

Theologisch-Philosophische Beiträge zu Gegenwartsfragen

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5 Brain and Mind

Most of you will agree that we think with our brain. Our brain is responsible for our emotions, our thinking and acting. Because we have a brain we have a mind. And because we have a human brain we become responsible for our thinking and acting. Especially our moral responsibility depends on our neurological capacities.

Despite this agreement this has serious consequences you might not be ready to agree. One serious question is whether mind is a result of matter. Is it true to say that the human mind depends on a physical process? If so, then what will happen with our mind after death? Our Christian faith in resurrection or in the immortality of the soul could become relevant. Western philosophers of the modern epoch since René Descartes have not rejected that the human mind correlates to the human brain. They have also reflected the consequences of an accident with brain damage, consequences for personal capabilities and change in personal character. But despite this, modern philosophers tried to describe the correlation between mind and brain as a correlation but not an identity.

René Descartes (1596–1650) described the self-consciousness as a substance. A substance is something which needs nothing else for existing. Thus self-consciousness needs no physical matter or process for existing. Despite this, self-consciousness correlates with physical matters, especially with the brain. According to Descartes, there must be an organ as a bridge between mental and material entities. As such, the physical world has an open door for mental influence. And such the I, the human self-consciousness, could influence the human brain in order to organize human acting in life¹⁹.

There is another thinker, Gottfried Wilhelm Leibniz (1646–1716), who describes the relation between mind and brain as entirely independent areas but with parallel structures. The mental world could never influence the physical world, but both are organized by the same structure so that a fact in the one

19 R. Descartes: *Meditations*.

world has a specific correlation in the other world. Separate but parallel structured²⁰.

Finally Baruch de Spinoza (1632–1677) describes the correlation between mind and brain as two modes of the same thing. According to Spinoza there is an identity between mind and brain, between soul and body. But the difference results from different perspectives which are between thinking and space. The contexts of the same thing are different, so that it seems that the same thing is two parts. Thus Spinoza tries to solve the problem about the correlation between mind and brain by making the difference between appearing and being. Actually mind and brain are the same, but they appear as if they are different. Spinoza could prove the immortality of the soul by the way: It is only an appearance when physical life ends. But the essence of mind remains valid even after death²¹.

The key of modern philosophical thinking is to describe correlations between mind and brain without identifying both. Most philosophers follow this modern tradition in principle until now. We could experience and we could prove scientifically that a special structure and life history of the brain leads to a special kind of cognitive behaviour. But it is something else to say that a special neurological structure *is* a special cognitive capacity.

Neuroscience is a new biotechnological movement. In neuroscience many explorers of different sciences work together in an interdisciplinary field. Physicians, computer programmers, mechanical engineers, philosophers and theologians explore the human brain in order to describe the correlation between mind and brain more precisely. The hope is to develop therapies against different kinds of brain disease such as dementia, loss of senses (e.g. blindness), psychological distresses such as depression or schizophrenia.

One of the most interesting questions is whether there is a 1:1-correlation between brain-structures and special cognitive behaviour. Could we read what

20 G.W. Leibniz: The Monadology.

21 B.d. Spinoza: Ethics.

someone thinks if we perceive the actual representation of his brain state? And if so: Could we also change his thinking precisely by changing the actual brain state? Especially computer scientists are engaged in representing brain states in computers. Could we copy human capacities in computers? Could a computer “think” like a human? Could a computer “feel” like a human?

This is not only a theoretical question. It could also become a practical one. For instance, is it possible to save one’s mental capacities? Suppose a very ingenious thinker who has cancer in his brain. He needs a medical treatment which could destroy his incomparable cognitive capacity. If computers could replace his cognitive skill it could be possible in principle to support the person to get his ingenious cognitive capacities back after treatment. For instance, a hard disc could compensate the neuronal defect. This leads to the assumption that mental capacities are a construction of matter. Even if a person dies, the saved intellectual capacities could work on. It is a kind of materialistic belief in the immortality of the soul.

And one important implication of that belief is the 1:1-correspondence between brain-structures and a special cognitive behaviour – which is not proven yet. It might also be possible that the same brain-state could evoke different conscious states. And vice-versa: Maybe the same thought could correspond to several different brain-states in the same person.

In spite of this, neurological research develops new and very interesting results, especially for the correspondence between brain and mind. We already know how to influence mental emotions or thoughts by stimulating special regions of the brain. Or: One could feel pain in a special part of the body, for instance in the arm, simply by stimulating a special region of the brain. One gives a weak electric impulse into the brain which is not hurtful in and of itself. But the consequence is a painful feeling in the arm although the arm is not harmed. The reverse is also true: One could stop pain or a harmful emotion by similar stimulation of the brain although the arm is actually hurt. Such, it seems, the brain constructs the awareness of the world and of oneself. And this construction – who I am and what the world is – needs not to have to do anything with the

outer reality. What we think and who we are seem to depend on contingent structures of the brain.

Why is that a problem for ethics? Usually we think of ourselves as the agents of our lives, at least as moral agents for our decision-making and of our acting. But since the brain constructs our awareness of everything, we are no longer the agents of our rational judgments. We are no longer deciding what to do by rational arguments or a rational discourse. But what an open-minded capacity is depends on contingent brain structures which could be changed and influenced physically. This has consequences for what a person is. Our understanding of personality is now embedded in a materialistic frame. Personal freedom, personal autonomy appear as illusions because the brain sets the conditions for what a rational behaviour is and how a person could behave rationally.

Surely one could try to educate children to learn how to decide autonomously; how to make judgments. In this case of education, their brain will rebuild its structure. But it could become more effective to change the brain structure directly by physical means. And if so, personality appears to become a material construction. What I think, when I think I am an autonomous agent of my life, depends on brain conditions. And these brain conditions determine not only the material concept of autonomy, but also the individual concept of how I use my autonomy. Therefore, the brain is the heterogenic condition for autonomy. The point is that other humans, physicians, could manipulate the brain of a person in order to change his autonomy. And this is really heterogenic in an ethical sense.

There are some lawyers who propose not to punish criminals anymore by imprisonment. The reason is simply that criminals do not act as they want but they want as the brain determines them to do. Perhaps it would be more useful then to stimulate their brain in order to diminish their criminal energy. In some cases this has become practice already. For instance in the USA sexual criminals like rapists are treated with pharmaceuticals or even by an operation on those brain regions which control their hormones. If so, morals become replaced by medicine. One is no longer responsible for one's own actions, but whoever makes

false decisions is sick and needs medical therapy. Criminal actions mutate to causal events. And morals collapse.

Since we know something specific about the correlation of brain and mind, many people use pharmaceuticals to enhance their mental capacities. According to an international poll of the journal “Nature” from 2008, 20 percent of the respondents use pharmaceuticals in order to enhance their mental capacities, especially at the workplace²². This is called “brain doping”. It seems that the consumers of such pharmaceuticals do not have a special education level, social role, age, income or position in the company. It overlaps all social groups. In general, the fear of unemployment or failure are reasons for enhancing the mind capacities by drugs. In this case the heterogeneity of the autonomy becomes an autonomous decision: It is the proprietary decision of oneself to become dependent on external brain stimulation.

Another point is relevant about the relation between mind and brain, at least for Christian ethics: Also religious confessions seem to be dependent on brain structures. Experiments, especially from the scientist Michael Persinger, have shown that electric stimulation at the periphery of the brain evoke mystical feelings. I cite Persinger from an article of 1983: “Religious and mystical experiences are normal consequences of spontaneous biogenic stimulation of temporal lobe structures.”²³ According to new tests, people with brain damage after an accident have changed their religious and moral value system entirely²⁴. Richard Dawkins states polemically that religious beliefs entail a defect of brain functioning. Religion is merely a “virus of the mind”²⁵.

22 <http://www.aerzteblatt.de/v4/archiv/artikel.asp?id=65887> (discovered 11-28-09). Dtsch Arztebl 2009; 106; A 1615–8.

23 Michael A. Persinger, Religious and mystical experiences as artifacts of temporal lobe function: a general hypothesis. *Perceptual and Motor Skills* 57 (1983), 1255.

24 H.J. Markowitsch: Warum wir keinen freien Willen haben. Der sogenannte freie Wille aus Sicht der Hirnforschung; *Psychologische Rundschau* 55/2004, 163–168, 165.

25 <http://www.cscs.umich.edu/~crshalizi/Dawkins/viruses-of-the-mind.html> (Discovered 11-28-09).

Also here it is the underlying assumption that the brain constructs a virtual reality but it does not discover a “real” reality. If special brain states are the conditions for having religious impressions, the assumption suggests that there is no religious reality absent from the brain. But this assumption of construction suggests too much. The suggestion is that the correlation between brain and mind is like an identity. The premise is: “People with a specific brain damage have a specific kind of religious impressions”. And the conclusion is: “The impressions of mind only refer to the brain damage but not to something else”. The identity-assumption suggests that consciousness only refers to structures of the brain but not to something of the outer world. And this deconstructs consciousness.

In my opinion, this identity-assumption is too strong and only suggestive. It is not well proven because it ignores the phenomenon of consciousness. Consciousness is reduced to a representation of biological states of the brain. This is a circular argument. Because one wants to show that mental states correspond to brain states in a 1:1-correspondence, one makes mental states meaningless for themselves – and for the reference to the outer world: to what conscious states “mean”. They are only representations of brain states. That is a circle. So in my opinion, we are only at the beginning of the serious question of understanding how brain and mind correlate and what this would mean for our understanding. But despite that, it seems that we must change our self-understanding and perhaps our moral foundations.

To sum up: It seems that neuroscience touches our feelings. It is like a Copernican turn which hurts human self-esteem. The original Copernican turn consisted in the remark that not the sun turns around the earth – like it seems – but vice-versa. Thus the earth and also the human beings lose their central point in the universe. Now the material claim of neuroscience intends a new kind of Copernican turn: the human mind would depart from its personal center for human self-awareness (like it seems) to the periphery of physical events. The mind seems to be only a result of physical events like all others.

In the next three chapters, I want to discuss subjects about the relation between mind and brain, which seem to be ethically relevant. First of all, I would

like to discuss the claim of a materialistic neuroscience. This is rather a metaethical discussion but one which establishes the background for all further ethical claims of neuroscience. Is it possible at all to prove in principle that the mind is based on matter? And what does it mean? The second point I would like to discuss is to ask what would follow for persons with a major loss of mental capacities, like handicapped people, patients in coma or even patients after brain death? My final question is about human freedom. Do we act as we want or do we want what our brain determines us to do? Human freedom is one basic presupposition of ethics. So, if freedom is an illusion, there are no ethics anymore. It would become meaningless.