Computing Professionals for Social Responsibility: The Past, Present and Future Values of Participatory Design

In-Action Value Framework– Participatory Design with Values

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Similar to the In-Action Ethics framework (Frauenberger et al, 2017), we hereby call for an In-Action Value framework that we can draw on as educators, researchers and practitioners within participatory design. While the In-Action Ethics framework links anticipatory ethics with the practice of HCI research, an In-Action Value framework would complement more formal approaches that professional organizations develop, e.g. standards and codes of conduct (ACM, 2018; IEEE, 2019a; IEEE, 2019b; ISO, 2019), with a responsible participatory design practice. An In-Action Value framework could help to conceptualize skillful practice and cultivate a community of practice. Also, in order to support educators of the next generation of practitioners and researchers within participatory design to not only be sensitive to values, but also to dare handling uncomfortable value conflicts, this In-Action Value framework could be structured around illustrative examples of progression in participatory design with values.

The importance of responsible innovation in technical education has grown, raising a number of concerns related to the human-technology relationship, and will hopefully lead to technology that leads to greater justice, more human dignity and well-being, and better odds for human survival, also over time, and in times of pandemic and climate emergency. This means that we, who bear the responsibility to educate and inspire future designers and researchers, have an enormous responsibility on our shoulders. How can values in design be considered as cool to practice, teach and learn such as e.g. design thinking or programming? In addition, how can we inspire and train the future generation to handle uncomfortable value tensions in PD?

We see a new tendency of value shift in many professional organizations, that they currently develop standards based on ethically-aligned design which seeks to prioritize human well-being over engineering and economic values (IEEE Standards Association, 2019a; IEEE Standards Association, 2019b), and where peoples values have been prioritized over technical aspects (ISO/TC173, 2019). Simultaneously, with the impact of emergent technologies such as artificial intelligence and human-robot interaction on society, we see a shift in technical educations, where societal and ethical questions become part of the curriculum (Grosz et al, 2019; Frauenberger & Purgathofer, 2019). We also note that
identifying ethical and social dilemmas is becoming a part of explicit learning goals in a growing number of courses in Scandinavian universities.

As educators responsible for the next generation of socio-technical designers and researchers, our overarching goal must be to make sure that, our students become caring, daring and responsible designers of the future society in a holistic and grounded manner. This means to not only focus on developing conceptual knowledge about values and ethics and gaining practical skills to design in a value-sensitive way, but more importantly, on becoming a reflective and responsible designer ready to act also in uncomfortable situations. To do that, we need to further structure how a practice and understanding of values develops from a simple to a more complex level. This raises questions on curriculum design and pedagogical practices (Hendry et al, 2020). How do you adjust to different level of expertise in responsibly designing with values (beginner/advanced)? How do you conceptualize and teach ‘skillful practice’? What are the learning goals? What is progression in participatory design with values?

In an ongoing project, we have identified three main pillars for teaching about values in design: 1) Ethics and Human Values, 2) People and Stakeholders, and 3) Technology and Context (Barendregt et al 2020). Building the In-Action Value framework on these three pillars, we can illustrate how those pillars can be operationalized in relation to the realities of practice and formal standards, and structure how progression of values in participatory design develops from a simple to more complex level.

A learning progression is a sequence of subskills that needs to be mastered to reach a curricular aim (Popham, 2007), and is characterized by starting with something simple and moving on to something more advanced, applying the knowledge in new ways. Drawing from established taxonomies of learning, such as the SOLO taxonomy (Biggs & Collis, 1982), we can explore what makes progression in participatory design with values move from not only being able to name or identify different ethical frameworks, but to actually use different ethical frameworks to imagine consequences of design processes and products. Similarly, we should be able to not only identify the difference between indirect and direct stakeholders, but also be able to create new ways (e.g., methods, tools) to identify multiple roles of stakeholders, elicit key values, and describe relationships and value tensions. We should be able to reflect on tradeoffs between different procedures for designing with values. However, as designers and designs are never value neutral (Haraway, 1988; Søndergaard & Kofoed, 2017; Suchman, 2002; Verbeek, 2011), we need to be able to critically reflect on the impacts and consequences of our own values, and be able to take a critical stance to mediate between value tensions, including our own, in PD processes.

Hopefully, this In-Action Value framework could lead to a values-led participatory design with designers who are not only sensitive to values (Iversen et al 2012a, Iversen et al2012b), but also brave
to handle uncomfortable value tensions in front stage, backstage, planning and documentation activities (Bødker et al, 2017).

**References**


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