

Design Research

METHODS AND PERSPECTIVES

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Ethnography and Critical Design Practice

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The philosophers have only interpreted the world, the point, however, is to change it. —Karl Marx

This chapter describes how ethnography, a research technique that originated in anthropology, has become an increasingly central practice for a variety of businesses and professions, including design. I was trained as an anthropologist at the University of California at Berkeley and conducted long-term fieldwork for my research in Brazil. I now work outside of academia primarily in technology, design and other areas of business. In this chapter I will briefly describe ethnography, a core anthropological research tool, and its role in research both in and out of academia. I will also explain how ethnographic techniques and social science theory are suited to enhancing design practice. I'll offer my own view of what the future relationship between designers and ethnographers might look like and what the two professions have to offer each other. Finally, I will briefly explore the potential for and promise of a critical design research practice.

Designed Artifacts, Culture, and the Study of Imponderabilia

At its core, anthropology is the study of human behavior—how people experience and make sense of what they themselves and others do. This is a very broad statement and, as such, a vaguely absurd claim. The terms “experience” and “making sense” comprise a large part of what social scientists like anthropologists generally call culture—the practices, artifacts, sensibilities and ideas that constitute and inform our everyday lives. The culture concept has been periodically championed, reviled, deconstructed, abandoned and reclaimed many times since it first came into use in the 19th century. I will simply use it as a heuristic for the sake of discussion.

As a working concept, culture includes phenomena ranging from how we tie our shoes to religious beliefs, flirting, the categories we use to parse the world, body piercing, and how we navigate an interface. Typically, we don't realize how and to what extent we are participating in and therefore shaping culture. It is so natural to us—our behaviors, feelings, thoughts, ways of doing, communicating, and understanding all things—that it is extremely difficult for us to step back from our everyday experiences and analyze these practices objectively.

The products of design, whether material like a bicycle or immaterial like a networked computing environment, engage humans through their utility as well

as their cultural location—the “situatedness” through which designed artifacts recursively derive their meaning and are simultaneously the object of interpretation. In other words, “situatedness” means the multiple ways people consume and integrate designed artifacts into their lives through interaction (use and embodiment) and through their experience creates understanding.

One aspect of engagement with a designed artifact is through use. Don Norman has written extensively on the issue of product use and usability [1989]. Another dimension closely related to use is how products are experienced or interpreted. These are both deeply cultural activities. It is only recently that the design community has paid attention to the experience of designed artifacts and the impact of experience on consumption 153 SHEDROFF. In late industrial capitalism, designed artifacts and the experience of them are sites through which people, to differing degrees, live facets of their lives. People live and dream through design. Designed artifacts are, in this sense, “materialized ideologies.” Designed artifacts help to create our subjective experience by acts of what Louis Althusser [1972] called “hailing.” These are acts of attracting attention (hailing), compelling individuals to generate meaning (interpretation) and behave in specific relation to designed artifacts. To a certain extent, our sense of self and identity flow from the raw material of design that permeates our high modernist world. This is something designers and social scientists need to consider.

In order to think about how design influences us and the relationship between design research and social science, we need to look briefly at the development of anthropology and, in particular, the research method called ethnography—a practice increasingly central to design research. In attempting to describe what he did during extended fieldwork in the Trobriand Islands, one of anthropology’s founding figures, Bronislaw Malinowski, used the phrase, “the imponderabilia of actual life” to refer to a perspective that can only be obtained by living among indigenous peoples for long periods of time. By imponderabilia, Malinowski meant the daily life of the people, their ordinary behavior, which the “natives” themselves find difficult to explain or articulate: “[t]he final goal...is to grasp the native’s point of view, his relation to life, to realise his vision of his world” [Malinowski 1922, 25].

Prior to Malinowski’s pioneering work, early in the 20th century, most early “armchair” anthropologists received their information secondhand from missionaries, soldiers and traders and they did not hesitate to occasionally engage in questionable induction and wild speculation. Malinowski’s corrective was simply to take the (then) radical step of living with the people he wanted to learn about and systematically document what he learned in great detail. It seems obvious now, but at the time, a host of prejudices and racist ideologies against living with the so-called “primitives” discouraged that option. But instead of somewhat blindly asserting what people beyond the Western world were doing, anthropologists began to gather firsthand information in order to develop more informed

and nuanced theories about human behavior. And the way they gathered that information was modeled after Malinowski's ethnographic, on-the-ground approach in the Trobriands.

Like armchair anthropologists, designers, engineers and other professionals often face barriers (of a different nature) that prevent them from learning about the context and audience for their products, processes and systems. While the trend in design seems to be moving away from the armchair approach, the majority of designed artifacts are planned, prototyped and produced without the benefit of primary, ethnographic research on intended audiences and the context of use.

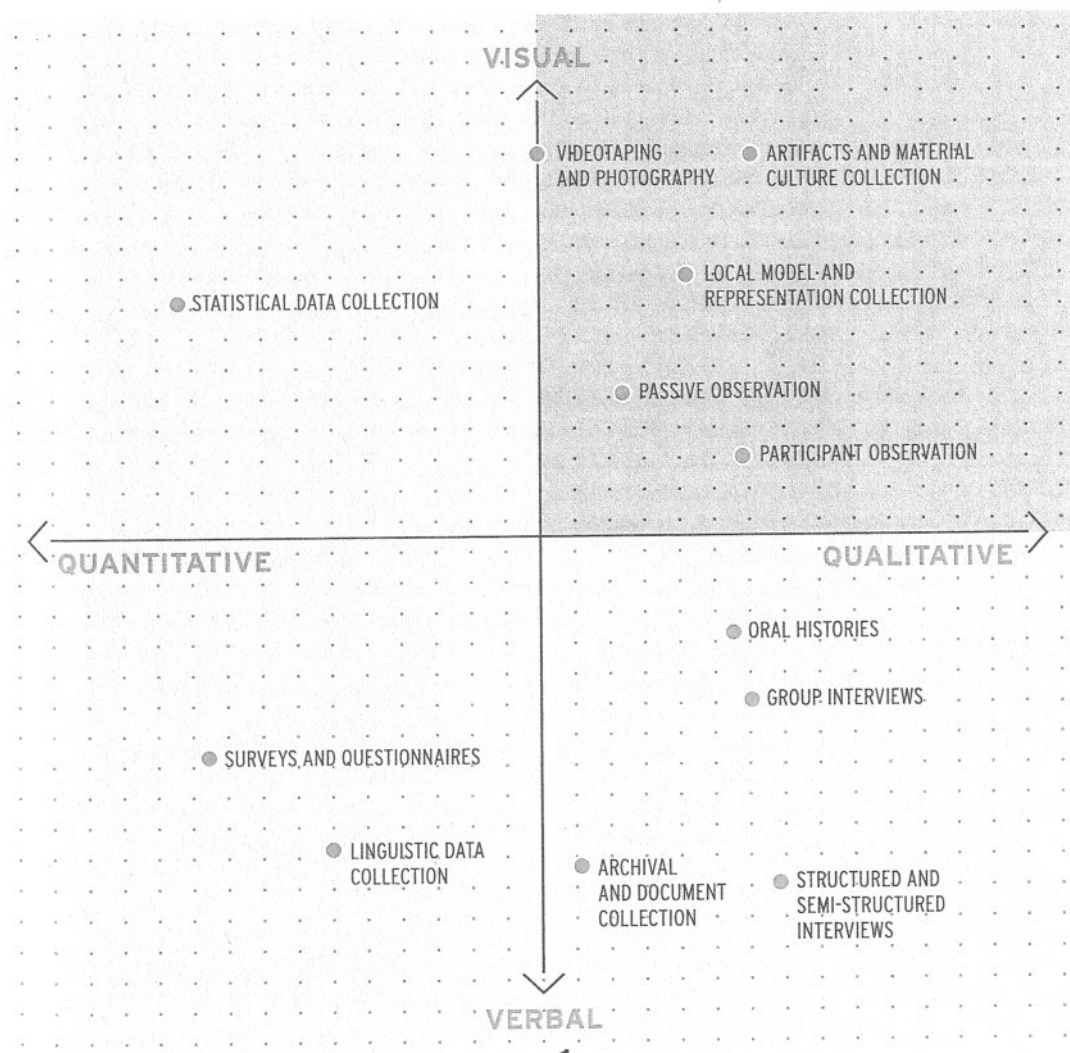
What Is Ethnography and How Do Academic Social Scientists Do It?

From Malinowski's early excursions to the field, to the University of Chicago's "urban ethnography" of the 1930s and 1960s, to the present field of cultural studies, social scientists have typically used the ethnographic method for studying and learning about a person or relatively small group of people in order to theorize about culture at a more general level. Almost without exception, ethnography still involves the study of a small group of people in their own environment in order to test the ethnographer's hypotheses. Instead of looking at a small set of variables among a large number of people (the typical approach in survey research), ethnographers attempt to get a deep, detailed understanding of the life and circumstances of fewer people. Ethnographic accounts are both scientifically descriptive and interpretive. They are descriptive because they are designed to capture as much detail as possible, crucial to testing and developing theories. They are interpretive because the ethnographer must determine the significance of the detail in the relatively narrow scope she observes without necessarily gathering broad or statistical information. Ethnography requires analytic rigor and process as well as inductive analysis (reasoning from the particular cases to the general theories).

The practice of ethnography typically involves a range of specific techniques. These are applied as necessitated by the research objectives. The following illustration lists many of the specific research tools used when conducting academic ethnography. Academic ethnographers might use all or a few of these techniques when conducting long-term research. In contrast, the gray area indicates methods that are primarily used in commercial ethnography.

In and outside of academia, participant observation (in the upper right quadrant of the illustration) is regarded as both a core ethnographic practice as well as one of the most demanding techniques in qualitative research. In academic ethnography, participant observation often requires months or years of intensive fieldwork—partly because the problems are so complex, but also because it is thought that the researcher needs to become accepted as a "natural" part of the culture or context under study. The assumption is that this minimizes the impact of the researcher's presence and increases the likelihood that the observations

Research
academic
The gray
used primarily
ethnography



Research tools for conducting academic ethnography. The gray area represents those used primarily in commercial ethnography.

are of more or less naturally occurring phenomenon. The extent to which a researcher can actually become a natural part of the context in which the ethnographer is working has been debated on and off for the past 50 years within social science, yet ethnography continues to increase in popularity as a method.

Participant Observation as Ethnography in Business and Academia

A relatively recent incarnation of participant observation mandates that you

immerse yourself into the flow of daily life, copiously documenting what you learn and what you think it means in order to tease out the strands of thought and action enmeshed in a given context. This differs from Malinowski's approach in that he saw his role as that of detached scientific observer, whereas this recent variant emphasizes a more interpretive approach. Advocating for this interpretive approach, Clifford Geertz used the term "thick description" and extended the idea of participant observation as a means of representing another's reality [Geertz 1973]. This technique has a strong grounding in both verbal and visual domains of experience. It also privileges another dimension not captured by the illustration above: empathy, the altered subjectivity that can come from immersion into a particular context.

According to this model, to the extent possible, when the people you are studying gamble on cockfights, as was Geertz's case in Indonesia, you gamble with them and run from the police with them when the game is raided. According to Geertz, this single event allowed him to gain the trust and respect necessary to effectively conduct his research at the time. In his study of genetic scientists in France, Paul Rabinow [1999] went to work in their research lab and participated in their research routines as much as possible, including running a number of experiments. The notion of empathy and understanding through immersion in participant observation has a physical as well as cognitive component. Using embodiment and bodily practices as a means to gain insight requires the researcher to explore the physicality of experience. This variant has been used successfully in both academic and business contexts 49 LAUREL, 39 JOHNSON. The theory is that by engaging in their activities and observing where engagement is not possible, the ethnographer obtains deeper insight into the desires, beliefs, habits, motivations and understandings of behavior in a given context. The goal of immersion and thick description is to ensure that the resulting ethnographic representations are strongly interpretive and deeply germane, providing more comprehensive intellectual leverage for analysis and theory generation.

In contrast to academic ethnography where social scientists conduct years of participant observation, in a business context, ethnographies (read: participant observation) can last a half a day or even less. How is this possible? Ethnographers working in business are generally PhDs and typically manage this seemingly impossible feat by applying their methodological skill and accrued knowledge of theories of human behavior and social interaction. Through years of experience, trained ethnographers working in a business context also build up a great deal of knowledge garnered through numerous research projects about those segments of the population who are reliably of interest to business. A mastery of ethnographic techniques allows them to quickly gather relevant information, minimize the impact of their presence, quickly synthesize data and draw conclusions.

Academic and business ethnography also require a well-defined set of hypotheses and research objectives designed to test those hypotheses. In academia these research objectives tend to be complex and grounded in a body of previous research. You are expected to spend years or a career figuring out how to address them. Of course, this is a luxury of time that designers and developers do not have. Research objectives that designers have to deal with typically need to be defined in a matter of weeks or days. Accordingly, the goals of commercial ethnography are modest by comparison and therefore achievable.

When companies like IBM, IDEO, Apple, Design Continuum, Cheskin, Intel, Xerox, Herman Miller and Microsoft say they conduct ethnographic research, they are not conducting ethnographic research the same way as academic ethnographers are. These companies are using a few specific ethnographic techniques that make sense in a business context, as indicated by the illustration. It is simply not practical for business entities to engage in the same form or extent of ethnography as is practiced by academics. Despite the constraints imposed by companies seeking to earn a profit from their ethnographic activities, it is possible to successfully use abbreviated ethnographic methods as demonstrated by these companies and others, provided they are carried out by a trained ethnographer.

The use of ethnographic methods in conjunction with design problems—whether graphic, industrial, architectural or otherwise—can have a democratizing and potentially radicalizing effect on aspects of the design profession itself. With regard to designers, an infusion of insights flowing from social science provides opportunities for the profession to think critically about design processes, outcomes, and human interaction. Design process and practice have not historically coalesced, nor has the profession systematically codified its practices, in ways that accommodate critical reflection emerging from the application of ethnographically based analysis. It is simply not built into most design practices.

Ethnographers and other social scientists, on the other hand, also face their own set of challenges in being meaningful contributors to the design process. Most, but not all, anthropologists and ethnographers are trained to observe, analyze, theorize, and publish within the confines of academia or NGOs. This bias stems in part from the way ethnography and social theory is taught and practiced in North America and Western Europe. In other anthropological traditions, however, there is more emphasis on applying ethnographic insights to social contexts with real problems [DaMatta 1993]. This unwillingness or inability to move en masse into other spheres of social activity is changing slowly, but much of academic anthropology and holds an aberrant disdain for the business world. With its emphasis on popular culture, one might expect cultural studies to prove an exception to this trend. While a case might be made for engagement for the British variant of cultural studies, the American strain prefers to write in a specialized and coded vocabulary. I hope acceptance will grow as anthropologists and

sociologists begin to recognize that the growing alliance among social scientists and all variants of designers holds immense promise for reshaping consumer culture in unexpected and positive ways.

Some social scientists have been deeply but narrowly concerned with products and design, but this has been largely in the form of critiques. The Frankfurt School was built around critical (and occasionally elitist) sociological analyses of modernist forms of mass production and consumption. More recently, Daniel Miller [1987] and other anthropologists have engaged in their own critiques of products that focus more on the consumption side of the equation as opposed to the production side. While these analyses are useful, they fail to robustly engage the design community and thereby limit their potential contribution.

Ethnography and Design: A Partial History and a Powerful Future

Many people identify the work done at Xerox PARC and other research labs in the early 1980s as the first use of ethnography in design processes, specifically system design [see Blomberg, et al. 2003]. While it is true that a number of anthropologists were hired by Xerox and carried out pioneering ethnographic research, it is important to identify a few precursors to Xerox PARC's integration of social science and design. Broadly speaking, the antecedents to socially oriented design can be traced back to early Futurism, Constructivism and The Bauhaus School. Later, Germany's Hochschule für Gestaltung (HfG) Ulm, and the Swiss Kunstgewerbeschule, Basel also produced influential, socially/scientifically based design. ©94 GONZALES CRISP.

In 1955, on the other side of the Atlantic, Henry Dreyfuss published *Designing for People*. In it he argued that conducting field research was critical to successful industrial design. This position was based on the insight that industrial design should both help and delight people. To that end Dreyfuss engaged in any number of activities and contexts he thought relevant to the design problems he sought to solve. This ranged from driving a diesel train, to spreading manure, to washing clothes in order to design better products [Dreyfuss 1974]. Robert Probst, who eventually headed the Herman Miller Research Corporation, strongly advocated for field research that closely resembled participant observation. He emphasized capturing visual data and using cognitive models derived from interviews with the audience for whom he sought to design furniture [Rothstein 1999].

In a slightly different vein, the British sculptor Richard Wentworth has been taking a series of photographs called *Making Do and Getting By* since 1974. One could describe the photos as a visual notebook, or perhaps as a small anthropological investigation. The objects in his images fall loosely into categories of acts: pil-ing, propping, wedging and leaning. A door is wedged open with a gumboot, the clapper of an alarm bell is silenced with a Fudge bar still in its wrapper, and a catering-size tin of peas is used as a cafe doorstep. Wentworth's visual anthropology carefully documents these *ad hoc* acts of design, demonstrating how people bend

the world to their will by using their imagination [Wentworth 1985]. Similarly, Rachel Strickland's striking work on the Portable Effects project explores the relationship among cognition, material culture and problem solving using video as a research tool in the tradition of *cinéma vérité* 118 STRICKLAND.

The introduction of social science theory and ethnographic methods into the fields of human computer interaction (HCI) and computer supported co-operative work (CSCW) represents a modest high point in transdisciplinary work (and much of this work was carried out initially at Xerox PARC). However, in general, the use of the sociological and anthropological literature has unfolded in extremely selective ways. Initially, engineers and computer scientists, as opposed to social scientists working in a research and development setting, borrowed from sociology and anthropology in the course of developing CSCW, GUIs and tangible computing. Social scientists, however, were soon drawn into service. The use of social science method and theory in this computer- and networking-based context was often aimed at pragmatically trying to improve these now commodified tools [Dourish 2001]. Ironically, the anthropological and sociological methods and theory that have been utilized were themselves socially decontextualized. The methods and theory used have largely been deracinated of considerations of phenomena like social inequality, gender, class, and, more generally, power relations. Historically, product and graphic design have followed a similarly narrow path and used a few research tools (and little theory) imported from or applied by social science practitioners.

HCI, CSCW, as well as industrial and graphic design have avoided or found little utility for theorists like Franz Fanon, Pierre Bourdieu, C. Wright Mills and Michel de Certeau, whose analyses possess a more deeply contextualized, critical perspective. Perhaps this is due in part to the density of their ivory-tower prose, but I suspect it is primarily because it is not immediately clear how to apply the work of these theorists to issues so intimately bound up in the generation of capital and social reproduction. Not only would design benefit from the introduction of powerful social theory into its practice, but social scientists, tending to write in technical and coded language (making their theories impenetrable to the general population) would reap rewards. The application and "materialization" of theory in design stands to clarify and operationalize theories, as well as to contribute to the development of alternative or supplementary criteria in the planning, crafting, manufacture and assessment of graphic and industrial design. Victor Margolin makes a similar argument in calling for a deeper assessment of "...the relation between products and how people construct ideals of human happiness..." and "...studies of technology innovation on which to base proposals for social policies or legislation that would link human well being to the presence or absence of particular products" [2002, 53].

Conclusion

In thinking about the relation between products and human happiness there is much at stake outside the traditional scope of design—macroeconomic and ecological factors come to mind. From an ethnographically based point of view, there are other considerations that come into play. I conclude by exploring the possible relevance of the ethnographic insights of French social historian Michel de Certeau for design [1998].

On cultural issues, de Certeau's originality lay in his refusal to endorse the old opposition of high culture versus popular culture and by extension the dichotomy of creative art versus mass production. Over the course of his research, he analyzed what he called the "operations" that people perform with designed artifacts and other cultural objects. What was at stake for him was the way people use some readymade objects, the way they organize their private space, their office or workplace, the way they "practice" their environment and all public space available to them including shopping malls, town streets, airports, railway stations, and movie theatres. This approach allowed de Certeau to focus his theorizing on the ordinary practices of people's everyday life. He replaced presupposition of passive mass consumption of objects and products with the assumption of large-scale, anonymous creativity by ordinary people. For de Certeau, every man or woman could be regarded as the "producer" of his/her own lifestyle through the art of recycling objects, adapting and transforming readymade products.

While it is true that ethnographic research results in better products and systems, it is not enough to produce better products and systems in the conventional sense. For designers and social scientists the question should become: how can we design artifacts so they radiate the degrees of freedom necessary to enhance the self-invention that de Certeau observed? Can the cross-pollination between these professions move toward the introduction of emancipatory content into designed artifacts? Can this direction comport with the business imperatives inherent in the production of goods and development of services? I think the answer is yes, but the questions are dauntingly complex and solutions will only come through sustained and hard work. The logical point of departure for engagement is increased social science and design collaboration, working towards the development of a robust, theoretically-informed, critical design research practice.