

Using Scenario-Writing for Identifying and Mitigating Impacts of Generative AI

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Scenario-based Sociotechnical Envisioning (SSE) can be a cornerstone to enrich current impact assessment practices. We argue for its use to uncover unknown future impacts of generative AI technology and to highlight lived experiences from affected groups.

Method

Scenario-Based Narratives make complex issues visible and more accessible for a broader audience (e.g., political decision-makers, or the public).

Socio-Technical The socio-aspect entails the human interplay with technology and brings situated knowledge to the surface. Especially in case of general-purpose technology like LLMs the possible intended uses are endless – gauging the insights from different user groups is essential to understand the range of risks and impacts that can emerge.

Envisioning SSE is about anticipating risks and impacts of technology on individuals and society. This aspect highlights the necessity to illuminate future pathways of technological interplay with individuals and society to inform decision-makers – whether regulatory or developer driver – early on in technology development.



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Data Collection & Analysis

Mode Survey or Workshop Setting

Scenario-Writing 300+ words fictional stories

Complementary Reflection Tasks

Output

- Narratives as stand-alone future projections
- Bottom-Up impact frameworks
- Quantification of impact categories
- Development of mitigation strategies

Excerpt of an original scenario

"It was not long, though, before Robert realized that most people did not know the difference between what was well researched, substantiated content and the more generic and superficial output he was feeding them. He felt defeated. About one year in, he started believing that the world of information and news was moving at a frightening high speed towards being a mass of AI generated content with little human touch. He knew that the vast majority of readers were not educated enough to realize that; he knew that way too many would believe anything they would read. He knew swathes of people would not question whether an image was real. If it's on the news outlets, it must be real, right?"

How SSE addresses current impact assessment shortcomings

Structural

- Strengthening of democratic accountability
- Politicization of assessments
- Inclusive sampling
- Facilitating diversity

Prospection

- Identification of unknown unknowns
- Focus on exploring future scenarios

Methodological

- Focus on societal values
- Keeping qualitative character of impacts
- Assessing Contextuality of Impacts
- Inclusion of societal, organizational, and human factors as sources of impacts

