

INFO 272. Qualitative Research Methods

Design Ethnography

Fall 2014

This lecture is in part about thinking more broadly about possible outcomes of ethnographic approaches. How ethnographic approaches can inspire, guide the design of products, technologies that better serve the needs and desires of people.

Outline

- ❖ Ethnography applied to design
- ❖ Contextual Inquiry vs. Design Ethnography
- ❖ Case: Vineyard Computing
- ❖ Case: Xerox 8200 Photocopier
- ❖ An Ecological View of 'Implications'

What does an ethnographic approach offer?

...to product/technology design:

- ❖ Getting a handle on **ever more diverse user populations** (understanding the 'users point of view')
- ❖ Design **Innovation** (research as a discovery process, inductive analysis)
- ❖ **Grounding feature prioritization** (by situating in the real-world context of use...beyond the focus group)

 Design Innovation	 Design Evaluation
<ul style="list-style-type: none"> ⦿ Focus Groups ⦿ Participant-Observation ⦿ Interviews ⦿ Contextual Inquiry ⦿ Cultural Probes 	<ul style="list-style-type: none"> ⦿ Task analysis ⦿ Think Aloud Walkthroughs ⦿ Heuristic Evaluation ⦿ Focus groups ⦿ Eye-tracking

Here are a broader list of methods involved in applied research for design – importantly I’m drawing a division between design innovation and design evaluation. Call for very different approaches.

This is a fairly standard list of methods that you have probably encountered before, but I want to place field-based, qualitative, ethnographic research in the context of this list.

The Blomberg article pointed to the emergence of field-based, ethnographic techniques as a response to the limits of standard marketing research approaches such as focus groups.

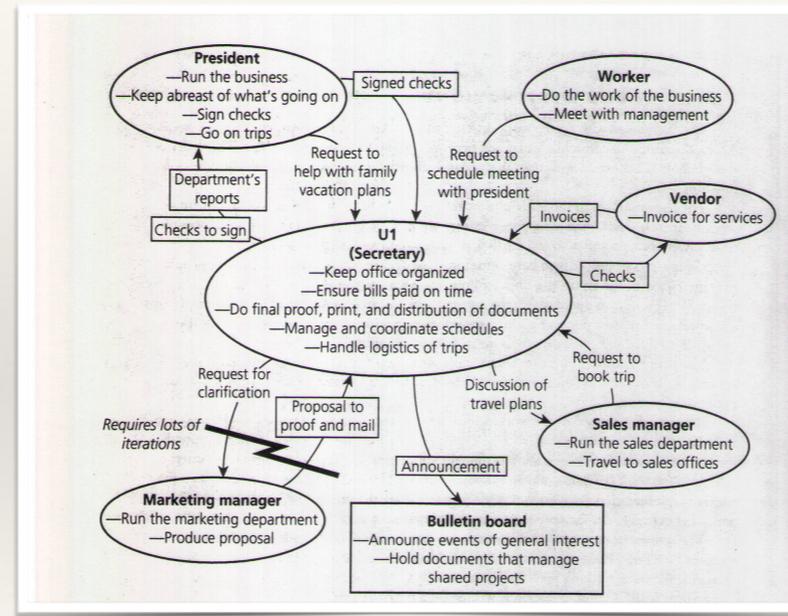
these techniques vary in terms of how constrained or open-ended they are

can also distinguish between long-range innovation and more immediate design needs. Contextual inquiry (more on this in a minute) is an approach to observation and analysis of work settings for arriving at requirements for software, fleshing this out comprehensively and rigorously. Cultural probes and certain ethnographic approaches are useful for a more loose discovery process – less a priori structure to the way processes are documented.

can distinguish between field-based and lab-based approaches

can also distinguish between methods for innovating new technologies and methods for evaluating

Contextual Inquiry



[Contextual Design, Beyer and Holtzblatt]

Case: Vineyard Computing



- Origins of the idea
- early 2000s
- Method we used
- This article was as much about understanding priorities and values in the vineyard workplace as it was about finding problems to fix.
- we were concerned with critiquing sensor network systems and the notion of proactive computing that aimed to take people out of the loop and to have computers automate decision-making.
- We were trying to understand process, trying to identify the important objects, entities in that workplace and their interrelationship.

Research Context

- ❖ 'Proactive Computing'
- ❖ agricultural production (rather than biological research) settings
- ❖ Non-office work environments
- ❖ 'how' questions, process, work priorities of humans



- In a sense, a fairly straightforward case of coming up with design implications from a generally 'ethnographic' process
- The main point of the article was that sensor network system design decisions are not necessarily something that ought to be or could only be based on the most efficient configuration of technology. Work processes may be key resource for how technologies ought to be configured.

Methods

- ❖ Participant-observation and interviews
- ❖ Implementation work (collecting data with sensor network motes in the vineyard)



- We also built devices and put them out into the vineyard to gather data
- We designed possible computing interfaces. In this vein of tangible computing, we thought about ways of tagging tools and gathering data through physical practice

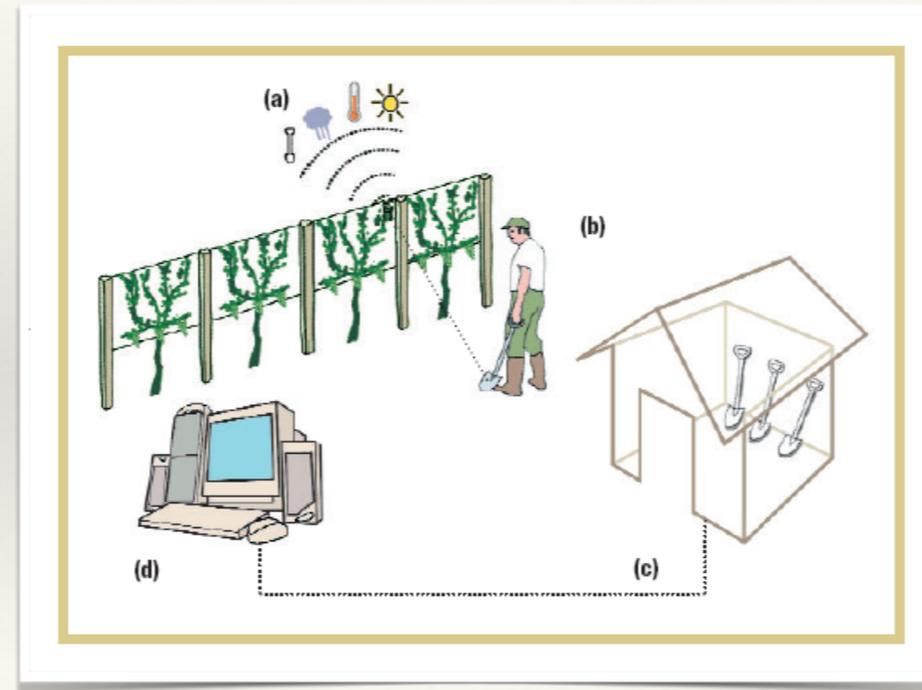
Findings

Priorities and work practice:

- ❖ Vineyard managers prefer to be in the vineyard not doing desk work or data analysis work
- ❖ Some suggestions for sensor network configurations driven by **work practice**, not de-contextualized technical optimizations
- ❖ A need to **delegate between automatic and human-initiated decisions** about data appropriately

- scaring a way birds — that is something that can be automated
- deciding when to pick the grapes (and the picking process) ... hard to imagine that being automated

Presentation Modes



- standard output of an (Academic) ethnographic project is an 'ethnographic monograph' (a book-length work)
- often in industry, a powerpoint slide set (with lots of material in the notes)
- implemented an application concept (A tagged instrument, smoke and mirrors)

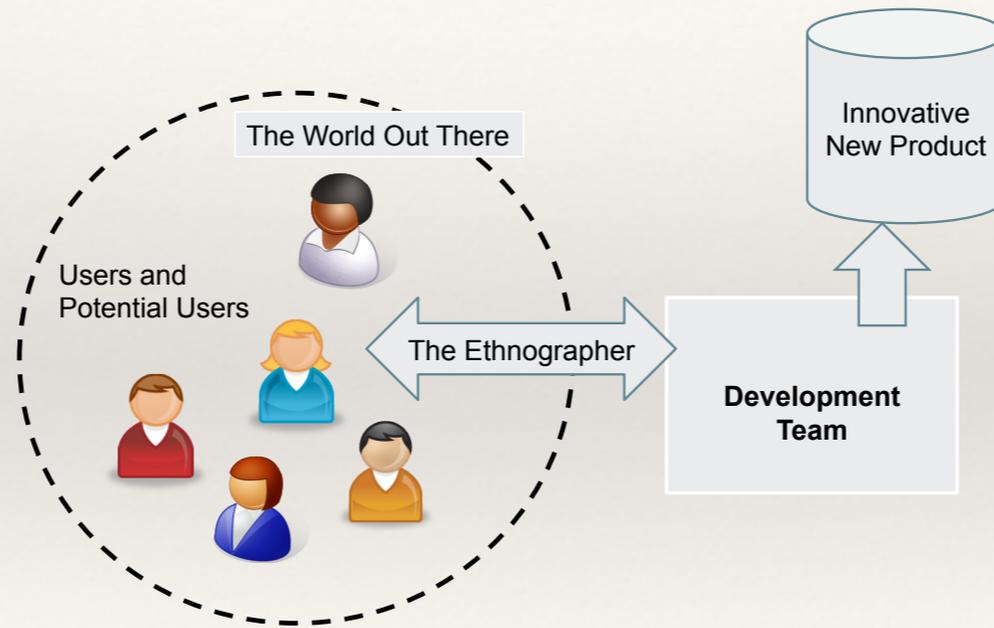
Case: Xerox 8200 Photocopier
(& Dourish's implications for design)

The Legend of the Green Button



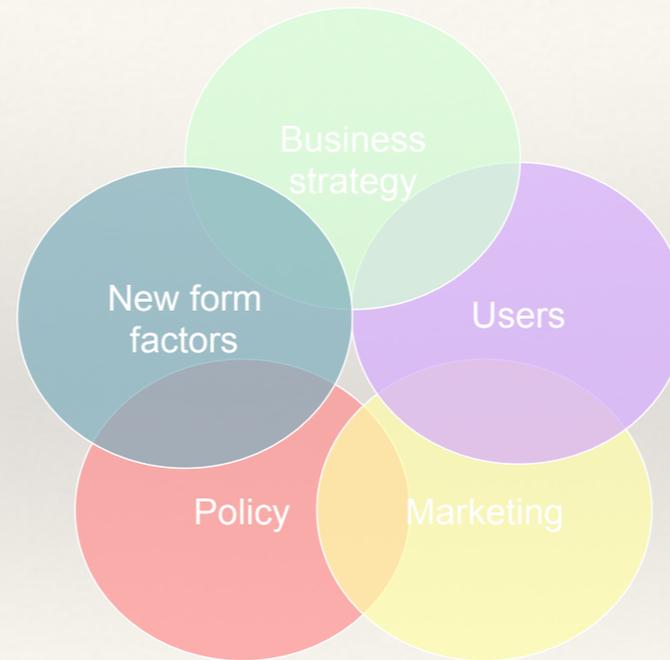
Lucy Suchman and ethnographic/
ethnomethodological work at Xerox Parc

Design Ethno: Conventional



- conventional notion...the ethnographer translates between the world out there and the development team...what is studied is the users
- but what about the possibility of studying the design process, studying the development team?

Design Ethno: An Ecological View



- I suggest that we need to take a new view on ethnography in relation to design with an understanding that implications may come in many forms.
- The same project may suggest new form factors (or features), policy changes, ways of doing marketing, new business models and strategies, etc.
- As Dourish points out – the most effective outcome might be to suggest what should not be built rather than to recommend what we should

In Summary

Potential contributions of ethnographic approaches to design:

- ❖ Improving how teams work to design things (studying designers/managers, not just the users)
- ❖ What market or milieu to build something for
- ❖ What thing to build (high-level)
- ❖ What specific features to include or capabilities to facilitate – i.e. requirements gathering (low-level)