

Co-Impuls: Artificial life

Artificial life – a topic that, as you can guess, can hardly be summed up in a short statement. After all, the impact of the associated technologies is limitless, and their future potential is hard to grasp. It interfuses almost all areas of our lives and will also significantly affect our future life. The only question is: How? How far do we want to go? What do we want to enable? Where do we set limits? Where are ethical boundaries? These questions already indicate that the possibilities of artificial life go hand in hand with a mandate that we not only determine but also have to take responsibility for. Let me substantiate these considerations with three examples:

The first example is genome editing: The CRISPR-Cas9 method in particular shows us that genetic engineering interventions via somatic gene therapy or germline intervention could aim to correct certain genetic defects to cure or prevent diseases. But what are the risks of such interventions in human DNA, in particular interventions in the human germ line? Because of the irreversibility of such interventions, certain questions must be addressed. After all, which genotypes are desirable, and which are not? And don't such decisions have a selective character that might influence our ideas about the quality of life or even the value of life? In addition, with a view to possible modifications in the germ line, shouldn't the question of whose dignity be threatened by those modifications be asked anew and differently? After all, such modifications have not only a consequence for a single person, but also for all their descendants. In terms of social policy, the question arises, who has the right to obtain such medical attendance. Does everyone have access?

In addition to the prevention or cure of human diseases, genetic engineering methods could also be used for genetic enhancement. Such a fixing up would then no longer only correct genetic information that can lead to diseases, but also improve human characteristics and abilities. Basically, the topic of human enhancement is about the artificial improvement of humans through pharmaceuticals, implants, prostheses or bio- and nanotechnologies. Cyborgs, the hybrid of man and machine, can certainly be discussed in this context; also transhumanistic ideas. Probably the most radical vision of transformation includes a transition from man to the new man through the complete digitization of human consciousness, the so-called "uploading" or "whole brain emulation". At least digital immortality seems to come true with this method. However, fundamental ethical issues have to be discussed here as well - not only questions about life's „natural“ borders. After all, what is nature? What is technology? And to what extent does human self-understanding change in the face of such scientific and technical progress?

Finally, I would like to mention another topic that does not sound like a vision, as we encounter it in our everyday life: autonomous driving. Here, the question always arises how artificial intelligence deals with morally relevant decisions. How does an autonomously driving vehicle decide in a dilemma

situation? Does it hurt or Kill the 80-year-old grandma instead of the playing child? The well known Trolley case. And who will takes responsibility for such a decision, which at the same time includes a value judgment about the value of life? Can artificial intelligence take responsibility at all? In this context, Capurro warns against the trap of anthropomorphism: we cannot simply metaphorically apply concepts from the human realm, such as action, autonomy, person, ambitions, values, choice or responsibility, to robots.

By the way, all of these technological innovations have in common that they collect an almost inconceivable amount of data. But how to deal with this amount of data and its analysis options - keyword: big data? Questions of informational self-determination and the right to privacy arise here. Certainly, it is also important to consider the relation between freedom, security and surveillance, which is followed by a discussion as to whether all this data not create an infrastructure for prevision. And what does it do to us when our actions suddenly become predictable?

These examples already show that all the technologies of artificial life are accompanied by ethical challenges. Basic ethical concepts, freedom, decision or responsibility must be reinterpreted in this context. And what does being human mean in the face of these technological innovations? Are these ideas of being human and the associated ideas of a successful life free of thoughts of discrimination, selection or instrumentalization? And what does nature mean, what does technology mean? Are there still clearly definable boundaries?

In this discussion, such ethical considerations are not only fundamental but, in my opinion, have priority. Based on this, certain basic conditions are required: From our governments, we need clear, unambiguous and, above all, binding guidelines for research and science. Limits must also be set to curb an ethically unacceptable delusion of feasibility. This implies a fundamental debate about the scientific ethos. Of course, (self) controlling systems are also needed; more attention needs to be paid to the topic of technology assessment. In addition, because of big data, questions of data acquisition, data storage and data utilization must always be considered. And maybe new ideals are also needed. Does it always have to be “higher”, “faster” and “further”?

However, the greatest challenge here seems to balance the ambivalence: Since every technical progress also creates new risks, critical considerations of the “dialectics of progress and risk” are required. For the local context, it means, not fundamentally refusing the technical progress of artificial life, but also perceiving it as an easing and enrichment, and consistently asking about its contribution to a fairer and better world, both for the individual and our togetherness. Thus, the basic question is: How do we manage to stay human **with** all these technological innovations?

Quellen:

Becka, Michelle: Zwischen Selbstoptimierung, Überwachung und Wirtschaftsinteressen. Sozialethik unter dem Druck von Big Data. Habilitationsvortrag am 05.02.2015 an der Universität Würzburg, https://www.academia.edu/29626617/Big_Data_unver%C3%B6ffentlichtesManuskript.pdf (zuletzt aufgerufen am 01.08.2020).

Bericht der Ethik-Kommission „Automatisiertes und vernetztes Fahren“. Eingesetzt durch den Bundesminister für Verkehr und digitale Infrastruktur. Bericht 2017, Berlin 2017, https://www.bmvi.de/SharedDocs/DE/Publikationen/DG/bericht-der-ethik-kommission.pdf?__blob=publicationFile (zuletzt aufgerufen am 08.10.2022).

Capurro, Rafael: Homo Digitalis. Beiträge zur Ontologie, Anthropologie und Ethik der digitalen Technik (Anthropologie – Technikphilosophie – Gesellschaft), Wiesbaden 2017.

Centrum für Bioethik (Hg.): Genom-Editierung in der Humanmedizin: Ethische und rechtliche Aspekte von Keimbahnangriffen beim Menschen (CfB-Drucksache 4/2018), Münster 2018.

Datenethikkommission der Bundesregierung (Hg.): Gutachten der Datenethikkommission der Bundesregierung, Berlin 2019, insbesondere 39-47.

Deutscher Ethikrat (Hg.): Big Data und Gesundheit. Bericht über die öffentliche Befragung des Deutschen Ethikrates, Berlin 2018, <https://www.ethikrat.org/fileadmin/Publikationen/Studien/befragung-big-data-und-gesundheit.pdf> (zuletzt aufgerufen am 08.10.2022).

Deutscher Ethikrat (Hg.): Eingriffe in die menschliche Keimbahn. Stellungnahme, Berlin 2019, <https://www.ethikrat.org/fileadmin/Publikationen/Stellungnahmen/deutsch/stellungnahme-eingriffe-in-die-menschliche-keimbahn.pdf> (zuletzt aufgerufen am 08.10.2022).

Dickel, Sascha, Der Neue Mensch – ein (technik)utopisches Upgrade. Der Traum vom Human Enhancement, in: www.bpb.de/apuz/233464/der-neue-mensch-ein-technikutopisches-upgrade-der-traum-vom-human-enhancement (zuletzt aufgerufen am 10.12.2021).

Ernst, Stephan, Den Menschen verbessern? Enhancement aus theologisch-ethischer Sicht, in: Stimmen der Zeit 4 (2013), 263-273.

Ethikrat der Max-Planck-Gesellschaft (Hg.): Diskussionspapier zur wissenschaftlichen Bedeutung der Genom-Editierung und zu den potenziell damit verbundenen ethischen, rechtlichen und gesellschaftlichen Fragen, München 2019.

Filipović, Alexander: Die Datafizierung der Welt. Eine ethische Vermessung des digitalen Wandels, in: Communicatio Socialis 48 (2015) 1, 6-15.

Gasser, Georg, Überwindung des Menschen?! Transhumanistische Zukunftsszenarien als Herausforderungen für ein christliches Menschenbild, in: Datterl, Monika / Guggenberger, Wilhelm / Paganini, Claudia (Hg.), Welt am Abgrund. Zukunft zwischen Bedrohung und Vision (theologische trends 29, Innsbruck 2019, 221-238.

Grundwald, Armin: Technikfolgenabschätzung – eine Einführung (Gesellschaft – Technik – Umwelt 1), Berlin ²2010.

Hacker, Jörg (Hg.): Ethische und rechtliche Beurteilung des genome editing in der Forschung an humanen Zellen / Ethical and legal assessment of genome editing in research on human cells, Halle 2017.

Karger-Kroll, Anna: Christliche Sozialethik als Anwältin für eine nachhaltige Digitalisierung. Überlegungen angesichts der Herausforderungen der ökologisch-sozialen Krise, veröffentlicht von der

Clearingstelle Medienkompetenz am 01. September 2022,
<https://medienkompetenz.katholisch.de/nachhaltige-digitalisierung-christliche-sozialethik-als-anwaeltin/> (zuletzt aufgerufen am 08.10.2022).

Mayer-Schönberger, Viktor: Was ist Big Data? Zur Beschleunigung des menschlichen Erkenntnisprozesses, in: Aus Politik und Zeitgeschichte: Big Data 65 (2015) 11-12, 14-19.

Nationale Akademie der Wissenschaften Leopoldina / Deutsche Forschungsgemeinschaft / acatech – Deutsche Akademie der Technikwissenschaften / Union der deutschen Akademien der Wissenschaften (Hg): Chancen und Grenzen des genome editing / The opportunities and limits of genome editing, Halle 2015.

Ohly, Lukas: Ethik der Robotik und der Künstlichen Intelligenz (Theologisch-philosophische Beiträge zu Gegenwartsfragen 22), Berlin 2019.

Schwanenbeck, Axel: Gefangen im Netz. Medialer Wandel und kontinuierliche Überwachung in digitalen Welten, in: Schröder, Michael / Schwanenbeck, Axel: Big Data – In den Fängen der Datenkraken. Die (un-)heimliche Macht der Algorithmen, Baden-Baden 2017, 9-37.

Vogt, Markus, Christliche Sozialethik als Auseinandersetzung mit den Ambivalenzen der Moderne, in: Vogt, Markus / Gigl, Maximilian (Hg.), Christentum und moderne Lebenswelten. Ein Spannungsverhältnis voller Ambivalenzen (Gesellschaft – Ethik – Religion 19), Paderborn 2022, 15-40.