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https://www.isi.fraunhofer.de/de/competence-center/foresight/projekte/KI_Transformation/en.html.

Consortium:

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Orientation towards the common good in the digital age

Transformation narratives between planetary boundaries and artificial intelligence

The project's objectives and content

The project "Orientation towards the common good in the digital age: transformation narratives between planetary boundaries and artificial intelligence" analyzes and develops ethical concepts and narratives for societal change processes (transformations). It explicitly considers digital technologies with a potential to fundamentally change current relationships between humans, technology and the environment (disruptive digital technologies), especially artificial intelligence.

Sub-goals and research contents are:

- to identify and characterize fields of digitalization that can accompany fundamental disruptive changes in human-technology-environment relationships (screening)
- to critically review disruptive digital technology narratives, to analyze and extend perspectives of environmental ethics, especially relating to artificial intelligence (ethical ways of thinking)
- to enter into new transformation narratives that consider disruptive digital technologies (storyboards)

An interdisciplinary and transdisciplinary advisory board supports the project.
The project will run from November 2018 to June 2021.

Background

At present, globally networked humanity is clearly on an unsustainable path of development. The current environmental policy therefore aims to (re)design human-environment relations aiming at the common good. So far, the relevant transformation narratives are looking at new relationships of this kind, but often ignore the fact that our ideas of the human condition can and perhaps should shift fundamentally in the future.

At the same time, disruptive technologies are being developed that may fundamentally change the human condition. These include artificial intelligence, which is currently widely promoted, and, more specifically, machine learning. The former seems to be acting increasingly autonomously (i.e. not controlled by people), is becoming more widespread and fosters or enables more intensive and new types of networking. Associated with this are processes that lead to or can lead to a possible merging of digital, material (inanimate) and biological fields. Such mergers shake up traditional understandings of humanity, what defines humans as human and their coexistence, what links people with their cultural artefacts and where people stand with regard to nature.

Given these conditions and questions, it is important to contribute proactively to shaping transformation paths appropriately in the sense of the common good and sustainable development, as well as exploring ways to design environmental policy institutions. This includes examining and further developing the relevant ethical concepts and criteria against the backdrop of the possibilities offered by artificial intelligence. Narratives to shape transformation processes must reveal and illuminate the negotiation arenas and the critical decision points for designing the relevant technologies.

What is Artificial Intelligence?

A system is defined as intelligent if it can solve problems autonomously and efficiently.[1] This concept of intelligence attributes the capacity for intelligence to both humans and technological systems.
Artificial Intelligence (AI) serves as an umbrella term for the creation and imitation of human behavior and thought, and for the automatic and autonomous execution of clearly defined tasks.[2]
Analyzing and recognizing patterns form the core of AI from today's perspective. In so-called machine learning (ML), algorithms are programmed in such a way that they change automatically as the result of processing data without further human intervention.[3]
Anthropomorphic expressions such as 'self-optimization', 'intelligence' and 'learning' are part of a widespread narrative that treats AI as technical systems with human characteristics.

Anticipating AI futures by expanding today's uses of AI

Transfer to other groups ...
e.g. from commercial users of AI
to public users ...

Generalization als a mainstream practice ...
e.g. what happens when peripheral AI
uses become mainstream?

Radicalization of the principle ...
e.g. what happens when weak AI
applications become strong ones?

Source: Fraunhofer ISI

[1] Mainzer, K. 2016. Künstliche Intelligenz - Wann übernehmen die Maschinen? Heidelberg: Springer, p. 3.
[2] http://www.datenbanken-verstehen.de/lexikon/kuenstliche-intelligenz/
[3] VDMA Future Business/Fraunhofer ISI 2016. Machine Learning 2030, Frankfurt: VDMA, p. 5.