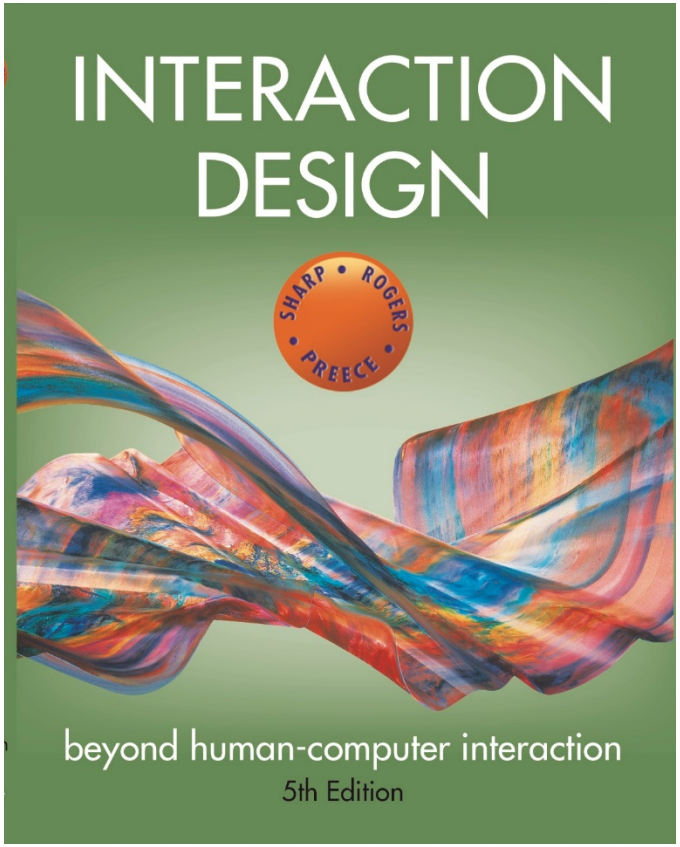
Introduction to Human Computer Interaction (IHCI)

Dr. Kalpana Shankhwar, PhD from NTU Taiwan

Assistant Professor

Department of Human Centered Design, IIIT Delhi



Chapter 3

CONCEPTUALIZING INTERACTION DESIGN?

Dashboard-mounted coffee maker

Conceptualizing design

Proof of concept

- Conceptualize what the proposed product will do

Why the need to conceptualizing design?

- To scrutinize vague ideas and assumptions about the benefits of the proposed product in terms of their feasibility
- How realistic is it to develop?
- How desirable and useful?

https://www.youtube.com/watch?v=Cn4vC80Pv6Q

Assumptions and claims

- Write down your assumptions and claims when coming up with a new design
- Try to defend and support them by what they will provide
- Those that are difficult to articulate
  - Can highlight what ideas are vague or unrealistic
  - Identify human activities and interactivities that are problematic
- Iteratively work out how the design ideas might be improved

What is an assumption?

- Taking something for granted when it needs further investigation
  - For example, people will want to watch TV while driving

Technotopic Narratives and Networked Subjects: Preparations for Everyday Life in Cooltown

What is a claim?

- A claim is stating something to be true when it is still open to question
  - For example, “a multimodal style of interaction for controlling GPS — one that involves speaking while driving — is safe.”

Activity: How will enabling robot waiters to speak to customers enhance their experience?

Source: Xinhua, Guo Cheng

What is the problem being addressed?

- The benefits:
  - The robot could take orders and entertain customers by having a conversation with them
  - The robot could make recommendations for different customers, such as restless children or fussy eaters
- But just assumptions
- The real problem being addressed:

  “It is difficult to recruit good wait staff who provide the level of customer service to which we have become accustomed.”

Working through assumptions

- Many unknowns need to be considered in the initial stages of a design project
  - Where do your ideas come from?
  - What sources of inspiration were used?
  - Is there any theory or research that can be used to inform them?
- During the early ideation process
  - Ask questions, reconsider assumptions, and articulate concerns

Critical thinking

https://www.youtube.com/watch?v=pV-vf-7LbC8

A framework for analyzing the problem space

- Are there problems with an existing product or user experience? If so, what are they?
- Why do you think there are problems?
- How do you think your proposed design ideas might overcome these?
- If you are designing for a new user experience, how do you think your proposed design ideas support, change, or extend current ways of doing things?

Activity

- What were the assumptions and claims made about watching 3D TV?

Figure 3.2 A family watching 3D TV

Source: Andrey Popov, Shutterstock

Assumptions and claims: how realistic?

- There was no existing problem to overcome
  - What was being proposed was a new way of experiencing TV
- An assumption
  - People would really enjoy the enhanced clarity and color detail provided by 3D
- A claim
  - People would not mind paying a lot more for a new 3D-enabled TV screen because of the new experience

Benefits of conceptualizing

Orientation

- Enables design teams to ask specific questions about how the conceptual model will be understood

Open-minded

- Prevents design teams from becoming narrowly focused early on

Common ground

- Allows design teams to establish a set of commonly agreed terms

From problem space to design space

- Having a good understanding of the problem space can help inform the design space
  - For example, what kind of interface, behavior, functionality to provide
- Before deciding upon these, it is important to develop a conceptual model

From problem space to design space

https://www.youtube.com/watch?v=n8sCvbBUNBs