Design futures in action: Documenting experiential futures for participatory audiences

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ABSTRACT

The futures field demonstrates a willing openness in embracing methodologies, approaches, and influences from a diversity of disciplines and perspectives. This plurality of practice is evidenced in a growing body of work that increasingly embodies futures thinking in the design of everyday material and networked experiences. The intersection of design and futures produces artifacts, applications and interactions created to provoke dialog in an accessible manner. As part of the Futures special issue on the *Emerge: Artists and Scientists Redesign the Future* event, this article describes the documentation and public representation of the creative outcomes from nine *Emerge* design futures workshops. These workshops provided a rich opportunity to study how designers and futurists collaboratively engage, implement and communicate alternative futures. The goal of the documentation effort described is to capture the experience of creating experiential futures and extend the capacity for developing social foresight through a participatory exhibit and online social platform.

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1. Introduction

The practice of futures studies has a rich history of integrating models and methodologies from diverse disciplines in exploring, forecasting and envisioning possible futures. The past decade witnessed an emerging interest in theoretical, contextual and practice-based plurality (Schultz, 2012), while the concurrent extension of foresight practice to accommodate materials, methods and approaches from design and the arts (Candy, 2010; Davies & Sarpong, 2013; Dunagan, Jeffery, Fidler, & Maguire, 2011) indicates an enriching of the procedural and representation framework for emergent futures. Epitomizing this development, diegetic prototypes, design fiction movies, alternate reality games, and speculative design artifacts serve to embody and embed futures thinking in the material and networked world of everyday experience (Bleecker, 2009; Dunne & Raby, 2013; Hand et al., 2010; Kirby, 2010).

The *Emerge: Artists and Scientists Redesign the Future* symposium hosted at Arizona State University in March 2012, purposefully united artists, designers, social scientists, futurists and engineers in an integrated series of foresight workshops and activities. Over an intense 36-hour period, these diverse participants worked in nine different groups to imagine, design, produce, and present a rich assortment of embodied future-focused artifacts. Tackling diverse topics ranging from energy scenarios to the convenience store of the future, healthcare robots to cataclysmic social destruction hoaxes, the participants created movies, 3D printed objects and multimedia performances as commentary and provocation. The activities engaged in

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these workshops exemplify the burgeoning method of inquiry defined as research through design, whereby design practices are invoked to tackle complex, intractable problems beyond the scope of individual disciplines or singular approaches. The outcomes produced also represent an amalgamation of experiential futures – vignettes of possible worlds mediated through a rich variety of formats and presentations (Candy, 2010).

The symposium provided a prime opportunity to document and analyze this form of integrated design futures research in an authentic practice setting. Of interest to us here is not just revealing the content-focused 'what' of experiential futures, but also the procedural and methodological 'how' of such multidisciplinary futures work. A noted challenge of this type of design research is the overt focus on the final end product, with less attention paid to illuminating the iterative process of prototyping and creation. This omission makes it difficult to comparatively evaluate outcomes generated by this approach, and can potentially limit the ultimate value of such research contributions (Koskinen, Binder, & Redström, 2009; Zimmerman, Stolterman, & Forlizzi, 2010). While design researchers have in response developed strategies and tools (Dalsgaard & Halskov, 2012) to help designers reflect both in the moment, and after the fact (Bowers, 2012), opportunities still exist for considering the value of documentation and synthesis for expanded audiences and needs. In addition, from a futures perspective, concerns have also been expressed about the risk of design futures "producing visually rich, but analytically impoverished, outputs" (Raford, 2012, p. 34). Thus, our goal in developing a documentation platform for design futures work is to support collaborative interpretation of alternative futures by diverse stakeholders as a potentially emergent form of social foresight (Slaughter, 1996).

In this paper we describe our approach in developing a mixed-media framework for chronicling the products, processes and surrounding discourse generated during a series of design futures workshops. The approach mixes elements of traditional recording apparatus (e.g., videography, photography and audio recorders), social media contributions, and custom-built capture technologies (e.g., time-lapse video and experience capture installations) to create a rich description of events as they unfold. This documentation strategy was implemented in a multi-stage process (prior, during and after the workshop events), and with an expanding group of stakeholders and target audiences (workshop attendees, local public participants, online audiences). The first iterative analysis of the collected data quickly summarized the primary outcomes and provocations from each workshop and presented them to the broader public in the form of a participatory gallery exhibition. A secondary analysis presents the entirety of the mixed-media dataset within an online computational framework that extends the initial event reach to an even broader audience.

The paper makes several contributions to the study of futures practice as well as more broadly to the area of inquiry defined as research through design. First, it proposes a systematic approach to capturing, organizing and disseminating mediated documentation of *design futures practice*. Second, it provides an *online resource* for futures researchers to observe and input reflections on their activities in practice. Finally, it proposes a series of *guiding documentation principles* for futures practitioners operating in multiple domains of inquiry.

The paper is organized in five main sections. We begin with an overview of prior work and art in a diverse set of areas including design research, design futures, mediated experiences, and multimedia documentation. We then present the design and implementation of our mixed-media documentation approach. Next, we present results and findings from documenting the symposium and workshop events, together with a description of the initial formal analysis and synthesis of the captured data into a participatory public exhibition. We then describe the online implementation of a social media platform, and our long-term strategy in sustaining discourse around documented design futures activities. Finally, we conclude by proposing guiding documentation principles for futures practitioners and educators.

2. Background

2.1. Design research

Christopher Frayling first broached the topic of design research by distinguishing between three modes of inquiry into, through and for art and design (Frayling, 1993). While the former is well understood, and the latter remains controversial, it is the middle area of research through design that situates our current approach. In this context, research through design can be understood as an active form of reflective inquiry by interdisciplinary teams engaged in creating and considering a novel product, system or experience. This approach has been co-opted most recently by researchers in interaction design and in human-computer interaction, who identity the potential of this practice in tackling intractable 'wicked problems' such as climate change and social injustice (Rittel & Webber, 1973). Within the HCI community, research through design is commended for orienting researchers to focus on a preferred future (Zimmerman et al., 2010), exemplifying Herb Simon's famous action-oriented definition of design as the "transformation of existing conditions into preferred ones" (Simon, 1996, p. 55).

In addition to traditional product, service, and communication design, futures-oriented design practice has generated a rich body of speculative work integrating ideas and influences across the arts and sciences. Noteworthy approaches include ludic design, ambiguous design, critical design, and experience design (Dunne, 2006; Forlizzi & Battarbee, 2004). Extending the critical design practice of creating culturally provocative artifacts aimed at generating social dialog, design fiction has most recently been presented by a diverse group of engineers, designers, authors and futurists (Bleecker, 2009; Hand et al., 2010). Popularized by cyberpunk author Bruce Sterling, design fiction tethers embodied design practice with, what Sterling calls, the imagineering of science fiction (Sterling, 2009). All of these speculative practices approach the representation of alternative futures as purposefully intending to "engage audiences in considerations of what might be" (DiSalvo, 2012, p. 109).