Gender Differences Regarding the Perception of Artificial Intelligence

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Gender und KI

Relevance

Technical progress through digitalisation is constantly increasing. Currently, the most relevant and technically sophisticated technology is artificial intelligence (AI). Women are less frequently involved in research and development on AI, clearly in the minority in STEM-professions and study programmes, and less frequently in management positions. Previous AI applications have often been based on data that under-represents women and thus map our society with existing disadvantages and injustices.

Accordingly we defined the following general **research questions**:
Do men and women have different ideas about the role and significance of AI in the future? Do women have different requirements or wishes for AI?

Consideration

A literature review of existing studies reveals that while more people are in favour of AI development than against it, it is mainly men with a high level of education and income.

According to their self-awareness, women have a lower understanding of AI than men. Moreover, AI research and development is predominantly in the hands of men. Just under 25% of those employed in the AI sector are women, in Germany even only 16%. Old stereotypes are thus not only the basis for decisions regarding the development of AI but also incorporated into the data basis for AI: Voice and speech recognition systems are less reliable for female voices, as is face recognition for female faces.

In addition, initial evidence shows that factors such as understanding and trust play a major role in the successful use of AI, although we do not know whether there are gender differences.

Added Value

The expected results of the questionnaire will be gender-relevant aspects in the perception, evaluation, development and use of AI.

This allows the general public to be sensitised to the possible risks of AI applications in terms of prejudice and discrimination. In addition, opportunities for using AI to strengthen gender equality will be elaborated.

Survey Method

1 Qualitative Studies › Literature review › Generating hypotheses

Opportunities and Risks	Motivation and Competences	Trust	Insight and Transparency
H1: For men, AI is more frequently associated with opportunities than with risks than women.	*H2: Women are less interested and less proficient in AI applications than men.*	*H3: Trust is an important success factor for using AI.*	*H4: People want to be able to follow how decisions are taken by AI.*

2 Operationalisation › Develop a questionnaire of 68 questions, most widely used scale is Likert scale, as questions require survey respondents to select their level of agreement to a statement
› Reduction to the most highly selective and reliable 22 questions › Programming of the questionnaire

3 Review › Pretest to check completeness and comprehensibility, n = 8

4 Field Phase › 29 July – 13 September 2020, n = 200

5 Evaluation › Statistical procedures by using the software IBM SPSS Statistics
› depending on the hypothesis by mean, standard deviation and significance test

6 Publication of Results
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