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EXAM

REVIEW

human-computer interaction
CSE 440 WINTER 2014

MAR 10 - WEEK 10 - TUESDAY



University of
Washington

Today

- Reminders
- Exam structure & topics
- Closing thoughts
- Course evaluation
- Video prototypes

Reminders



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Exam questions

- Matching questions
- True/false questions
- Short/structured answer questions

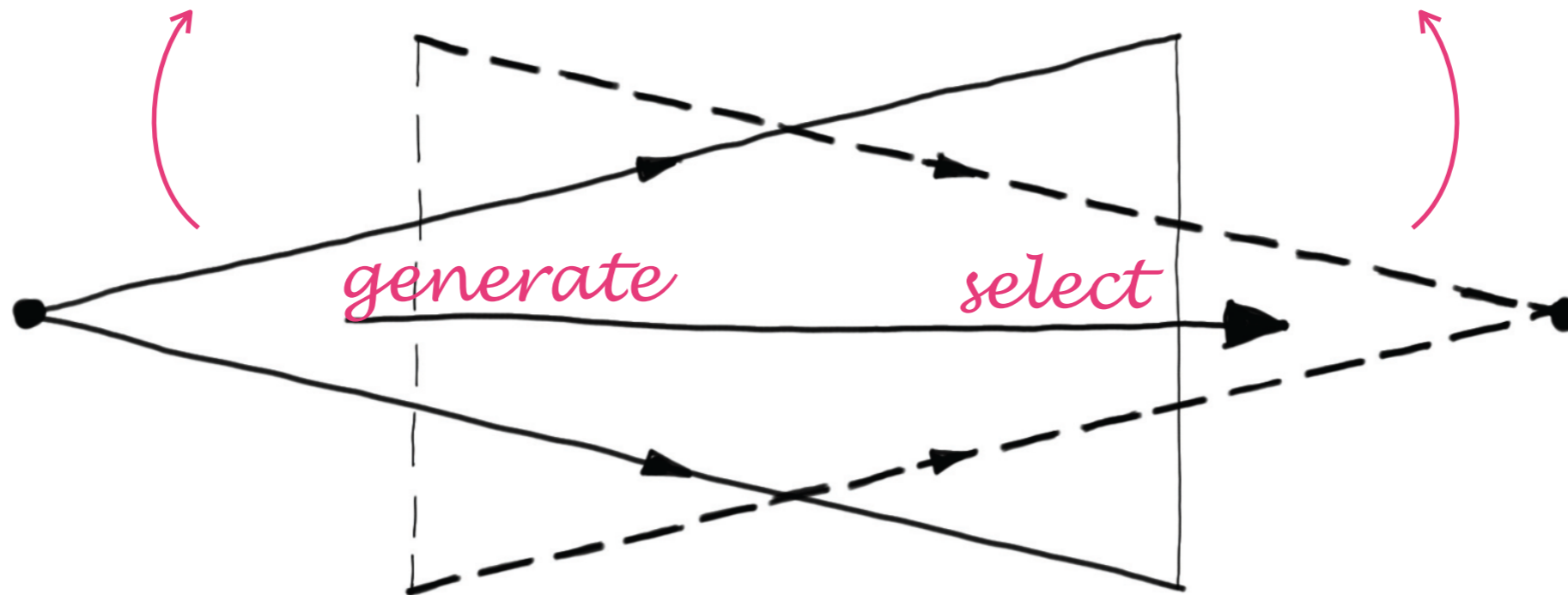
Exam topics

- Everything covered in class

Design process

Getting the right design

Getting the design right



Data gathering/design discovery

get information from the user

ask them

observe them

make them observe
themselves

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Interviews
Questionnaires

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Ethnography
Passive
observation
Think-aloud

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Experience
sampling
Diaries/logs

Data gathering/design discovery

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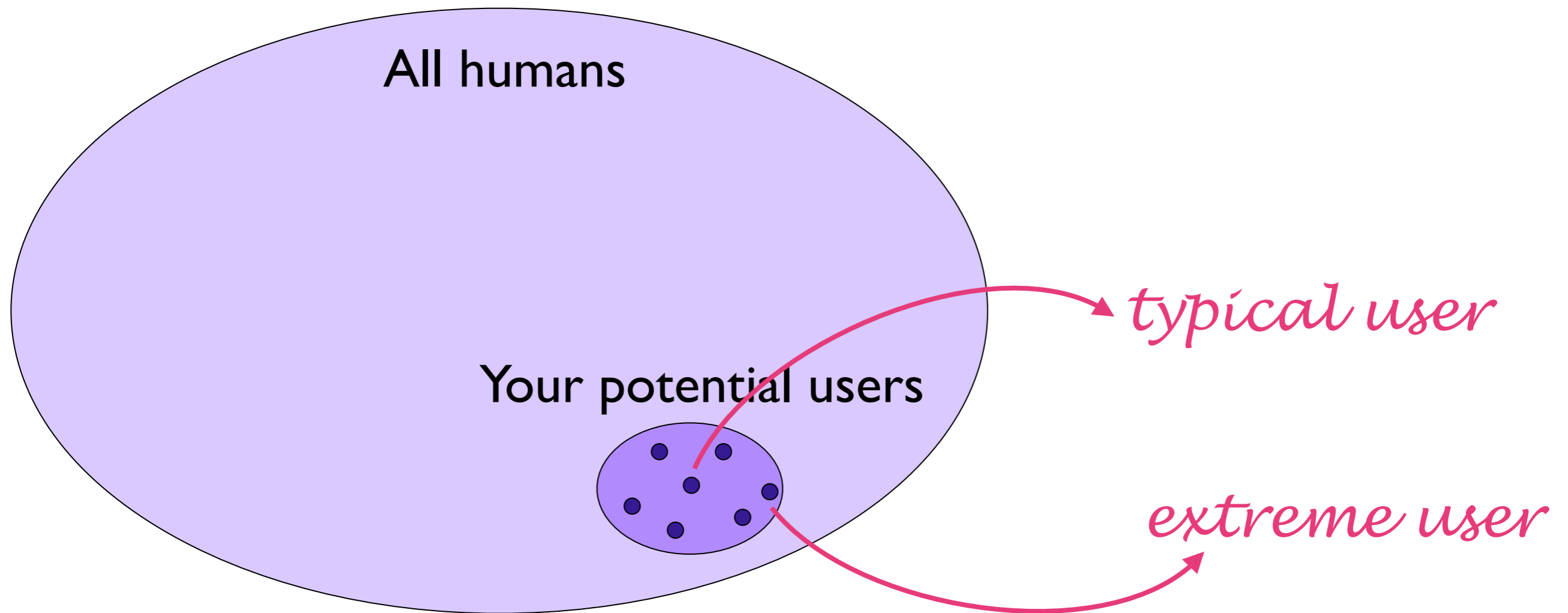
Interviews
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Contextual inquiry

Users & tasks



Users & tasks

1. Who is going to use the system?
2. What are the currently possible tasks?
3. What are currently unavailable desired tasks?
4. How are tasks learned?
5. Where are the tasks performed?
6. What is the relationship b/w user and data?
7. What other tools does the user have?
8. How do users communicate with each other?
9. How often are the tasks performed?
10. What are time constraints on the tasks?
11. What happens when things go wrong?

Prototyping

Fidelity



Storyboarding

Time

Prototyping

Fidelity



Paper prototypes
Storyboarding

Time

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Fidelity



Digital mockups

Paper prototypes

Storyboarding

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Fidelity



...

Digital mockups

Paper prototypes

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Video prototypes

...

Digital mockups

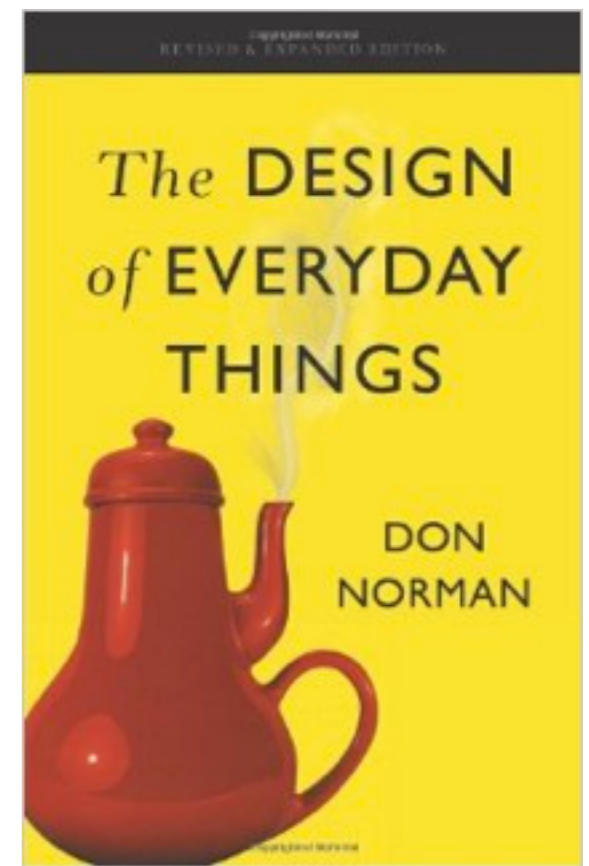
Paper prototypes

Storyboarding

Time

Fundamental concepts/principles

- Conceptual/mental models
- Affordances
- Signifiers
- Mappings
- Feedback
- Constraints



Human abilities

- Humans:
 - Perception
 - Color, shape
 - Patterns (Gestalt principles)
 - Memory
 - Motor
 - Movement speed/precision (Fitt's law)

Heuristic evaluation

- H1: Visibility of system status
- H2: Match b/w system & real world
- H3: User control & freedom
- H4: Consistency & standards
- H5: Error prevention
- H6: Recognition, not recall
- H7: Flexibility & efficiency
- H8: Aesthetic & minimalist design
- H9: Recognize & recover from errors
- H10: Help & documentation

Evaluation techniques

get information from the user

ask them

observe them

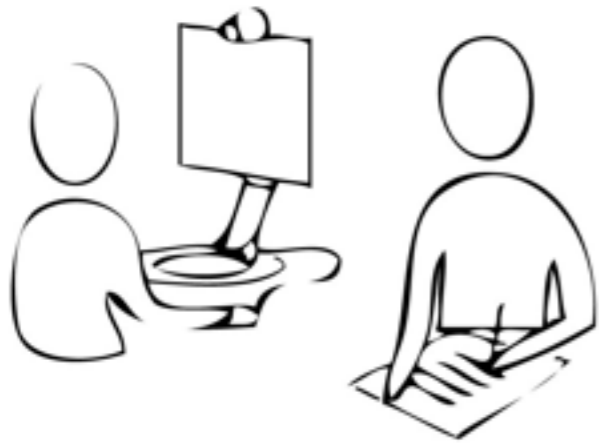
make them observe themselves

Interviews
Questionnaires

Ethnography
Passive
observation
Think-aloud
Empirical user
studies

Experience
sampling
Diaries/logs

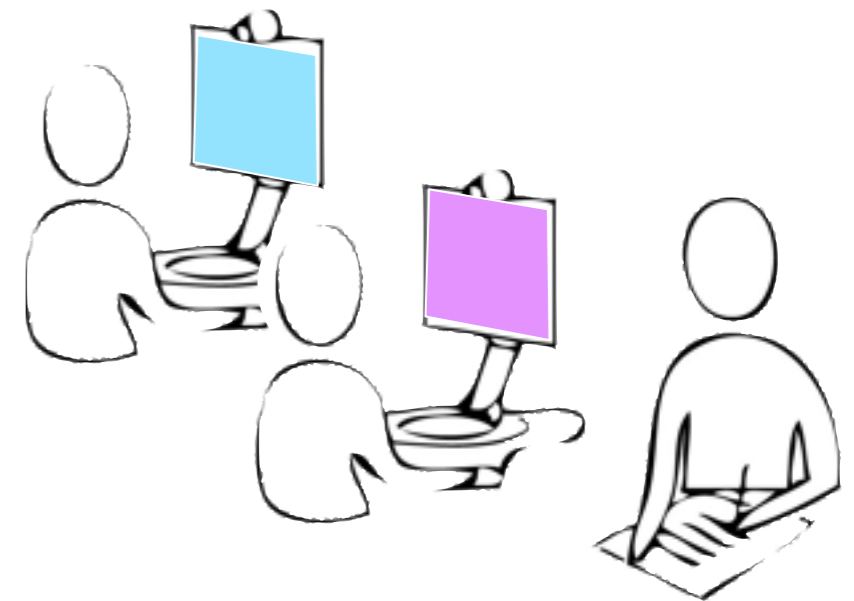
Observing interaction



Passive observation

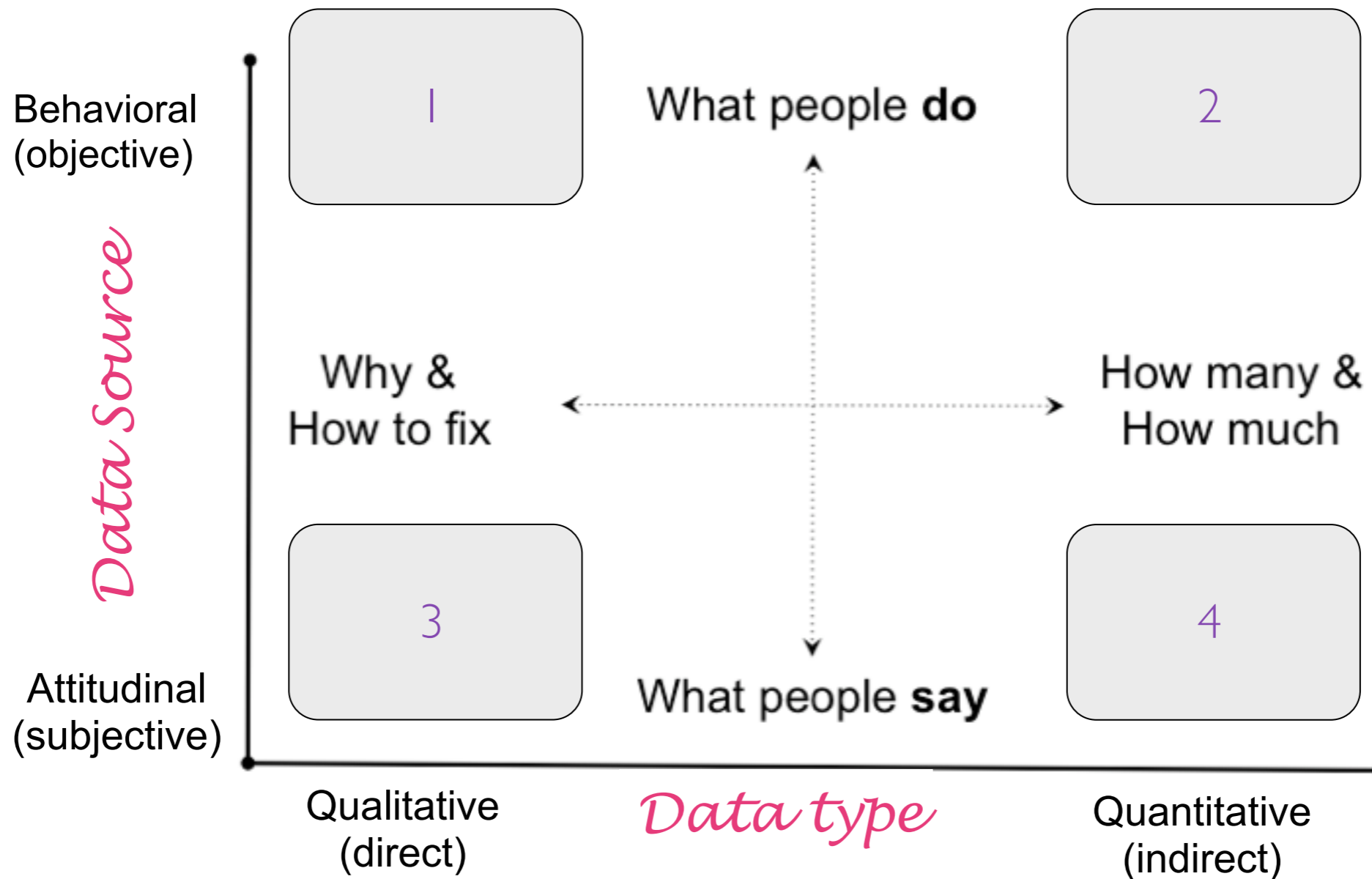


Think-aloud protocol



Comparative study

Assessing interaction



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Sample questions

- Matching questions

_____ affordances

_____ signifiers

_____

a) Definition: Perceivable properties of an object that help us to determine what are appropriate actions to perform upon it.

b) Example: There are some doors in this building where I always get confused about whether to push or pull.

c) ...

Sample questions

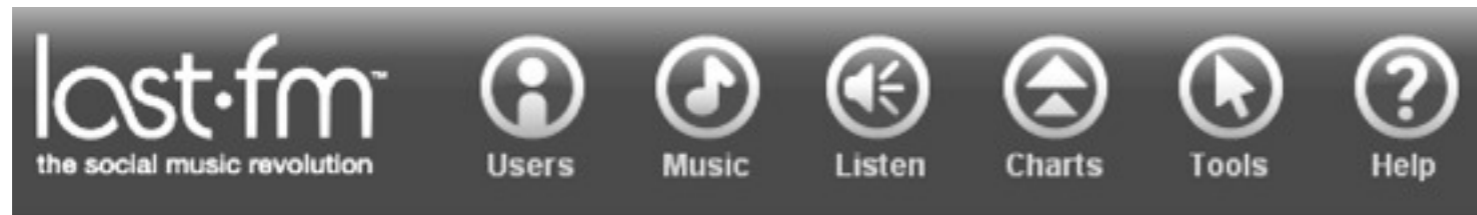
- True/false

___ Subjective evaluation techniques are qualitative, whereas objective evaluation techniques are quantitative.

Sample questions

- Short/structured answer

Comment on the use of four Gestalt principles in the Last.FM interface shown below.



Closing thoughts

Great job!

Course evaluations

<https://uw.iasystem.org/survey/141204>



we are at 30%

MOVIES