Needfinding: beyond the surface

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Thanks to Dev Patnaik, Scott Klemmer, Maneesh Agrawala and Michael Bernstein
Before we design...

• We need a clear picture of the need we are designing for.
• Satisfying that need becomes the goal for your design.
• Getting the scope of goal right:
  • Start with a need, a.k.a a design space
    • Example: “How might we help weekend extreme sports enthusiasts share their digital media?”
It is tempting to express surface-level needs
What are the needs?
What are the needs?
The biggest need finding failure: Skimming the surface

- **Symptoms**
  - Describing only what is visibly obvious
  - Assuming the tasks are fixed
  - Recommending local tweaks to the environment
Skimming the surface

- What gives rise to it?
  - Our intuitive reasoning skills reward us for fast thinking and reacting.
  - See a problem, react with a solution.

- Why is it dangerous?
  - Although it often captures an immediate need,
  - It misses the root cause, and the recurring need.
Take 2: What are the needs?
Needs are verbs, not nouns

Noun: “She needs a ladder.”

Verb: “She needs to grab all her items before leaving.”
Needs are verbs, not nouns

Noun: “She needs a **ladder**.”

Verb: “She **needs to grab all her items before leaving**.”

Nouns assume a solution
Verbs identify needs with many possible solutions.
Take 3:
What are the needs?

VERBS
Needfinding Steps
1) Observation
2) Interpretation
3) Feelings
3) How Might We?
Observation vs. Interpretation

• Let’s separate what you see with what you interpret

• Start with what you see:
  • What’s the environment or activity that’s framing this behavior?
  • What’s out of frame that might be important?

• Capture details! You’ll need them later

• Then interpret, why are you seeing what you see?
Take 4: Observations
Interpretation

- Ask yourself *why* you think something happened
- Suggest a reason
- Ask yourself why that reason exists and matters
- Recurse...
- (Aim to produce needs)
Take 4: Interpretations
Getting to the root cause

- Often needfinding results in observations that focus on what subjects *do*.

- Make sure you also consider what they *think* and *feel*, these are usually the root causes of what subjects do.
Take 5: Interpretations of feelings
Your turn!

- Observations (nouns)
- Interpretations (verbs)
- Feelings (root cause)

Create groups of three
What are needs suggested in the next slide’s picture?
Five minutes
Share with another group

Three minutes
How might we...?
“How might we...?” questions

- Turn needs into actionable charges
  - e.g., “How might we make CS 247 feel more like trusted, safe spaces?”
- Sketches out a design space
  - A useful way to ground a brainstorm
The Goldilocks of How Might We

- How might we help people organize all their digital media?

Too broad
The Goldilocks of How Might We

- How might we help people organize all their digital media?
  - Too broad

- How might we help people retrieve their favorite digital media with just a click?
  - Too narrow
The Goldilocks of How Might We

- *How might we help people organize all their digital media?*

- *How might we help weekend extreme sports enthusiasts share their digital media?*

- *How might we help people retrieve their favorite digital media with just a click?*
Take 6:
How might we...?
Needfinding Takeaways

- Think beyond the immediate need
- Interpret the root cause, and formulate a design space in which to brainstorm.
  - Observe (noun)
  - Interpret (verb)
  - Feelings (root causes)
  - How might we…?
A2.1 Needfinding Assignment

• Out Today at 5pm
• Due in 1 week
• Prompt:
  • Needfinding for learners mastering material that you do not know:
    • The equestrian team learning to ride new horses
    • Theater class learning a new play
    • Grad students in the MBA program learning to negotiate
    • Journalists learning about new technologies
    • Medical students learning to care for patients
    • Improv class
    • People learning a foreign language
Break Into Studios for AI Feedback

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