
Exploring Noticing as Method in Design Research

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Abstract

The aim of this one-day workshop is to explore, practice, and develop methodological approaches for HCI researchers and practitioners to “notice differently” and envision more ethical and responsible ways of engaging in technological interventions. In this workshop, we will focus on what anthropologist Anna Tsing calls the “arts of noticing”, methods of looking beyond progress narratives, cultivating awareness of diverse actors, and engaging in alternative ways of knowing (e.g. embodied knowledge and activist commitments) in design research and practice. The workshop will include discussion, a walkshop, and hands-on group exercises that develop “arts of noticing” appropriate to the DIS community.

Author Keywords

Arts of noticing; noticing; decentering; design research methods; feminism; HCI.

CSS Concepts

- Human-centered computing → Interaction design process and methods

Introduction

In a time of pressing ecological, political, and social concerns, the concept and practice of *noticing* has taken root, encouraging the re-examination of research



Figure 1: Assembling braces (photo credit Thomas Tran).



Figure 2: Top: mushroom Foray in Western Pennsylvania (photo by Jen Liu). Bottom: Hand-Substrate Interface (photo by Robert Zacharias).

assumptions, as means of pursuing alternative pathways towards preferable futures [14]. Specifically, we argue that while there have been many recent calls for noticing as an approach to HCI and design, it is unclear how this concept can be translated into actionable design research methods [2,7–11,13].

In this one-day workshop, we aim to explore design research methods for seeing past dominant narratives and perspectives by considering approaches that will help us as researchers and designers to see the challenges in a new light. Here we take anthropologist Anna Tsing's "arts of noticing" to see "the divergent, layered, and conjoined projects that make up worlds" [14, p.22]. These include paying attention to conditions of inequality and injustice [3,13], cultivating the ability to acknowledge and simultaneously step in and out of familiar frames of reference [8,10], and shifting the scales and proximity of questions about "what is and what can be" [1].

We see this workshop as an opportunity for members of the DIS community to consider how noticing can fit into their own design and research practices. Through conversations and structured activities with participants, our intention is to develop and deploy nontraditional design research methods that amplify, augment, and attune our abilities to account for a wide range of perspectives and voices that mobilize the arts of noticing. This consists of multi-pronged strategies including but not limited to slowing down research approaches, taking note of the "polyphonic assemblages" [14] of non-human and human actors at stake in research questions, and questioning or subverting narratives of progress.

Background

Recent scholarship in HCI has explored the notion of *noticing* as a strategy for cultivating alternative perspectives in technological intervention. Methods to notice differently have inspired HCI researchers and practitioners to engage with the challenges presented by intersecting environmental and social crises. Among them, Light and her colleagues call us to design for attentiveness: to reorient our attention from human-centeredness to the fellow-species that constitute the world. Here, the arts of noticing are the commitment to pay attention to situations that make us uncomfortable to avoid the conformity of "bovine design" [7].

In practice, the arts of noticing involve scholarly engagement in myriad nontraditional methodological approaches. For example, Lindtner, Bardzell, and Bardzell draw from feminist studies to inform their analytical sensibilities [8]. In doing so, they contribute to the repertoire of social computing scholarship by expanding existing definitions of intervention for societal change. A different approach is experimented by Blevins, in which he privileges visual components, as opposed to text, to show how design details reveal political tensions. He uses the example of production and design information printed on the back of iPhones to demonstrate the boundaries between sites of innovation and sites of production [1]. Additionally, Dew and Rosner [2] use noticing to consider the collection of timescales present in the range of environmental and ecological actors in a design practice. Drawing from their ethnography in timber framing, where woodworkers interact with and respond to trees as living materials, noticing involves "reading and appreciating the material's life history prior to and



Figure 3: Top: weeds grow together with crops. Bottom: weeds turned into compost (photo by Cyn Liu).



Figure 4: American pika in Niwot Ridge, CO. (photo by Maya Livio).

extending beyond the design moment without framing it solely in terms of its value to humans” (figure 1).

Liu, Byrne, and Devendorf [9] go further by designing interventions for collaborative survival, the recognition of interdependent and entangled multispecies relationships to persist in precarious times. For them, the arts of noticing are both hands-on and speculative, where they build multisensory tools to nurture a mutualistic relationship between humans and nonhumans (figure 2). For Liu, Bardzell, and Bardzell [10] to notice differently involves inserting themselves as design researchers working alongside eco-friendly farmers, to learn how to see weeds and pests not as something to be eradicated but as companion species to humans (figure 3). Through embodied understanding of the earth, they reflect on ways of cultivating intimacy with the biosphere with and through technology. Livio [11] enacts noticing through slow research with the American pika, a small relative of rabbits and a climate change indicator species. By carefully teasing out the relationships between pikas, humans, and machines, she reframes the biological concept of thermoregulation to add technology to its taxonomy (figure 4).

We build upon the notion of decentering previously explored in [8,16], and suggest turning it inward to reflect on HCI/d research methods. We see noticing as a complementary technique in the context of ongoing design efforts to shift user-centered design processes in directions that can consider the complexities in socio-technical assemblages, and envision ethical and responsible ways of working with new technologies [5,6,12]. Rather than attending to the singular perspective of a user, noticing can be a way of

accounting for the multitudes at stake, particularly those which have been traditionally marginalized.

In short, the arts of noticing have been explored as an approach related to decentering by contesting dominant narratives and questioning established ways of knowing in design research. Cultivating such arts include practices like close readings, developing embodied knowledge, and maintaining long-term fieldwork commitments as ways of surfacing and addressing pressing contemporary issues around social and environmental justice. While noticing has enabled researchers to decenter dominant narratives and deconstruct knowledge hierarchies, there is a lack of methodological principles to guide this practice. This workshop seeks to address this absence by exploring and developing methods that can be used in research practices of those in the DIS community and beyond.

Workshop Activities

The workshop will move from activities designed to cultivate arts of noticing to ones in which participants will be encouraged to develop their own strategies for noticing differently. As such, participants will begin with a scaffolding activity consisting of presenting and discussing position papers, mind mapping activities, and an implosion writing exercise [4]. Afterwards, the main activity of the workshop will take place on foot: participants will go on a walking probe [15] around the conference venue following the strategies to “notice differently” synthesized from previous activities. Each participant will practice a different way of documenting what they notice, which may include jottings and field notes, audio recordings, photos, drawings, motion captures, feelings and bodily reactions, found items, etc. Moreover, participants will be asked to generate

Tentative Workshop Schedule

[9:00-10:10] Introductions & position paper presentation

[10:10-10:30] Coffee break

[10:30-11:10] Small-group discussion: take a closer look at the position papers and examples from the organizers

[11:10-11:30] Coffee break

[11:30-13:00] Synthesizing previous works to tease out the underlying methods of noticing differently

[13:00-14:30] Lunch and discussion

[14:30-16:00] Walkshop in the vicinity: practicing methods of noticing identified from previous activities

[16:00-17:00] Documentation & reflection: discuss, refine, and trouble ways of noticing practiced in walkshop

personal strategies for introducing noticing to the exercise such as attending to what is strange, out of place, undesirable, taken for granted vs. what is ordinary, appropriate, desirable, and foregrounded. At the end of the walking probe, participants will re-group, document, and reflect on their workshop experience to discuss, refine, and trouble ways of noticing they practiced in the walkshop.

Workshop Goals and Outcomes

With this workshop we hope to forge a creative, welcoming, and critical space for exploring alternative approaches towards design. A key goal will be community building among scholars, practitioners, and activists interested in methodologies for noticing in design research. In addition, participants will directly put the workshop's key ideas into practice through the walking activity, which will scaffold exploration and articulation of practical tactics and strategies for "noticing differently". Organizers will also work with participants to identify formats and venues for sharing research-, design-, and activism-oriented arts of noticing, and for disseminating findings beyond the conference, including an article submission or a special issue publish on ACM *Interactions* magazine.

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