

Qualitative study on aspects of research culture in the field of artificial intelligence

As part of a qualitative study, explorative guided interviews on aspects of research culture in the field of artificial intelligence were conducted with developers and researchers from various disciplines. The participants are members of the Centre for Scalable Data Analytics and Artificial Intelligence (ScaDS.AI) Dresden/Leipzig. CitizenScience.AI is part of its Research Area Responsible AI and consists of two fields of action, Focus on Developers and Focus on the Public. The study presented here is part of the first field of action, which aims to reflect central value-based matters that are central to shaping our common future in AI research. The core topics in this context are gender equality, cultural diversity, sustainability and participatory justice.

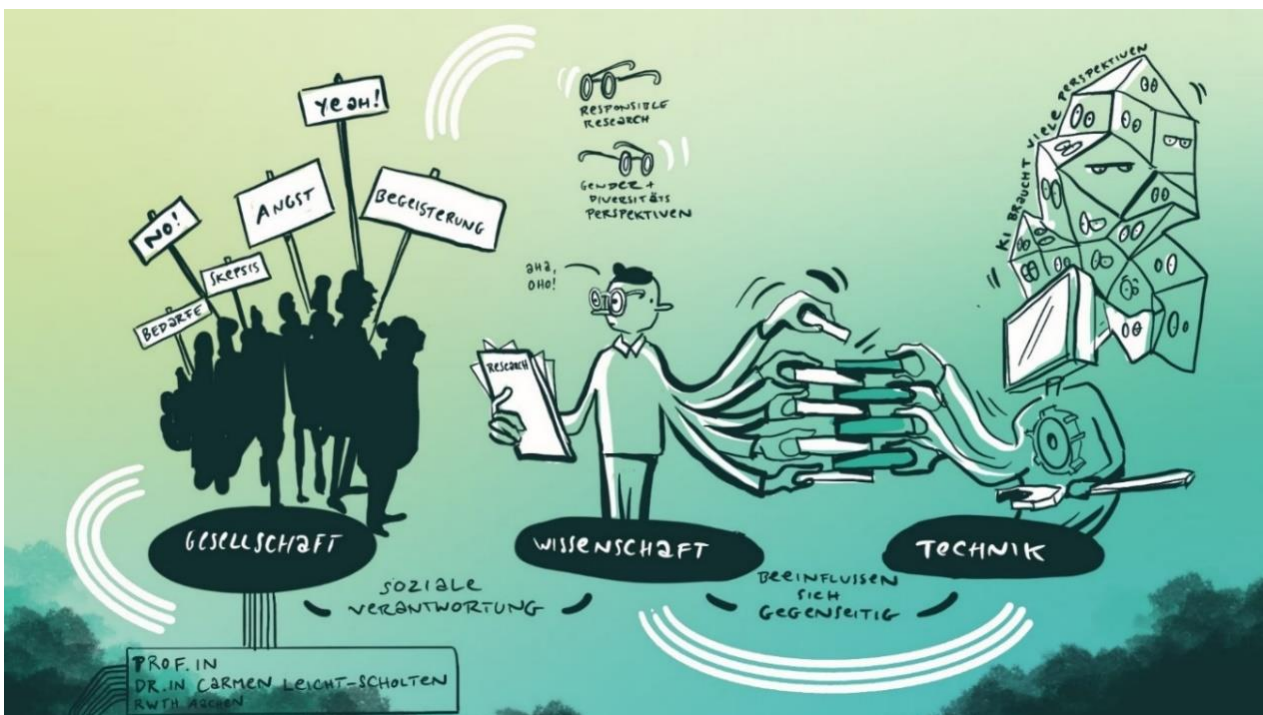


Figure 1 Graphic recording by @Henrike Terheyden on the impulse by Prof. Carmen Leicht-Scholten, symposium in the Motorenhalle Dresden on 10 November 2023 on the topic: 'Hope in the climate crisis? Artificial intelligence in the context of ecological sustainability and social responsibility'

The collaboration with Carmen Leicht-Scholten from RWTH Aachen University as part of an event in 2023 provided important input for the development of the interview guidelines. One of her central statements is that citizen participation is the key factor in driving transformations towards sustainable and socially responsible solutions. (Leicht-Scholten, 2023) The first key question therefor is:

„To what extent do researchers in the field of AI agree with this theory and to what extent do they see the possibility of involving social actors in research processes?“

In the sense of sustainable technology assessment, as formulated by Jonas already in 1979, researchers ideally adopt the perspective of users in order to take responsibility for their own development. (cf. Jonas, 1979, p.96). In this context, Russell pondered on how a world would look like in which AI technology resulting from his own research. (cf. Russell, 2020, chapter 3) So our second key question is:

„To which extent are current AI technologies already being reflected in terms of value in basic and applied research?“

Theoretical embedding

The active reflection of personal experiences in the context of one's own research activity ideally initiates learning processes. Accordingly, every open dialogue can be an intervention. The central starting point is a constructivist view of human nature. According to this view, learning is an active construction process in which people are irritated in their learning processes and thus encouraged to deal intrinsically with various topics. (cf. Siebert, 2011, p.90)

„We cannot teach people anything; we can only help them discover it within themselves.“
(Galileo Galilei)

Methodical approach

The two key questions discussed above regarding the involvement of social actors and the value-based reflection of modern AI technologies represent a significant momentum in the development of the interview guidelines. The interview guidelines were created in the year 2023 using the SPSS method according to Helfferich. (cf. Helfferich, 2011, p.182ff.) To test the survey instrument, five pretests were carried out in December 2023 with different ScaDS.AI members with reference to the think-aloud method. (cf. Schnell et al., 2011, p.340ff.) A quota-based method was chosen for the sample selection. The aim being here to ensure that the input comes from different status groups and research areas. The participants were diverse in terms of their gender, status and nationality. A total of eight interviews were conducted in the survey phase from February to April 2024. The pre-transcriptions were first created using the dictation function of Word Office 365 and then transcribed using the extended content-semantic transcription according to Dresing & Pehl.

The evaluation will focus on the extent to which the core topics of CitizenScience.AI are reflected in basic and applied research.



Figure 2 Positioning of the research project

By way of investigating this, the method of circular deconstruction according to Jaeggi is applied. The transcripts are taken apart in a circular manner and reassembled from different points of view, so that initially unconceived meaning gradually gains clarity. (cf. Jaeggi et al., 1998, p.6) Individual professional expertise as well as personal experiences and attitudes are to be opened up and made visible. Resulting theses will be transformed into a discourse the Research Area Responsible AI of the ScaDS.AI.

Diese Maßnahme wird gefördert durch die Bundesregierung aufgrund eines Beschlusses des Deutschen Bundestages. Diese Maßnahme wird mitfinanziert durch Steuermittel auf der Grundlage des von den Abgeordneten des Sächsischen Landtags beschlossenen Haushaltes.

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