

## Transhuman Memory

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The works of Johann Sebastian Bach were not performed for many decades after his death in 1750. Bach's St. Matthew Passion was performed again on the 11<sup>th</sup> of March 1829 at the Sing-Akademie in Berlin, 102 years after its first performance in 1727. The establishment of an important culture of remembrance with public concert halls only took place 200 years ago. Since then, this culture of remembrance has been continuously expanded and refined. This development is not independent of the availability of technical possibilities that significantly increase our ability to remember. In the second half of the 19th century the record was developed, which was then replaced by tapes and CDs in the 20th century and finally by the cloud in the 21st century. Other techniques have emerged in the present that significantly increase the potential of human memory, so that transhuman memory can be realized..

The most promising possibilities for further development of humans results from the astonishing progress of genetic engineering. It is already possible today to determine the correlation between certain genes and an increased ability to remember by means of big data analysis of genes. On the basis of these findings, it would in principle be possible, after artificial insemination and subsequent analysis of the fertilized oocytes, to select three cells with the highest memory capacity for implantation by means of pre-implantation diagnostics. In the foreseeable future,

genome editing, such as the CRISPR/Cas9, the so-called gene scissor, will probably promote this ability in a reliable, precise and cost-effective manner.

It is doubtful whether increased memory is necessarily an all-purpose good. In the last episode of the first season of the Netflix series "Black Mirror" this was vividly illustrated. It bears the apt title "The Entire History of You". Here the extreme capacity of memory was realized by a brain-computer-interface. This development results from the constant miniaturization of computers. The personal computer was replaced by the smartphone, which now shrinks to the size of an RFID chip (RFID stands for Radio Frequency Identification) that can be implanted into the body. This is accompanied by an increase in human performance, such as memory, and continuous monitoring of bodily functions to increase the likelihood of the widening of the human health span. Humans are usually not only interested in an extension of the lifespan, but especially in an extension of the time in which we live healthily, which is what the term "health span" stands for. At the same time, it is also possible to permanently monitor a person's physiological processes. If Elon Musk's "Neuralink" company or Mark Zuckerberg's "Facebook" were to succeed in realizing digital mind reading, a person's psychology could also be digitized in real time. In fact, work is already underway on various variants of brain-computer interfaces. In this way, the physiological and psychological development of a single being (i.e. its ontogenesis) could be digitally stored so that no human life event would be lost. The digital, silicon-based memory capacity would far exceed the carbon-based capacity of the brain.

In the following, I will expand this idea further to make statements about a probable future and to evaluate the development of digitization from an ethical perspective: "Upgraded" people, transhumans, also need an appropriate environment, such as smart cities, in order to be able to use their potential. In smart cities, every entity is given a chip: this is how smart homes, autonomous cars and cognizant architecture are created. In the latter case, chips are built into walls. The Internet of Things, i.e. objects equipped with chips, such as cars, smartphones and washing machines that are in mutual data exchange, is connected to the Internet of Bodily Things, i.e. chips integrated into the human body and used for physiological monitoring, so that we are increasingly moving into the Internet Panopticon. The Panopticon is an architectural concept developed by the founder of utilitarianism Jeremy Bentham to realize effective, comprehensive and cost-effective surveillance. Its basic concept is used, for example, for prisons, whose construction enables the simultaneous total surveillance of many people by just a few people. The guards of the Internet Panopticon have access to all digital information. We are all prisoners in this system. However, as an outstanding hacker, a prisoner can also become a guard at the same time, just as every guard must also be a prisoner in the system at the same time. The total monitoring of all digitally available data and their storage for the realization of a special memory are realized here. This sounds like a totalitarian horror vision, but can also be in our interest. Using "predictive maintenance techniques" of the human body, defects could already be considered and treated before malfunctions have occurred. These

techniques have so far been used on machines. Corresponding measurement data enable us to predict which part of a machine will have a defect in the foreseeable future so that it can be replaced in time. By establishing an Internet of Bodily Things, this approach could also be applied to humans to expand our health spans. National security will be increased through permanent total surveillance, too. Being aware of algorithmic surveillance leads to self-censorship and compliance. We abide by laws, as any breach of the law is discovered and sanctioned. Every process, every event and every action that can be digitally stored is converted into data capital that can be used to evaluate us, for example, in the conclusion of insurance policies, in application procedures to jobs and also within the framework of government assessment. Digital memory determines a person's value. In China, this is already being implemented as part of the Social Credit System.

Digitalization is accompanied by the perfection of digital surveillance and memory. Numerous advantages are associated with this development. To prevent this development is not a realistic option. It is rather obvious that the lack of digital infrastructure in many European countries will be a reason for the economic regression there. At the same time, economic growth will be promoted in East Asian countries, while Europe risks becoming the Disneyland of the world, where the memory of the non-digital world - Neuschwanstein, Chartres and the Colosseum - is held high. The standard of living of the European middle class will fall. In the eyes of the public, it is always the other who is to blame - the member of a minority group, the refugee, the dissident. Social tensions will lead to open

conflicts, which will develop into civil war. ... In order to prevent such a development, digitisation must be promoted further. With every new development challenges arise at the same time. A psychologist from Stanford recently showed that digital face recognition makes it possible to determine people's sexual orientation in a surprisingly accurate way. The cameras in the Smart Home take nude pictures of the residents, but also warn against burglars. Public video surveillance makes private secret meetings impossible, but increases the reliable capture of criminals. Progressive digitalization will increase the ability to remember. Even if the vision of a total surveillance system makes most of us shudder, the individual, economic and social benefits are clear. Privacy is important to us because we fear moral, institutional and legal sanctions. Sanctions for rape, murder and theft are important. It is in our interest to increase the rate of awareness in this way. However, we do not want to become a laughing stock of people when private nudity is made public. We want to cross the street at night when it is red and no car can be seen. We want to have politically incorrect thoughts without immediately being considered a sociopath.

Yet, it is possible to achieve digitalisation, perfect memory and therefore total surveillance, while at the same time guaranteeing the plurality of human lifestyles. If the norm of freedom, or more precisely of negative freedom, that is, the absence of coercion, is further promoted at moral, institutional and also legal levels, then total digital surveillance and the plurality of human flourishing can co-exist in one system. This is not to say that it will be easy to practically implement an

appropriate value structure. In principle, however, it is possible. Regardless of any further development, we must never forget what a wonderful achievement freedom represents. For the effectiveness of freedom, we must always fight in new ways. It enables us to realize the diversity of human flourishing without being deterred by paternalistic structures.

What does this mean in concrete terms? Even if not every area of life in our society today is regulated by general values and norms and we have already realised a high degree of diversity, the present cultural situation is far from being such that we can speak of freedom already being culturally established in an appropriate way. The following example can illustrate the contexts in which we are still prevented from living pluralism by problematic paternalistic structures.

Although voluntary polyamorous love relationships among adults are not prohibited by law, they are still not considered a morally appropriate way of life by large parts of the population. Within a fully supervised social system, persons involved in such relationships would have to fear being morally sanctioned. Against the background of the current cultural environment, this would not result in legal punishment, but in moral punishment, and consequently in social ostracism and public exclusion. After all, it is only a question of a group of adult persons capable of consent who have decided to live their sexuality in their special way. Social rethinking could be encouraged by the state's recognition of polyamorous marriages as a legally legitimate option, as is already the case in Colombia. Here, three men were allowed to marry each another. Current technical possibilities of

reproduction stress the relevance of revising the currently dominant concepts of marriage. In the United Kingdom it is already legally legitimate to realize a child with three biological parents. At present, however, this technical procedure is only permitted there, if the potential mother has a severe mitochondrial disease. Then the nucleus of her ovum can be gutted and inserted into another woman's ovum, resulting in an ovum with the genetic material of two mothers. This entity is then artificially fertilised and implanted so that a child with three biological parents can come about. The technology for this is available. Why should it not also be made available to a lesbian couple who wish to have a genetically related child? Why should this technique not also be available for two women and one man who are in a polyamorous relationship, if they want to have a child? If the persons concerned can thus have a biologically related child and they also want to get married, why should the state deny them this option? This is almost a traditional family: father, mother, mother and their biologically related child. There are still some cultural hurdles to overcome.

The norm of freedom was fought for and fought for at various levels within the framework of the Enlightenment. This struggle must continue. It is far from self-evident that individual freedom is respected in a state. Especially against the background of the increasingly unfolding digitalization and the associated establishment of the Internet Panopticon, it is of fundamental importance to point out the relevance of freedom and also to point out that one has to stand up for it again and again. Especially against the background of the increasingly intense

surveillance, it is important to promote freedom on a moral, institutional and legal level. Only if freedom is properly recognised, then total digital surveillance and the plurality of human floridity can both be present in a social order.