

# Introduction to HCI

## Affinity Diagrams

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Courses, projects, papers, and more:

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# Today

- Affinity diagrams [20 min]
- In class activity [40 min]
  - make an affinity diagram
- Project discussion [15 min]

# Learning goals

- Describe affinity diagrams as an analysis method
- Understand when and why we use affinity diagrams vs. Thematic analysis
- Explain how to analyze data using the affinity diagram method

# When affinity diagrams?

- Affinity diagram vs. thematic analysis
  - When we don't have a lot of time and a less rigorous analysis is acceptable
  - Not typically used for research paper that is purely qualitative
  - Common for research where the qualitative analysis is secondary

# Why affinity diagrams?

- Lighter-weight / discount method (as done by HCI researchers, Holtzblatt describes a relatively rigorous process though)
- Physicality promotes discussion
- Relatively good quality result in less time

“ You can read a good affinity from beginning to end to see every issue in the practice and everything the team has learned so far, all tied to real instances. There is no better way to see the broad scope of the problem quickly...”

Holtzblatt, K., and Beyer, H., 2016

# Affinity diagrams

- A tool for organizing field data and consolidating insights from collected data.
  - Common technique to find recurring patterns/themes
- Arranges the notes from interpretation sessions into a **hierarchy** that reveals common issues and themes across all users.
- Can be used for many purposes (including analysis)
  - brainstorming about design ideas
  - comments from users
  - problems observed/reported by users

# Affinity diagrams

## *considerations*

- The affinity is built bottom-up (inductive)
  - We don't start with known categories such as 'quality' that might be familiar to the team
- Keep group notes small: 4-6 notes per group
  - Make more groups, finding more issues or more insights
- Label each group, use a different color for labels
  - Group into hierarchical structure that breaks the data about the topic/user into manageable chunks.
- Larger group
  - Wider range of perspective

# Affinity diagrams

*process*

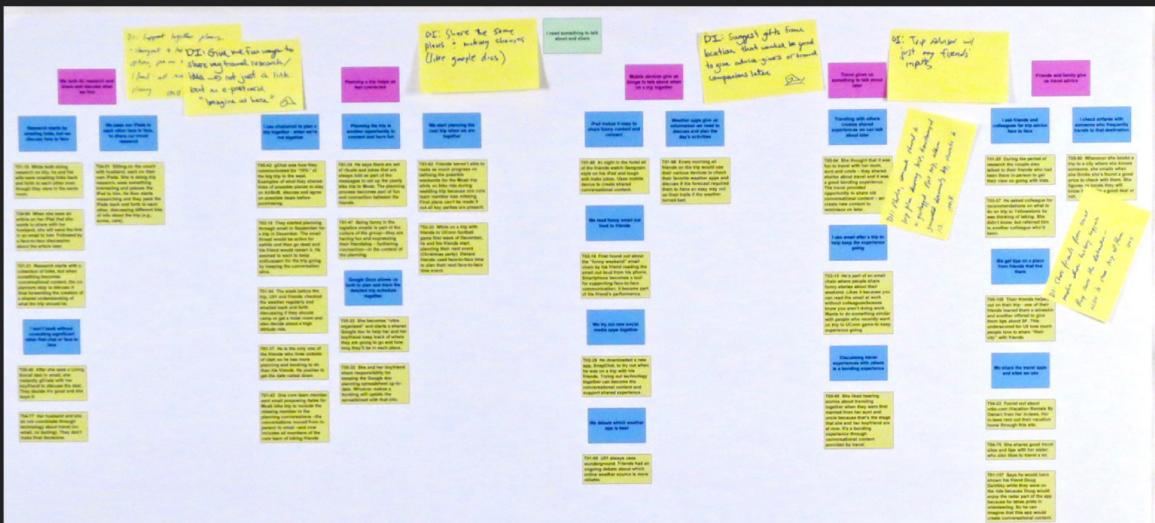
Important:

- To start with the project/research focus.  
The meaning a team reads in a note and the way they group them are driven by the project/research focus.
- To let groups emerge, rather than start with predefined groups.

# Affinity diagrams

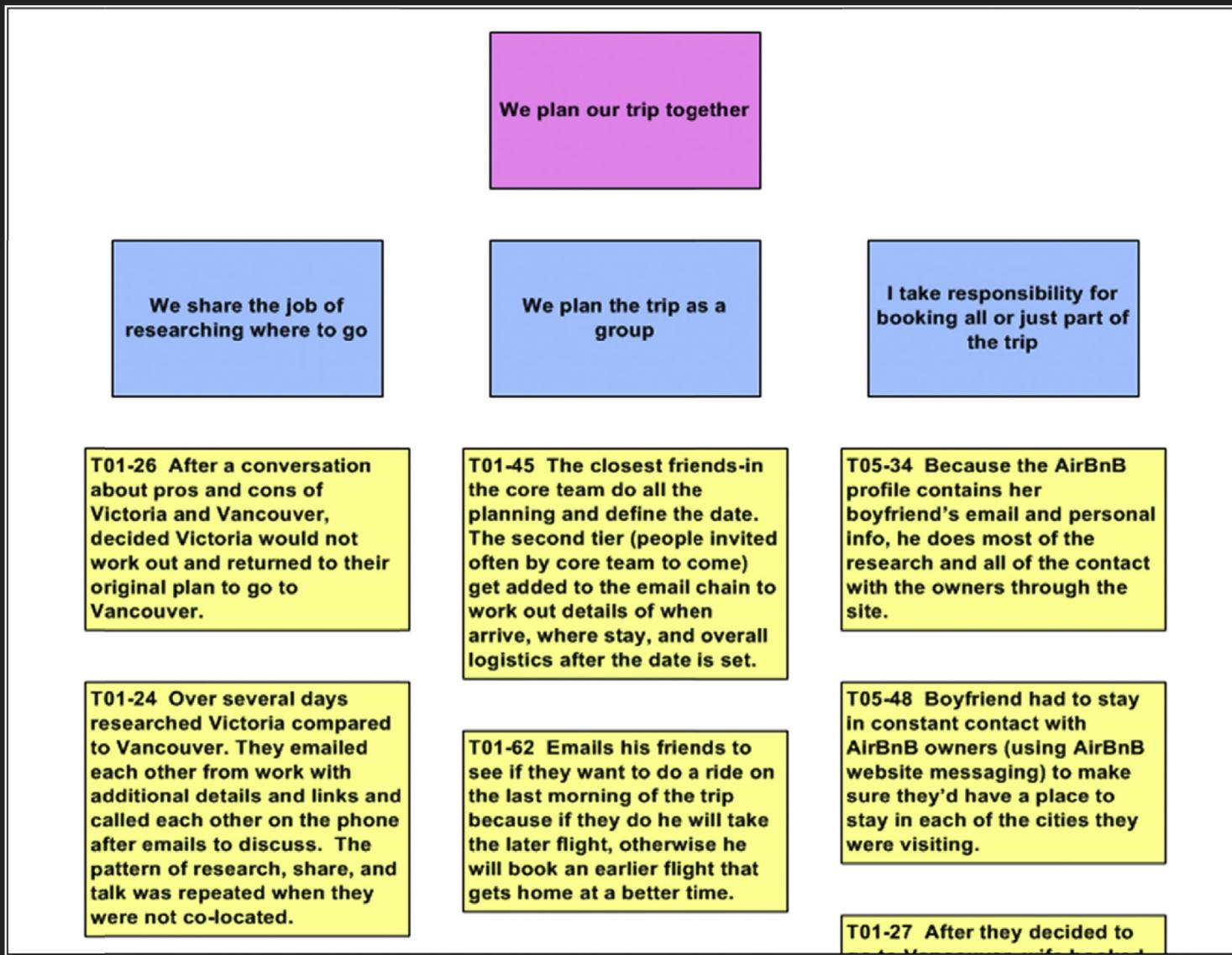
## *process*

- Record each idea/observation/problem/etc. On an individual card or sticky note (in random order).
- In team, arrange the notes into a **hierarchy**.
  - Look for notes that seem to be related.
  - Sort notes into groups until all used.
  - Give them a label representing the insight suggested by the group.
    - The label is the synthesis of the detailed data
    - Labels written from the user's perspective
    - Labels will drive design
  - Sort and resort into larger clusters subgroups as necessary
- **Note:** place notes one at a time; as each note is placed, other team members may add similar notes in close proximity.



Holtzblatt, K., & Beyer, H., 2016





# How far do you take analysis?

- As far as is helpful for your needs
- Useful until you have uncovered with some rigor, e.g.,
  - What are the most important activities/tasks to support
  - Where task dependencies occur  
*people, resources, order*
  - What is essential vs. nonessential in an implementation
  - ....etc.
    - → From here, key elements for design begin to emerge

# Example

Using the team room to create an immersive experience.



# My undergrad researchers @ UCSD



The Civic Data Deluge: Understanding the Challenges of Analyzing Large-Scale Community Input. Narges Mahyar, Diana V. Nguyen, Maggie Chan, Jiayi Zheng, Steven P. Dow, ACM Designing Interactive Systems (DIS), 2019.

# Activity [40 min] make an affinity diagram

- Imagine you are designing an interactive system to help children improve the quality of their handwriting.

- *Individually:*

1. Review the transcript and your own notes
2. On post-it notes: write down each example of a problem/situation that you observed in the video

- *In your group:*

3. Organize the post-its into categories using an affinity diagram

Be prepared to share the categories you find

# Project discussion [15min]

- 1<sup>st</sup> Milestone due in 1 week
- Any questions regarding projects?

# On deck...

- Next class (Thursday) ...
  1. No Reading
  2. First Project milestone: Empathy
    - ❖ due on Feb 13

# Extra slides

# What makes a good affinity?

- Hierarchical structure
- Clear language of the labels
  - Short, succinct, invite immediate understanding
- Story language
  - Moving through data quickly so that the mind can be free to generate ideas
- Communicative
  - Bridges the gap between data and design

# References

- Holtzblatt, K., and Beyer, H. (2016). *Contextual design: Design for life*, Elsevier.
- Holtzblatt, K., and Beyer, H. (2015). *Contextual design*, Morgan and Claypool.