

(Pre-press version)

Epilogue: Where the Action Was, Wasn't, Should Have Been, and Might Yet Be

Paul Dourish  
University of California, Irvine

It is flattering but also rather disquieting to be asked to provide some remarks on the writing of and reception to *Where the Action Is* after a little over ten years since its publication (and almost fifteen since I made the first notes on the project, which are dated March 17 1998 and appear on a cocktail napkin.) While I am gratified that others have found the event of its publication notable (and I make no judgment or claims for anything beyond the event itself), producing a commentary feels self-congratulating to a degree that I find uncomfortable. Nonetheless, in a field that prizes novelty and innovation so dearly, it makes a pleasant change to be asked to spend a moment looking backwards, and an assessment of how both the research and the technology landscape have developed over the last ten years may be instructive in figuring out where to go next.

It is hardly necessary at this point to comment on the technological and interactional trends since *Where the Action Is* was published in 2001 that have helped to fuel an interest in the topics of embodied interaction. Further, the papers collected in this issue are testament to the variety of theoretical and analytic perspectives that have been brought to bear by a wide range of researchers. The papers here further do important work in situating HCI's interest in embodied interaction within a broader and varied intellectual history. Indeed, many of the researchers represented here are people whose own work directly inspired the writing of that text, and with whom my own work has been in dialogue over many years. Indeed, if the book has achieved anything, I would say that it is not that it broke any new ground in understanding the nature of embodiment as a phenomenon in HCI, but rather perhaps that it invited new people to participate in a conversation that was already going on.

With the benefit of hindsight, and in light of the kinds of explorations explored in the papers collected in this issue, there are a number of observations that we might make about the broad trajectory of research on embodied interaction and the position of that specific volume within it.

The first, as has been noted by several people, is that the body has remarkably little presence in a book that is ostensibly about embodied interaction. This is certainly true, and is valid as critique, although of course the book has a slightly different focus. Ironically, in fact, although it sets out to explore "embodied interaction," *Where the Action Is* represents, in some sense, an attempt to argue that then-emerging trends in physically embodied interactive computing could be understood best in terms of existing analytic frameworks such as those of ethnomethodology –

that is, it was to some extent an attempt to lead away from the “novelty” of those techniques and back to the kinds of concerns that had already been occupying many researchers in CSCW and related areas. From this perspective, then, the absence of the body as a central consideration was somewhat strategic, if problematic. Indeed, in light of subsequent events, I wonder if having focused more on bodies in interaction might have turned out to be a problem (see below). Certainly, it meant that there were many important issues to which the text was largely blind (despite Toni Robertson’s best efforts, over dinner in San Francisco one evening while the book was still in development, to get me to see them). Certainly, I am happy these to see a whole range of more thoughtful perspectives on the body in interaction – from feminist technoscience (e.g. Satchell 2006, Borning and Muller 2012) to queer theory (e.g. Light 2011) – playing a more prominent role in contemporary HCI discourse, even if the connection between these and the material of *Where the Action Is* is perhaps a strong one only in my own wishful thinking.

That said, one other aspect of unfortunate positioning, in retrospect, was the way that the book articulated its arguments in terms of tangible computing but not more broadly in terms of the ubiquitous computing program of which that tangible computing work was a part. Ubiquitous computing has grown considerably as a program and has become an interesting site at which the relationship between technical and social considerations are negotiated, both intellectually and in everyday life. It might have provided a stronger link between the analytic achievements of HCI and CSCW on one hand and the contexts of ubiquitous computing on the other had the consequences of the argument that the book laid out been made clearer at the time. As it has turned out, ubiquitous computing has been a productive site for a new generation of sociotechnical scholars to develop arguments that have taken some intriguing new turns, although the focus on the production of meaning in interaction is not as central a topic in that field as it could be. This is a topic that is still emerging, and as ubiquitous computing increasingly takes a broader view of its interactional foundations, and as HCI increasingly incorporates studies of non-traditional domains of interaction, there may be some convergence.

More explicitly resisting the interpretation that embodied interaction deals particularly with mobile, tangible, and other alternatives to traditional desktop computing.

While that is a desirable outcome, it is one that rests on a problematic foundation, and one that has perhaps been the most frustrating to me since the publication of *Where the Action Is*. As outlined above, the spur to writing the book was the emerging interest in novel physical interaction contexts, so-called tangible computing and related programs; my goal was to attempt to understand these by placing them more broadly in the context of an ongoing program phenomenologically-inspired interaction analysis. However, two choices – the choice to use tangible computing as the launching-off point, and the choice to anchor the text around the term “embodied interaction” – created the space for a significant

misreading, which is that embodied interaction *is* tangible computing. To an extent, this derives from what I have come to think of as a “taxonomic mindset” in which a term like “embodied interaction” is read as making a distinction between those forms of interaction that are “embodied” and those forms that are not. The term, of course, was not intended to do this work. Rather, my goal in articulating how tangible computing could be understood within the frame of the ongoing phenomenologically-inspired program of research was to precisely draw connections between tangible computing and other forms of interactive systems and to suggest that they were amenable to common forms of analysis. In other words, desktop computing with mouse and keyboard is also “embodied,” and the question of just how it is embodied and the relevance of its embodiment are topics for HCI. Tangible computing is a particularly productive site at which to examine questions of embodiment but it by no means defines or sets the boundaries of embodied interaction or embodied analysis. If there were one thing that I would like to make clearer in *Where the Action Is*, it is the relevance of an embodied account of interaction to traditional user interface design and analysis.

On the positive side, one somewhat unexpected consequence of the publication of the book has been a connection established between my own work and work in the new media arts community. While a small amount of artistic work is presented in *Where the Action Is*, the book helped to forge a connection to those whose perspective on new media focused on the embodied experience of interaction with digital materials. I have found it personally extremely rewarding to explore interactional concerns from a quite different perspective, and at the same time to attempt to draw on concerns that have driven artistic and critical work, such as Bourriaud’s (1998) relational aesthetics, as a means to open up new avenues of HCI research. Weiser’s original ubiquitous computing program at PARC was one that engaged strongly with digital artists, although this connection was unusual at the time. These days, media art has a recognized place within HCI research, and authors represented in this volume have done significant work in this area (David Kirsh’s paper here, of course, evidences a different but no less productive connection between HCI and topics in performing arts.)

Finally, of course, there is the ever-vexing issue of the extent to which the book provides, or should provide, “implications for design” (a topic I note does arise in the critiques offered by some papers here.) I felt at the time of publication, and continue to feel, that the design chapter is the weakest in the book, although I note too that, to the extent that it provides some kind of bridge if not to design then at least to designers, it remains useful. (It remains useful in my own conversations with people and in my own teaching, at least.) I note, too, that what at the time struck some as vagueness and abstraction is perhaps fundamental to that abstraction. It is nice to find that one can continue to build upon the text ten years after publication and not find that it is mired in outdated technology and inappropriate assumptions, given that mobile phones were not particularly important or widespread at the time it was written, never mind WiFi, Kinect, or Google Googles. Whenever I feel bad about the fact that the book did not articulate

itself in terms of more specific contemporary technologies, I immediately feel better by thinking about how distant and dated it might seem if it had done so.

As a professor, I spend a good deal of my time counseling and advising graduate students. One of the common anxieties that they experience is that they (not unreasonably) think of their dissertations as the culmination of something (in this case, their graduate studies), and so as an ultimate expression of some ideas. I try to help them to see their dissertations instead as way-points on a longer journey, and as a progress report on their thinking. So it is with any publication. Inevitably, then, there are other ideas, other frameworks, and other concepts that I came across only after the book had been published, or that I wish with hindsight that I could have incorporated into it. For instance, while the book dwells on what we might call “old school” phenomenology (tracing, as it did, some of the intellectual antecedents of ethnomethodological analysis), more contemporary pieces of phenomenological thinking that are deeply relevant to the enterprise are neglected. Peter-Paul Verbeek’s work in *What Things Do* (Verbeek 2005) is one component that I would most certainly want to incorporate, seeking as he does an account of mediated interaction that discharges the sense of inauthenticity that is manifest in Heidegger. An account that could incorporate the recent political ecology of Jane Bennett (2010) and aspects of Bruno Latour’s (2004) work would also paint perhaps a richer and more compelling story of the relationship between meaning, agency, and technology, one that could connect the relatively microsocial view of interaction in *Where the Action Is* to broader considerations. Hindsight is 20/20, and it is possible too that these thoughts reflect more where my own research directions have brought me over the last ten years. Perhaps more importantly, though, they reflect the fact that a broader community of scholars and researchers with an interest in the philosophical foundations of computation, representation, and interaction and in the cultural practices of digital media production and use have become more active and more prominent as a part of the HCI research community over the past ten years, as evidenced in part by the publication of this issue. I find this personally very heartening, and since most books are at heart selfish acts, perhaps that is all that could be hoped for.

## References

Bennett, J. 2010. *Vibrant Matter: A Political Ecology of Things*. Duke.

Borning, A. and Muller, M. 2012. Next Steps for Value-Sensitive Design. Proc. ACM Conf. Human Factors in Computing Systems CHI 2012 (Austin, TX), 1125-1134.

Bourriaud, N. 1998. *Relational Aesthetics*. Dijon, France: Les Presse Du Reel.

Latour, B. 2004. *The Politics of Nature: How to Bring the Sciences into Democracy*. Cambridge, MA: Harvard University Press.

Light, A. 2011. HCI as Heterodoxy: Technologies of Identity and the Queering of Interaction with Computers. *Interacting with Computers*, 23(5), 430-438.

Satchell, C. 2006. Cultural Theory: From Armchair Critic to Star Performer. *Proc. Australasian Conf. Computer-Human Interaction OZCHI 2006*, 199-204.

Verbeek, P.-P. 2005. *What Things Do: Philosophical Reflections on Technology, Agency, and Design*. Pennsylvania State University Press.