Call for Abstracts: Designing, shaping and experiencing AI systems. Concepts, values, applications

TATuP topic in issue 3/2021

Deadline for your abstract: 22 February 2021

Currently, Artificial Intelligence (AI)—and its associated enabling, emerging and infrastructure technologies: e.g., machine learning or big data—are rapidly growing fields of technological innovation with high potentials for transforming society and science. Taking this huge relevance for the future(s) of society into account, it is necessary to shape AI research and development according to overarching societal goals and values regarding the possible effects, impacts and consequences of AI for life-worlds, e.g. for culture, economy and politics as well as for science and research. Since AI systems have such a high transformative potential, shaping AI at the level of implementation, diffusion and application of already developed AI technologies is important, but it does not seem to be efficient and far reaching enough. Moreover, a more fundamental approach concerns particularly the upstream level of (techno)scientific research on, with and through AI systems and their development processes themselves. This early-phase perspective is often neglected in the public AI discourse and it challenges the methodological concepts of technology assessment (TA), too. TA, therefore, seems to have to rely on techno-visions formed by narrations, language and images of the world, humanity and society—or to some central aspects of the technoscientific core itself. The following questions for the assessment of AI might therefore arise, among others:

Approaches for a prospective and design-oriented assessment of AI

- In which way and by applying what kind of criteria can foresight methods and other appropriate approaches develop scenarios of future AI life-worlds that are already accessible for emerging AI systems, their architectures and concepts? Which roles will more recent approaches like hermeneutic TA, Value Sensitive Design, Responsible Research and Innovation (RRI) or prospective TA play here?
- How could an innovation and technology analysis of AI appropriately address the technoscientific core of highly adaptive AI systems? And how can adequate assessment criteria support this analysis? Do aspects of complexity, non-linearity, self-organization and instability that are often inherent to AI systems play a role here? Does this mean that concepts of complex systems should be included into the TA of adaptive AI?
- How should one assess the expected autonomy, creativity, complexity and opacity of artificial "intelligent" systems in everyday social life and in research practice from the perspective of TA?

Design and shaping requirements for AI in politics, business and society

- Which new policy-related regulatory approaches are in prospect? Which measures should support desirable AI developments by way of R&D funding and at legal levels? Which roles will ethically oriented guidelines from AI-related committees and platforms play here? How can political advisory TA come in here?

- How could we succeed in strengthening an understanding of AI in society, which enables citizens to better estimate the possibilities and also the risks of AI systems and how should we take them up in corresponding assessments, actions and decisions ("AI discourse", "AI-Enlightenment")? How can we demystify any unjustifiably excessive AI ascriptions?
- How can we design entry scenarios for companies (especially SMEs) into the domain of AI in such a way that they might capture useful inputs from the fields of TA and technology ethics?
- In addition to theoretical considerations, case study-based analyses are also highly welcome here. Non-disclosing examples are AI in diagnosis and therapy of diseases, AI in high-frequency trading on the stock exchange or specific AI-application fields of SMEs.

Further perspectives on the AI discussion

- Which aspects of previously neglected lines of discussion, such as resource or ecological problems, should be included into the assessment of AI? Are there useful links to the UN Sustainable Development Goals (2015)?
- Do autonomous and adaptive AI systems cause an epochal change in the basic structure as well as in the everyday experience of a technology that is now becoming "late-modern" or "trans-classical"?

The subject editors are inviting interested authors to make corresponding conceptual, methodological, interdisciplinary and/or subject-specific and application-oriented contributions. The contributions should / propose and apply ideas for a productive, generally acceptable and sustainable development of AI from the perspectives of TA and other related approaches. If applicable, design requirements and shaping strategies in the areas of research, economy, politics or society should to be addressed as well as epistemic doorways and normative criteria.

Subject ed.

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Submissions

- Please send your abstract not later than **22 February 2021** by email to redaktion@tatup.de;
- Length of the abstract: max. 1.5 pages;
- The editorial office conducts the correspondence with the author who submitted the abstract;
- Please name all participating authors with full names, email addresses and institutional affiliations.

Editorial process

22 February 2021: deadline for submitting your abstract
Beginning/middle of March 2021: decision on inviting authors to submit a full manuscript
Beginning/middle of June 2021: deadline for submitting your full manuscript, followed by a double non-blind review process
End of August/beginning of September 2021: feedback from the reviewers, followed by authors' revisions until late September
Beginning of October 2021: feedback on revisions
Mid-October 2021: end of revision period
December 2021: publication (print and online)