

Communicating Design Research Knowledge: A Role for Ethnographic Writing

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Abstract: The recent use of ethnographic field research methods in design research practice reflects the growing interest of designers in the expressive and cultural impact of the artifacts they create. Design researchers have not, however, exploited the "thick description" methods used by ethnographers to report their findings, but instead prefer to apply the results of design-driven ethnographic research directly to the development of new product concepts. This paper proposes that ethnographic representation methods, including innovative visual representations, offer untapped potential for design research reporting, not just in terms of facilitating communications during the design process, but also as a record of ongoing attempts by designers to make sense of the broader field of historical design. Test projects by design students show the potential of ethnographic representation methods for design.

Keywords: *Ethnography in design, Ethnographic writing, Ethnographic representation*

1. Introduction

Ethnography is often viewed as a specialized area within the larger activity of cultural anthropology, seeking to reveal and preserve cultural knowledge, using methods such as interviewing or cultural submersion to discover important values. Since design is also a profession that addresses cultural meaning in the creation of symbolically significant new products and services, it has been natural for the field of design research to turn to ethnography for inspiration. However, designers and design educators, like myself, have tended to embrace ethnographic fieldwork methods rather than the interpretive methods of ethnographic writing. Designers seldom draw upon specialist ethnographic writing as a source of information; and we seldom record our own ethnographic research in the form of texts that employ an ethnographic approach to writing and illustration.

This paper focuses on the interpretive mandate of written ethnography and the opportunities that its guidelines offer to improve the quality of interpretive design writing, even for designers without an anthropology background.

2. A Brief History of Ethnography in Design

While the ethnographic fieldwork methods applied in design research lie outside the scope of this paper, we will begin with a short history of the ways in which design has made use of ethnography. In her article, *Ethnography in the Field of Design*, Christine Wasson addresses an audience of anthropologists to observe that industrial designers

have always tried to meet the “needs and wants” of product users [1]. However, the ‘human factors’ design approach developed in the early twentieth century was not sufficient to address the complexity of Human Computer Interaction (HCI) emerging in the 1980’s, especially in the field of Computer-Supported Cooperative Work (CSCW) [1, 2]. According to Wasson, it was in this area that anthropologists began to demonstrate how ethnographic investigations into technologically connected work communities could help designers better understand the needs of new technology users [1: 380]. At Xerox Palo Alto Research Center (Xerox PARC), anthropologist Lucy Suchman and her colleagues “pioneered the use of ethnographic [fieldwork] approaches in software design,” following with work on a 1991 project with Steelcase and the ID firm, Dublin Group [1, 3]. Similar “ethnographically informed design practices” spread into firms such as IDEO, Fitch, and E-Lab [4: 966] as designers realized that:

Ethnography...investigates, not just what consumers say they do, but what they actually do. From the beginning, ethnographic studies showed major discrepancies between designers’ intended uses of their products and consumers’ everyday behaviors. Such discoveries ... [highlighted] the importance of learning about product use “in the wild [in the field]”[1: 378].

The benefits of ethnographic field research have been discussed at length in design literature [3-8]. However, written descriptions of such research, modeled on interpretive design research writing, have tended to be cursory [2, 9, 10].

2.1 Ethnographic Representation in Anthropology

Most design professionals lack the background to understand the differences between how writing is used to represent research findings in ethnography and design. A brief overview of the evolution of ethnographic writing will provide a foundation for understanding how ethnography has come to represent its data to the anthropology audience.

In anthropology... what the practitioners do is ethnography. And it is in understanding what ethnography is, or more exactly *what doing ethnography is*, that a start can be made toward grasping what anthropological analysis amounts to as a form of knowledge. This, it must immediately be said, is not a matter of methods. From one point of view, that of the textbook, doing ethnography is establishing rapport, selecting informants, transcribing texts, taking genealogies, mapping fields, keeping a diary, and so on. But it is not these things, techniques and received procedures that define the enterprise. What defines it is the kind of intellectual effort it is: an elaborate venture in, to borrow a notion from Gilbert Ryle, ‘thick description’ [11: 5].

The ‘thick’ description mentioned by Ryle is simply a form of description that is thorough enough to depict its entire subject. Achieving this goal began in the late nineteenth and early twentieth century, with European anthropologists Franz Boas and Bronislaw Malinowski, who pioneered field research in their studies and descriptions of the customs of the Non-Western indigenous peoples encountered during colonial expansion. Malinowski’s guidelines have influenced subsequent ethnographers in their attempts to describe, “the native’s point of view, his relation to life; to realize *his* vision of *his* world” [12: 25, 13: 11]. Later Chicago School sociologists applied “participant observation” methods to develop ethnographic accounts of people living on the fringes of American life. Their ethnographic accounts of thieves, hobos, gangs and colonized indigenous peoples were “a form of writing and a way in which a cultural understanding [was] inscribed as a literary form” [2: 543, 14].

For most of the twentieth century, ethnographic texts remained the product of a single authoritative researcher interpreting the cultural aspects of the lives of his or her subjects [10, 15, 16]. However, postmodern thinking in the 1980s criticized the authoritative stance taken by an outside ethnographer constructing knowledge about 'the other' [17: 961]. The resulting "crisis of representation" debate in anthropology charged that interpretive frameworks claiming scientific authority through the distanced voice of an omniscient narration were, in important ways, complicit with colonialism [18-21]. Since then, new ethnographic writing genres have proliferated to include "autoethnography, fiction, poetry, drama, readers' theatre, writing stories, aphorisms, layered texts, conversations, epistles, polyvocal texts, comedy, satire, allegory, visual texts, hypertexts, museum displays, choreographed findings, and performance pieces," some of which also engage visual representation [17: 962]. Some of these methods explore visual modes of representation, which have also increased since anthropologists have also entered fields such as design, increasing their awareness of visual communication strategies.

2.2 Visual Representation in Ethnographic Research for Design

Where modes of representation originating from anthropologists and ethnographers are primarily textual, design research naturally incorporates visual expression, because visual communication is central to design practice. Furthermore, while the objectives of anthropology are to understand, and to record understanding, designers seek understanding only as a first step towards the creation of solutions to problems, and often show little interest in documenting preliminary research. As a compromise between ethnographic objectives of descriptive interpretation and design interest in prescriptive solutions, some social scientists working with design firms have developed innovative forms of visually representing research findings [22: 671]. Two popular representation methods, Contextual Experience Models, and Scenarios, are briefly described below, with illustrations from senior student projects from Carleton University's School of Industrial Design. One example shows navigation tasks of visually impaired people, using a Contextual Experience Model. The other uses Scenarios to describe the students' observations of kitchen experiences of aging people.

2.2.1 Contextual Experience Models

While working with the Digital Equipment Corporation, applied psychologist Karen Holzblatt developed the concept of Contextual Inquiry. Its techniques were intended to bridge the gap between academia and commercial planning with communication methods "that most easily [translate] customer data into the corporate design process" [23: 21, 24]. To represent the "structure and pattern" in complex everyday work practices, she and Hugh Beyer identified five simplified models: the Flow Model, Cultural Model, Sequence Model, Physical Model, and Artifact Model [4, 24: 4]. A student interpretation of the Sequence Model is shown below. This presents a visually impaired person's travel task as taking three parts. Each part is linked to assistive devices, and associated strengths and shortcomings are identified. This Sequence Model is based on a more extensive series of detailed charts developed by the students in field research. Both the research and the final Sequence Model used a hybrid visual/textual approach to the identification of meaningful patterns.

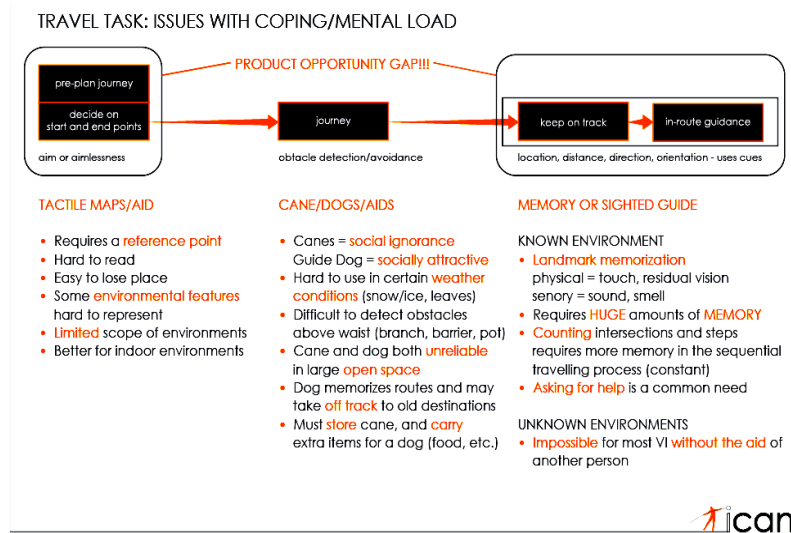


Figure 1: Contextual Inquiry form of Sequence M odel applied to design research findings about travel for visually impaired people. Research and illustration by Elizabeth M itchell, Ilana Ben-A ri, Christopher Edwards, and Charles Carriere.

2.2.2 Scenarios

A more purely visual approach to data collection is characteristic of much design research. It is common for designers to use illustrated 'Scenarios' to represent sequences of activity in daily life. Taking the form of sequential illustrations, Scenarios offer a semi-abstract representation of the original field observations. Writing about the application of ethnographic methods to design, anthropologists Blomberg and Burrell observed, "Analysis of Scenarios can foster the identification of areas of difficulty ("pain points") and experiential gaps (or opportunities), that may be addressed or enhanced through various design solutions" [4: 980]. In these two examples, the student teams summarized research findings into Scenario form.



Figure 2: Scenario illustrations representing the sequence of tasks as the subject forgets her food is cooking. Research and diagrams by Rob Beland.

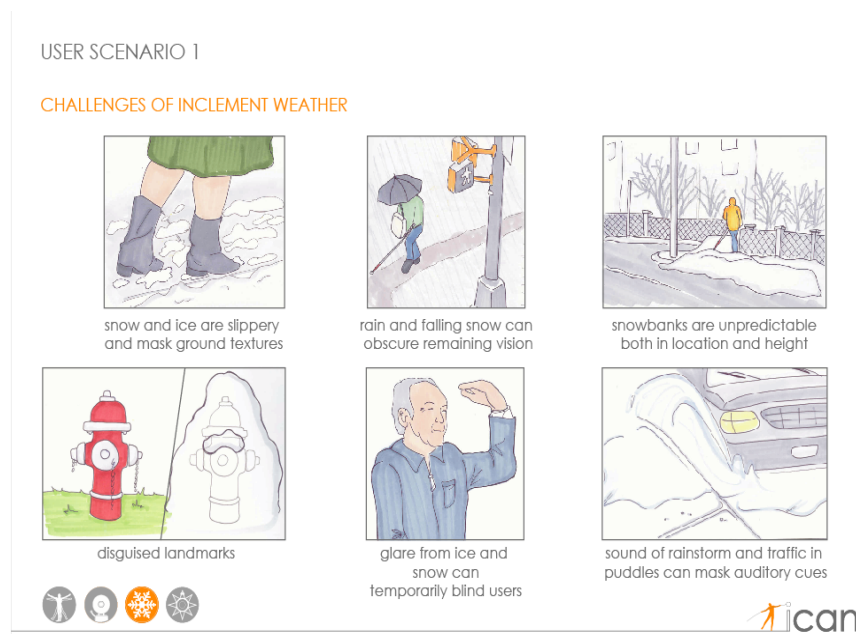


Figure 3: Scenario illustrations representing a visually impaired person walking in poor weather. Research and diagrams by Elizabeth Mitchell.

2.3 Comparison of the Different Approaches to Representation

These examples of presentation techniques show approaches for communicating *distilled* learning: they are “simplified representations of how people organize and construct experiences” [4: 977]. Some ethnographers use dismissive terms such as “discount ethnography” to describe ethnographic techniques of representation after they have been appropriated and altered by designers [2, 9], as they may seem superficial in comparison to thorough ethnographic textual descriptions [2, 14, 25, 26]. Designers themselves are concerned about whether research may be obscured by a distilled reporting approach, as shown by design conference topics such as “Communicating Research Findings Effectively”, in the call for papers for IASDR2009 (the annual conference of the International Association of Societies of Design Research).

A central skill in design is the quick generation of mental solutions to problems almost as soon as they appear in the field. Consequently designerly representations of field data may be biased towards prescription of a solution already mentally generated in the field. By contrast, an ethnographic analysis of data delays generation of solutions, requiring reflexive steps such as applying theory, juxtaposing concepts, identifying patterns, interpreting cultural implications, and presenting these in writing “in order to make an argument that reveals something about the setting under investigation” [2: 548]. According to Blomberg and Burrell:

Ethnographic accounts have always provided a descriptive understanding of people’s everyday activities. Ethnographers are concerned first and foremost with understanding events and activities as they occur, without evaluating the efficacy of people’s everyday practices. This is not to say that ethnographic accounts cannot or should not be used to suggest how things could be different or to point out inequities in current ways of doing things ... However, there is a strong conviction that to suggest changes or to evaluate a situation, one first needs to understand it as is... . As such,

ethnographic accounts strive first and foremost to provide descriptive and not prescriptive understandings of people's everyday lives [4: 968].

3.0 Ethnographic Writing

The following abridged passage from Daniel Miller's book *The Comfort of Things* illustrates many techniques of ethnographic writing. In his chapter "The Aboriginal Laptop", Miller writes:

The nearest thing to a real home for Malcolm is found in a rather unexpected place. It is his laptop. This is the place within which he leaves himself and finds himself, creates order, tidies up, furnishes, dusts and returns to for comfort... Malcolm is constantly concerned that the record he stores of who he is and what he has done is kept up to date... Malcolm thereby keeps his home in order. But there is another quality that makes this term "home" an appropriate one. It is the simple realization that, given his mobility, there is only one address that seems to have much by way of permanence; and that is not a place of bricks and mortar, but his email address...

To understand why he constantly keeps himself up to date as a kind of living archive, we need to appreciate how much of his life has been devoted to the archiving of others. Malcolm is keenly interested in one side of his family, which represents his Australian Aboriginal ancestry... Malcolm's ambition is to complete [the] process of archiving his [deceased] mother's lineage... For an anthropologist, there is an obvious link here to a literature I encountered as a student. For example, how identity in Australian Aboriginal life is constructed in large measure through a concern for lineage...

Malcolm has generalized a larger antipathy to the storage of material things... He recognizes that this has become integral to who he is: 'I think I've set myself up to be out of touch with objects and things, so... there's probably something psychological about that.' For Malcolm, the emergence of the digital resolves his basic contradiction of materiality. How can he, at one and the same time, both keep things and dispense with them as objects? ... The laptop seems almost perfect as the solution to his ambitions in life; as the contemporary completion of a cosmological tussle with materiality, which was once central to the lives of his aboriginal ancestors [28].

These excerpted paragraphs illustrate important techniques of ethnographic writing. Written ethnographies are *interpretive* accounts that employ *thick description* to provide evidence that supports an *argument*. They use *comparison*, *verbatim quotations*, *the ethnographic present tense*, and *the overt voice of the ethnographer* to communicate with a specific *audience*.

In the book as a whole, Miller uses the introduction to present his *argument* that relationships do not suffer as a result of material things, but instead grow closer relative to them [28: 98]. The following thirty portraits show this argument manifested for different people. Field data is not just recounted but *interpreted* through an anthropological framework. Miller describes Malcolm's apparently modern preoccupation with his laptop as integral to his Aboriginal origins [2: 543], arguing that the laptop permits him to respect his familial relationships and document his mother's life for posterity without compromising his non-material cultural customs. In this passage, Miller constructs "a reading of what happens-... what in this time or that place, specific people say, what they do, what is done to them" [11: 18]. He *describes* and *finds patterns in* Malcolm's computer practices, material, and personal relationships, paying attention to "*microscopic description*" as befits an ethnographic account [11: 21, 30: 123].

As an author, Miller openly *puts himself in the picture*, as an anthropologist with classical training. This provides a

clue about his *interpretive perspective*, *identifies his biases*, and convinces *the reader* that he was there [14: 154, 16: 13, 30: 131, 31: 5]. It is the task for writers of ethnography to make the ways of living and thinking of particular groups of people *intelligible to their readers*, no matter how foreign and incomprehensible, or how familiar and taken-for-granted, these practices may first appear [29: 3]. Miller's technique of *comparing* Malcolm's tidying of his laptop to the similar responsibilities of cleaning a home provides a *simple metaphor* that is *comprehensible* for the reader [29: 4]. He uses *verbatim quotations* of Malcolm's *own words* to convey authenticity. Finally, Miller writes in the *ethnographic present tense* to make the story come alive and to create the literary illusion of timelessness [29: 125]. His achievement is a *written* account that effectively *communicates his research findings* and *can be consulted* on more than one occasion [11, 28]. Miller's portrait of Malcolm shows that, "through discourse, stories become texts and give a body to experience and knowledge" [31: 47].

4.0 Discussion

Formally developed ethnographic writing techniques suggest potential application as methods for improving interpretive design writing. Enhanced interpretive design writing could meet a wide variety of goals. Richer design research writing would enhance designers' abilities to articulate design findings to their clients. It would improve the quality of the final designs, by helping better meet users' symbolic design needs through a more precise description of people and cultural contexts, with better recognition of bias in interpretation. It would also be a valuable tool for the preservation of design knowledge for the future.

4.1 Rich Description of People and their Cultural Contexts

While Daniel Miller was not specifically aiming for design research, his "Aboriginal Laptop" portrait is interpretive writing that provides "new ways of imagining the relationship between people and technology" [2: 548]. The portrait of Malcolm's relationship with his laptop is established through a *thick description* applying *detail*, *explanation of patterns* and *familiar comparisons*. Miller is not concerned with the future development of laptops, but his vivid depiction of Malcolm's current relationship with one provides the kind of deeper understanding that could potentially inspire new developments in laptop design.

Ethnographic writing techniques are both effective and simple. Developed over more than a century of reflection, they permit the literature to be accessible to non-specialist readers. The methods are also readily usable to non-specialist writers such as designers, who could exploit these polished conventions to better communicate design research findings.

4.2 Enhance Ability to Articulate Design Findings

Twenty-seven years ago, philosopher and educator Donald Schön identified the same problem that I notice among my students today: a limited ability to *describe* their analysis of observations. His descriptions of the peculiar limitations of design conversations remain valid, characterized as a moment when the designer states,

“While I do not accept *your* view of knowledge, I cannot describe my own.” Sometimes, indeed, the practitioner appears to say, “My kind of knowledge is indescribable,” or even, “I will not attempt to describe it lest I paralyze myself” [33: vii].

Such inability to communicate knowledge is no longer acceptable for design practitioners. Designers need to become better at building an *argument*, with *descriptive evidence* in support. This ability is needed where designers work on interdisciplinary teams with other professionals. It is needed in education, where teachers and students must communicate, and in higher academia, where research is generated to serve as a resource for many different other professions. Finally, communications are critical for anyone hoping to make a meaningful and lasting contribution to the body of shared design knowledge.

4.3 Acknowledge Potential Bias in the Field

Just as ethnographic writing acknowledges the presence of the ethnographer, designers also need to *acknowledge subjectivity*. Ethnographers admit, “ethnographic understanding depends critically on recognizing that the view of the setting that one gains (or the interview response that one gains) is inevitably shaped by one’s subject position” [5, 34: 544]. Acknowledging that understanding and recommendations are presented from a specific point of view gives more credibility to a design argument. It also situates the argument within its particular context, and provides valuable information for future reference.

4.4 Preserve Design Knowledge

Design historian, Victor Margolin observed, “If designers are going to increase the scope of their influence, they need to enrich their understanding of the product milieu” [35: 228]. Ethnographic “thick” description is one way to provide richer understanding. David Gilmore of the product consultancy IDEO affirmed the relevance of an ethnographic approach when he suggested, “Sharing stories of real people using real products in real contexts can be very effective in helping people realize how much they need richly textured, individualized information about their own customers” [6: 35]. Properly recorded, such stories will endure beyond the immediate needs of a design project to form an archive of knowledge for future design research.

4.5 Challenges

Inevitably, much design research occurs under corporate sponsorship, sometimes upon condition of confidentiality. Even when results may be shared, publication is often not a priority. Anthropologist Sarah Pink, whose ethnography *Home Truths: Gender, domestic objects and everyday life* evolved out of ethnographic studies done for Unilever Research, observes, “for reasons of time, ownership of data and informant and commercial confidentiality, applied projects are often not published as academic texts” [36: 22]. Pink wrote up her findings as ethnography, but other researchers have published accounts that are no more than step-by-step reportage of the process leading to the final design [2, 9, 26, 36-40]. Such a simplistic approach to reporting design research is no longer adequate. We need a better way to respond to the challenge of communicating design findings, and ethnographic writing methods provide at least a start in that direction.

Even designers who have adopted anthropological ethnographic fieldwork methods may not be aware of the value of

ethnographic reporting tools. This paper aims to remedy that oversight, by pointing out how techniques of ethnographic writing may enhance the representation of design research information.

5.0 Conclusion

This paper acknowledges the important contributions ethnographic research methods have made to design research, and the growing role that visual and written forms of ethnographic expression are making in the reporting of design research results. Visual forms of ethnographic expression, such as Contextual Inquiry, are relatively rare, but have been most readily adopted by designers. The sophisticated tools of written ethnographic description remain comparatively unexplored. It has been observed that ethnography:

is, after all, *ethno-graphy*; a form of writing and a way in which cultural understanding is inscribed as a literary form. Writing then, is central, and the ethnography is not, itself, the project, but the written form that is its final outcome” [2: 543]

Examination of the written form of ethnography, suggests that some of its key elements could serve as valuable guidelines for the improvement of interpretive design writing. Ethnographic writing is *interpretive*, using *thick description* as evidence to support an *argument* that the ethnographer makes after analyzing data. Written ethnographies use *comparison*, *verbatim quotations*, *the ethnographic present tense*, and *the presence of the ethnographer* to communicate with a specific *audience*.

These essentials translate readily into the design environment, where they can assist designers in the analysis of raw data findings, and in the communication of findings to the project team during the design process. Use of ethnographic writing tools in recording design research findings will also give such documents a wider audience, permitting them to be used as reference material by academics in general, and contributing to the start of a comprehensive body of design specific literature to form a reference resource for the future of our profession.

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