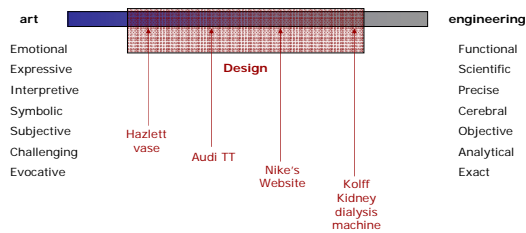Ethnography | Gathering Data:
Contextual Inquiry, Interviews & Observation

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Overview

- About User Centered Design
- Understanding Ethnography

- Contextual Inquiry
- Traditional Interviews

- Comparing Techniques

About User Centered Product Design

art		engineering
Emotional		Functional
Expressive	Design	Scientific
Interpretive		Precise
Symbolic		Cerebral
Subjective		Objective
Challenging		Analytical
Evocative		Exact

Hazlett vase
Audi TT
Nike's Website
Kolff Kidney dialysis machine

About User Centered Product Design

If I don't understand this, whose fault is it?

About User Centered Product Design

If I don't understand this, whose fault is it?

About User Centered Product Design

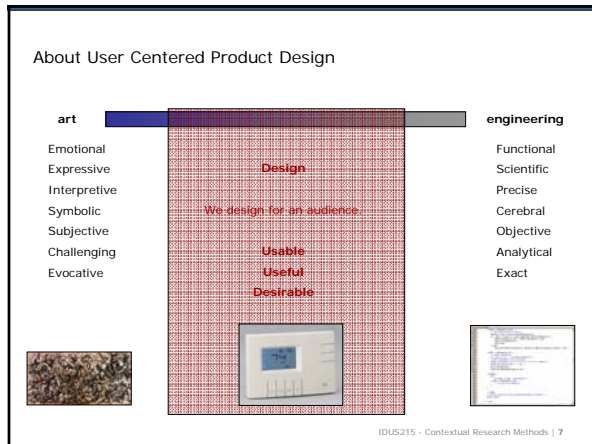**If I don't understand this, whose fault is it?**

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About User Centered Product Design

art		engineering
Emotional	Design	Functional
Expressive		Scientific
Interpretive		Precise
Symbolic	We design for an audience	Cerebral
Subjective		Objective
Challenging	Usable	Analytical
Evocative	Useful	Exact
	Desirable	

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Ethnography

A qualitative description of the human social condition, based on fieldwork and observation.

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Ethnography

A qualitative description of the human social condition, based on fieldwork and observation.

Qualitative implies a lack of statistical evidence, but a richer experiential understanding of gathered data.

What does this mean?

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Ethnography

A qualitative description of the human social condition, based on fieldwork and observation.

Social phenomenon occur within a culture, and exist when there is interaction between individuals.

What does this mean?

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Ethnography

A qualitative description of the human social condition, based on fieldwork and observation.

"The field" is where work is done (ie, the **context** of the work).

Data is gathered through **observation**.

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Goals of Ethnography

How do we know what to design?

All Ethnographic techniques attempt to understand and document user behavior:

what people do	why they do it

Why are these things important?

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What Ethnography Can and Cannot Do

Ethnography is good for ..	Ethnography is bad for ..
Identifying problems with existing designs (understanding the nuances of product usage)	Determining if someone would buy a certain product
Understanding how people work, play and live	Identifying how much someone would pay for a certain product
Identifying why people do the things they do with a product, service or system	Understanding what color, texture, material, size, or shape to make a certain product

Types of Ethnography

Contextual Inquiry.
Context, partnership, interpretation & focus.

Interviews.
No context for observations.

Passive Observation.
Anthropological; become transparent and simply watch.

Evaluative Ethnography.
Introduce a new object into the environment to understand the effects it has.

Kinesics.
Understanding the non-verbal behavior related to human movement.

Contextual Inquiry

- Principles of Contextual Inquiry
- Affinity Diagramming to Set a Focus
- Informed Consent
- Conducting The Inquiry
- Transcribing

Contextual Inquiry : **Context**

Context

The interrelated conditions within which something occurs or exists

Understanding work in its natural environment:

- Go to the users
- Observe real work where it is normally done
- Interview the users while they are working

- Discover details and intricacies of work

- Be confident that you are observing and recording concrete, real data

Contextual Inquiry : **Context**

Context

The interrelated conditions within which something occurs or exists

Pay attention to the user's **context**:

- Physical work space
- The work – tasks, sequences
- The work intentions
- User's words
- Tools used – physical artifacts, placement of objects, commonly used vs. rarely used items
- Other people and how they work together
- Organizational structure
- Cultural influences
- Business goals

Contextual Inquiry : **Context**

Context

The interrelated conditions within which something occurs or exists

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Contextual Inquiry : **Partnership**

Partnership

> A relationship characterized by close cooperation

- Master/Apprentice relationship
- Encourages users to share their expertise
- **Suspend your assumptions and beliefs**
- Invite the user into the inquiry process as a co-designer

- The user is the expert! "The only person who really knows everything about his work is the one doing it".

Contextual Inquiry : **Partnership**

Partnership

> A relationship characterized by close cooperation

- Let the user lead the conversation
- Use open-ended questions:
  "What are you doing?"
  "Why are you doing .."
  "Is that what you expect to happen?"

- Listen
- Pay attention to communication that is non-verbal
- Expect to learn

Contextual Inquiry : **Interpretation**

Interpretation

> The assignment of meaning to observations

- As an investigator, we will always be trying to establish meaning in what we discover

  fact > **hypothesis** > **implication for design** > **design idea**

- Make this interpretation explicit by verifying (*discussing*) your interpretations with the user, and watch for hidden signals that your interpretation may be wrong

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Contextual Inquiry : **Interpretation**

Interpretation

> The assignment of meaning to observations

- Always label "facts" with the line numbers from our transcripts or the time from a video tape
- Everything labeled with a line number is concrete data; everything else is an unchecked assumption

| 18. | 00:11:53:04 | F: "Now I'm writing the appointment on this post-it note; I'll leave it on my monitor to make sure I remember to go to the meeting" |
| 19. | 00:11:55:04 | F: [tapes post-it note to computer monitor]. |

line numbers indicate concrete data

- During design, be wary of unchecked assumptions

Contextual Inquiry : **Focus**

Focus

> The point of view an interviewer takes while studying work

- Perhaps the most important aspect of the Contextual Inquiry process.

- A perspective

- A set of pre-conceived assumptions and beliefs

- Will reveal and conceal

Contextual Inquiry : **Focus**

Focus

> The point of view an interviewer takes while studying work

- Focus serves many roles:
  - Directs the selection of participants
  - Helps manage limited interview time
  - Directs questioning towards a goal
  - Creates understanding

- Clear focus steers the conversation

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Contextual Inquiry : Focus Setting

Focus

> The point of view an interviewer takes while studying work

How to conduct a **Focus Setting Meeting**:

1. Form a team
2. Create an "affinity diagram" of potential foci:
   a) Brainstorm questions, assumptions
   b) Record all items generated
   c) Remove items participants cannot answer
   d) Remove "personally-biased" questions
   e) Organize remaining items
   f) Develop general foci based on affinity groupings
3. Review the foci with the team
4. Select research direction

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Contextual Inquiry : Focus Setting

Setting a Focus

> The point of view an interviewer takes while studying work

1. **Form a team**
   Team should include all stakeholders, including project managers, engineers, designers, marketing, sales, and even the end users if available.

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Contextual Inquiry : Focus Setting

Setting a Focus

> The point of view an interviewer takes while studying work

2. **Create an "affinity diagram" of potential foci:**
   (chapter 8 in Rapid Contextual Design)

   a. Brainstorm questions, assumptions
      No bad ideas! Given your problem domain, think of anything and everything you would want to learn; what aspects of the domain could be important? Ask both specific and general questions.

   b. Use sticky notes, and write one idea per note; if ideas are flying too quickly, type them and re-write them later.

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Contextual Inquiry : Focus Setting

Setting a Focus

> The point of view an interviewer takes while studying work

2. **Create an "affinity diagram" of potential foci:**

   c. Remove items participants cannot answer

      Some questions may ask a participant for a factual quantity or piece of data that they may now know ("How large is your market?").

      Other questions may ask the participant to state their opinion about a hypothetical situation ("Would you buy this product?").

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Contextual Inquiry : Focus Setting

Setting a Focus

> The point of view an interviewer takes while studying work

2. **Create an "affinity diagram" of potential foci:**

   d. Remove "personally-biased" questions

      A team member may have suggested items that are particularly important to them, but don't contribute to the problem domain and goal; remove these items too.

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Contextual Inquiry : Focus Setting

Setting a Focus

> The point of view an interviewer takes while studying work

2. **Create an "affinity diagram" of potential foci:**

   e. Organize remaining items. Create categories and groups from the individual items.

Contextual Inquiry : Focus Setting

Setting a Focus

> The point of view an interviewer takes while studying work

2. Create an "affinity diagram" of potential foci:

    f. Develop general foci based on affinity groupings.

       Using the groupings that have been established, come up with a two or three sentence Focus Statement.

Contextual Inquiry : Focus Setting

Setting a Focus

> The point of view an interviewer takes while studying work

3. Review the foci with the team

    Make sure everyone involved understands the potential foci that have been developed

4. Select a path for your research.

    Let's try it in class ..

Contextual Inquiry : Scheduling Participants

- Using your foci as a basis, begin to select participants to meet with.

- Contact participants well in advance and schedule a meeting time; call a day before to confirm your meeting time.

- You may need to compensate participants for their time.

- You may need to negotiate the corporate hierarchy in order to reach the right people.

Contextual Inquiry : Getting Prepared for the Inquiry

- **You can never be overly prepared**.

- Organize your equipment:
  - Video/audio recording
  - Tapes
  - Batteries (and backup batteries)
  - Pens/paper
  - Digital camera

- Organize your foci & questions:
  - Have a list of questions you desire to have answered
  - Try to anticipate the flow of the inquiry, but be open to following the direction the work takes you

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Contextual Inquiry : The Interview

1. Introduction
   - Introduce yourself
   - Explain informed consent form, receive signature
   - Get permission to record
   - Articulate your focus
   - Establish your master/apprenticeship relationship

2. Transition

3. Observe work and interpret
   - Take notes
   - Follow your focus; draw the user towards your foci questions
   - Interpret and get validation
   - Co-design with the user

4. Wrap-up
   - Summarize your understandings
   - Thank the user
   - Leave the door open for future meetings

Contextual Inquiry : Informed Consent

- Protects both you and the participant

- Explains any compensation that will occur

- Explains the scope of the study

- Explains how the results of the study will be used

- Explains exactly how the individuals name, image, company, and words will be used

Print two copies per participant; you keep one, they keep the other.

Contextual Inquiry : The Interview

- Be sure to record relevant information:

    - Work flow & tasks that you observe
    - Work opportunities and problems
    - Tools used
    - Design ideas, and validation
    - User's words
    - Your observations

- Take good notes, and **write fast**!

    - Even though you have an audio and/or videotape recording of the session, your notes will be the most useful for you later.

Contextual Inquiry : Afterwords

- **Directly after the interview**, in your team, meet and regroup; discuss the interview, and document key takeaways

- As soon as possible, transcribe your interview. A full transcription is best, but is tedious. Partial transcription may be adequate.

List all participants

Include line numbers and, if possible, time stamp from video

Write exactly what was said and done

- Send a thank-you note to the participant, and confirm that you may contact them again in the future.

Interviews

- Overview
- Interviewing techniques

Traditional Interviews

A way to understand and gather data relating to a specific context; one-on-one question and answer session.

- Very similar to Contextual Inquiry, except without the work-based context

    - Still set a focus, using the same foci-setting techniques
    - Still use Informed Consent form

- Critical Difference: Develop a list of questions to ask. If you don't ask the right questions, you may not get the right responses!

    - Because traditional interviews aren't work-based, your questions and vocabulary are the only "triggers" you have to aid a participant's recall

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Traditional Interviews: Good Strategies

- Participants can easily answer things they know about:

    - What they do
    - How they do things
    - Their **opinions** about their current activities
    - Their **complaints** about their current activities
    - How much they like or dislike something they know about, as compared to another thing they know about

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Traditional Interviews: Poor Strategies

- Participants can't answer things they don't know about, but they will try (and fail):

    - Deciding what they *would* do, like or want
    - Imagining themselves in hypothetical situations
    - Determining how much they like things without a point of reference
    - Estimating anything related to time
    - **Estimating most anything at all**

Interviewing Techniques

Successful techniques for interviewing include:

- Repetition/Rephrase (*So what you mean is..*)

- Ask for an example

- Determine steps in a sequence

- Question a term or concept, even if you think you know what it means (*Does "graphic design" mean the same thing to an office worker as it does to us here at SCAD?*)

Interviewing Techniques

Successful techniques for interviewing include:

- Summarize what was said and draw out a conclusion or a concept

- Question pronoun references (*who is "She" or "Bob"?*)

- Ask for anecdotes and stories; Check for deviant cases (*When did it not work as expected?*)

Ethnography Methods Compared

Contextual Inquiry	Traditional Interviews
Develop a partnership with real users to observe focused work in its actual context	User provides verbal responses to a series of pre-determined questions focusing around an area of work
We gather "concrete", detailed data about what occurs in the context of a user's work	We gather "once-removed", detailed anecdotes about what occurs in the context of a user's work
Perform a Contextual Inquiry when you have access to work that can be readily interrupted; CI will present the richest data	Use Interviews when you cannot interrupt the work to ask questions, or the work is intermittent, or you cannot visit the work site in person

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Summary

- About User Centered Design
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- Contextual Inquiry
- Traditional Interviews

- Comparing Techniques