Sociomateriality: Infrastructuring and Appropriation of Artifacts

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Abstract

This Studio offers researchers and designers an opportunity to investigate and discuss prototypes and in-process projects from a perspective that expands beyond material aspects, to also cover social and cultural ones. Participants will bring a project, device, or platform, which will be discussed as *sociomaterials* that actively participate across multiple social and cultural contexts. This perspective, as well as the prototypes and projects brought by the participants, forms the core of the Studio, where conversation will emerge over several phases: from the demonstration of the individual projects as things, to the generation of speculative fictions as to the role and use of these artifacts in the world. Finally, we end with a discussion of infrastructuring and appropriation of the artefacts and their social roles. The themes that will be examined in this Studio are agency, emerging behaviors, embeddedness and design strategies from a sociomaterial perspective of artifacts.

Author Keywords

Materiality; design; prototypes; research through design; design things; sociomaterials; infrastructuring.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous

Introduction

From the physical to the digital, materiality is central to TEI. The post-digital theme of TEI 2018 continues to address materiality, yet emphasizes a paradigm shift as digital materials transition from novel and virtuous to ubiquitous and distrustful, and physical materials to celebrate craft, nostalgia, and nature. Fundamental to this shift are the dynamic social meanings embedded within the material of artifacts, objects, and systems. How then are we to design for these material meanings? One way to consider how devices serve to frame the world and possible relations within it is through the idea of *infrastructuring* [2]. Infrastructuring reflects the social role of an object or system in relation to its context and use, and reflects a collaboration over time and among stakeholders and between contexts [14]. Understanding the role of designed objects as being socially active substances that operate inside of infrastructural concerns to support broader values and practices opens a way to discuss how designs might be put to use [12].

The social implications of these materials are not often discussed at venues like TEI. The core argument of this workshop is that a sociomaterial perspective might become a theoretical lens to discuss tangible, embodied, and embedded interactions at TEI beyond demo contexts or research studios, into social structures and organizations. We believe that making space for conversations among designers about both social and material issues of computational artifacts is essential for design research.

Being a community highly focused on tangible interaction, a central theme of TEI and HCI has been materiality [6,13], reflecting the availability of a new and diverse materials as well as competing views of materiality reflecting TUIs, material computation and crafting [8]. These contributions emphasize how computation is both material and post-digital, and as such has challenged existing perspectives in HCI [9,16,17]. One way that TEI can contribute to the broader field of HCI is by drawing on the strong tradition of the community in exemplifying and developing material research agendas, but also by bringing them into dialogue with ongoing discussions regarding their social and cultural implications. The material turn is also reflected in contemporary discourses in design research. To designers, the substance has long been an essential part of understanding how or whether a design “works.” A key idea we want explore is that the objects that are produced as part of practice-based research are *design things* [1]. Design things enact multiple roles in the context of the process of design; they are messy, and support the negotiation and alignment of different values and viewpoints [5]. In HCI, design things can take the form of design notebooks [3,7], strong conceptual insights into design processes [11], and reflection on provocative hardware prototypes, e.g. [4,10,15]. These design things produce, constitute, and perform knowledge about social relations via their dissemination and use. As such, it is important to attend to the context and intended role of these prototypes as well as the material and scholarly documentation produced after the fact—to consider the role of the device, what it is infrastructuring, and how it might be appropriated by future users.

Studio Proposal

In the interaction design/HCI community, and in the TEI community in particular, materiality is a highly important and strong topic. This Studio contributes to this research space by examining and elaborating on how the design of interactive things expands beyond the material aspects, to also cover social and cultural ones. In particular, we want to explore how things and materials affect social structures and practices. In this Studio we intend to study, discuss and explore the fidelity of the prototype as a design thing. This involves moving the conversation beyond novel or technically robust prototypes that will be operated in a demonstrative context to also consider the possible social implications of the things we design. In particular, we are interested in how the three core concepts of TEI, namely *embeddedness*, *embodiment* and *tangibility,* can be re-addressed and revisited in a post-digital era. We use the idea of sociomaterials—devices and objects that actively play a role in social worlds—as a lens to this discussion, as it addresses the material and social arrangements of technological prototypes together, and bridges the demonstration, workshop, or research lab with the "real" world.

Studio Topics

This Studio will closely investigate computational design things, brought by the participants. Having such tangible things and prototypes at the core of the Studio activities, the format is meant to be conversational and generative, around issues relating to those design prototypes and the material and social roles that they play. These include, but are not limited to:

- Agency: How do materials participate? In design? In use? In context?
- Emerging Behaviors: How can computational capabilities embedded in materials shift how the materials participate?
- Embeddedness: How do devices embedded in cultures perform cultural values?
- Design Strategies: How can design researchers produce technologies that are deeply embedded in social or cultural contexts?

Studio Learning Goals/Discussion Objectives

Participants of this Studio will have the chance to critically examine and discuss one another's prototypes, artifacts or demos from both social and material perspectives, as well as how these perspectives interweave. This means that a strong focus will be put on how materiality—in its many facets—is both socially and culturally embedded and prototypes and devices participate in these discourses. The material form and the presentation of the objects themselves will be used to ground the discussion of the role that these devices play in social worlds. This will include the device's materiality, the goals and intentions of the designer, and how design decisions can be translated to how a device will leave its life outside a workshop or a research space to perform social and cultural roles.

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