
Everyday Acts of Noticing

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Exploring Noticing as Method in Design Research*

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Introduction

In this position paper we discuss two projects we have worked on which incorporate acts of noticing from the perspective of longer-term, situated histories of practice and living in order to re-frame conversations around climate change and domestic living. First is a project to make climate change data more tangible and personal for everyday cyclists. The second project focused on creating situated, bespoke visions of alternative forms of domestic IoT. These projects both use methods that acknowledge acts of noticing at the granular level of individual lived experience as a way of breaking from dominant narratives through recognizing alternative ways of seeing or being.

Everyday cyclists' intersections with climate change

Biggs' master's thesis investigates intersections of everyday cyclists and climate change, using speculative tools to make climate change more tangible for the everyday cyclist. It was inspired by her personal experience as a cyclist. The past few summers were plagued by smoke from forest fires which are more common due to hotter, drier summers. Breathing



Figure 1. Research Probe deployed with Seattle's everyday cyclists.



Figure 2. Prototype of circuitry and mechanical functioning of Highwater Pants.

smoke through falling ash as she rode her bike made her reflect on how climate change might manifest in unexpected ways that will impact her health and transportation as a cyclist differently than people who drive cars. This made her wonder how other future impacts of climate change on cycling might be made tangible for everyday cyclists.

In order to learn more about possible ways to investigate intersections between cyclists and climate change, she did three rounds of research. She started with a personal set of rapid, design experience prototypes exploring connections between Seattle, the elements and bike gear. She then did a round of semi-structured interviews with Seattle cyclists to learn how their cycling practices and influenced their understanding of Seattle's weather and seasons and climate change. Finally, she created a probe to stimulate speculative thinking and potential design approaches which she also deployed with Seattle cyclists (Figure 1). Through her research, she observed that cyclists have embodied and sensorial understanding of Seattle's local climate and weather but can't perceive weather at the long-term scale that would make climate change observable. Additionally, during her preliminary self-guided experience prototypes, it became clear that small adjustments to cycling gear designed to interact with the elements offered surprisingly rich grounds for reflection and acted as a catalyst for noticing her cyclist-specific relationship to the elements as she rode her bike.

Stemming from those observations, in order to make climate change more perceptible and offer more personal opportunities for reflection, she is designing a way to 'bend time' by tangibly overlaying future sea-

level rise projections over present-day bike rides. She is doing this through mechatronic pants she named Highwater Pants (Figure 2), designed so the pant leg raises as cyclists enter areas that will be most impacted by sea-level rise in Seattle in the future. Through wearing and experiencing these garments, cyclists can reflect in action as they experience climate change projections in a sort of transparent overlay that meshes with their existing memories and knowledge of Seattle's climate, weather, geography and topography.

This project relies on noticing in several ways: It uses embodied histories of noticing weather and seasons that cyclists have accrued over time through practice, and leverages that knowledge as a foundation for understanding climate change data. It then seeks to use the combined effects of noticing in action with new information delivered via a tangible experience into novel speculation about climate change. It also operates at a personal scale, so what cyclists notice can be open-ended and personal, giving agency and nuance to conversations about climate change which often feel non-localized and overwhelming (e.g. narratives about polar bear extinction and glacial melting). While she is still developing the garment, she plans to test it with cyclists to hear the unique, situated, and local climate change speculations they might have after riding in the garment.

This project is in dialogue with a shifting focus in sustainable HCI from critique of production and consumption [2,4] to radical adaptive strategies and envisioning collaborative survival [7], a history of tangible technologies for cyclists [8], and an emerging interest in embodied speculation in design research [3,5]. It also resists solutionism and offers tools for



Figure 3. An array of Bespoke Booklets, filled out by our participants.

noticing as a design outcome, embracing technology as a tool to mediate between human and nonhuman actors/systems, mediate between timescales and limitations of human perception, and design for participatory speculation.

Non-Stereotypical Homes Research

A second project that involved more nuanced ways of noticing was research to imaginatively co-speculate alternative visions of IoT in non-stereotypical domestic settings such as houseboats, vans, micro apartments, historic buildings and shared homes. Alongside other UW students, we called our research method Bespoke Booklets (Figure 3) because we created co-speculative booklets specifically and uniquely for each different participant. After touring each participant's home and taking photographs, we would sketch IoT concepts on top of the photos we took that were post-functional, imaginative and playful in ways that embodied the qualities of each individual home and placed them in a small booklet. We then passed these books to our participants and encouraged them to add five of their own concepts by sketching on top of photos of their home we included in the booklet especially for them to engage with. These booklets were designed as a way to facilitate co-speculative narratives around future visions of IoT in domestic settings that were situated, plural, collaborative and post-functional [1,6,9] concepts for incorporating feminist theory in HCI as laid out by Shaowen Bardzell, as well as from feminist STS scholars Donna Haraway and Lucy Suchman. We argued that in order to avoid building our speculation on stereotypes of the home or archetypes of the home, our speculation had to be situated in individual

participant's own homes and based on their lived experiences.

This research sought to critique one-size-fits-all approaches to domestic IoT devices by noticing the differences in individual homes. Our work is a reminder to look beyond stereotypes to reveal what would remain unnoticed otherwise. For example, the van and boat revealed relationships between the indoors and outdoors by the nature of their mobility and size. That relationship is present for many homes but often remains uncharted because it is eclipsed by other more common foci of design or interests such as privacy and security. Similarly, buildings with rich histories like participant June's historic box office apartment make it difficult to ignore the long temporal scale of some of the places we live in. While newer homes don't have that history, many homes are in the process. Of creating those long-term traces—making temporal considerations highly relevant, but often forgotten.

Questions for Workshop

As a participant in this workshop we would love to learn more about others' perspectives and methods for noticing. We also want to ask the following questions:

1. How is an act of noticing an act of world building?
2. What are some of the artifacts produced through exploring noticing? How does this challenge design as a practice or discipline?
3. How do people frame and disseminate the type of knowledge generated through designing for acts of noticing?

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