

DIADRÒM  
DIVDBOW

Ethnography in design

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## *Why I am here*

- Industrial design is an applied art whereby the aesthetics and usability of products may be improved for marketability and production. The role of an Industrial Designer is to create and execute design solutions towards problems of engineering, usability, marketing, brand development and sales.
- Informatics is the theory and design-oriented study of information technology use, an artificial science with the intertwined complex of people and information technology as its subject matter
- **Ubiquitous computing** brings our fields closer?
  - The artifacts you design are increasingly becoming computer-based artifacts
  - The systems we develop are increasingly beyond the traditional computer

# *Background*

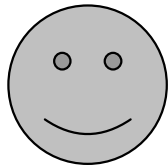
- Researcher interested in design/development but with a focus on people
- Technology OR people
- Explain (engineering) OR interpret (social science)
- What about change/improvement?
- Informatics – “use-oriented design”
- Cooperation with social sciences
- Ethnography, Lancaster University in the UK
- Xerox PARC/EuroPARC
- Research to applied research to industry
- “Sell your soul to the devil”

## *Why beyond traditional approaches to requirements engineering?*

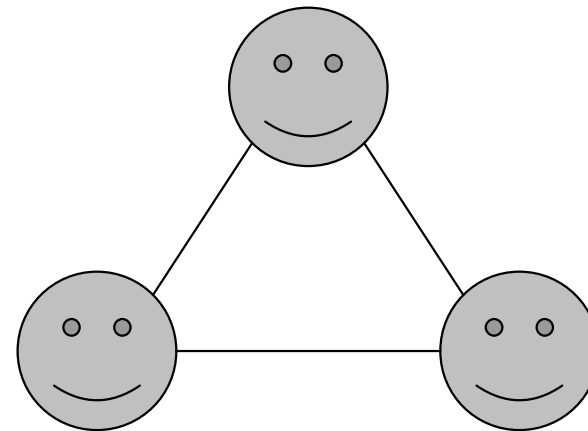
- Many systems do not meet the expectations and needs of the user/customer
- Examples
  - You cannot do what you want to do (to do your work effectively)
  - You can do many things you do not want to do
  - Navigation paths in the system not obvious
- This causes problems
- The system relies on false assumptions regarding what people do
- "It's life Jim, but not as we know it"

# *How do we understand human beings for the purpose of design/innovation?*

Inside one person's head



Between people in a social setting



# *Ethnography*

- Ethnography is an approach/method that uses fieldwork to provide detailed, descriptive studies of human societies/setting
  - Ethno... = people
  - ...graphy = writing
- Used in sociology, anthropology
- Sociologists analyzing technology-rich settings, e.g., air traffic control
- Why in design? Detailed analysis of work with many good points regarding the importance of the specific/detailed
- An emergent trend in product development to use ethnography in design, e.g., Xerox, HP, IBM, etc.

# *Ethnography*

- Describe and analyze human activity in detail
- Study always conducted in the real setting
- Holistic– the individuals cannot be accurately understood independent of each other.
- Assumes people are fundamentally social
- The ethnographer seeks to understand the world from the point of view of the people being studied
- Often prolonged studies
- Focus on what is important for the people studied
- The important things will reoccur
- “Hanging around is not the point” (but the means to get it done)

# *Aspects of ethnography*

- **Situatedness**
  - Data are collected by a participant observer located within a community of practitioners.
- **Richness**
  - The observer studies behaviour in all forms (conversations, documents, non-verbal interactions etc).
- **Autonomy**
  - The observees need not comply with rigid, pre-determined study arrangements.
- **Openness**
  - The observer remains open to unexpected issues that come to light as a study progresses.
- **Personalisation**
  - The observer notes their own feelings in relation to situations encountered.

## *Aspects of ethnography (continued)*

- Reflexivity
  - The observer takes account of, rather than striving to eliminate, their effects upon observees.
- Self-reflection
  - The observers interpretations are influenced by the tradition to which they belong.
- Intensity
  - Observations are intensive and long-term, the observer immersed in the observee's environment.
- Independence
  - The observer must not be constrained by pre-determined goal-set, mind-set or theory.
- Historicism
  - The observer connects observations to a backdrop of historical and cultural contingencies.

## *Example*

- Media Space systems for ubiquitous interaction between dispersed places
- How to support people handling remote interactions?
- Using a door icon to handle "sessions" in video conferencing systems
- An open door means: "I'm available for interaction"
- A closed door means "I'm busy, please don't disturb"
- Users would set the icon to show their availability for remote sessions

## Excerpt and interpretation

- *EBS arrives together with another researcher concerned with [and partly responsible for] “the catastrophe project” [a “very badly designed project” which had been discussed among the researchers in the group extensively the last couple of days]. When entering her office, EBS says to the secretary: “I’m shutting the door.”*
- In the situation described above, EBS does not simply “shut the door,” but she also *explains to the secretary* (IG) that this is what she is doing.
- “Shutting the door” seems to be a social activity that does not only involve the physical operations of shutting the door.

# Excerpt and interpretation

- *PJ arrives. He glances into the secretary's office, which is next to EBS, saying "Her door is shut?" The secretary replies: "Yes, they just arrived,..." PJ while heading towards EBS's office to join them: "This might take some time,..." [...]*
- *After a while, KK shows up, [also] glancing in to the secretary's office: "I need to discuss my study with EBS, but she's busy now, right?" The secretary replies: "Yes, ... you know,..." "the catastrophe," they [EBS and PJ] have a meeting with someone from the UK." KK: "Yeah, ..."*
- Both PJ and KK thus seemed to have noticed that the door to EBS's office was shut, and both of them appeared to have ideas about the implications of the shut door.
  - For PJ, it meant that a meeting he was going to join has started, i.e., that he was supposed to *enter the office as soon as possible*
  - For KK it meant that she could not talk to EBS at the moment, i.e., she was *not supposed to enter the office*. Even though the latter seemed to be the general meaning of "the shut door," PJ (effortlessly) appeared to easily recognize that he was supposed to enter the office.
- "The door" does not have a single, fixed meaning. A shut door does not necessarily mean "do not disturb."
- The meaning of the door seems partly to be derived from interaction between people in the particular situation.
- Even though both PJ and KK seemed to know the (different) implications of "the shut door," both of them wanted their interpretations of the situation confirmed. They did so by addressing "the shut door" in conversations with the secretary.

## *Ethnography*

- Rich descriptions, not explicit requirements
- Capture how things are actually get done , contingencies
- Complement to formal modeling processes
- More correct assumptions regarding the domain in focus





## *Ethnography and design*

- Quick and dirty ethnography
- Concurrent ethnography
- Evaluative ethnography
- Re-assessment of previous studies

## What would the ethnographer say about... (slightly exaggerated)

- Laboratories?
  - Interesting setting if you are interested to learn *how people behave in laboratories*
- Interview?
  - People tend to tell you what they think you want them to say
  - Tacit knowledge – “we know more than we can tell”(Polanyi)
- Cognitive psychology?
  - You learn nothing about human beings if you study them in isolation

## *Critique against ethnography (in design)*

- Ethnography is typically a lengthy process that rarely can be afforded in practice
- Communicating the results of ethnographic studies to the design process is not straight-forward
- Language and cultural barriers exist between social scientists and engineers
- It is difficult to draw abstract lessons in the form of design principles from a technique that is concerned with the concrete detail of a particular situation
- The success of an ethnographic study is dependent upon the skills of the individual fieldworker

## *Reflections*

- Insist spending some time in the field
- People are not stupid
- Frame of reference (common concepts) when talking to users/customers
- Hostage useful in roll out (launch)
- One week is much better than nothing!
- It has given us more accurate assumption of the setting in focus
  
- And be careful in the lab!

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