosa Damásio, *Ich fühle, also bin ich. Die Entschlüsselung des Bewusstseins*, List, Berlin 2006, p. 170.

10  
Cf. Th. Fuchs, *Das Gehirn – ein Beziehungsorgan*, p. 181.

11  
Cf. Günter Rager, “Der Status des Embryos”, in: Günter Rager, *Die Person. Wege zu ihrem*

*Verständnis*, Herder, Freiburg – Vienna 2006, pp. 185–249.

12  
Bernhard Irrgang, *Einführung in die Bioethik*, UTB, Munich 2005, p. 69.

13  
Bruno Vollmert, *Das Molekül und das Leben. Vom makromolekularen Ursprung des Lebens und der Arten*, Rowohlt, Reinbek bei Hamburg 1985, p. 177.

14  
Günter Rager, “Biologische Fakten und personales Denken”, in: François-Xavier Pottallaz, Bernard N. Schumacher (eds.), *Der*



Accordingly, it is somewhat surreal to consider that Bernhard Irrgang in his *Einführung in die Bioethik* poses the question of whether a zygote is “a human person in the anthropological sense”,<sup>15</sup> and speculates that the human spirit, subjectivity and the like are only present in rudimentary form and only develop in the late stages of pregnancy, or perhaps even after birth.<sup>16</sup> The beginning of the life of the (living) body does not coincide with the beginning of the body of the human person.<sup>17</sup> Irrgang, thus, differentiates between the human body and the (living) body.<sup>18</sup> Accordingly, physicality is taken to exist from the moment of fusion between an egg and a sperm to the moment when the body disintegrates in the grave, and (living) corporeality comes into being with the coming into being of subjectivity and ends at the moment of brain death.<sup>19</sup> Irrgang points out that a (living) body (*Leib*) is present only when subjectivity has come into being. Initially, only a human body (*Körper*) develops.<sup>20</sup> Accordingly, the body and the living body are not only differentiated between, but are torn apart.

For Irrgang, the source of all corporeality is the development of the brain.<sup>21</sup> Here ‘corporeality’ is “a dangerous wolf in sheep’s clothing of bioethics”, and legitimises the mind-brain picture of the human being. The brain is not understood as being embedded in the organism as a whole, but is understood as the very seat of corporeality.<sup>22</sup> According to Irrgang, cerebral processes are the essence of personhood. Your and my cerebral processes are, of course, not excluded. According to Irrgang, the humanly-personal and bodily-constituted life develops after the 25th week of pregnancy.<sup>23</sup> Bodily reality is, thus, not seen as the essential basis within which the brain structures are even able to develop. The (*living*) body is, thus, dependent on the *brain*.<sup>24</sup> The formation of the brain is *sufficient* for important mental life manifestations – subjectivity, for example. One cannot attribute subjectivity to the unborn human living being since it is not yet the author of an action. Thus, Irrgang claims that subjectivity, understood in this way, is also the indicator whether a human living being is entitled to legal protection. Embryos as “pre-personal human physicality”<sup>25</sup> only have a right to a diluted measure of inviolability. In this, an apparent ethical benchmark has been discovered regarding research on embryos; and if one assents to this, one accepts their killing.

According to Irrgang, stem cell research needs embryos as “raw materials”. And the leitmotif is this: Irrgang knows that, if embryos were accorded dignity, “consuming embryo research” would be unacceptable.<sup>26</sup> Irrgang’s following statement is to be evaluated on the same basis: provisions permitting abortion within the first three months of pregnancy can be justified only when embryos and foetuses are not accorded any human dignity up to a certain point in time.<sup>27</sup> The “value” of embryos created for research purposes has to be appraised in a different way than the ones that have been fertilised in the womb.<sup>28</sup> This argument in which Irrgang separates *a life worth living* from *a life not worth living* is reminiscent of the rhetoric used by the National Socialists in Germany:

“... without a doubt, the life of some human persons is less valuable; saving it, thus, has lower priority.”<sup>29</sup>

In the case of an embryo or an infant whose *mind and brain* have not yet fully developed, and where one cannot yet speak of personality in the full sense of the word, certain acts of omission are still possible.<sup>30</sup> According to Irrgang, when a certain “demand” exists (e.g., for research purposes), certain human persons can be killed, particularly when certain faculties with which we assist other mortals have not yet fully evolved. Irrgang claims that the almost



limitless right to reproductive self-determination includes the right to select embryos or foetuses, meaning that it also includes eugenic tendencies.<sup>31</sup>

That already unicellular organisms constitute a living whole escapes Irrgang's notice. And this whole is organised, structured or, as we may naturally also say – formed. It is the *form* which holds everything together.<sup>32</sup> Irrgang's statements on the zygote are more than questionable from both a biological and a philosophical perspective. His presumption that the spirit/soul is only added during the course of time is not feasible and collapses fairly soon given that, already at this stage of life, a formal principle is identifiable. Günter Rager correctly points out that already in the zygote and the following blastomeric stages we see an exchange of molecules between the individual and the environment.

“The unity of zygotes and blastomeres is, however, guaranteed through the targeted control of metabolism which takes place in the protected space of *Zona pellucida*. Thus, on the one hand, we have materiality which allocates a certain space and designates boundaries to individuals, which anchors these individuals within space and time, and gives them their individuality. On the other hand, we have a form which guarantees not only the survival of zygotes, but also their unity and further development.”<sup>33</sup>

The life of human persons can be described as a development. Development is typically human. From the beginning, our genetic makeup is fully available. Entelechy, *form*, is present from the beginning. They do not ensue at a later date. Just like you or I or a professor concerned with bioethical questions, a totipotent cell with a double set of chromosomes is likewise a member of the human family. It is, thus, absurd to link the legal protection of an embryo to the question of where an embryo is (in a research laboratory, or in the womb). It is obvious that the life contexts and faculties of an embryo are different

*Mensch und die Person*, Wissenschaftliche  
Buchgesellschaft, Darmstadt 2008, p. 65.

15

B. Irrgang, *Einführung in die Bioethik*, p. 20.

16

Ibid., p. 21.

17

Ibid., p. 38.

18

Ibid., pp. 41, 60.

19

Ibid., p. 45.

20

Ibid., p. 46. [“Von einem Leib kann erst die Rede sein, wenn sich eine Subjektivität ausgebildet hat. Zunächst entwickelt sich ein menschlicher Körper.”]

21

Ibid., p. 45.

22

Ibid.

23

Ibid., p. 66.

24

Ibid., p. 45.

25

Ibid., p. 46 [“präpersonale menschliche Körperlichkeit”].

26

Ibid., p. 52.

27

Ibid., p. 151.

28

Ibid., p. 50.

29

Ibid., p. 47.

30

Ibid., p. 161.

31

Ibid., p. 151.

32

This Aristotelian thought is taken up well by Fuat S. Oduncu, “Moralischer Status von Embryonen”, in: Marcus Düwell, Klaus Steigleder (eds.), *Bioethik. Eine Einführung*, Suhrkamp, Frankfurt/M. 2003, pp. 213–220, esp. pp. 215ff.

33

G. Rager, *Die Person*, p. 159ff.

from yours and mine. This cannot be denied. It is, however, important to recognise that these contexts and faculties are already given in the foetus and later reach maturity. Rager points out that the living body with its boundaries and its possibilities of regulation is the guarantor of the identity and survival of the biological individual.<sup>34</sup> Without exception, each embryo is a (living) body-spirit unity, a living wholeness of form and matter. Fatal consequences accompany the reduction of the human person to the mind-brain-paradigm, i.e. to the existence or non-existence of brain structures and mind faculties. It is important to remember the new re-formulation of the Hippocratic Oath at the World Medical Association in 1948 in Geneva stating that the life of the human person should be maintained with deepest reverence from the moment of conception.<sup>35</sup>

#### **IV. The dying human person: brain death criteria and manifestations of life**

Let me mention a second example. In response to the mind-brain-paradigm and the resultant glorification of the human brain, a *new definition* was given birth to in the 20th century, a definition of when a member of the *Homo sapiens* species is actually dead. What was new to this definition was that *brain death* would now be interpreted as the *death of the whole human living being*, while breathing and heart activity could continue to be maintained.

How did it come to this point? It is widely known that, during the last century, there were many medical changes and innovations. Part of this is that, since the end of the 1950s, with the help of respirators, medicine has been able to provide artificial respiration for long periods of time. This was great progress. However, a number of drawbacks soon became apparent: researchers, such as the Frenchmen Mollaret and Goulon, discovered in this context that there may be situations in which the breathing of a human person can be ensured, and the heart continues to beat in the chest cavity, but no cerebral manifestations of life are accessible. The technical medical term for such situations is ‘*coma dépassé*’. What is important in relation to the topic under discussion is that these human persons were definitely not regarded as being dead. They were patients. In der Schmitten emphasises that, after the prevalence of cardiopulmonary resuscitation and the introduction of external cardiac massage, the number of patients who lived in *coma dépassé* increased. Patients continued to live despite cardiovascular and respiratory arrest, and with irreversible brain damage.<sup>36</sup>

A solution had to be found. In the late summer of 1968, several things changed. A committee of the *Harvard Medical School* in the USA revised the approach to *coma dépassé*. Patients who found themselves in this situation were no longer regarded as being comatose, they were now dead. Being alive was reduced to what was or was no longer possible in the cerebrum. Brain death, it was agreed, was when physicians could no longer identify any recognisable functions of the cerebrum (a flat electroencephalogram). This was not the only criterion. Spontaneous breathing and reflexes also had to be considered to be absent.<sup>37</sup> We should not ignore the revolutionary nature of this decision: personhood now ends when brain faculties are no longer diagnosable. Thus, the death of one part of our selves (*meros*), namely that of the brain, was to be the same as the death of the whole human organism.<sup>38</sup> From that point on, once this diagnosis has been made, vital life support measures need not be taken.



Hans Jonas was one of the first to voice concerns over this development: through this strategic course of action, a way had been opened to serve the interests of transplantation medicine.<sup>39</sup> I have already mentioned that, in the course of embryo research, Irrgang has spoken of “human raw materials”. Here, we have a similar situation: “harvesting” the largest number of the best possible (“fresh and alive”) organs. Jonas argues that the point for this move was to bring forward the time of declaration of death. This means that permission is given not only to turn off the heart-lung machine, but – alternatively – also vice versa: to continue to use this and other life support equipment so as to keep the body in a state which, according to earlier definitions, would have been regarded as ‘life’. Jonas points out that, according to the new definition, this status of the body is no more than a simulation of life. And he adds that the rationale for this is that the organs and tissues are now made available under ideal conditions, conditions which, at an earlier date, would have fulfilled the criteria for vivisection.<sup>40</sup> Even Peter Singer, who is widely known for having triggered controversial discussions about the legal protection of life, comments that the change in our understanding of death, which excluded brain dead persons from the moral community, was one of the first in a number of dramatic changes in our understanding of life and death.<sup>41</sup>

Authors with such different approaches as Hans Jonas and Peter Singer nevertheless agree that the new definition of death resulted from an *agreement*. A consensus was reached that from now on patients will be declared brain dead. As it has already been mentioned, this opens completely new opportunities for organ transplantation medicine. An organ, such as the heart, for example, cannot be transplanted if one waits until all manifestations of life have come to an end.

Descartes advised that human beings should rise to become the Lord and Master of life and death. By bringing forward the time of declaration of death, this is even more successful. Physicians prepare a checklist and decide when a patient is no longer a patient, but a corpse. The image of the person made in the image of the machine comes to mind: old and defective parts of the “human person machine” are scrapped and, if possible, replaced by others which are still fully functional.

“To declare a person dead whose warm blood still pulses through his veins remains a prerogative reserved for our progressive age.”<sup>42</sup>

34

Günter Rager, “Neuronale Korrelate von Bewusstsein und Selbst”, in: Günter Rager, Josef Quitterer, Edmund Runggaldier (eds.), *Unser Selbst. Identität im Wandel der neuronalen Prozesse*, Schöningh, Paderborn – Munich – Vienna – Zurich 2003, p. 37.

35

Taken from: Peter Singer, *Leben und Tod: der Zusammenbruch der traditionellen Ethik*, Fischer, Erlangen 1998, p. 94.

36

Johannes Hoff, Jürgen in der Schmitt, “Kritik der ‘Hirntod’-Konzeption. Plädoyer für ein menschenwürdiges Todeskriterium”, in: Johannes Hoff, Jürgen in der Schmitt (eds.), *Wann ist der Mensch tot? Organverpflanzung und “Hirntod”-Kriterium*, Rowohlt, Reinbek bei Hamburg 1994, p. 155.

37

Cf. Hans Jonas, *Technik, Medizin und Ethik. Zur Praxis des Prinzips Verantwortung*, Suhrkamp, Frankfurt/M. 1987, p. 220.

38

Ibid., p. 220.

39

Ibid., pp. 220, 224.

40

Ibid., p. 221.

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P. Singer, *Leben und Tod: der Zusammenbruch der traditionellen Ethik*, p. 28.

42

J. Hoff, J. in der Schmitt, “Kritik der ‘Hirntod’-Konzeption”, p. 154.

Many disciples of the brain death criterion rarely mention that there is no uniform globally accepted definition of what is meant by “brain death”. Literature suggests that we can speak of three hundred different definitions.<sup>43</sup> This is not a small number indeed. It should not be lightly dismissed that you or one of your loved ones may be declared dead in some hospitals around the world, while in some others physicians may well be convinced that they have in their care a patient and not a corpse to whom medical care and a pension are due. No human person may be declared dead, not even when the chances of life of very ill persons need to be optimised.

In this context, I would like to draw attention to another aspect: according to statistics, one in one thousand infants born in Germany is born with anencephaly. The diencephalon (interbrain), the cerebellum and the mesencephalon of these infants (numerically, there are more girls than boys) are severely impaired or atrophied. In addition, their meninges, the cerebrum and the bony skull have not developed properly. Physicians point out that the brainstem of such infants can apparently only fulfil its service in the total organism in a very limited manner.<sup>44</sup> Some authors speak emphatically of a “primitive form of life”.<sup>45</sup> For them, this means that under no circumstances can such infants be regarded as “meaningful human life” in the true sense of the word.<sup>46</sup> This is clear. Peter Singer, nonetheless, adheres to the principle that anencephalic children and children with a defunct cortex can move their limbs, can sneeze, cry and apparently also smile.<sup>47</sup> Thus, Singer argues that these children are not dead. Yet, the presence of a conscious mental manifestation of life is denied to them, something he believes is constitutive of human personhood, and so he suggests that, instead of changing the definition of death in such a way that would make anencephalic children and those with a defunct cortex be legally declared dead,

“... it is better to allow the legal harvesting of organs from living children who have beyond doubt been diagnosed either with anencephaly or with the destruction of the cortex.”<sup>48</sup>

The honesty and consequences inherent in Singer’s above thoughts are truly frightening. Instead of adapting definitions to suit the situation, he suggests that organ removal from living children should be allowed, since the mental abilities and neuronal structures are not completely developed in the full sense of the word. In his opinion, the easiest means of attaining the desired goal is to be allowed to remove these children’s organs.<sup>49</sup> He puts the brain on the throne of the “seat of consciousness”.<sup>50</sup> Similarly, in Jeff McMahan’s statements on anencephalic infants, the characteristic reduction of the human person to mind and brain all too obviously reflects the mind-brain-paradigm. He writes that you and I are primarily mind beings, and that a new-born infant born with anencephaly is fundamentally different.

“It is no more than an organism – a permanently vacant human organism.”<sup>51</sup>

Anencephalic infants are “only” organisms! One can only marvel at such profound insights. The fact that these organisms are alive is being ignored. That these organisms are seen as being “permanently vacant” is an indication of the skewed assessment that all manifestations of life in organisms flow from the brain, that the essence of a human person is found in the *mind and brain*. In discussing Rager’s work, I have pointed out that the (living) body-soul unity first evolves in the course of the embryonic development of brain structures. While it is actually true that a heart, lungs and a brain are present right from the beginning, something alive is nevertheless already present, from which all the rest will evolve. It is scientifically not tenable to say that alive-ness begins

only when cerebral functions are present. The US neurologist Shewmon comments:

“Integration does not necessarily require an integrator, as plants and embryos clearly demonstrate. [...] The integrative functions of the brain, important as they are for health and mental activity, are not strictly necessary for, much less constitute, the life of the organism as a whole. [...] the body without brain function is surely very sick and disabled, but not dead.”<sup>52</sup>

The majority of authors who hold the brain death concept comprehensible locate mental manifestations of life in the cerebrum, i.e., they claim that brain processes and mental manifestations of life are identical. Other authors claim that, because that which is essential in defining personhood is missing, brain dead persons are no longer spirit filled. What lies behind these statements is reckless non-physicality. In the context of this discussion, Detlef B. Linke has called attention to the fact that, in the event of brain death, at least ninety-seven per cent of the organism is still alive.<sup>53</sup> Thus, it is already mathematically ridiculous to declare such an organism dead. Such an organism has not yet collapsed and still exhibits a number of life manifestations. In the event of brain death, many organismic functions remain present – often not only for a few hours, but for several weeks. In contrast to corpses, in such (living) bodies, there is no sign of livor mortis, coldness or stiffness. It is important to note what continues to be present: for example, metabolism which is part and parcel of the alive-ness of organisms. Those who have been declared dead still digest food and produce excretions. The heart of those who are brain dead is still beating and their injuries can still heal. Their body temperature can rise again. The skin of those who are brain dead can develop a holiday-like tan in the sun. All these phenomena have not yet been observed after death.

Brain dead men can still have an erection so that, under certain conditions, they are still in a position to father children. In the era of Viagra, it seems strange that physicians who themselves might be suffering from potency re-

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Cf. Manfred Balkenohl: “Der Hirntod – Zur Problematik einer neuen Todesdefinition”, in: *Theologisches. Katholische Monatsschrift*, Vol. 37 (2007), No. 1–2, p. 54. Similarly, there is no uniform brain death definition in Europe either. A tabular overview can be found in: Hans-Peter Schlake, Klaus Roosen, *Der Hirntod als der Tod des Menschen*, Neu-Isenburg DSO, Würzburg 2001, p. 61.

44

Cf. Fritz K. Beller, Kerstin Czaia, *Hirnleben und Hirntod – erklärt am Beispiel des anencephalen Feten (Medizinische Materialien*, Vol. 17), Zentrum für medizinische Ethik, Bochum 1988; H.-P. Schlake, K. Roosen, *Der Hirntod als der Tod des Menschen*, pp. 73–75.

45

H.-P. Schlake, K. Roosen, *Der Hirntod als der Tod des Menschen*, p. 74.

46

Ibid.

47

P. Singer, *Leben und Tod: der Zusammenbruch der traditionellen Ethik*, p. 44.

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Ibid., p. 57.

49

Ibid., p. 52.

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Ibid., p. 44.

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Jeff McMahan, *The Ethics of Killing. Problems at the Margins of Life*, Oxford University Press, Oxford 2002, p. 451. Taken from: Bernd N. Schumacher, “Zur Definition des menschlichen Todes”, in: F.-X. Putallaz, B. N. Schumacher (eds.), *Der Mensch und die Person*, pp. 54ff.

52

D. Alan Shewmon, “The Brain and Somatic Integration: Insights into the Standard Biological Rationale for Equating ‘Brain Death’ with Death”, *Journal of Medicine and Philosophy*, Vol. 26 (2001), No. 5, p. 473.

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Cf. Detlef B. Linke, *Hirnverpflanzung. Die erste Unsterblichkeit auf Erden*, Rowohlt, Reinbek bei Hamburg 1993, p. 120.

lated issues should declare their patients who may well have fewer difficulties in begetting children than the physicians themselves – dead. And, in contrast to quite a few women who cannot carry a child to full term, being able to bear a child is not impossible for brain dead women. In order to be able to save the child of such a woman, doctors involved in the treatment of such cases speak of a “brain dead-*living*-womb”.<sup>54</sup> Defenders of the brain death concept also have to take a position.<sup>55</sup> Schlake and Roosen advise against the “metaphysical glorification of simple vital processes”.<sup>56</sup> According to them, this is merely “a manifestation of residual life forms which are being realised on the level of primitive vegetative residual functions”.<sup>57</sup> In both these instances, the notion of vital (life) processes and life forms are mentioned. And it is precisely these terms that indicate that we are dealing with living beings, and not with those who are dead. The various manifestations of the life of those who are “brain dead” cannot be explained without a dynamic auto-organisation and integration of the entire living organism.<sup>58</sup> They are also different from the mere existence of a stone or a planet.

“In the hylomorphic view, ‘mind’ (or ‘psyche’) and ‘soul’ are not synonymous; but the soul is *both* the principle of the immaterial aspects of the mind *and* the substantial form of the body, making it precisely an organism as a whole. So long as the organism is present, the soul is necessarily present.”<sup>59</sup>

In this context, several neurobiologists emphasise that all organs contribute to the maintenance of an organism. There is no hierarchy of organs worth mentioning. According to this understanding, the cerebrum is not the indispensable authority in the upkeep of our life contexts.<sup>60</sup> In the event of kidney failure, nobody speaks of kidney death or of the death of a beloved fellow human being. Why is the brain then assigned this special role? An organism is dead only when the entire organism has collapsed.

“Advocates of the brain death criterion continue to maintain that the remaining functions of brain dead organisms are no more than the activity of the subsystems of a lost whole. Yet, the often complex organisation of these functions can only be maintained through the interaction of the remaining subsystems at the level of the whole organism. Such cooperation does not need a central intermediary instance.”<sup>61</sup>

Proponents of the brain death criterion start from the basic premise that

“... personality of the human person, the individual unmistakable whole of a human existence, is bound to consciousness, and therewith substantially and alone to the brain.”<sup>62</sup>

How are we to then understand the unconscious functions which are, after all, a large part of the manifestation of life? Do these not belong also to us as living beings? In the light of these numerous manifestations of life, is it right to claim that conscious functions constitute the whole of the human person? Is it a scientific fact that we can be equated with our conscious mental manifestations of life?

In our day-to-day encounters with one another, it is not our brain that is central, but our (living) body. Our (living) body grants us the opportunity to meet one another. This could be the starting point for this important bioethical question. I experience even irreversibly comatose human persons in their living corporeality. When I put the hand of such a person in mine, it definitely feels very different from the hand of a corpse in a coffin. As long as even some vital functions continue to exist, we are still in the presence of a (living) body. And this (living) body deserves our respect.

The criteria we apply in answering the question of when a human person may be declared dead must not be opportunistic. We can only say the following:

a human person is dead when all life functions of this organism have been suspended, when this organism no longer possesses entelechy, no longer has a soul. The exact point when this occurs cannot be determined, not even with the support and help of computers and imaging methods. This lack of clarity, Jonas tells us, is the final state of not knowing the exact borderline between life and death. And he underlines that this lack of knowledge demands that priority be given to the assumption that life still exists.

“It should enable us to resist the temptation to follow pragmatic recommendations concerning the definition of death.”<sup>63</sup>

## V. Conclusion

My main concern has been to draw attention to a prevalent point of view according to which the brain is considered to be that which determines our entire personhood and aliveness. Moreover, the brain is sometimes even expected to bring forth our very selves and the world in which we live. The biggest problem with this approach is that the living unity disappears from sight, and the argument given to counter the latter is that it is sufficient to explore and analyse neuronal processes well, so as to understand the mental manifestations of life, to understand you and me. In here discussing this issue, we have looked more closely at the beginnings of our personhood and the definition of brain death.

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Hans Jonas, “Brief an Hans-Bernhard Wuermeling”, in: J. Hoff, J. in der Schmitten (eds.), *Wann ist der Mensch tot?*, p. 25.

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According to the German Medical Council, any such pregnancy is to be understood as an autonomous placenta function.

56

H.-P. Schlake, K. Roosen, *Der Hirntod als der Tod des Menschen*, p. 85.

57

Ibid.

58

Josef Seifert, *Das Leib-Seele-Problem und die gegenwärtige philosophische Diskussion. Eine systematisch-kritische Analyse*, Wissenschaftliche Buchgesellschaft, Darmstadt 2<sup>1989</sup>, p. 242.

59

D. Alan Shewmon, “Constructing the Death Elephant: A Synthetic Paradigm Shift for the Definition, Criteria, and Tests for Death”, *Journal of Medicine and Philosophy*, Vol. 35 (2010), No. 3, p. 268.

60

Cf. Gerhard Roth, Ursula Dicke, “Das Hirntodproblem aus der Sicht der Hirnforschung”, in: J. Hoff, J. in der Schmitten (eds.), *Wann ist der Mensch tot?*, pp. 51–59; Gerhard Roth, *Aus Sicht des Gehirns*, Suhrkamp, Frankfurt/ M. 2003, pp. 192ff.

61

J. Hoff, J. in der Schmitten, “Kritik der ‘Hirntod’-Konzeption”, p. 185.

62

H.-P. Schlake, K. Roosen, *Der Hirntod als der Tod des Menschen*, p. 77.

63

H. Jonas, “Brief an Hans-Bernhard Wuermeling”, pp. 24ff. Jonas suggests the following as the benchmark: *brain death plus heart death plus death of every other indication* (H. Jonas, *Technik, Medizin und Ethik*, p. 222, cf. p. 233). “One can speak of the death of an organism as a whole only when *all* vital functions on every level of the organism as a whole have really come to an end” (J. Hoff, J. in der Schmitten, “Kritik der ‘Hirntod’-Konzeption”, p. 222).

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### Marcus Knaup

## Pojam života u modernoj medicinskoj etici i bioetici

### Sažetak

Ljudske osobe karakterizira tjelesna struktura, što znači da one nisu samo nakupine neurona ili duhovi. Već sâm prefiks 'bio' u 'bioetici' ukazuje na nešto što je živo. Stoga bioetika mora uvijek imati u vidu tu vezu između života i živoga tijela. U ovom se radu raspravlja o dvije etičke konzekvence koje proizlaze iz reduciranja ljudske osobe kao organizmičke cjeline na tjelesno umno-moždano biće: kada se ne može, još ne može ili više ne može ustanoviti određene umne kompetencije ili moždane strukture, umanjeni su pravna zaštita i pravo na život takvih osoba.

### Ključne riječi

bioetika, Hans Jonas, moždana smrt, živi organizmi, osobnost, status embrija, tjelesnost (*Leiblichkeit*)

### Marcus Knaup

## Lebensbegriff in der modernen medizinischen Ethik und Bioethik

### Zusammenfassung

Personen sind leiblich strukturierte Wesen – und kein Neuronenhaufen oder Gespenster. Das Prefix ‚Bio‘ in ‚Bioethik‘ verweist uns auf das Lebendige, weshalb Bioethik den Konnex von Leben und Leib im Blick haben sollte. Der vorliegende Beitrag beleuchtet zwei ethische Konsequenzen, wenn die organismische Ganzheit zu einem leiblosen mind-brain-Schrumpfwesen degradiert wird: Sind bestimmte mind-Befähigungen oder brain-Strukturen nicht, noch nicht oder nicht mehr ausfindig zu machen, wird der Schutzstatus und das Lebensrecht dieser Menschen aufgeweicht.

### Schlüsselwörter

Bioethik, Hans Jonas, Hirntod, lebendige Organismen, Personalität, Embryostatus, Leiblichkeit

**Marcus Knaup**

**Le concept de vie dans l'éthique médicale et la bioéthique moderne**

**Résumé**

*La structure physique caractérise les personnes humaines, ce qui signifie qu'elles ne sont pas seulement un amas de neurones et d'esprits. Déjà simplement le préfixe « bio », dans « bioéthique » témoigne de quelque chose de vivant. Pour cela, la bioéthique doit toujours garder en vue ce lien entre la vie et le corps vivant. Ce travail traite de deux conséquences éthiques qui proviennent d'une réduction de la personne humaine d'un tout organique à un être corporel cérébrale: lorsqu'il n'est pas possible, qu'il n'est pas encore possible ou qu'il n'est plus possible d'établir la présence de compétences intellectuelles ou de structures cérébrales déterminées, la protection juridique et le droit à la vie se trouvent amoindris.*

**Mots-clés**

bioéthique, Hans Jonas, mort cérébrale, organismes vivants, personnalité, statut de l'embryon, corporalité (*Leiblichkeit*)