Exploring a Speculative Design Approach in Inclusive Privacy and Security

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1. INTRODUCTION

The speculative design was proposed by Dunne and Raby [5]. It is a method that forces a future aspect of design into the present and demands responses from the present [5]. Speculative design is primarily about asking questions and provides freedom from the demands of industry and the market so that new ideas can be formed outside of the majority of technological trajectories [2]. The high-level goal is to situate future technologies into the present contexts and communicate how the technologies will be manifest through a set of tangible probes, such as videos, stories, and scenarios [2]. Furthermore, other than facilitating future technology contemplation, it is important to understand that speculative design also establishes a system for re-thinking and critiquing the current technologies [1].

As a design and research methodology, the speculative design has been used in a number of prior studies. For example, through a visual toolkit and a serious of design workshop, Forlano and Mathew explored a conceptual future-oriented space for urban problems and technologies solutions and discovered the politics in the city infrastructures, as well as different tensions and disagreements of future urban technologies [6]. Through the use of fictional stories, Sakamoto et al. proposed a value-based analysis framework that illuminates the design of virtual information artifacts which can influence people's attitude towards surrounding physical artifacts as well as their behavior [8]. Lawson et al. took a speculative design approach in a qualitative research to understand pet owners' needs for pet quantification applications and demonstrated a strong desire of technology that was less justified by contemporary research [7]. Lastly, Wills and Anderson applied a speculative design approach in developing a new BA major for University of Southern California by moving the concept of worldbuilding from movies to the context of teaching and learning and letting the students and considering how the new major could support "a new world" [10].

However, this design approach has not really been exten-

sively used by the privacy and security community. The only study that we are aware of and is most related to this workshop theme is the study by Briggs and Thomas on exploring future identity technologies [3]. In this study, the authors adopted an inclusive, value sensitive design perspective to capture common values in identity management technologies from people with various abilities [3]. Sourcing from over 100 identity management scenarios [9], the authors identified a set of futuristic scenarios and artifacts for identity technologies and used them as probes in the following inclusive design sessions with six marginalized communities (e.g, young children not in education) [3]. They found a number of must-have (e.g., clear underlying justification for the implementation) and nice-to-have (e.g., convenience) factors for future identity technologies that could implicate future design and research [3].

Inspired by their study, I would like to discuss with the community on whether we can adopt this methodology in our research of inclusive privacy and security. By adopting an inclusive, speculative design approach in privacy and security research, it is possible to open up a space for alternative design and perspectives from people with different levels of abilities regarding how to protect their privacy in future technologies. It can also help researchers to think more critically about the contemporary technologies and shed lights on privacy and security values that should be supported for all sectors of society by future technologies. In addition, by involving people with various levels of abilities in the early ideation of the design process through a speculative design approach, researchers are taking proactive measures to actively consider people's privacy and incorporate their privacy expectations into the design, which can be recognized as a reflection of Privacy by Design [4]. Lastly, when the common values for people from different communities are supported by future technologies, it is also helpful for researchers to build a long-term relationship with these communities.

To start the discussion during the workshop, I propose the following questions:

1. What are the values of adopting an inclusive, speculative design approach in the inclusive privacy and security research?

2. What are the challenges of adopting this approach? How can we overcome the challenges?

3. What are the following steps after the speculative design studies?

2. REFERENCES

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