

Envisioning Ethics – How to foster ethical reflections on futures to design responsible technologies.

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Contribution for the conference:

„Anticipation 2022 / Arizona, USA“

Keywords:

#Ethical Reflection

#Responsible Technology Development

#Participatory Futures

Abstract:

The anticipations of future events guide current actions and decisions. This becomes important when studying the development of new and emerging technologies, such as applications in the fields of robotics or machine and deep learning. The anticipations of how those technologies might change the world for the better form the vision of the development team and guide the development of the respective technology. In other words, the anticipative visions contain a - mostly implicit - ethical script for a future world, which is created within a specific value framework. Anticipation, thus, is not a neutral act but instead highly normative in the sense that it implicitly holds what it means to build a “better” world. It raises ethical questions like: Better for whom? Better under which premises? Better in which sense?

This creates a challenge, as emerging technologies come with the promise of having a high disruptive potential and their implications for societies and the planet are often unclear. As current developments show, negative and often

unintended consequences include discrimination of already underprivileged groups and raising inequalities. One cause, this paper proposes, is that the visions and the (implicit) ethical guidelines, which guide developers during the development process, are seldomly critically reflected nor are the developers' biases challenged from outside perspectives during the development process of emerging technologies. One reason for that is the current paradigm of technology development, which is driven rather by feasibility and the curiosity to develop than by socio-ecological desirability. Thus, the reflection of a wider socio-ecological perspective or the explicit discussion of the inherent ethical values of the guiding vision often come to short; if done at all.

The question this paper addresses is how visions can be explicitly reframed to enable responsible technology development. In a combination of theory and practice, we examine approaches to a) make the guiding anticipations within a development team, such as implicit visions of imagined use cases, explicit and tangible for a joint reflection, and b) to include such a critical reflection on premises, worldviews and ethical implications iteratively at important milestones within the development process. This also entails c) going beyond the anticipations of the development team only and to create further interactions with potential (non-)users by including multiple stakeholder perspectives into the discussion.

The paper will, on a theoretical level, examine the interplay of anticipations, especially visions, their guiding power in the context of technology development, critical reflections and (participatory) opportunities for creating responsible visions. To do so, we draw especially on the work done in the field of Critical Futures Studies and participatory as well as integrated Technology Assessment, as well as on work in the realm of Responsible Research and Innovation and Value Sensitive Design. On a practical level, the paper elaborates on methodological approaches that enable such reflections and reframings. Here, we focus especially on speculative and creative methods that support imagining desirable futures, drawing on participatory future studies, Experiential Futures and practices of writing speculative fiction, such as worldbuilding or storytelling. Furthermore, we present a case study from our own work, done in the Berlin Ethics Lab at the Technical University in Berlin, on developing and researching these methods for ethical reflection within actual technology development processes.

We approach the paper from the angle of Futures Studies, and our methodological focus offers fruitful combinations of Critical Futures Studies and Experiential Futures with the aim of ethical reflection and using the anticipatory power for guiding actions and decisions for creating technologies for desirable futures. With that focus, our paper is positioned at the interface of three conference themes: It connects to questions on the ethics of anticipation (theme 2), and especially on the question of how to make the worldviews, principles and practices that shape anticipations explicit in order to develop ethical anticipations in the context of technology development. As the paper explores ways of integrating the critical reflection of guiding anticipations into the technology development process, we also connect to theme 4, critical anticipatory capacities. Our paper supports this discussion by highlighting both: methodological options for a critical reflection of visions and examples of integrating critical reflection into a technological development process. Furthermore, to engage with critical reflections, we propose to integrate multiple perspectives, connecting to theme 1, public futures. We discuss opportunities to create spaces for shared anticipation beyond the development team, empowering diverse stakeholders to challenge the guiding assumptions and to co-create technologies with regard to desirable futures.

By giving an insight into our work at the Berlin Ethics Lab, into the methods we developed and into a case study we conducted, we want to contribute to the discussions on how to open up the space for ethical reflection of anticipations with the aim to responsibly design emerging technologies.