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Postmodernism and Design Anthropology

As an emerging discipline, Design Anthropology's foundation was constructed from a series of events—both intentional and fortuitous—by individuals representing numerous disciplines. Arising simultaneously in Europe and North America, interdisciplinary researchers began applying the tools of social sciences in design-centric scenarios (Bezaitis and Robinson 2011; Suchman et al. 1999). One of the early adaptors of this approach was Xerox PARC, whose researchers utilized these tools to explore how users interacted with computer technology. The knowledge gained through the social science perspective would ultimately be used to influence future design processes. The work that occurred at Xerox PARC as well as other early practitioners represents the beginning of wide scale user-centered design, which in itself is a reflection of poststructuralists/postmodern philosophy.

Founded in 1970, Xerox's Palo Alto Research Center (PARC) "represented an investment in making technology futures" and positioned it as a "kind of advanced settlement on the frontier of the emerging markets of computing" (Suchman 2011, p. 3). At PARC, a multi-disciplinary group of researchers drew from their backgrounds in anthropology and computer science to explore digital technologies (Suchman et al 1999). Spearheaded by the computer scientists Jeff Rulifson, social anthropologists began to explore the notion of how people worked in an office as it related to the introduction of Xerox's computer office equipment. This perspective was based on Rulifson's supposition that operator difficulty wasn't based as much on equipment as it was on office interactions and therefore the design of office systems should in part be based on the anthropologists' research (Suchman 2013). This is an assumption that technology is partially defined by social interactions.

Lucy Suchman, Jeanette Blomberg, and Julien Orr were three of PARC's early anthropologists focused on "details of everyday work practices in multiactivity, technology-intensive work settings" (Blomberg et al. 1993). With the proliferation of office computing and Xerox's exploration of the paperless 'Office of the future', these researchers recognized the importance of "how" workers interact with new technology, and how this insight would be critical for the development of future Xerox products. Bridging the gap between scientist/designer and end user, these anthropologists followed "three interrelated lines of research: (a) critical analysis of technical discourse and practices, (b) ethnographies of work and technologies-in-use, and (c) design interventions" (Suchman et al. 1999, p. 392). The importance of these research avenues is that they framed design/technology in a user centric, in-context view. In other words, design/technology can no longer occur in a vacuum, nor can design be based solely on marketing. As one of the most visible and well documented PARC researchers, this essay will focus on Suchman and her specific investigation into a recently introduced photocopier.

In this case, early reports of user complaints when operating the photocopier were interpreted as the byproduct of an overly complex machine. The proposed design solution was a larger video display. Recognizing the paucity of investigation into the complaints, Suchman believed that in-context observations would yield greater insight as to the source of the user complaints. Once she undertook a series of in-context observations, the photocopier's complexity was verified. One unforeseen outcome of the direct observations was her hypothesis that user difficulty was a result of product unfamiliarity rather than the users' technological aptitude (Suchman et al. 1999). Simply put, a larger video screen would not resolve the underlying causality for user complaints.

Suchman's example is based on the premise that the process of designing artifacts—here Xerox photocopiers—does not exist in isolation and instead must be part of the cultural/use construct. This premise, however, was antithetical to the Xerox corporate structure at the time, where design, computer science, and marketing was based on a hierarchy which did not include the end user. This inward looking design and problem solving meant that when difficulties arose—in the form of customer complains or poor product performance—the pool of available experience and knowledge was limited to the in-house understanding. Additionally, experience and knowledge in this structure is often biased. Take for example Suchman's photocopier, the Xerox team's intimate knowledge of their own product made it impossible for them to place themselves in the role of an unfamiliar user experiencing this new and different technology. By isolating their design process, Xerox designers did not recognize that naive users and in-context atmosphere effects how people understand and use a photocopier. They simply could not address a problem they didn't know existed.

The isolation by which design, and subsequently design analysis often occurred at Xerox, prior to the introduction of ethnographic research, failed to create a holistic understanding of the design artifact. This process could be viewed as a structuralists in nature. For a structuralists, the totality of an object is based on the relationship of its parts. In this case, the totality of a photocopier is the process of the design and resulting photocopier. The unchanging, fixed nature of this structuralist order disallows the intervention of the user, thereby removing them from the copier's structure—the user can never be part of the photocopier's "design". The negation of the user is based on the structuralists' rejection of empirical knowledge, instead relying only on rational. (Barnard 2000). The result of this is design in isolation. When problems with a design arise, structuralist orientated designers would believe that the solution could be found within the object itself. This was the case Suchman encountered. Ultimately, this belief system does nothing more than reinforce the belief of the universality of design, the designer as sage, and that one design solution fits all. Given the technological newness of photocopiers at this time, this structuralists approach could have had detrimental impacts on Xerox.

Being in the right place at the right time and recognizing how ethnography could enhance the design process, the complaints created the opportunity for Suchman to undertake in-context observations. She later stated: "my colleagues and I at PARC framed our arguments in terms of the relatively greater value of ethnographically-based attention to practice over the kinds of decontextualised opinions and fragmented expressions of preference elicited through market research" (Suchman 2013, p. 2). Functioning as a intermediary between object and subject, Suchman's work helped decipher the nuances of the object/subject relationship which ultimately demonstrated to Xerox the viability and value of ethnographic research (Clarke 2011). With the adaptation of ethnographic methodologies, introduced by Suchman and fellow anthropologists, it would be fair to



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interpret this change as Xerox's incorporation of poststructuralist and postmodern philosophy into the design process.

Suchman recognized that "reading a new artifact is an inherently problematic activity" (Suchman et al. 1999, p.394). The problem she observed was that the photocopier was a relatively new technology and one that was introduced within the adult life time of the users, in other words, it was learned. The fact that the users were, as later coined by Prensky (2001, p. 2), "digital immigrants", meant that users would not only have to learn to operate the photocopier, but they would have to do so within the work environment. At this point, the design process could no longer support a hierarchy of knowledge. Instead, the user's empirical knowledge of the photocopier could help construct 'little narratives' (Simm 2011) which in-turn allows users to communicate amongst themselves to learn to use the photocopier. This shift towards a poststructuralist and postmodern philosophy meant that to be successful, the design process would have to abandon fixed knowledge and grand theories. Design in a vacuum could no longer exist, instead designers must seek answers outside of themselves, because, as Suchman observed, the design of a photocopier extends beyond the team who created it.

Suchman's research with the photocopier demonstrates the use of the three interrelated research lines. First, by examining the technical discourse and practices, she showed that users are integral to the design of a photocopier. This relates directly to the belief that design in isolation is not a true reflection of the life cycle of the photocopier. Second, the recognition of the role of the user could only have been discovered through in-context ethnography. In postmodern philosophy, 'sensemaking' is a social activity considered the "process through which people reduce the complexity of their environment to a level which makes sense for them" (Toit 2011, p.113). In the case of Suchman's photocopier, the 'newness' of photocopiers resulted in users helping one another understand the technology. Therefore, if sensemaking was removed from the experience, and users did not assist one another, the possibility exists that more complaints would have arisen. This illustrates that the shared meaning of group is a tangible aspect of the photocopier's design. Finally, Suchman's research demonstrated the need for iterative design cycle including cooperative prototyping. It is interesting to note that cooperative prototyping in PARC's early research referred to cross-disciplinary internal teams (Suchman 2011) and not what is now considered 'participatory design' which includes users. As a whole, these steps confirm the fact that an ethnographic approach to a design process actually redefines the process itself.

Bezaitis and Robinson (2011) trace the variable role and perception of corporate anthropology from its early days to today where it remains a fixture in the design environment. It is only through hindsight that we see Suchman and her colleagues as part of the catalyst for anthropology's acceptance in the corporate setting. While the early PARC research's evolution into today's design anthropology seems inevitable, it was set in motion by Rulifson, practiced by Xerox anthropologists, and implemented at standards inline with the most rigorous academic traditions. Most importantly, however, they represent the beginnings of an evolution of user-centered design rooted in poststructuralists and postmodern theory.

Notes

For the purposes of this essay I'm using 'design' in the very broad sense of all the aspects used to create a design artifact.

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