
Adventures of an Interdisciplinary Native

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Abstract

Concern with the role of designed things, particularly digital things, in everyday life and society has taken me through the interdisciplinary spaces between human-computer interaction (HCI), philosophy of technology, science and technology studies (STS), social and cultural studies, media studies, and design. Despite the significant intellectual and practical challenges that interdisciplinary work entails, the project of designing material configurations that can support preferable forms of life is arguably one that requires such an orientation. This is why my work has always been situated in the interdisciplinary borderlands.

Author Keywords

Interdisciplinarity; social implications; design.

ACM Classification Keywords

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

Introduction

I am an interdisciplinary native. Like the so-called 'digital natives' who have never known a world without the Internet, I have never known what it is like to be at home in a single discipline. I have always inhabited the in-between spaces, the ones not easily identified, defined, or explained. In contrast to established fields

with reasonably well-defined boundaries and orderly goings-on, these interdisciplinary spaces are marked by disorderly flows of fellow intellectual interlopers, and the ideas, problems, methods, concepts, and commitments they transport and transpose.

Although these interdisciplinary spaces are not the easiest or most comfortable to inhabit, I have always found them the most interesting and productive. Perhaps this is due to the fact that I have since the beginning of my academic career been fascinated by the role of (especially digital) technologies in everyday life and society—and understanding of things as complex as technologies, human experience, the social world, and relations between them cannot be achieved by considering things from a single perspective.

My current work is positioned primarily in relation to design, philosophy of technology, and science and technology studies (STS). However, my PhD is in Informatics with a concentration in human-computer interaction (HCI) and PhD minor in communication and culture, so I have also been influenced by cultural and media studies, anthropology, and critical social theory. For my Master's degree in HCI I did my final thesis research in the domain of computer-mediated communication (CMC) with a big dose of philosophy of technology, STS, and complex systems; and by the end of my undergraduate studies in psychology (major) and computer science (minor) I was looking at creativity from the perspectives of both psychology and HCI. So interdisciplinarity has always been a key characteristic of my academic and intellectual trajectory.

However, this has of course also always entailed challenges, frustrations, and various other obstacles!

Interdisciplinary Challenges

One of the most basic but also perhaps most significant challenges of being an interdisciplinary native is that I have never had a clear disciplinary 'home'. In any academic context I have always been a bit of an outsider, or at least working at the edges of the field or using its paradigmatic trappings in unconventional ways. This makes dialogue with people closer to the 'core' of any given discipline a bit harder, and amplifies the already significant challenges of finding one's way as a young researcher.

Positioning myself in relation to a number of fields, but not sitting comfortably within any of them, has also led to two more specific challenges. The first is that my work has looked pretty weird (or worse) to people from different disciplines, albeit in different ways. To anthropologists and social theorists, my focus on the role and agency of artifacts in human experience and affairs has seemed to amount to an affront on the role of human agency and culture. On the other hand, in relation to HCI and design my work has seemed super theoretical, especially since I have taken an analytic approach without actually making anything or doing empirical studies with users. But in relation to a lot of philosophy of technology my analytic approach (informed by a design-oriented sensitivity to particulars) is unusual both in its detail and its focus on the digital.

The second big intellectual and practical challenge I have had, particularly in writing my doctoral dissertation, was that of crafting an interdisciplinary narrative to frame my work. I blogged about this in 2012 as I was wrestling with setting up my dissertation (<http://heatherwiltse.me/2012/04/19/the-difficulty-of->

interdisciplinary-narratives-3/), and it seems appropriate to quote this post at some length here:

My Informatics colleagues and I have joked about wishing we were doing something easy, like theoretical physics, because then at least we would have a fairly well-defined problem space (or an established paradigm, in the Kuhnian sense). A scholar working in such an established discipline is able to present (or assume) a boring, predictable setup for her research: the history of her discipline, its intellectual traditions, questions, and progress made toward addressing the problem at hand. Included in this nifty paradigmatic package are also shared conceptions of what count as acceptable problems, methods, and solutions. Of course, even research that fits this pattern has its own significant challenges that I do not mean to trivialize. But at least framing and rhetoric can be fairly straightforward.

When choosing to take a fundamentally interdisciplinary perspective, however, these things cannot be taken for granted. If the problem/question is not well set up (and sanctioned qua problem/question) by any single discipline, one can be left to at least some extent appealing to the audience's intuitive and practical sense of something being a real problem in the world that requires such a newfangled approach. And one person's interesting question is often another person's uninteresting assumption.

Much of my dissertation research [5] thus ended up being about framing an area for inquiry, a foundation and approach for further work.

Challenges Requiring Interdisciplinarity

Despite the significant and ongoing struggles I have had due to my interdisciplinary orientation, I have also found that its benefits far outweigh its challenges. Drawing on multiple fields and lines of inquiry has allowed me to identify areas of interest that are relevant to all of them, but that cannot (at least easily) be articulated from within one alone. More concretely, I found this to be the case in my work on the ways in which digital technologies (or what I more specifically describe as responsive *digital materials*) make activities visible, and thus mediate perception and engagement. My focus on technological mediation comes from postphenomenology, but my sensitivity to the many significant details and components of digital materials that can be involved in mediated perception comes from interaction design. Combining them let me articulate a significant set of philosophical issues around *digital material mediation* that also has implications for the ways in which technologies are designed [6]. Combining philosophy and design theory has also enabled a problematization of the 'computer' as an analytic object, and an initial articulation of some of the key features of contemporary technologies and associated theoretical and methodological implications [7].

In addition to my intellectual positioning, I am now professionally positioned at one of the world's best industrial design schools—the Umeå Institute of Design. My title of Assistant Professor of Industrial Design is somewhat ironic, given that I have no formal training in industrial design! It is my commitment to considering the social implications of technologies *in ways that can inform their design* that has brought me here, and that makes it such a great environment for me to be in. The

school has throughout its 25-year history maintained very close working relationships with industry, and is oriented toward ensuring that students in its professional programs are well prepared for careers in industrial design. Having a constant awareness of the realities of design practice 'in the real world' is quite helpful for keeping my research grounded; but it also makes me aware of the enormity of the challenge of connecting the critical perspectives and commitments that I hold dear to the realities of professional education and practice.

An inter- or trans-disciplinary orientation is not only beneficial, but needed in order to address the pressing challenges of the worlds in which computational systems and other designed things are embedded. Good interdisciplinary work also has the advantage of enforcing a certain precision and care when it comes to research design: it simply does not work to take things for granted when formulating goals, setting up a problem space, building on existing discourses, choosing methods, analyzing results, and so on.

It seems that interdisciplinary work can also serve a vital role in HCI by making sure that things do not seem more neat or straightforward than is warranted—especially since it can be so easy to think in terms of 'technological fixes' to problems. A sensibility of respecting and working with complexity, heterogeneity, and messiness (e.g., [1,3]) can perhaps provide part of the necessary foundation for using interactive systems to *ask* questions, articulate problem spaces for exploration, and speculate about possible futures [2].

In my own work, I am committed to foregrounding the social implications of technologies in ways that can

speak to their design and configuration, and to finding ways to better design our material world such that we can build a future in which sustainment might be possible [4]. This is a fundamentally transdisciplinary project; and it is this project rather than any particular discipline that serves as the anchor for my research. It is for this reason that my intellectual home remains in the shifting interdisciplinary borderlands.

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