

Envisioning Ethics

How to foster ethical reflections on futures to
design responsible technologies

Nele Fischer & Wenzel Mehnert



Overview

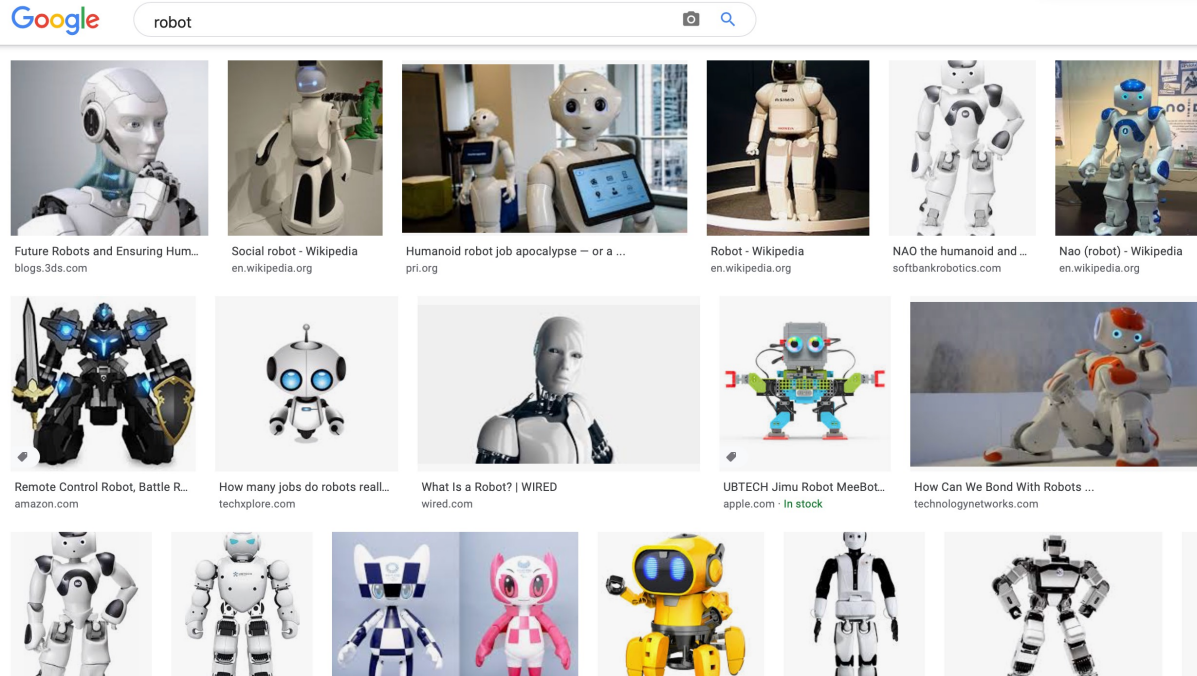
- Part 1: **theoretical background:**
how tech visions prefigure tech development
- Part 2: **thoughts on methodology:**
how ethical reflection supports responsible tech development
- Part 3: **our research approach and results:**
epistemic tools for ethical reflection

(1) theoretical background

Technological visions shape technologies –
and often come with unintended consequences



Prefiguration of Tech-Visions



Further Reading:

Cave, S., Dihal, K. The Whiteness of AI. *Philos. Technol.* (2020).
<https://doi.org/10.1007/s13347-020-00415-6>

Technoculture

„I am convinced that technoscience engages promiscuously in **materialized refiguration**; that is, technoscience traffics heavily in the passages that link stories, desires, reasons, and material worlds.“ (Haraway 1997 p. 64)

„**Cultural conceptions** have material effects.“ (Suchman 2006 p. 1)

„A large part of the work of innovators is that of **,inscribing’ [their] vision** of (or prediction about) the world in the technical content of the new object.“ (Akrich 1994 p. 207)

Further Reading:

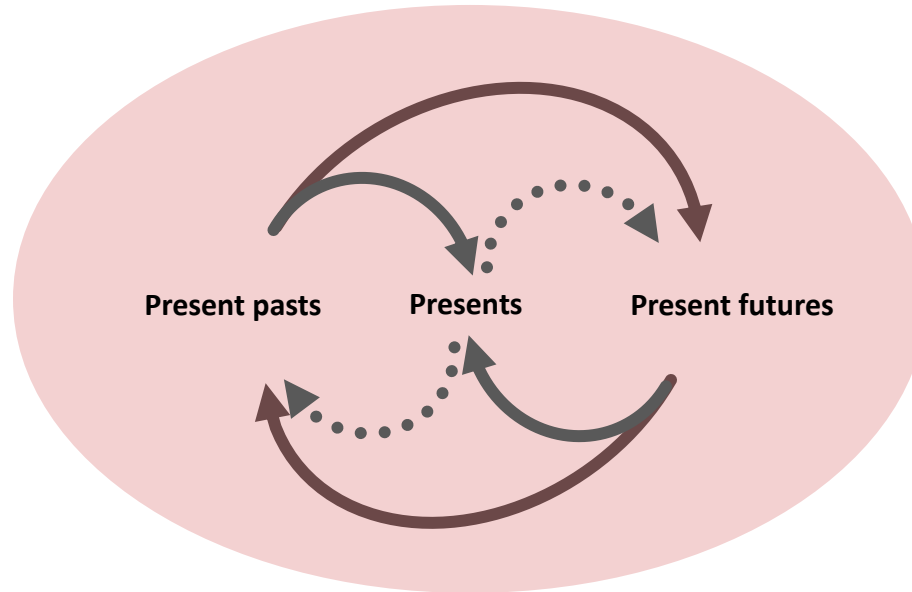
Haraway, D. (1997). *Modest_Witness@Second_Millennium.*

FemaleMan_Meets_OncoMouse: Feminism and technoscience (Second edition).
Routledge.

Suchman, L. (2006). *Human-Machine Reconfigurations: Plans and Situated Actions*
(2nd edition). Cambridge University Press.

Akrich, M. (1994). The De-Description of Technical Objects. In W. E. Bijker, J. Law,
W. B. Carlson, & T. Pinch (Hrsg.), *Shaping Technology / Building Society:*
Studies in Sociotechnical Change (Reissue). The MIT Press.

Anticipations - including visions – are *present futures* that shape current actions and decisions



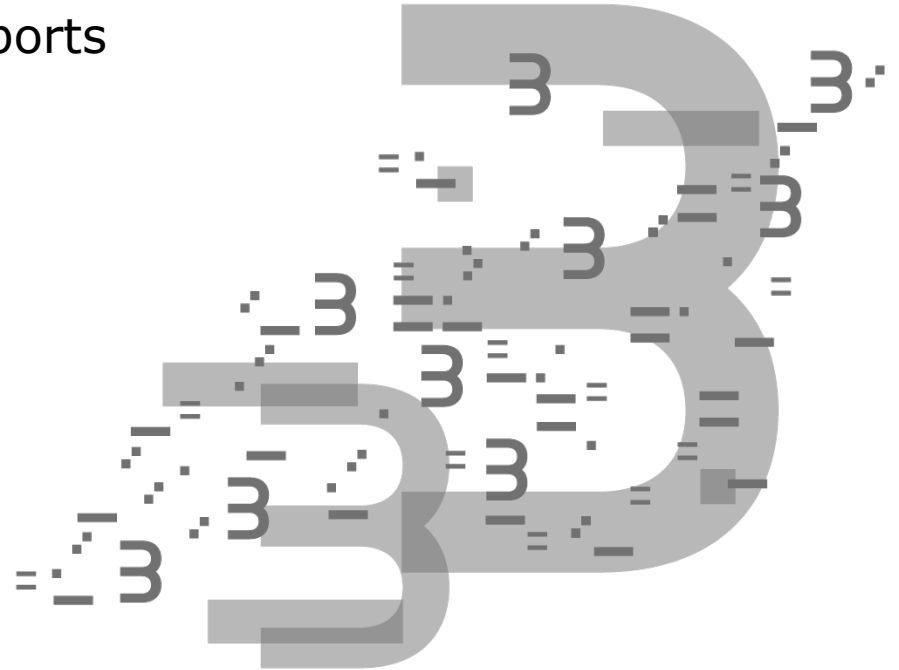
Further Reading:

Fischer, N & Dannenberg, S (2021). "The social construction of futures: Proposing plausibility as a semiotic approach for Critical Futures Studies." *Futures*, Vol. 129 DOI: 10.1016/j.futures.2021.102729

Visions of technology (and futures in general) shape current decisions and actions in the context of the development of technologies – the critical (ethical) reflection of such visions of the future enables the expansion of design possibilities.

(2) thoughts on methodology

How ethical reflection of visions supports
responsible technology development



FIRST: Visions as material for reflection

- Making implicit visions explicit
 - ... through worldbuilding
 - ... through speculation
- Deconstructing visions
 - Ethical reflection
(social longterm impacts,
social desirability, ...)



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Article

Building Possible Worlds: A Speculation Based Framework to Reflect on Images of the Future

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Abstract

Images of the future are representations of possible worlds different to ours. We access these worlds through written stories, plans, scenarios, statistics, trends, and many more. Oftentimes, those images only implicitly describe the world's context but still guide current actions and decisions. Thus, we lack the exploratory and reflective space for their deliberate discussion.

In this paper, we present a framework to explore and reflect own, current images of the future. The framework is based on the process of speculative worldbuilding with the aim to create a 'thick description' of a possible world to (self)reflect on the present assumptions and to understand and reframe today's actions and decisions.

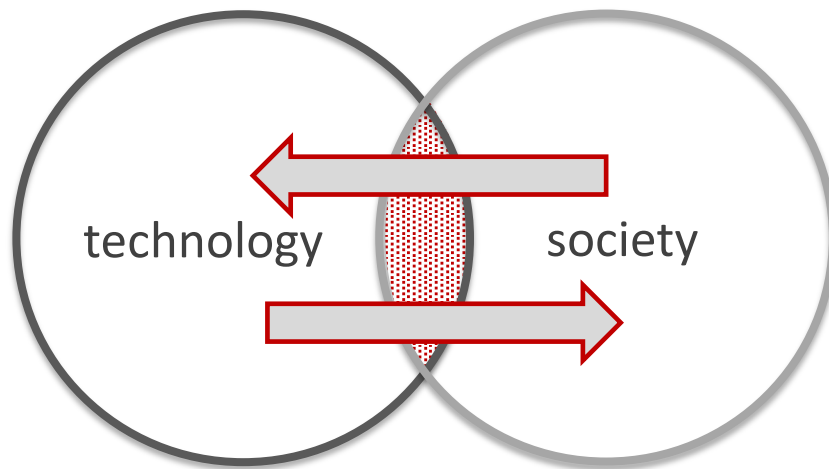
Further Reading:

Fischer, N., & Mehnert, W. (2021). Building possible worlds. A speculation based research framework To reflect on images of the future. Journal of Futures Studies, March.(25(3)), 25–38.

SECOND: Re-Design Visions

- Integrated ethics: ethical reflection as part of technology development
 - Upstream in the development process
- Guiding development actions
 - Developer teams of emerging technologies
 - Stakeholder integration (Co-Design)

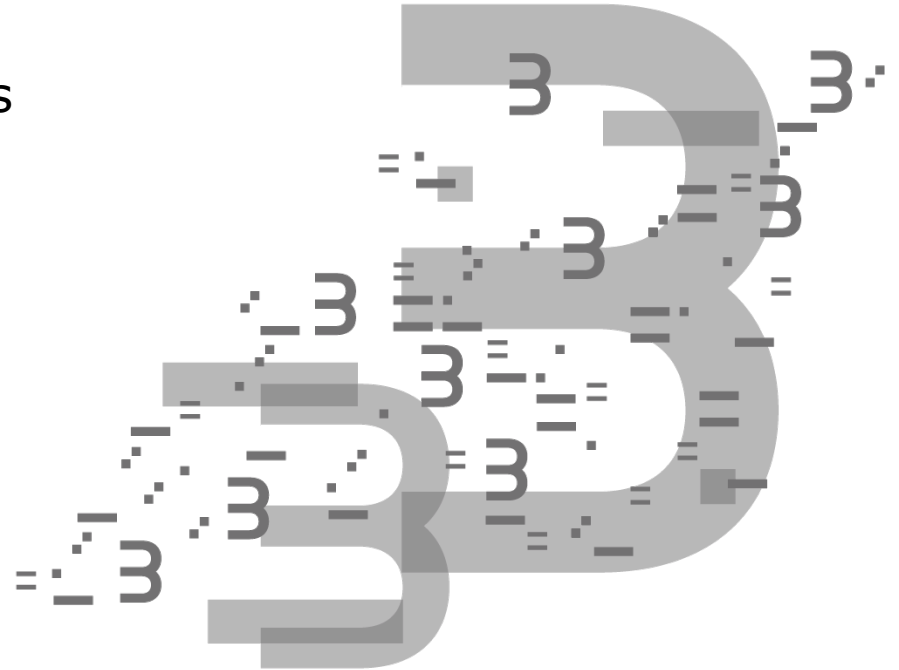
From feasibility to desirability: spaces for joint reflection



- Epistemic tools: interventions as a mode of creating knowledge

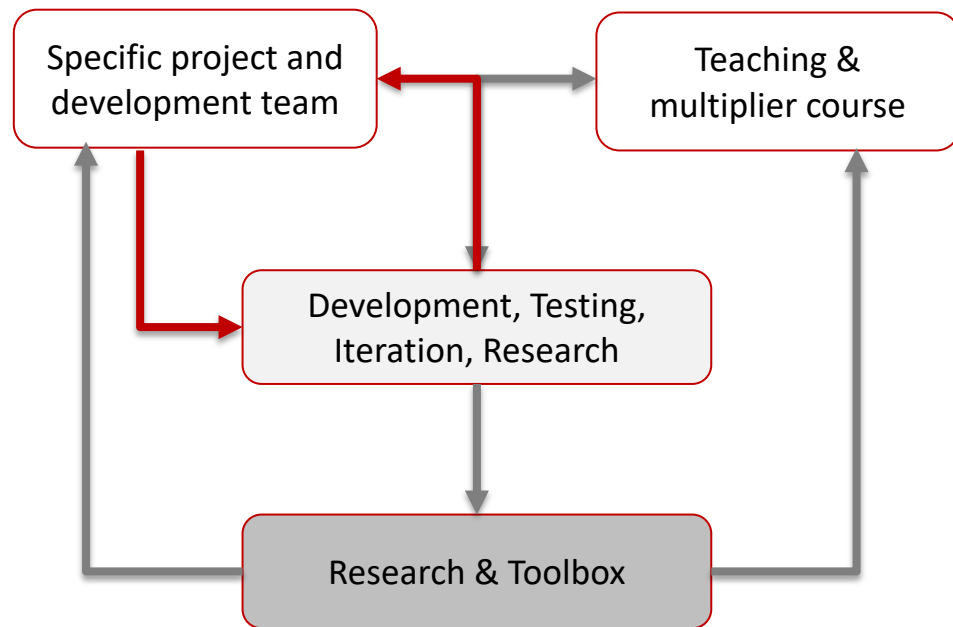
(3) our research approach and results

Integrating ethical reflection within
technological development processes

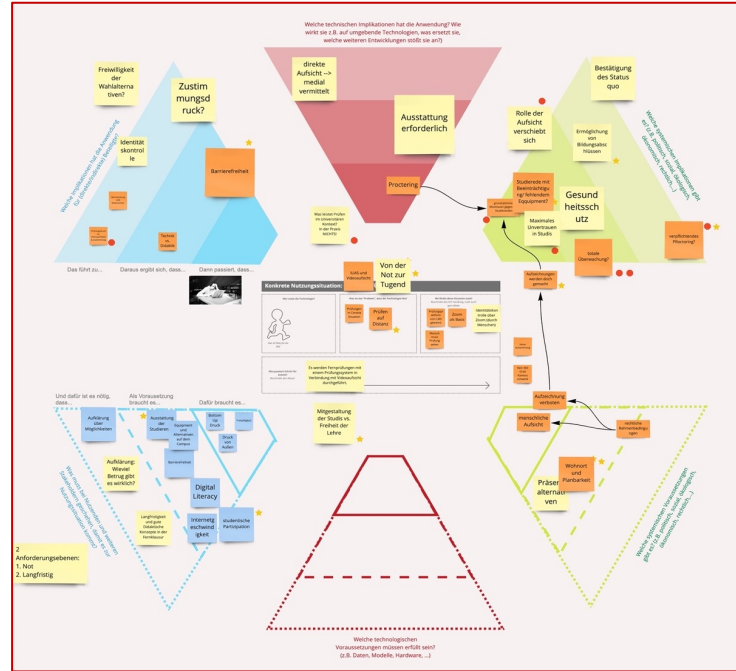


Methods for Integrating Ethics

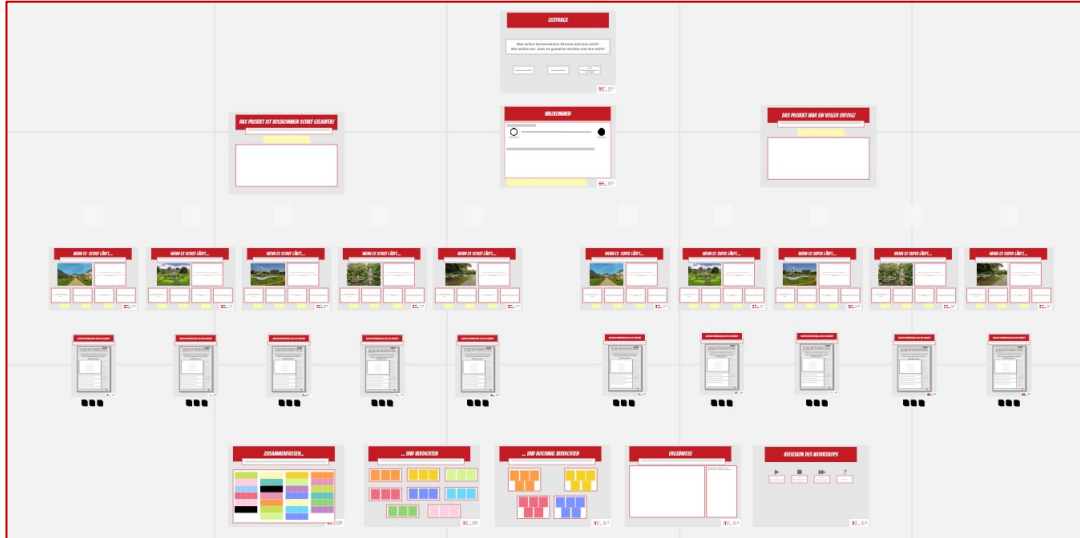
- **We develop and research epistemic tools**, that support development teams in the reflection of ethical issues (methods, frameworks, intervention formats).
- **We support development teams with facilitated interventions**, e.g. to develop visions, reflect ethical guidelines and challenges/issues and enable exchange between development teams and further stakeholders.



Example 1: Implication Fan



Example 2: Dystopia & Utopia



2 | Nachrichtmeldung aus der Zukunft

NACHRICHTENMELDUNG AUS DER ZUKUNFT

Fast eure Überlegungen zusammen. Nutzt die Headline für eine reißerische Beschreibung, gebt eurem Artikel ein Bild und beschreibt im Text die Zukunft, ggf. mit Hinweisen auf Ursachen und Auswirkungen.



Assumptions validated

- Integrating ethical reflections upstream can shape development processes further down.
- Developers ask for an open space for ethical reflection and guidance through epistemic tools and expertise is needed and helpful.
- Speculation as a fruitful starting ground for dialogue.

Preliminary Results

- Different actors have different positions regarding the role of ethics for the process.
- AHA-moments related to grasping the sociotechnical interrelations (the social aspects of technological details etc.).
- Ethical reflections of specific technologies might stretch beyond the scope of the development-team (e.g. touches business model or cultural presumptions)

Further research and open questions

- How much can we prospectively understand about implications? What are the limits to reflection and anticipation?
- How to really integrate opportunities for reflection into processes?
- How can we make sure to integrate insights into the technology development?
- How to evaluate the interventions?

➤ ***“Integrating Ethics”*** @ STS Hub; March 2023 in Aachen, Germany

Questions and thoughts?

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Thank you!

