

Learning to Anticipate Worlds through Participatory Speculative Design

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Critiques of the deeply-embedded concept of “human-centred design” suggest that simply engaging users in designing a successful product may exacerbate the problems we face today (Pasanen 2019): ‘Since design is subordinate to business, the power asymmetry is such that a ‘human centred’ choice has virtually always less weight than a ‘profit centred’ one’ (ibid). Not least, human-centred may be read as *self-centred* in contrast to work on multi-species and more-than-human design (e.g. Forlano 2018). Challenging this short-sightedness, speculative design has grown up as an antidote to work that allows short-term business values free rein. But, while speculative design aims to promote more future-oriented critical thinking through better anticipation of these issues (e.g. Malpass 2013), this form of design also faces criticism. In speculative design practice, interaction with the public is often limited to the presentation of provocative pieces in galleries and the impact of engagement with these works is largely unknown. It has been cast as elitist and self-serving (Prado de O. Martins and Oliveira 2014), despite its potential for opening up other worlds and ways of being.

Research from the field of education has shown that collaborative learning techniques and learning through making can enhance critical thinking (e.g. Gokhale 1995; Härkki et al 2016; Lahti et al 2016; Seitamaa-Hakkarainen et al 2016). Therefore, involving publics in crafting these design speculations becomes an important strategy in democratizing this process and deepening engagement. Going beyond responding to designer scenarios of future challenges, craft methods linked with collaborative reflection offer a transformative tool (e.g. Light et al 2019). Learning theorist Holt describes the process of learning as traversing and navigating four worlds: the interior psychological world of emotions and mindsets, the world of personal experience which shapes values and beliefs, the world of possibility (everything we know of, but have not experienced) and the potential world of things we do not even know we do not know (Holt 1972). These collaborative speculative design engagements provide a unique social learning space for participants to engage with their personal lived experiences while anticipating how the future may be different and becoming aware of possibilities and potential.

Light’s goal is to reveal the ‘designed, therefore designable’ nature of the world (2011). This paper argues that speculative design could be (and is being) made more impactful through harnessing learning theory to create collaborative making and hacking opportunities with diverse groups, especially with ‘non-expert’ designers (Edwards and Korsmeyer 2018). Learning with/from each other could become the primary outcome of speculative design. So, we bring together methodologies discussed in education, cognitive science, speculative design, design futures, and transition design.

As examples from our practice, we introduce our co-design workshops with young women about designing safer cities and the making of a participatory workshop series for generating alternative worlds. In the latter case, a consistent process has developed over several iterations, with each stage designed to meet a particular challenge of speculating. Small groups are given a globe in which there is a description of a world that is not ours (i.e. one substantive aspect happened differently). Each group is invited to work together to:

1. **World:** discuss this world, how it works and what the present would be like if this world were ours. (This allows imagination to reign and people to extrapolate to alternative conditions through storytelling.)

2. **Chronicle:** record and share the story of the world to other groups. (This pins down characteristics, providing important scaffolding for more detailed speculation.)
3. **Create:** make a thing/system/service that reflects this world. (This encourages articulation of the alternative value system by collectively thinking-through-making and committing to concrete choices about this imagined world.)
4. **Analyze:** reflect on the world and its outcomes to consider:
 - how the values affect the design;
 - how this relates to our world(s);
 - what the process of imagining another world has revealed. (This works to make the connections that support thinking beyond the artifact/world.)

The workshop ends with contrasting of outcomes and a whole-group discussion of learning across cultural and socio-material dimensions.

Participants themselves craft the speculations in our work, supported by the workshop structures. Involving people in a design process is an important tactic for getting people to care and consider more deeply what they are discussing. This works in contrast to a typical speculative design project, where designers present speculations to the public as a passive audience. We instead seek to involve everyone in the process, while working to find culturally relevant means to bring alternatives to light and mobilize care through creative labour.

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