Contextual Inquiry
Reading Reflection

Discuss in groups

• How often have you watched others program, if at all? What contexts?
• Did you notice:
  • Surprising actions?
  • Times when you felt you knew exactly what the programmer was doing and why?
  • Moments of total confusion about what they were doing?
Why observation?

• We could miss true things.
• We could learn false things.
• We could learn true things poorly.
Why observation?

- We could miss true things.

As someone working in this space (and after taking this class! 😊) you know a lot about what languages, programming environments, synthesizers, and other tools can do for users!

Your participants might know all this…or they might not!

Result: problems that they see as irrelevant may seem very relevant to you.
Why observation?

- We could learn false things.

When we ask questions, we (often unintentionally) shape the responses we get. We don’t have a durable, reliable memory where we can just look things up, even a week later, never mind a few months. So questions even about facts will come up false sometimes. We don’t have durable, consistent preferences marked down in a mental table that we just look up. The mainstream belief in Thinking, Judgment, and Decision Making these days is that we (mostly) construct preferences when we’re called on to express them.
Why observation?

• We could learn false things.

<table>
<thead>
<tr>
<th>Response</th>
<th>Smashed</th>
<th>Hit</th>
<th>Control</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
<td>16</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>No</td>
<td>34</td>
<td>43</td>
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</tr>
</tbody>
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Reconstruction of Automobile Destruction: An Example of the Interaction Between Language and Memory

Elizabeth F. Loftus and John C. Palmer
University of Washington

Two experiments are reported in which subjects viewed films of automobile accidents and then answered questions about events occurring in the films. The question, “About how fast were the cars going when they smashed into each other?” elicited higher estimates of speed than questions which used the verbs collided, bumped, contacted, or hit in place of smashed. On a retest one week later, those subjects who received the verb smashed were more likely to say “yes” to the question, “Did you see any broken glass?”, even though broken glass was not present in the film. These results are consistent with the view that the questions asked subsequent to an event can cause a reconstruction in one’s memory of that event.
Why observation?

- We could learn false things.

Consider the now familiar conclusion frequently stated in the introduction of behavioral decision theory (BDT) articles: “There is a growing consensus that preferences are typically constructed when decisions are made, rather than retrieved from a master list of preferences stored in memory. In particular, preferences are influenced by the method of preference elicitation, the description of the options, and the choice context”. In line with this theme, researchers have raised the possibility that preferences are created when decisions are made, with stable values often playing only a very limited role. While the exact wording differs from one article to the next, this basic conclusion has been recognized as “one of the main themes that has emerged from behavioral decision research during the past three decades” (Lichtenstein & Slovic, 2006; first page of the edited volume, “The Construction of Preferences”).

Will I like a “medium” pillow? Another look at constructed and inherent preferences

Itamar Simonson
Stanford University, USA
Available online 3 June 2008

SECTION I. INTRODUCTION

1. The Construction of Preference: An Overview

Sarah Lichtenstein and Paul Slovic
Why observation?

• We could learn true things poorly.

We just get a lot more detail seeing something happen than hearing it retold! Think about how much more you know about an event you lived relative to a similar even that a parent or friend relayed, even if they told you the story. If you turn to the person next to you and have them describe the program they’re working on right now, in excruciating detail…and then looked at it, there would almost certainly still be elements that you wouldn’t have predicted or find surprising.
Why observation?

• Naturalism

We don’t get to make any extra claims about things being natural just because we’re observing them instead of hearing or reading them. They’re still the product of the participant’s environment, constraints, prior experiences, and generally context. We may get a more detailed picture, but we don’t get a more natural one.
The core premise of Contextual Inquiry is very simple: go where the customer works, observe the customer as he or she works, and talk to the customer about the work. Do that, and you can’t help but gain a better understanding of your customer.

Contextual Design, Beyer and Holtzblatt
Highly recommend the expert-apprentice relationship model for contextual inquiry. Don’t typically recommend offering piggyback rides as part of it.
For reference, in Star Wars, this guy is an apprentice.

And this green one is his teacher.

You (your user/participant)

Yoda
Video—look for…

• Details of participant’s process that you notice but which they never express aloud
• Instances in which participant mentions something because of doing the task, or prompted by context

However, let’s also watch this with our ✨friendly but critical✨ hats on:
• Do you spot instances where it’s an interview that happens to be taking place in the context, rather than emphasizing the observation?
• Instances where the apprentice takes more of an expert approach to questions and less of an apprentice approach?
• This was a CI session run by students in a course, and it’s totally natural for it to take some time to get adjusted to this apprentice role!
Grocery shopping habits of college students
Contextual Inquiry by Annie Tao

https://www.youtube.com/watch?v=JV6br-npgfw
As the apprentice you...

- Ask abstract questions?
- Focus on the ongoing work
Context

• During the design process, we thrive on detail, so we don’t want the participant to give us summaries!

  how was your day

  fine

• We also want concrete stories/experiences, not generalizations
Partnership
But it’s a little different...

Expert/Apprentice- 

our goals are different from standard apprentice, so we want to direct the experience more. So we become partners in understanding Yoda’s work.

Wants to learn how Yoda programs uses the force so he can use the force to save his friends/the galaxy.

Wants to learn how Yoda programs uses the force to make it easier for him and others to use the force in the future.
participant does their thing

you notice something

your question is answered or your confusion is resolved

Are hand motions required to use the Force?

In almost every canon (that is, visual) source, Force users typically wave a hand to invoke the Force to move or manipulate objects, people and thoughts. I get out-of-universe this is a visual cue that the Force is being used, but in-universe is it strictly necessary?

(The only exception I can think of is when Luke is training on Dagobah and is balancing rocks while standing on one hand with Yoda on his foot. He doesn't appear to be waving his hand to move the rocks.)

Is this addressed anywhere in-universe, even in Legends?

No, they're not necessary. But they act as a focusing aide and may be necessary for more difficult tasks. Notice that no hand gestures were needed when Luke levitated C3PO:
Interpretation

more money than a different brand just because you said your parents used to
I saw you were doing the hand thing when you were frustrated with me. It’s a communication device?

Huh?

Or nodding...
I saw you were doing the hand thing when you were lifting big things but not small things. It makes your force stronger?

Yep, it helps me focus the force.
Focus

Grocery shopping habits of college students
Narrowing focus to what’s relevant to your research is good, but sometimes you need to expand focus....
I see you just copied 60 lines of code and pasted them to a second place in the file. Can you tell me about that?
*nods* yes, I have written a loop before myself and now understand you on a spiritual level.
ok, hang on, Kan fibrations??
One of the big reasons we talk to users during design is to avoid relying on our own assumptions. These triggers point to places in the conversation where we might have a chance to throw out a couple assumptions.
Structure

• 2-3 hours overall
• Components
  • Introductory conventional interview
    • 10-15 minutes
  • Tell them the rules!!!
    • 30 seconds
  • CI
    • However long y’all can spare :)
• Wrap-up
  • 15 minutes
Assignment 2

• If you’ve already run your call, awesome! Take this time to do the post-call reflection or your writeup.
• If you haven’t already run your call:
  • Can you use any of the lessons of contextual inquiry to enrich your plan for the call?
  • Finalize your plan for the call