

# CS449/649: Human-Computer Interaction

Spring 2017

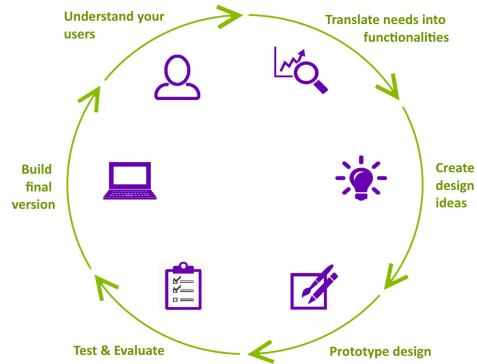
Lecture XXIII

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Anastasia Kuzminykh

## User Centered Design Process

May 1 - June 14



## History of user centered design in HCI

June 19, June 21



## Academic HCI

June 26, June 28



## Special topics in HCI

July 5, July 10



## Course Review

July 12, July 17



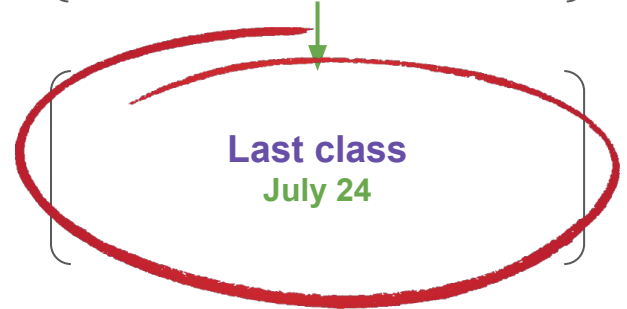
## Presentation 2

July 19



## Last class

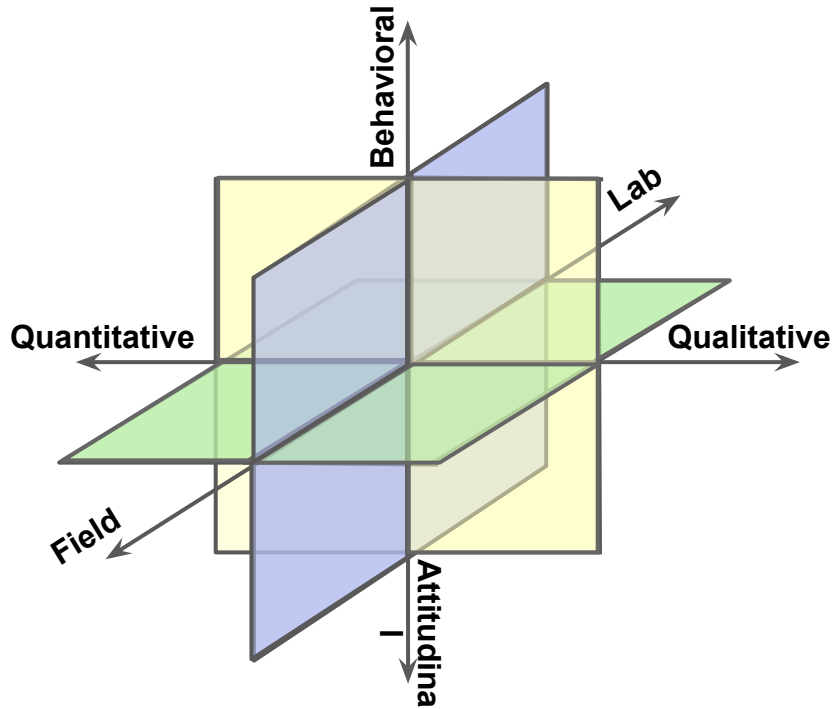
July 24



**Question 1: Name and explain three spectrums of research methods**

**Question 2: Name 4 types of interviews as research methods**

**Question 3: What is the difference between surface and content attention?**



## Quantitative

- Fixed & measurable reality
- Analyzed numerically and statistically

## Qualitative

- Dynamic & descriptive reality
- Analyzed by themes

## Field

- Natural Environment
- Uncontrolled

## Lab

- Artificial Environment
- Well Controlled

## Behavioural

- What people do

## Attitudinal

- What people think / feel

**Final Exam**

**Office Hours**

**Friday, August 4  
7:30 - 10:00 PM  
PAC 3**

**July 25, Aug 3  
01:00 - 02:00  
DC 3540**

**Question 1:**

**1.1 Define the concept of personas**

**1.2 Describe the process of creating personas**

**Question 5:**

**Define the concept of ubiquitous computing.  
Provide examples and explain why your example  
is considered to be ubiquitous computing**

**Question 6:**  
**Name and explain at least 3 principles of ethics in working with human subjects**





Your Users

Ethics

### Principles:

- Respect for human dignity
- Respect for free and informed consent
- Respect for vulnerable persons
- Respect for privacy and confidentiality
- Respect for justice and inclusiveness
- Balancing harms and benefits
- Minimizing harm
- Maximizing benefits

### Research Ethics Board (REB) at Waterloo can:

- Approve, reject, propose changes, or terminate any work with human subjects by members of the university. **This includes you.**
- REB consists of five members (both men and women)
  - One member knowledgeable in ethics
  - Two members have expertise in fields covered by REB
  - One member knowledgeable in biomedical law
  - One member from outside university

Goal is breadth – want a balanced perspective on projects being examined

### **Question 7:**

**For each described situation choose what type of methods would suite the research goal the best - lab or field type of methods. Explain your reasoning. Give an example of a method you would use. Design the study and describe the process.**

**7.1 You want to design a new product to increase efficiency of providing information to airport visitors regarding airport services.**

**7.2 You are designing a news website. You want to understand what is the best way to organize website menus so that users can easily find information of interest**

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**Question 9:**

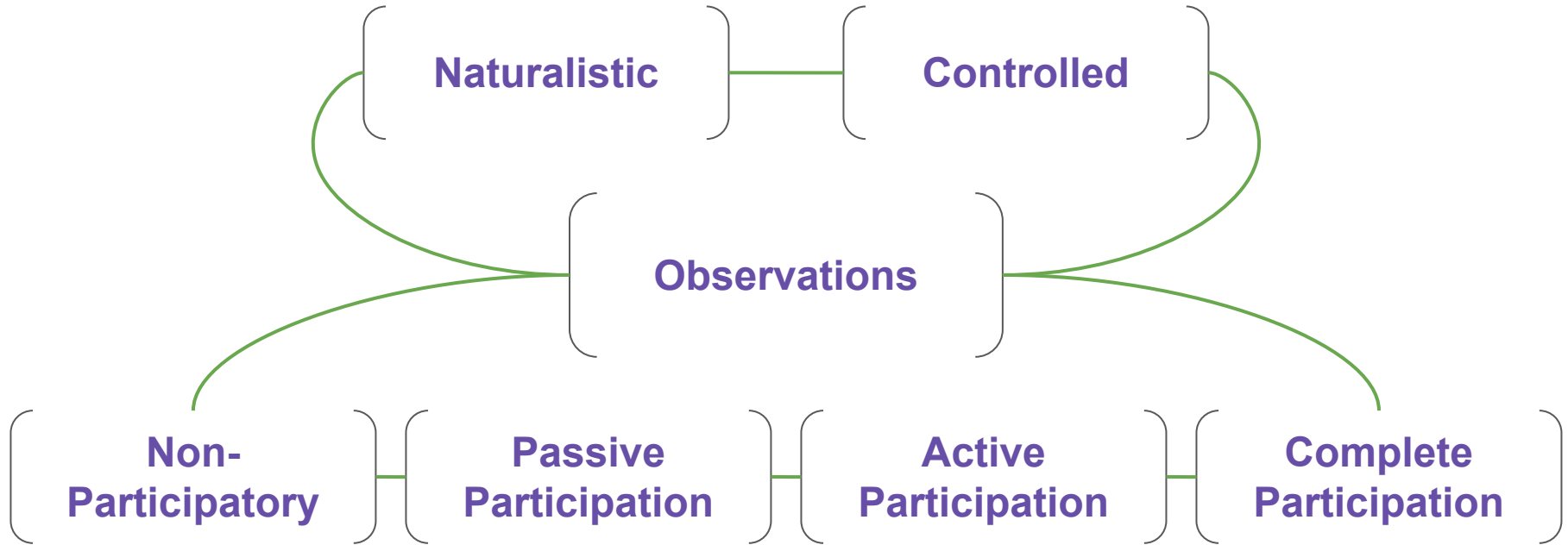
**Describe the difference between system 1 and system 2 thinking**

**Question 10:**

**Name and describe 4 types of observation methods. For each type of observations name at least 1 advantage and 1 disadvantage**



## Understand Your Users: Exploratory Studies

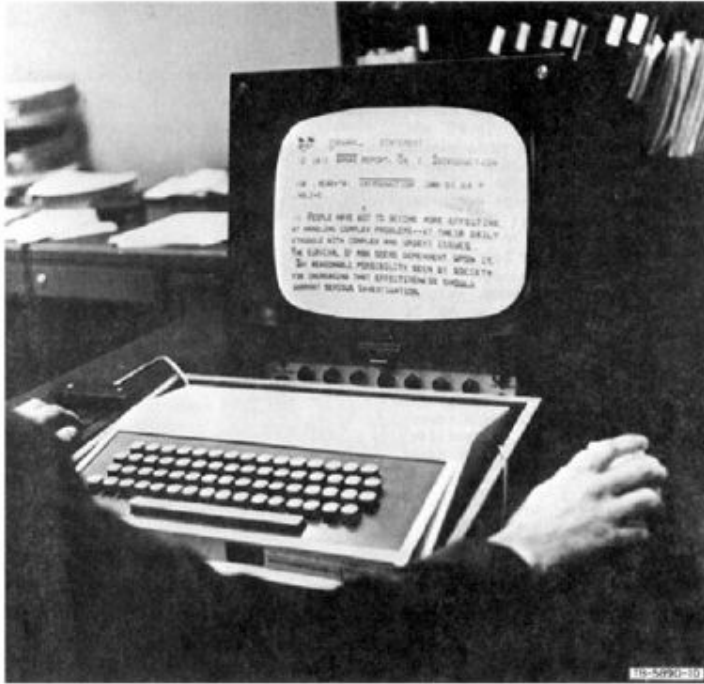


**Question 11:**  
**Who and when showed NLS demo?**





## History



**NLS - oN-Line System** - developed by **Douglas Engelbart** and his colleagues at the **Augmentation Research Center, SRI**

**First demonstrated December 19, 1968** at the **Fall Joint Computer Conference, San Francisco.**

**Was called “The mother of all demos”**

**“We were not just building a tool, we were designing an entire system for working with knowledge.” Douglas Engelbart**



## History

**Waterfall  
Model**

**GUI and WIMP**

**Agile  
Development**

## User Centered Design in Computer Systems

**HFE and  
Ergonomics**

**Socio-Technical  
Systems Design**

**Cognitive  
Psychology**

**Cooperative  
Design**

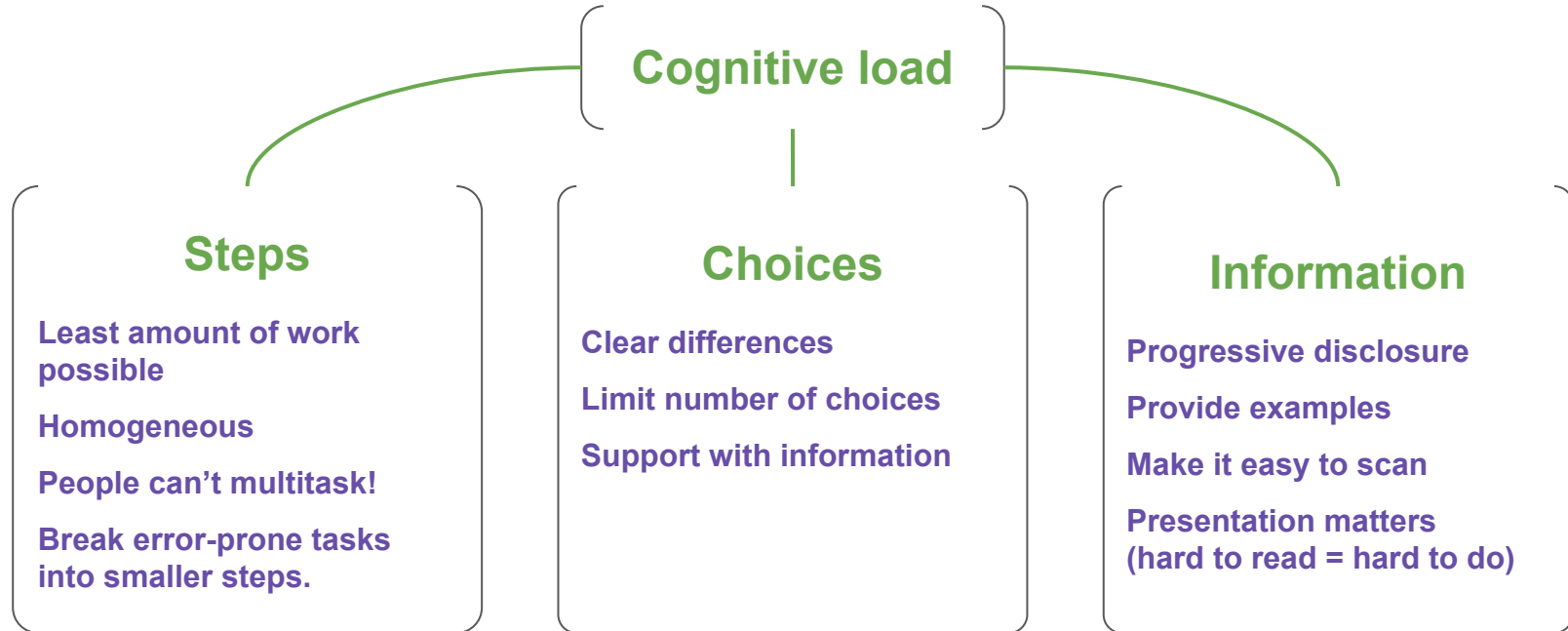
**Interaction  
Design**

**Question 12:**

**Name at least 2 strategies to lower cognitive load related to choice making; for each strategy give an example of how you would use it in a specific design**



## Translating Needs Into Functionalities



### Question 16:

On which of the work models would you best capture of the following piece of information? Indicate the name of the single best model you would use to capture the information. Then sketch the model containing the information indicated in the query.

*You are designing a menu planning application for catering chefs. One catering chef uses a large whiteboard in her kitchen to cost menus. The whiteboard is divided into four or five areas with a whiteboard marker. In each area, you see post-it notes with food items and costs. At the bottom of each area is a sample menu with a dollar figure.*

### Question 17:

Match terms and names by drawing a line:

CSCW	Alan Cooper
Gamification	Irene Greif
User Personas	John Kelley
Waterfall model	Nick Pelling
Wizard of Oz technique	Herbert D. Benington

# CHI 2017

DENVER, CO, USA | MAY 6-11

