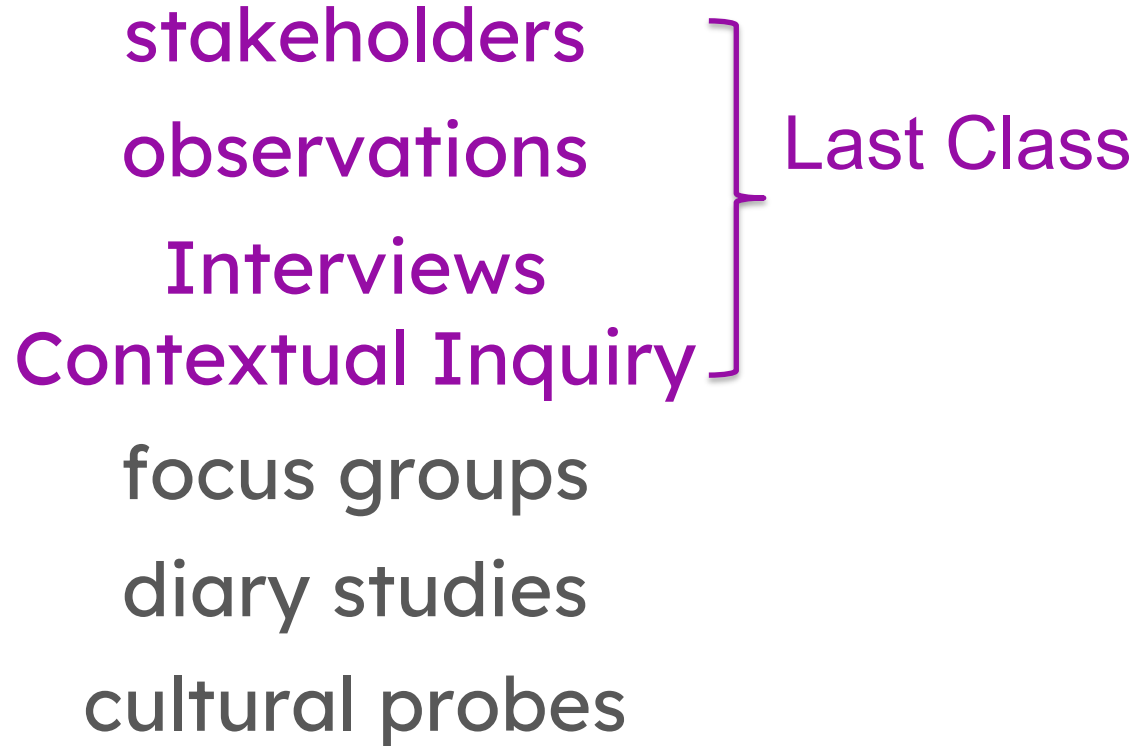
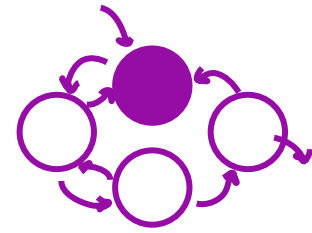


# Human Computer Interaction

Taslima Akter

Design Processes &  
Methods – Part 4



# Last Class - Identify

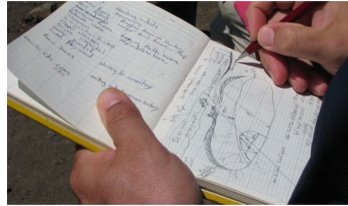


identify your  
primary,  
secondary,  
tertiary  
stakeholders

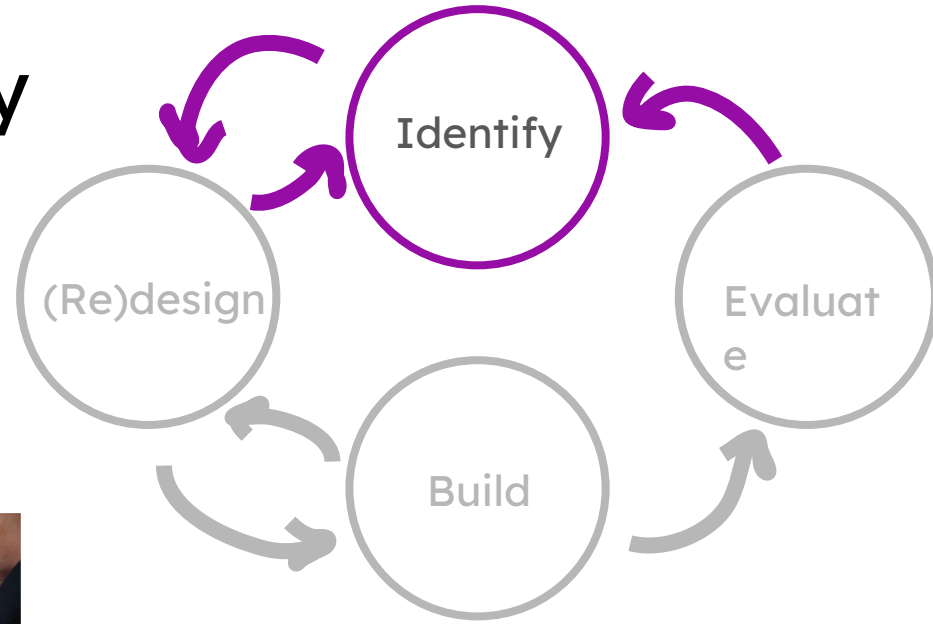
## *Interviews*

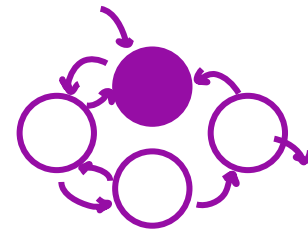


## *Field observations*



get to know your primary stakeholders  
(i.e., target users)





stakeholders

observations

Interviews

Contextual Inquiry

Fly on the wall

Behavioral mapping

focus groups

diary studies

cultural probes



Today



stakeholders

observations

Interviews

**Contextual Inquiry**

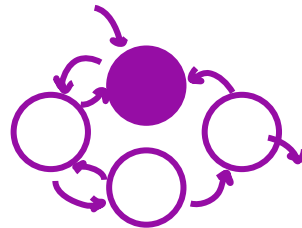
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# CONTEXTUAL INQUIRY

- › Can be thought of as applied design ethnography
- › 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.
  - gain a better understanding of your customer.
- › Effectively, observation + interview



# CONTEXTUAL INQUIRY

## GOAL

- › To study actual behavior in real contexts of use and see how context impacts interactions.
  - The goal is not to learn to do the task
  - Instead, the goal is to learn how the participant does the task in order to learn how to support it

## WHEN

- › Use when you are not worried about biases (that your behavior will change behavior somewhat) and you are interested in specific tasks



# CONTEXTUAL INQUIRY

## How

- › Define your tasks up front (ask participants in advance about the types of things that they do and the places where they do them to help design your session).
  - Conduct the session in the place and time that the task is normally conducted.
  - Enlist the participant's active assistance in understanding the task, but minimize interruptions.



# CONTEXTUAL INQUIRY

## Four Principles for applying the method

- › Context
- › Partnership
- › Interpretation
- › Focus

# CONTEXTUAL INQUIRY

## Four Principles: Context

- › Must be “where the work happens”
- › Useful for understanding the underlying work structures rather than people’s perceptions of those structures

# CONTEXTUAL INQUIRY

## Four Principles: Partnership

### › Aim to follow a master/apprenticeship model

- You're (researcher) the apprentice, watching and asking questions to understand why things are done a certain way
- The transfer of knowledge happens when people talk about how they work while they're doing the work

# CONTEXTUAL INQUIRY

## Four Principles: Interpretation

- › All data must be interpreted for meaning before developing design implications
  - Merge insights from your observations with insights from your questions
  - Double-check your interpretations with your participants

# CONTEXTUAL INQUIRY

## Four Principles: Focus

- › Be open to expanding on your initial focus or assumptions
  - Any time you're surprised by a participant or find their actions odd, it's an opportunity to ask questions
  - Aim to see their perspective rather than your own

# Interviewing within Contextual Inquiry

- › Within a contextual inquiry, interview questions should stay subtle
  - Again, you're acting as an apprentice
  - Follow your curiosity, but don't divert participant's workflow too much
- › Interviewing can also be a standalone formative method
  - Maybe you're investigating something hypothetical; participants have no established workflow
  - Standalone interviews can be more intrusive; follow-up questions are expected
  - But may require triangulating with other sources

# Contextual inquiry

## Gaining access & building rapport

- › Before you can do anything in an ethnographic project, you must gain access to your site and informants
- › Must additionally gain confidence and trust
- › Recognize some potential reactions you could have
  - Excitement about the project and site
  - Culture shock
  - Cycle of entering and leaving can have emotional impact

# Contextual inquiry

## Recording your observations

- › Video recording
- › Note taking and memos
- › Interviewing
- › Be mindful of your access permissions and participant's comfort levels



# Contextual inquiry

## What to record

- › Begin with your research questions
- › Do not overly constrain yourself
- › Take notes on
  - What is directly relevant
  - What strikes you as interesting
  - Everything else

# Contextual inquiry

## The process of recording

- › Your data are only as good as you are
- › Sometimes it is possible to record in the moment
- › Other times it must be done after the event
  - Write down the important things first
  - Then replay the day and slot them into order

# Contextual inquires and interviews

## Strengths

- › Extremely rich data
  - You get to watch what people do and talk to them!
- › “Real world” and unfiltered, or as close as you can get
- › The methods are led by participant’s needs and interests, not your preconceived notions

# Contextual inquires and interviews

## Weaknesses

- › Participants do not necessarily know what is important to you
  - Probing questions or observation can help, but they're not sufficient
- › People's memories are warped and flawed
  - They may say one thing in interviews and do another in practice
- › The methods are resource-intensive
  - You can hear from tens of people at best, making generalization challenging
- › Participants can find it awkward to be watched or open up



stakeholders

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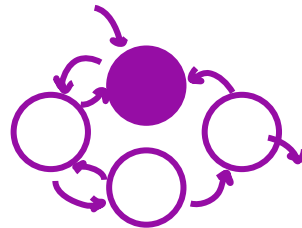
**Fly on the wall**

Behavioral mapping

focus groups

diary studies

cultural probes



# FLY-ON-THE-WALL OBSERVATION

## GOAL

To gain a deep understanding of how people behave in a specific location

## WHEN

Use when you want to study people unobtrusively (to avoid bias) and you don't require to keep this knowledge on a map

## HOW

Go to a location and observe what is happening there without interacting or talking to people. Be a fly on the wall!



stakeholders

observations

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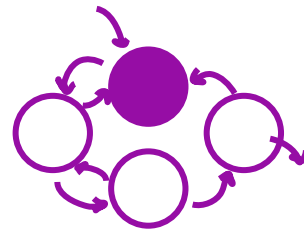
Fly on the wall

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# BEHAVIORAL MAPPING

## GOAL

To uncover discrepancies between how participants use a space and how it was intended to be used

## WHEN

Study a specific space/environment (e.g., to plan improvements such as how technology could support interactions)



# BEHAVIORAL MAPPING

## HOW

Unobtrusive (done “at a distance”)

Start with a site plan or map and a list of behaviors that you want to record, then note when specific behaviors happen in specific locations on the map





stakeholders

observations

Interviews

Contextual Inquiry

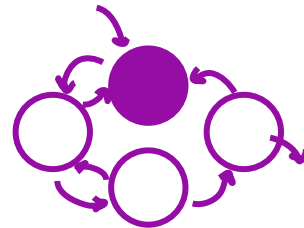
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# Focus Groups

- › 1-2 interviewers/moderators, 3-7+ participants
- › Often, colocated, sitting around a table
- › Similar prep as interview
- › Participants build / feed off each other



# FOCUS GROUPS

## GOAL

To gain insights into themes, patterns, and trends that are likely to come out more in a group setting.

## WHEN

Use when you want to learn about the opinions, feelings, and attitudes from a group about a specific product, service, brand, location...

## HOW

Write an interview script (i.e., a number of questions) and meet with participants in a small group to ask these questions

Be flexible enough to allow the group to carry the conversation elsewhere





# Pros/cons of focus groups?

- › can elicit more perspectives than an individual interview
- › participants may influence each other's perspectives
  - can help them recall other examples
  - may make them feel like they can't share minority views
- › get more breadth, less depth of understanding
- › can be harder to schedule than interviews
- › requires a lot of time to analyze



stakeholders

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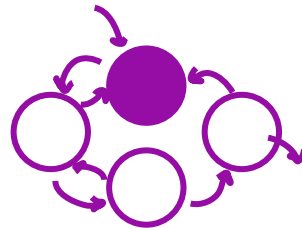
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# Diary Studies

- › Users carry diary, answer specific questions about activities throughout the day when certain activities occur, e.g., better understand frequency of use of a feature/app
- › Learn about specific activities over an extended period of time (e.g., when it is impossible to observe users throughout that time period)



a Chumby... it was a thing of the 2000's



# Pros/cons of diary studies?

- › in situ (in the moment) input from users
- › longitudinal (over several days/weeks) data
  - may be more accurate
  - may delay the project
- › less work for researcher / more work for participant
- › users may not forget key details by the time the elicitation interview is conducted





Activity 08  
10 minutes

## A08: Diary Study

- › Think about a tool that you want to design
- › Think about a task that can be performed using the tool and a user who will be doing the task
- › Write three questions you want the participants to answer
- › Submit to Canvas



stakeholders

observations

Interviews

Contextual Inquiry

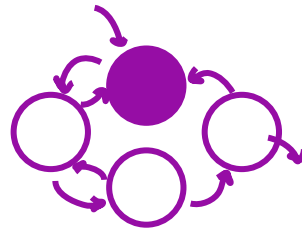
Fly on the wall

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# Cultural Probes

- › bundles of activities / prompts for users to take home and document important aspects of their daily lives
- › for Designers... use for inspiration, not rational design decision-making
- › Sometimes a needfinding tool, sometimes an evaluative method



“goodie bag” of cultural probes for a participant to take home





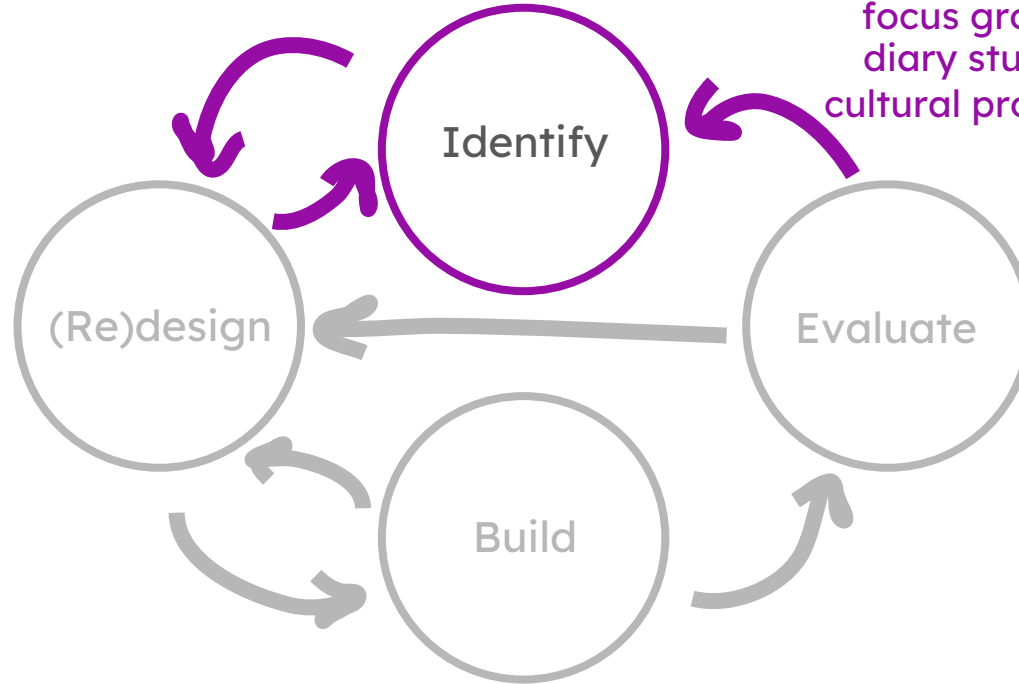
# Pros/cons of cultural probes?


- › can provide inspiration for design
- › will not provide deep or reliable knowledge about user experience
- › they are fun for researchers and participants!
- › can take 1 day - 1 week, so fairly quick info gathering



stakeholders  
observations pt.2

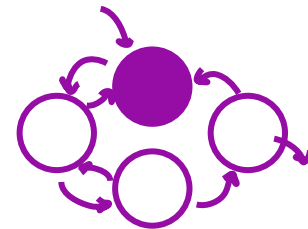
interviews  
contextual inquiry  
focus groups  
diary studies  
cultural probes  
...





# Which method(s) should I choose?

- › These are just some of the methods you can choose from
- › Each approach has **tradeoffs**:
  - cost to participants
  - cost to UX designers
  - time to carry out
  - reliability of information gathered
- › Choose methods with acceptable tradeoffs given your **goals**
- › Use them in combination to address tradeoffs and **triangulate**
- › Use them in other phases of design, like the **Evaluate** phase



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Materials in this course were compiled from courses taught by: Matt Bietz, Stacy Branham, Tyler Fox, Elena Agapie, Nigini Oliveira, Katharina Reinecke, Andrew Davidson, Jennifer Tums, Daniel Epstein, Andrea Hartzler. Thank you to all.