Human-Computer Interaction
Design Studio
Observation Methods

3 April 2014

http://cs247.stanford.edu

Design Critique

Announcements

Observation Methods

P2: Observation

P1: Show and Tell

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Design Critique

Critiquing in real world examples of design

What does it teach us about HCI?

Toothbrushes

Toothbrushes in Context

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P2: Observation

P1: Show and Tell

CS547 HCI Seminar

Fridays 12:50-2:05pm in **Gates B01**, 1 unit

A range of speakers touching on user interface design, social media, collaboration, psychology, design methods and ethnography A useful supplement to CS247!

Steve Whittaker: Technology & Memory

http://cs547.stanford.edu

Working Out Kinks

More timely uploads to web site
http://cs247.stanford.edu
> Lecture slides
> Problem statements
> Grading rubrics
Class communication
> Sign up in Piazza

CS247L

Wednesdays 6pm-7:50pm
in **320-106 (note new room!)**
1 unit

Next week: Intro to communications APIs
Can attend individual sessions even if not
registered for the lab

I'd like to hear about experiences with Samba,
Dumbstruck, Chatwala, or GiggleMail

Course Q & A

CS247 Q&A Forum on piazza.com, **sign-up**: **piazza.com/stanford/spring2014/cs247**

For questions likely to be of interest to other students (e.g., clarification or guidance on projects), please **post to the online forum**.

More sensitive questions should be sent to the course staff at **cs247@cs.stanford.edu**.

Enrollment Update

First round of enrollment updates for the waitlist coming once we have collected P1

If we don't collect a P1 from you, we will assume you are dropping the class

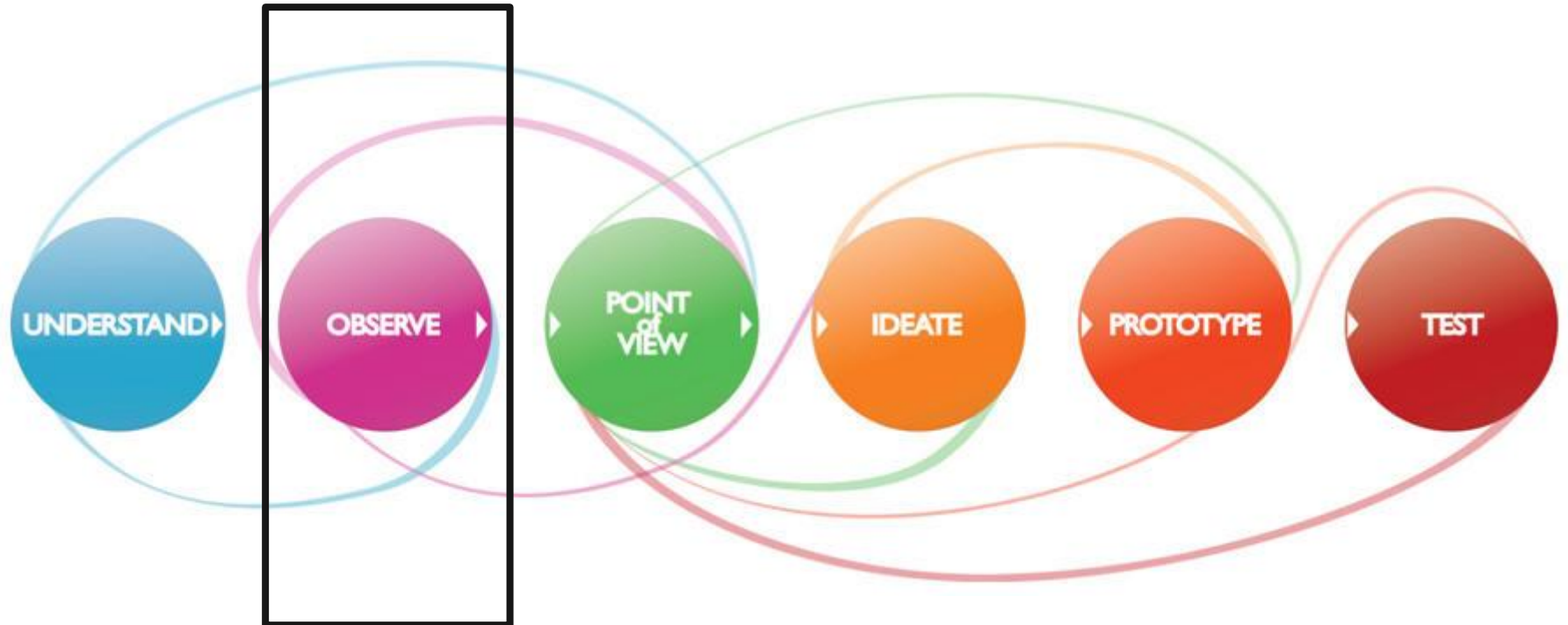Subsequent updates will be announced on a rolling basis

Design Critique

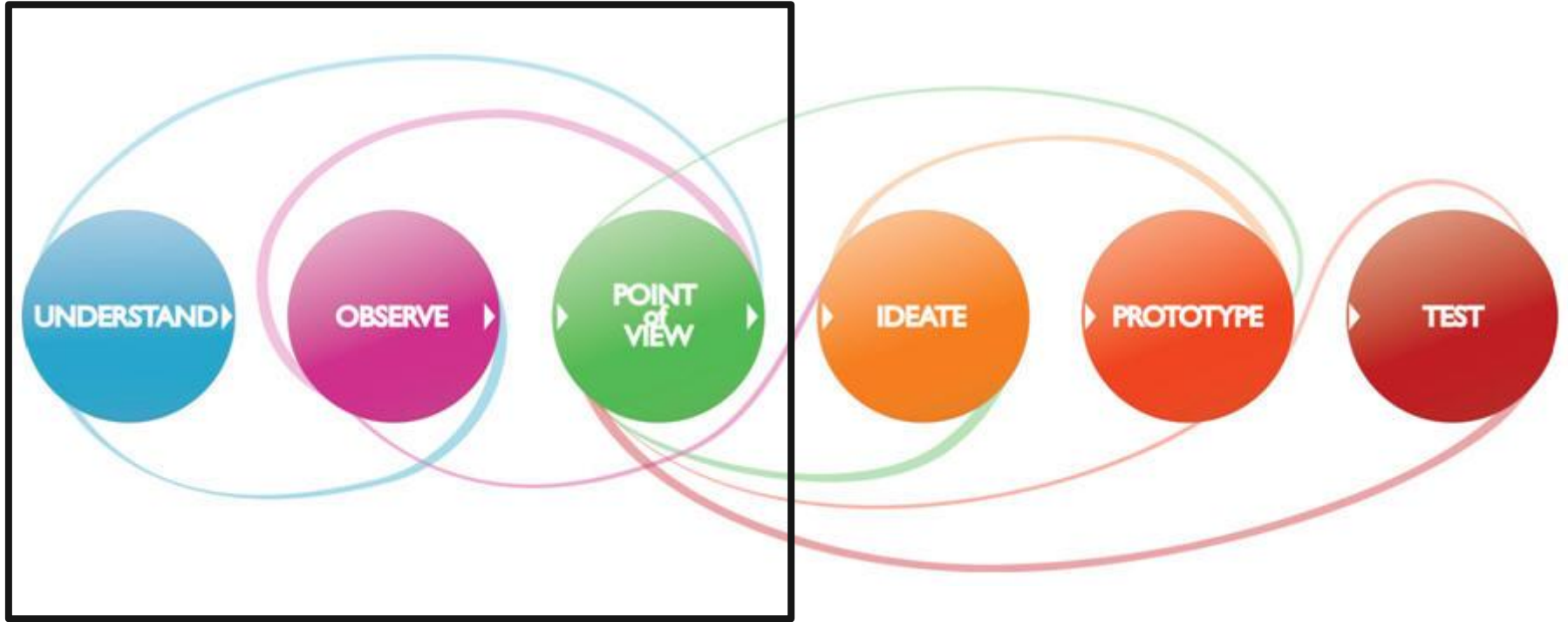Announcements

Observation Methods

P2: Observation
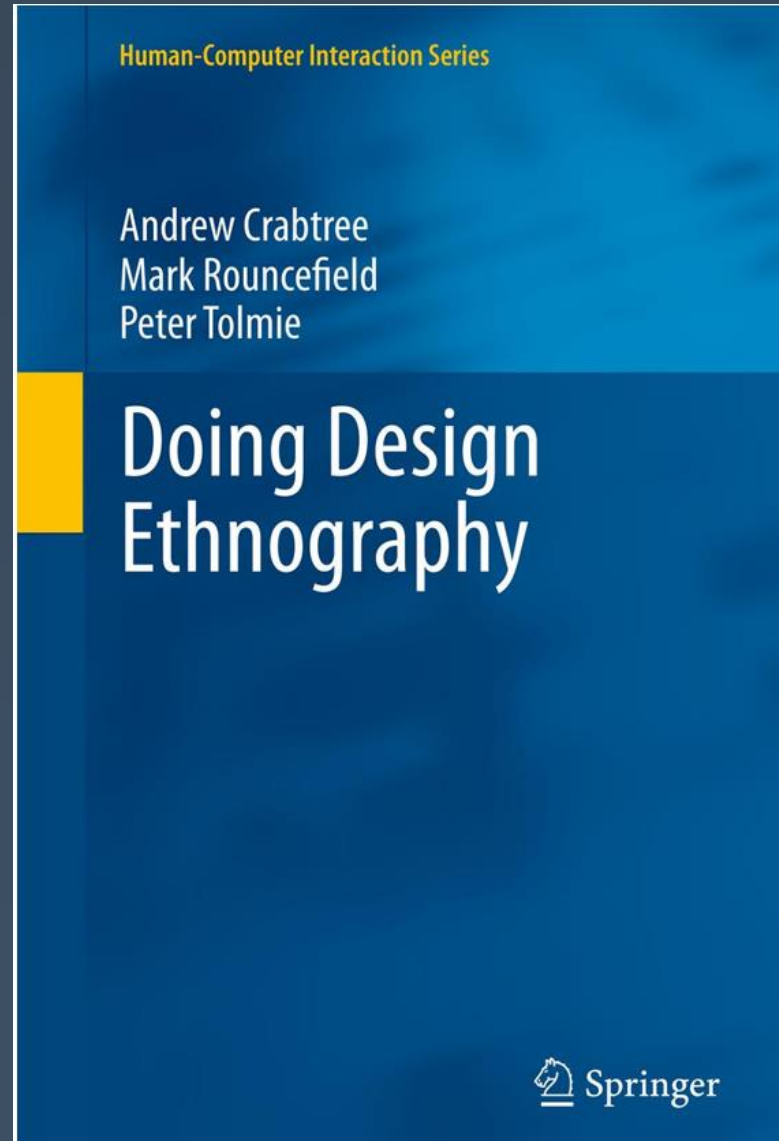
P1: Show and Tell

P1: Observation

P2: Observation toward Design POV

Ethnographic Observation

Participant Observation

Semi-Structured Interviews

Ethnographic observation

Human-Computer Interaction Series

Andrew Crabtree
Mark Rouncefield
Peter Tolmie

Doing Design
Ethnography

Springer

Ethnographic Observation

Observing *actual* activity

Approximate to design target

Immerse in context

Shadow, record, review

Ethnographic Choices

Picking a place to observe lots of examples by many different people

    Observing lots of examples

    Selectively looking for key behavior(s)

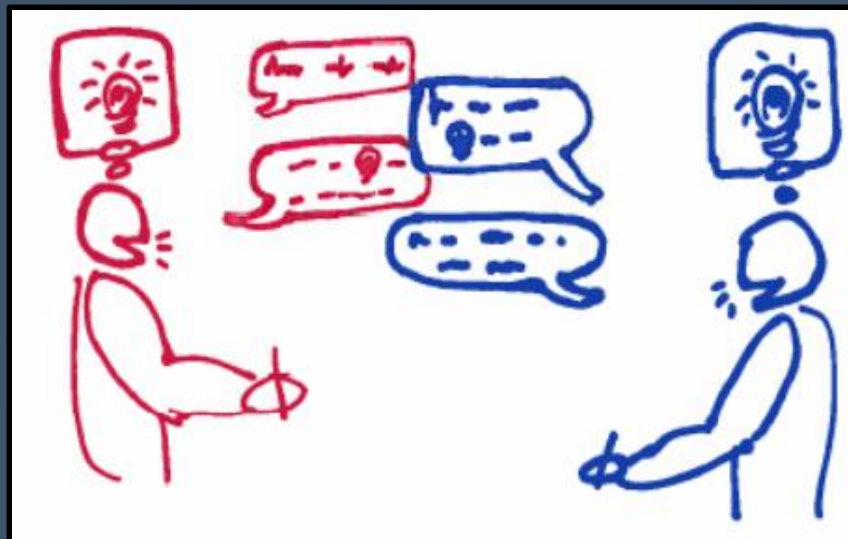   Good for high individual variation

Observing few examples deeply

    Good for detail differences

Co-discovery

Have two people work on a task together (even though the task is normally done by one person)

Coordination with each other naturally elicits cognition

Ethnographic observation

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- Rich understanding of user's need
- Grounded in actual activity (not user's perceptions)

-

- Time and skill intensive
- Careful generalizing
- Hard to project into future situations

Ethnographic Example

Participant Observation

Chapter 59: Participant Observation
Bruce Hanington & Bella Martin, *Universal Methods of Design: 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions*

Participant Observation

Actively engage in target activity

Personally interact in social context

When you can't personally participate, reach out to informants

Participant Observation Data

As with ethnographic observation: pictures, videos, sketches notes

Keep journal of own perceptions, reactions

Participant Observation

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- Rich, first-hand understanding of user's need

-

- Can't do with all activities
- Careful generalizing

Participant Observation Ex.

Semi-structured interviews

https://www.youtube.com/watch?v=TYHxfKw0kOg

Semi-structured interviews

Interactively asking questions (face-to-face, Skype, telephone)

Explore "why" to complement "what"

Subjective user's viewpoint

Interview at site where they can show activity

"Extreme" participants

Individually or groups

Semi-structured interviews

Begin with list of open-ended questions
   Ask all users these questions
   Let users elaborate
   Flexibility to ask follow-up questions
Must record (audio or video)
Interviewer should attend to user (not notepad or laptop), use recording for data (note timestamps, key points)
work in pairs

Question language (Don't)

Avoid "why" questions

Embarrassing questions

"What did you have the most problems with?"

Leading/Prestige bias

People answer a certain way because they want you to think that way about them

"How easy was that?" "How quickly did you finish?"

Question language (Do)

Think about the most recent time you…

How do you feel about…

What do you like best about it?

What's the most important thing you would like to improve?

Interview Example

https://www.youtube.com/watch?v=yMwQUZirfyg

Interviews

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- Capture user's perspective, perceptions
- Get to clarify, elaborate on responses

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- Subjective view (what they say they do)
- Interviewer(s) can bias the interview
- Time-consuming
- Hard to quantify

Interview Example

Qualitative Data Analysis

What is common across instances?

What is different across instances?

Identify groupings, categories, patterns (note as collect data), review across instances

Rich description of activity

   Resources used to accomplish

   Hindrances that get in the way

Communicating Findings

Describe methodology, data collected

Demonstrate data collection

     Pictures, quotes, clips from data

Use data, summaries to convince

A warning about "cherry picking"

     Comments should be representative

     Illustrative data, not sound bytes

access hollywood

"THE FIRST MUST-SEE BLOCKBUSTER OF THE YEAR"

SCOTT MANTZ

Rolling Stone

"EPIC"

PETER TRAVERS

The Washington Post

"IF YOU LIKED 'BRAVEHEART,' 'GLADIATOR,' AND 'TITANIC,' YOU WILL LOVE 'NOAH.'"

"THIS FILM IS DEEP AND THOUGHTFUL."

EWIN MCMANUS, PASTOR, MOSAIC CHURCH

"A POWERFUL, ARTISTIC INTERPRETATION OF THE BIBLICAL TEXT."

JON TYSON. PASTOR. TRINITY GRACE CHURCH

"NOAH IS NOTHING SHORT OF ASTONISHING."

GREG THORNBURY, PRESIDENT, THE KING'S COLLEGE

Activities

Fishing Bday Party

Playing at the Park

Play Center

Swimming Lessons

Swim Team

Gymnastics

Outdoor Soccer

Indoor Soccer

Track & Field Meet

Socially Connecting People

▶ "liked the opportunity to talk one on one with your partner, while **feeling a part of the activities**." [G1]

▶ "be **part of my kids' life** while I am not able to be there physically" [G2]

▶ "it **felt like I was sitting next to her** when I could see her reactions and the kids swimming at the same time". [G4]

▶ "it was **wonderful to share my kids' activities real-time** rather than just shooting video and emailing it later. It was fun to do." [G4]

▶ "Very cool to show my husband what the girls do at gymnastics. **It felt like we were together**." [G6]

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P2: Observation

P1: Show and Tell

P2 Goals

Observation exercise in the domain of Social Communication

Communicating what you learned from observation

Trying out a group for the final project P4

P2 Steps

1. Form groups
2. Pick a communication activity/setting
3. Pick two appropriate methodologies
4. Collect data
5. Analyze data
6. Prepare a slide deck for a 4-minute presentation
7. Reflect on what you learned

P2 Deliverables

Observations slide deck – **12:00 noon, Tuesday April 8**, submitted by email

Potential 4-minute presentation, **in class Tuesday April 8**

Individual reflection form, by **end of day, Wednesday, April 9**

P2 Grading

20% Activity and Methodology Choice

30% Observation work

20% Quality of data analysis

20% Communication through slide deck

10% Individual Reflection

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P2: Observation

P1: Show and Tell

P1: Show and Tell

Time to share your P1 insights!

Teaching staff will circulate around room in 3 groups (we'll mix it up)

- Walk through your poster in 1 minute (**timed!**)

- Share poster, critique among each other, with teaching team

- Form groups of 3 for P2

A Note on Critique

Start with question that prompts elaboration

Tell me more about…

How did you…

Critique **expands** the creator's understanding of their own ideas

Critique **does not** shut someone down

Ready… Get Set…

Pilot your 1-minute presentation with your neighbor

While teaching team gets organized

Go!

P1: Show and Tell

Do not leave class without giving your poster to the staff!

Do not leave class without registering your P2 group through the Google Form!
http://bit.ly/CS247-P2-Group