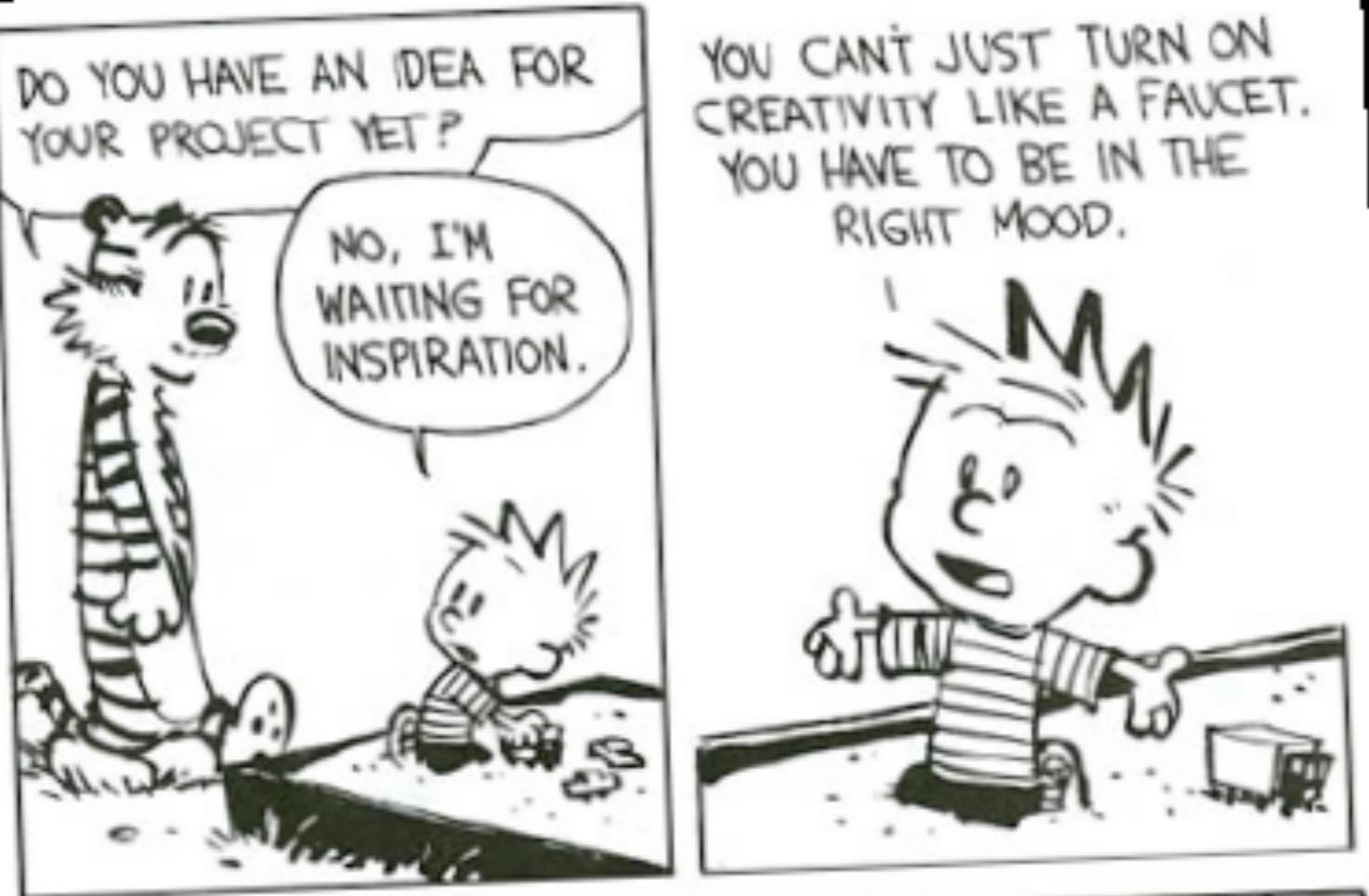


# Human-Computer Interaction

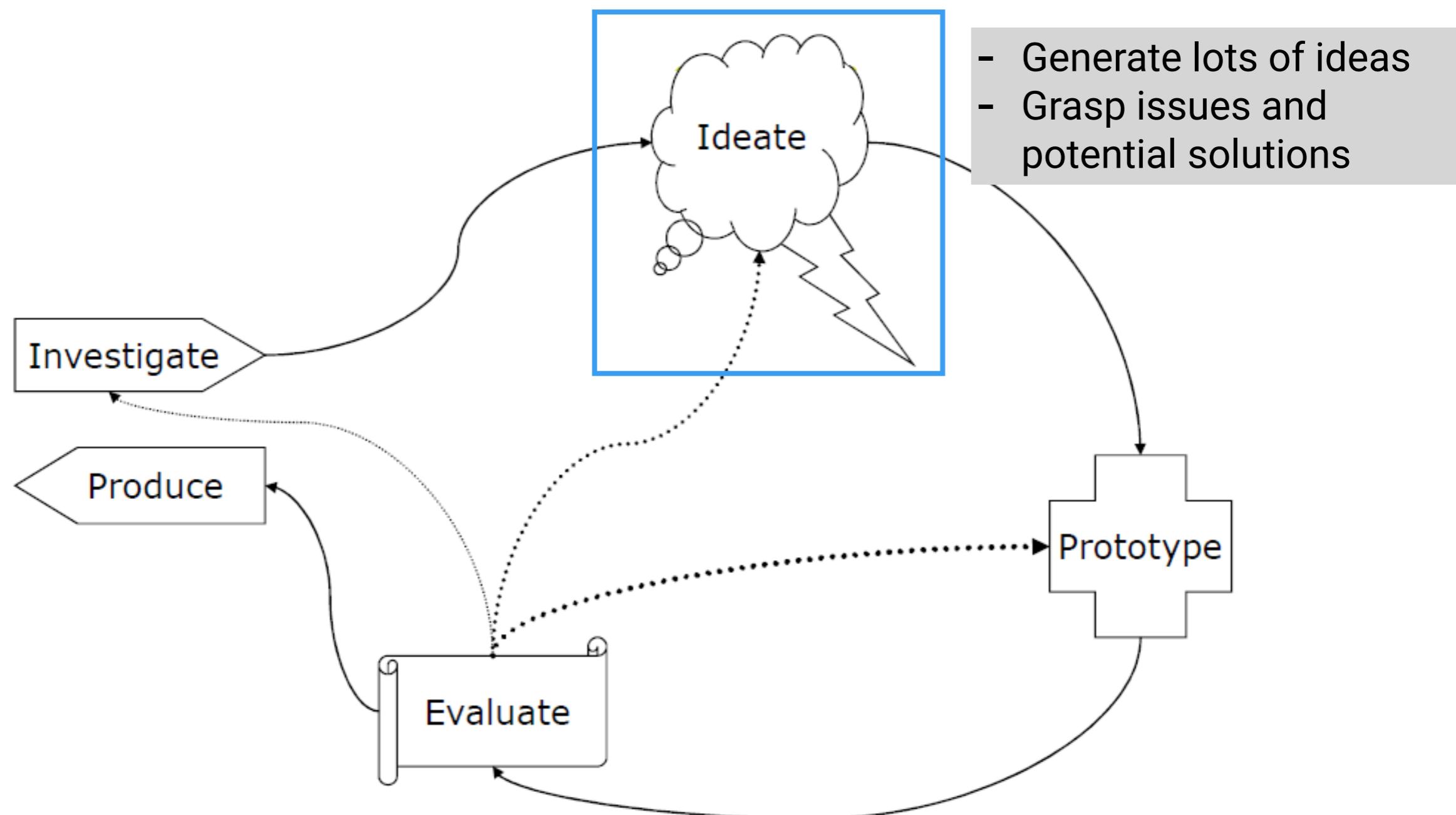
CPSC 481 - Winter 2019

## Ideation

Adapted from Tony Tang



# User-Centered Design



# Problem

- “I'm not creative!”
- Techniques that will help you (and your team) be creative together.

# Ideation

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- How do we come up with great ideas?

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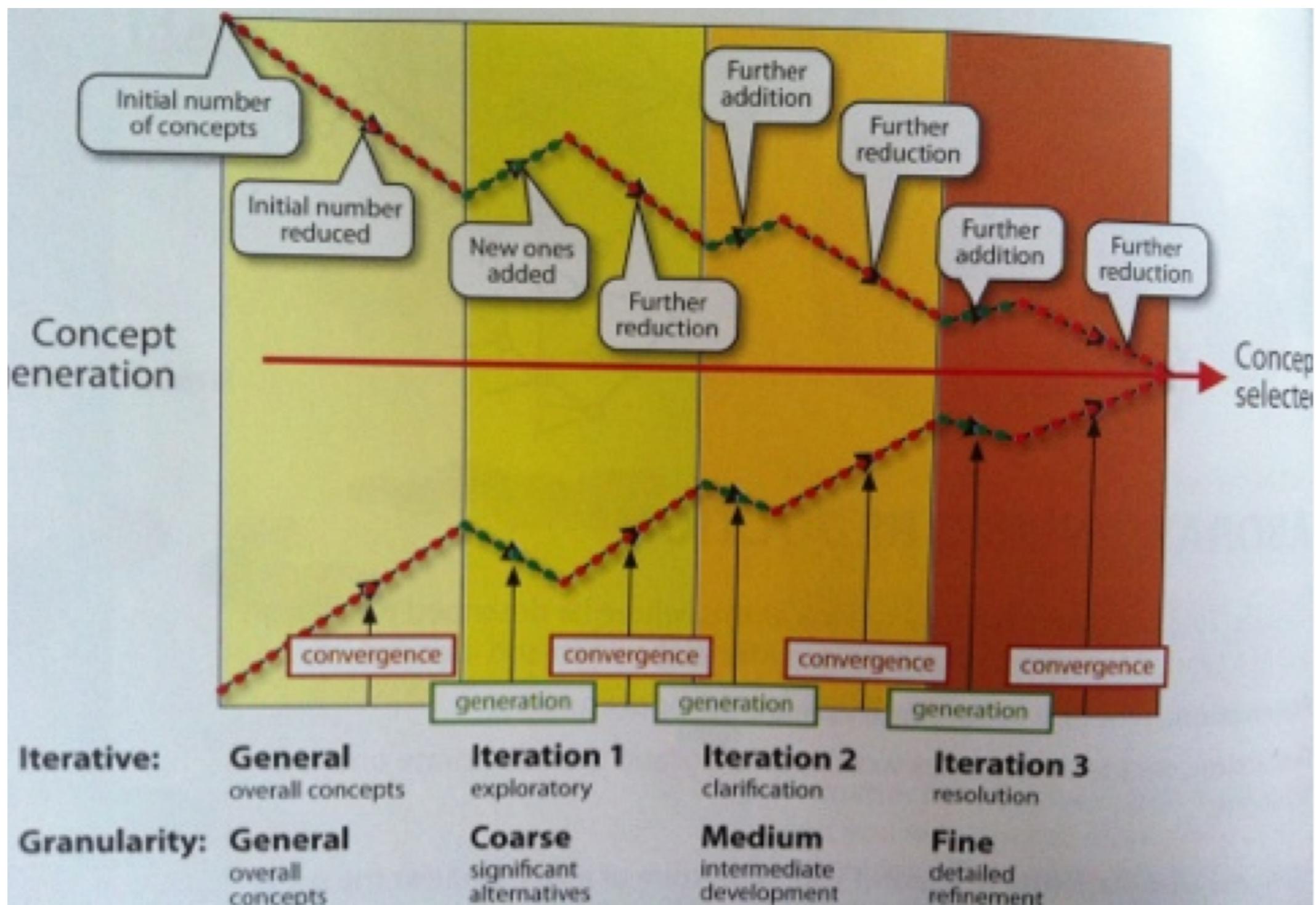
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- How do we come up with big ideas?
- How do we refine ideas?
- How do we organize ideas?

# Design Funnel



# Role of Creativity in Design

- Design is about making choices, and compromises

# Role of Creativity in Design

- Design is about making choices, and compromises
- There are three places where there is room for creativity in design:
  - Determining the methods you choose to investigate a problem
  - Enumerating distinct options from which to choose
  - Defining the criteria, or heuristics, according to which you make your choices

# Creativity as a Designer

- Immerse yourself in the world you are designing for (gathering inspiration)

# Creativity as a Designer

- Immerse yourself in the world you are designing for (gathering inspiration)
  - Collect examples from existing systems
  - Collect things that irritate you
  - Collect things that seem really good
  - Sample things that inspire you

# Existing Systems

- What's so good about this? (Why is it good?)
- What is the general problem that this solves?
- Where else I could use it?

Practice articulating what makes something good.

# Things that irritate

- Articulate and understand what makes something irritating.
- Why are mistakes happening?
- How can it be done better?



# Things that seem really good

- Real life things too!
- What are the principles that drive this design?

# Sample the inspiring

- How has the world solved these problems?
- How have others solved these problems?
- What is nice to look at?



# Sample the inspiring

- How has the world solved these problems?
- How have others solved these problems?
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# Creativity as a Designer

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- Explain ideas to others

# Creativity as a Designer

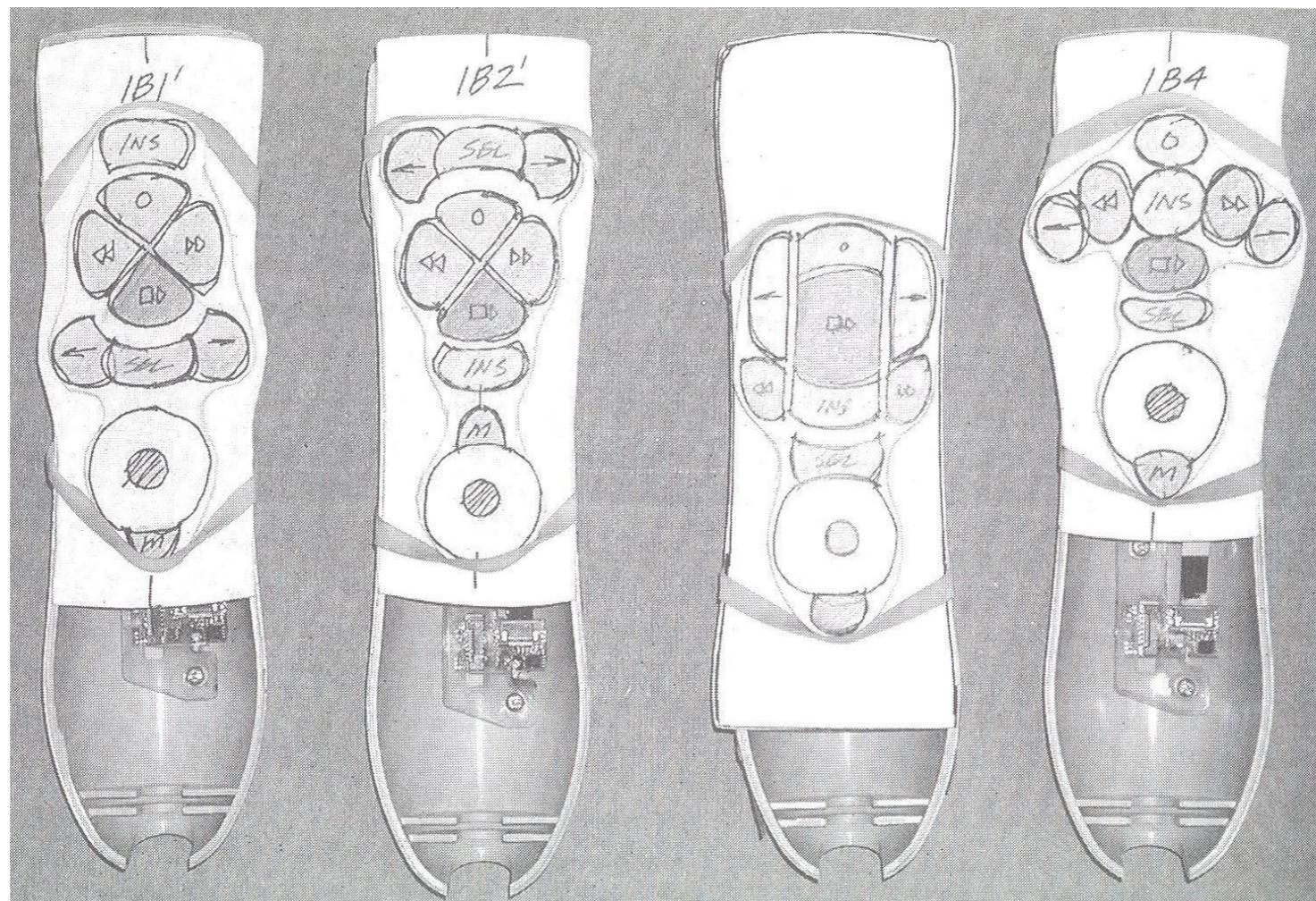
- Explain ideas to others
- Take an **outsider's** perspective on something you know well
  - Helps to simplify your language/understanding

# Creativity as a Designer

- Explain ideas to others
- Take an **outsider's** perspective on something you know well
  - Helps to simplify your language/understanding
- Take an **insider's** perspective you don't know well
  - Helps you to identify your assumptions

# Sketch constantly

- Generate ideas constantly (keep a sketchbook)
- Sketch vague ideas to help think more clearly



# Take risks (early on, it doesn't hurt)



# Kids and Creativity

- Kids seem creative because they don't know the rules, so they feel free to break them.
- Kids don't know the consequences, so they take risks.



# What to do with your collection



# Brainstorming

- Works best in groups
- Can be useful and fun
- Keep the results of user research handy during the process (e.g. scenarios, lists of design requirements etc.)

# Brainstorming for Design

- Be visual
- Defer judgment
- Encourage wild ideas
- Build on others
- Go for quantity
- One conversation at a time
- Stay focused on topic

# Brainstorming for Design

- DOs
  - Sharpen the focus
  - Write playful rules
  - Number your ideas
  - Build and jump
  - Make the space remember
  - Stretch your mental muscles
  - Get physical
- DON'Ts
  - Let the boss speak first
  - Ask the experts only
  - Go off-site
  - No silly stuff
  - Write down everything

# Summary

- Find things that  $x$  you
  - Where  $x = \{\text{inspire, interest, irritate, amuse}\}$

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# Summary

- Find things that  $x$  you
  - Where  $x = \{\text{inspire, interest, irritate, amuse}\}$
- Find things that you  $y$ 
  - Where  $y = \{\text{can improve, relate to}\}$
  - Break the rules, and think freely

# Acknowledgements

- Tony Tang
- Lora Oehlberg
- Ehud Sharlin
- Frank Maurer
- Saul Greenberg

# Course information

- Website
  - GitHub Pages <https://silvadasilva.github.io/CPSC481-2019W/en/#!index.md>
- Communications
  - Slack <https://cpsc481-2019w.slack.com/>
- Readings and Slides
  - Posted online at the main website