

# CYBER ETHICS 4.0

*Serving Humanity with Values*

Editors

Christoph Stückelberger / Pavan Duggal

## **MY FRIEND THE ALGORITHM: THEOLOGICAL-ETHICAL CHALLENGE OF ARTIFICIAL INTELLIGENCE**

*Erny Gillen, Luxemburg*

Many people are afraid of a future determined by machine-made intelligence. They overlook the fact that they are already surrounded by it: prostheses (artificial limbs) and other technical equipment facilitate everyday life, and even the human organism is the product of biochemical algorithms.<sup>84</sup>

### **4.1 Artificial: Negative Moral Judgment?**

Anyone who has to deal with the little word "artificial" in the Catholic Church and to introduce distinctions in morally sensitive areas such as fertilization or contraception, immediately works with the uncomfortable feeling of possible proscription. When it comes to unprejudiced ethical discourse, this little word seems to come with more than a little baggage. Even in colloquial language the adjective has more the function of a warning sign: wrong, imitation, false, pretend or, to be completely up to date, fake - "gefakt" as the German Duden dictionary puts

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<sup>84</sup> This article was first published in German. Erny Gillen, *Mein Freund, der Algorithmus*, Herder Korrespondenz, 10/2017, 49-51. With permission from Herder Verlag. Translation Jane Stranz.

it. It can also mean flowery, contrived, tortuous, unnatural, theatrical or turgid. An artificial product is regarded with suspicion in an enlightened world that stands for "bio" and "green". Someone who behaves artificially engenders little trust from the very beginning. Behind their artificial appearance, they are probably concealing their true, probably less favourable, nature.

Thus, in everyday language, the description "artificial" often suggests a negative moral judgment. In medicine and other sciences, on the other hand, the adjective is rather used to describe differences between, for example, the functioning biological organs or situations and an artificial kidney or an artificial coma. But the little word also refers back to its noun, namely "art". With their healing art the good doctors outsmart the illness or the wear and tear of the body. Modern artificial teeth in our mouths mean we can speak without any worries and adapt our first and second teeth to the unadulterated beauty of artificial ones. Glasses and lenses mean we are able to see, something we become aware of only when we lose the devices which give us artificial clear sightedness.

## **4.2 Artificial: Ethically Positive Innovation?**

Unlike in everyday language, the word "artificial" seems to have retained its ethical ambivalence in some technical languages. Before a patient is subjected to an artificial intervention, there are discussions to be had and decisions to be made. An artificial prosthesis in the knee requires the active help of the patient for it to be inserted organically. Coordinating artificial organs and the remaining natural ones is a continual work of precision. We can hardly afford the art of medicine today without its chemical, surgical or technical artificial mediations and tools.

To give a positive hue to the little word "artificial", we happily replace it today with the more innocuous word "new". People on the move with a new knee, with new teeth or a new pacemaker, reap the benefits as state-of-the-art human beings. What matters is the function that has

been preserved or restored. In the case of hearing and visual aids, the function is not only preserved, but sometimes artificially increased. The military and gaming industry know how to exploit these opportunities with success.

Sometimes the little word "artificial" sounds quite tantalizing. For thousands of years, people only dreamed of flying; today it is no dream that millions of people fly. Thirty years ago, who would have imagined an artificially networked world via the Internet, or just fifteen years ago, that one could telephone or even read e-mails on the street "without a physical connection"? The world in which we live is artificial through and through. We have got used to our art and culture through technology and development. But each time we take a new step, progress seems artificial until enough people are ready to accept its applications as being "new". The courageous are by then already planning the next enhancements for our lives.

The etymology in the Duden also teaches us that the Middle High German word "artificial" ("künstlich") originally meant "wise or clever" ("klug oder geschickt") and thus refers us back to the special "ability" of human beings. Ancient and renowned philosophers have already grappled with this art and ability, recognizing one of its main virtues as being prudence (phrónesis).

They were convinced that the practice of the virtues, as attitudes pushing people to take action, would raise them out of the dust of nature. By applying reason, human beings have gradually emancipated themselves from their living environment through their own efforts and shaped it by setting new goals. This included, from the outset, the dream of machines (such as the self-propelled cars of Hephaestus in the "Iliad").

For example, according to Hannah Arendt, as far as cultural history is concerned, we live in a consumer and mass society that assimilates people according to its own rules. Under the "rule of no one", the subject

of action no longer lives for itself, but lives because it consumes and in order to consume. The products and work of homo laborans serve consumption, which has become an aim in itself and which is kept alive through the spiral of growth.

### **4.3 Intelligence: Action-oriented Ability**

Artificial intelligence (AI), in the sense of a purposeful superhumanly fast and memory-powerful extension, arose in the service of this model of society of the ever-more, ever-faster and right now. Here, too, it is worth taking a look at the Duden, which under the entry for "intelligence" has: "The ability [of the human being] to think in abstract terms using reason and derive therefrom purposeful action." The square brackets around the term "human being" were originally set by the Duden! Intelligence is thus a practical, action-oriented ability.

As working people, we are evidently caught up in a society and economy in whose networking it is not clear who works for whom. As the Duden rightly states, purpose-based intelligence is not reserved for homo sapiens alone, but can also be found in non-human structures (economics, technology) and systems (social security). Again, this intelligence is to be distinguished from reason and intellect. The concept of artificial intelligence is thus undefined and can stand as a placeholder for many things.

There is still no theological proposal that explains the world from the point of view of technical singularity. Nevertheless, one could rewrite the story of creation and the fall without too much difficulty using the notions of Artificial Intelligence. After all, the so-called singularity is a new beginning, behind which, by definition, we cannot look. Although evolution can take us gently and step by step, the transition from today into the new tomorrow is inconceivable and beyond imagination. Something completely new has been born.

#### **4.4 Creation Story: Human Beings Responsibility**

This is exactly what our biblical story of creation speaks of, which sees human beings as emerging from the hand of God and gives them responsibility for what happens on earth. In doing so, with its strict monotheism, it consciously sets itself apart from other theological approaches from Egypt, Babylon or Greece. All these different stories of the origins are written out of a particular present and set of problems. Conceived as a myth or a narrative, they dramatically describe the lot and the task of the people of today. In today's society, this function has been taken over by both more and less enlightened sci-fi writers, and even more by the productions of film directors.

A theological approach that recognizes this potential singularity might either be optimistic such as the AI language games of Ray Kurzweil, or pessimistic such as the fears of Stephen Hawking (see Herder Korrespondenz, July, 38-40). The linguistic material, as we hear and read daily, can allow for both a new and better creation and an apocalyptic downfall. The papal advisor Antonio Spadaro already runs a cyber-theology website.

Such a theologisation of the new world faces other secular approaches such as the "religion" of humanism. In his entertaining, nearly 600-page bestseller "Homo Deus" (2015, German 2017), Yuval Noah Harari presents a philosophy of history based on a certain understanding of religion:

"However, religion is created by humans rather than by gods, and it is defined by its social function rather than by the existence of deities. Religion is any all-encompassing story that confers superhuman legitimacy on human laws, norms and values. It legitimises human social structures by arguing that they reflect superhuman laws" (p 182, English language edition).

Harari also goes on to describe how biological science in particular exposes human beings and reveals their innermost being, their ego, as an invented story. Human beings are also the product of biochemical algorithms. With this knowledge, *Sapiens*, as the former crown of creation, sees itself once again as naked. It is only part of other forces that makes it and tells it who it is and where it is going. Everything is information – as are human beings themselves. It does not depend on the individual pieces of data, but on the data streams in which the individual piece of data gets a purpose. It seems that at the end of humanism (understood as religion) we find ourselves disenchanted back in the Garden of Eden, handing over the knowledge of good and evil to the universe.

For the moral creators behind the programming keys, these theological-anthropological approaches sound abstruse and abstract. In the laboratories of the so-called artificial intelligence you are not dealing with "the" AI, but with specific individual applications. How should the car react when it has to make decisions about who it protects and who it exposes to danger in an emergency? How should a brain-computer interface, which connects a prosthetic hand with the brain of its wearer, for example, react if they want to use these new powers to strangle someone to death? How should a remotely controllable pacemaker react when it is hacked? The moral creators in science and industry must take decisions by giving devices that control themselves a viable morality that answers questions of right or wrong actions, either generally or specifically. As there is no consensus among scientists or in society about the concrete answers, one could leave them to chance or be guided by pseudo-democratic voting results. The moral creators can also base themselves on any old morality and program this in.

## **4.5 The Commandment to Love and Artificial Intelligence**

However, since the new machines no longer act according to linear and complex alternatives thought out in advance, but learn to deal with situations in a creative and evolutionary way using their neural connections as do our brains, one possibility is to pass the moral question "can-nily" on to the new forms of intelligence. Instead of feeding the technical "problem solvers", as the first computers were called, with a pre-formulated rule of morality, one could also give them the vocabulary and rules of the moral language game constantly being reinvented by human beings. Thus in all situations, they would be able to commit the same mistakes and errors that make up human beings. To err is human.

But according to our morality so capable of erring, the machines are not allowed to be wrong. They should be perfect or at least better than humans. The path of a perfect morality that knows exactly what is right and wrong, without hesitation and enforced by force, is paved with the bodies of the victims, who were on the wrong side in one of these final solutions. Morality stands as a sign for uncertainty, not for certain knowledge. It is characterized by the freedom that enables it to decide and thereby take the risk of right and wrong. In the internal dialogue of conscience and in exchange with one another, moral creators also gain the courage to take the plunge into the unknown and to chart a beginning that would not exist without their commitment to freedom.

Morality is not a natural process at all, but entirely an art of practical reason and therefore of thought. The artificial intelligence of the future will also think and argue, and even have to deal with emotions. Whether it bases itself on the language of Immanuel Kant or the hate messages of Twitter accounts will depend on its education. One should not call it stupid too quickly. And to keep it stupid is no longer possible anyway, with the potency of this kind of intelligence.

For example, taking as a starting point the Christian-inspired "Golden Rule", one could imagine the following calculation: perhaps Artificial Intelligence will one day encounter us as a smart Samaritan (robot), who does not follow the rules of its far-sighted morality but follows what is good and therefore follows the commandment of love.

If we replace the law of the majority with the law of purposeful argumentation, exciting new moral language games could emerge, which would also make we human beings think, because they would confront us with our own sources of morality. We should not underestimate the quick-wittedness of super-computers. At the same time, they could have access to the writings of Aristotle, Immanuel Kant, John Rawls, and Martha Nussbaum, as well as drawing on the church's social proclamation and forging totally new connections. Again, this is just a sort of game of Go on a different level. We, the humans, must decide what morality we live out and exemplify. This will be decisive for emotionally intelligent machines. Violence begets violence, love begets love. Super-human efforts in different cultures have brought us to this point. This meant crossing unforeseen boundaries in both a positive and negative sense. Perhaps together with an educated artificial intelligence we will be able to transcend ourselves and grow together as moral creators in search of what is good and the right.

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# Cyber Ethics 4.0

## *Serving Humanity with Values*

Cyber space influences all sectors of life and society: Artificial Intelligence, Robots, Blockchain, Self-Driving Cars and Autonomous Weapons, Cyberbullying, telemedicine and cyber health, new methods in food production, destruction and conservation of the environment, Big Data as a new religion, the role of education and citizens' rights, the need for legal regulations and international conventions.

The 25 articles in this book cover the wide range of hot topics. Authors from many countries and positions of international (UN) organisations look for solutions from an ethical perspective. Cyber Ethics aims to provide orientation on what is right and wrong, good and bad, related to the cyber space. The authors apply and modify fundamental values and virtues to specific, new challenges arising from cyber technology and cyber society.

The book serves as reading material for teachers, students, policy makers, politicians, businesses, hospitals, NGOs and religious organisations alike. It is an invitation for dialogue, debate and solutions.

## *The Editors*

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