



<http://ihm.tumblr.com/post/105778492/word-cloud-for-hci-human-computer-interaction>

CS5340

HUMAN-COMPUTER INTERACTION

October 12, 2016

TODAY

- Data Analysis Lab
- Hot Topics
- Personas
- Research Paper

LAB 2: DATA ANALYSIS

- In teams
 - Start creating an affinity diagram to describe Boston residents' experiences with the housing market & government services
 - Cut out quotes that represent one idea, feeling, opinion, etc.
- Observe other teams' analysis
 - ½ of your team will visit another team and observe their analysis
 - Pay particular attention to the
 - 3 types of goals (experience, end, life)
 - Emergent behavioral variables & variation
 - Report back what was learned (empirically, methodologically)

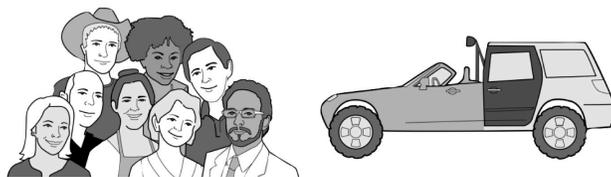
LAB 2: DATA ANALYSIS

- Team pairings: data sharing
 - Teams 1 & 2
 - Teams 3 & 7
 - Teams 4, 5 & 6

REMEMBER

- Normal to feel overwhelmed
- More than one way to build affinity
 - Goal: reveal new & useful design insights
- Go beyond surface-level themes
 - E.g. Likes / dislikes, basic discussion of a feature / place / thing
- No one owns the wall
 - Collaborative building

If you design for everyone, you make no individual happy.



You can design for specific types of users.



Astardik gash
Gufat
Have fun



Migah gash
Be safe
Be comfortable



Shlomo Goltz

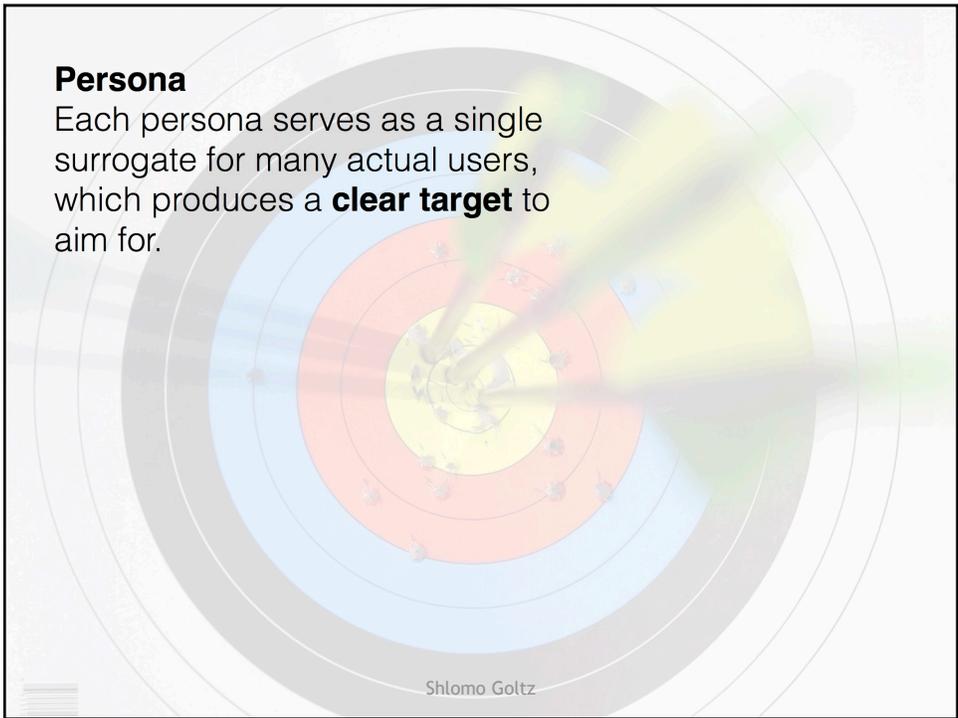
Persona noun per'sōne



Shlomo Goltz

Persona

Each persona serves as a single surrogate for many actual users, which produces a **clear target** to aim for.



Shlomo Goltz

PERSONAS: HISTORY

- *The Inmates Are Running the Asylum*, Alan Cooper (1998)
 - 1 chapter → huge impact on software design industry
 - Power + effectiveness
- Based on experiences as a software inventor, architectural consultant and the design consulting work
- Kathy
 - a key informant interviewed while beginning planning work for software development project
 - project management program
 - Successful; became model for Microsoft Project

PERSONAS: HISTORY

“As I walked, I would **engage myself in a dialogue, play-acting** a project manager, loosely based on Kathy, requesting functions and behavior from my program. I often found myself deep in those dialogues, speaking aloud, and gesturing with my arms.

Some of the golfers were taken aback by my unexpected presence and unusual behavior, but that didn't bother me because I found that this play-acting technique **was remarkably effective for**

- cutting through complex design questions of functionality and interaction,
- allowing me to clearly see what was necessary and unnecessary
- and, more importantly, to differentiate between what was used frequently and what was needed only infrequently.”

https://www.cooper.com/journal/2008/05/the_origin_of_personas

PERSONAS: HISTORY

- Later...
 - A project with Sargeant Technologies
 - Where Alan Cooper was no longer the developer
 - Had to communicate insights learned from interviews to dev team

PERSONAS: HISTORY

- Technique perfected at Cooper Design
 - Counseled to keep a secret
 - “Personas were so simple, clear, and powerful that it seemed only a matter of time before other practitioners discovered the technique for themselves.

When this happened, I would lose my competitive advantage anyway, but if I disclosed what I knew about personas, at least I could receive some credit for contributions to an industry that I loved.

This is what prompted me to write about personas in *Inmates*.”

PERSONAS: CRITICISM

- **“Forget about personas.”** - *Don Norman*
- **“We don’t use personas. We use ourselves.”**
- *37signals*
- **“What is actionable about a persona?”**
- *Robert Hoekman Jr*
- **“Personas are user-centered bull****.”**
- *Steve Portigal*

Elizabeth Bacon & Steve Calde • Catalyze, July 23, 2008

PERSONAS: CRITICISM

- Personas are **fluffy!**
- Personas are **expensive!**
- Personas **don’t design my product** for me; they aren’t actionable
- Personas really **cramp my style**; I just want to design what I like
- How is understanding **today’s users** going to help me **innovate** a new product?

Elizabeth Bacon & Steve Calde • Catalyze, July 23, 2008

PERSONAS: CRITICISM

- Hard to determine whether personas have been developed using real data and if so, how many users each persona reflects
 - Hard to judge generalizability / applicability of persona to target user populations
- Curse of dimensionality
 - “As the specificity of a persona increases (i.e., its number of features, or dimensionality), the proportion of the population that it represents decreases”

Chapman, C. N., & Milham, R. P. (2006, October). The personas' new clothes: methodological and practical arguments against a popular method. In *Proceedings of the human factors and ergonomics society annual meeting* (Vol. 50, No. 5, pp. 634-636). SAGE Publications.

PERSONAS: CRITICISM

- Cannot be sufficiently verified
 - How can we determine if personas are accurate?
 - No demonstrable validity
- How ensure that personas are applied appropriately?
 - When transferred between and across teams
 - Ensure “correct” inferences are made?

Chapman, C. N., & Milham, R. P. (2006, October). The personas' new clothes: methodological and practical arguments against a popular method. In *Proceedings of the human factors and ergonomics society annual meeting* (Vol. 50, No. 5, pp. 634-636). SAGE Publications.

WHY USE PERSONAS?

- Build empathy
- Develop focus
 - Set priorities
- Support brainstorming
 - Imagine what could engage users & what might offend or cause distrust
 - Determine if a single UI is sufficient or if multiple are needed
- Communicate findings & form consensus
- Make and defend decisions
 - Choosing amongst design alternatives
- Measure effectiveness

<https://msdn.microsoft.com/en-us/magazine/dd569755.aspx>
<https://www.smashingmagazine.com/2014/08/a-closer-look-at-personas-part-1/>

HOW AND WHY DO PERSONAS WORK?

Personas are leverage and activate core human abilities:

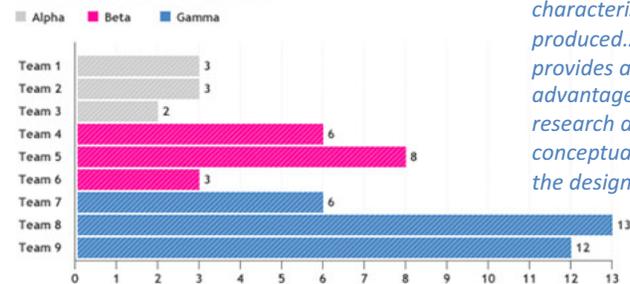
- **Narrative practice**
 - Ability to create, share and hear stories.
- **Concrete thinking**
 - People often relate better to and remember tangible examples, rather than abstractions.
- **Theory of mind (folk psychology, philosophy)**
 - Ability to predict another person's behavior by understanding their mental state.
- **Empathy**
 - Ability to understand, relate to and even share the feelings of other specific people.
- **Experience-taking**
 - Ability to have the “emotions, thoughts, beliefs and internal responses” of a fictional character when reading or watching a story.

<https://www.smashingmagazine.com/2014/08/a-closer-look-at-personas-part-1/>

ARE PERSONS EFFECTIVE?

- Much anecdotal evidence from design leaders
- Little empirical evaluation

Total Heuristic Score by Team



“through using personas, designs with superior usability characteristics were produced...using personas provides a significant advantage during the research and conceptualisation stages of the design process”

Long, F (2009) 'Real or Imaginary; The effectiveness of using personas in product design', Proceedings of the Irish Ergonomics Society Annual Conference, May 2009, pp1-10 Dublin.
InstanceEndEditable

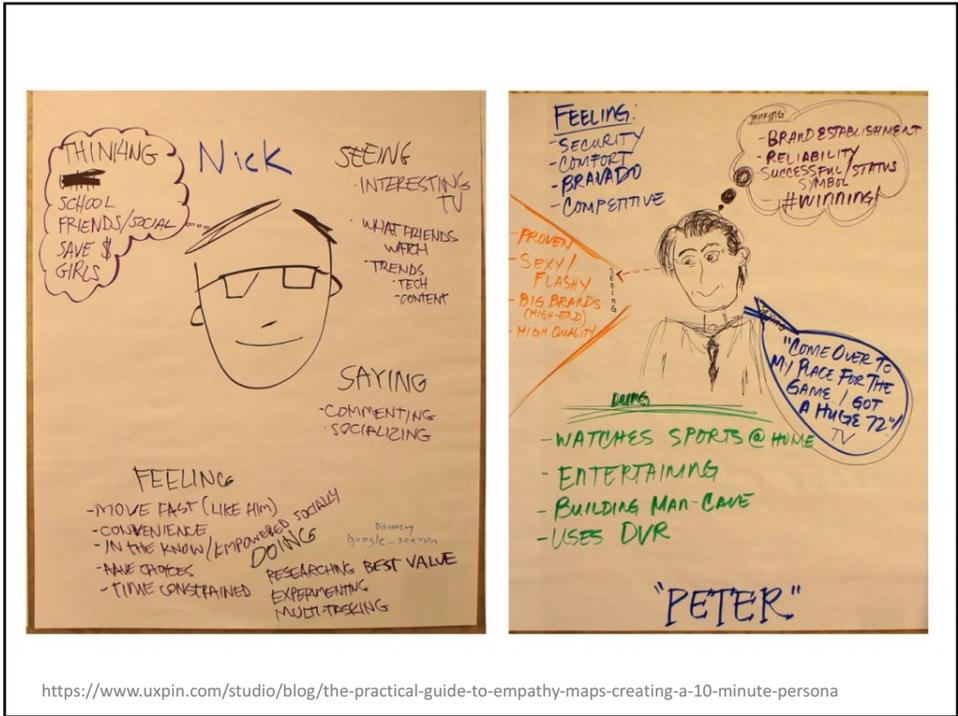
EMPATHY MAPS

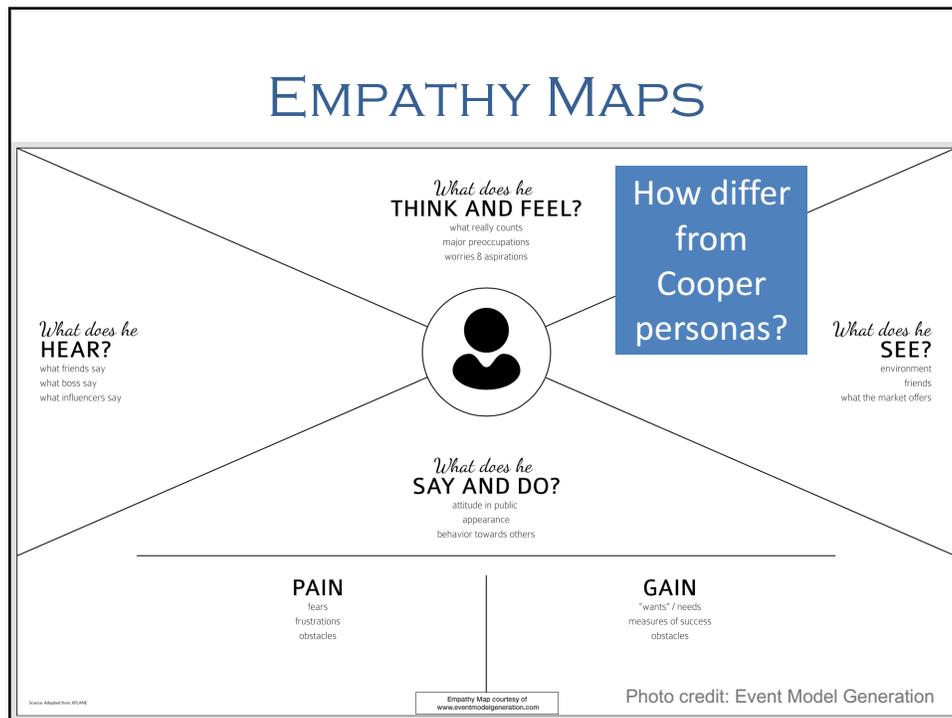
- Lean UX approach
 - quickly document user needs, visually
 - like personas, provide insights into users' challenges and areas for design to make a difference
 - Work best when based on real data

EMPATHY MAPS

- 4 quadrants (per user group)
 - **Say:** What are key words or quotes that help define what your user has communicated?
 - **Thoughts:** what is the user thinking? Beliefs?
 - **Do:** What behaviors or actions were observed or described?
 - **Feel:** What emotions was the user expressing or describing?

- Also
 - Problems: pain points
 - Goals: what the user wants to achieve/accomplish
 - "The user needs a way to _____ because _____."





FROM AFFINITY DIAGRAMMING TO PERSONAS

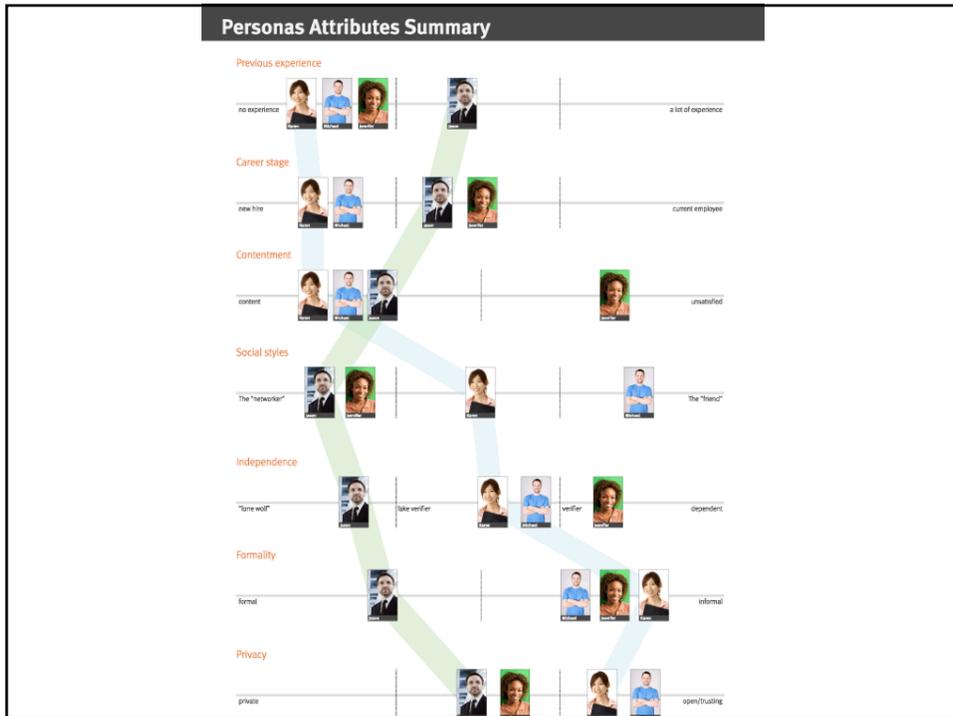
- **Step 1: Grouping by roles/archetypes**
 - Look @ themes in data that highlight broad user groupings
- **Step 2: Identify behavioral variables**
 - Look @ themes
 - Activities, Attitudes, Aptitudes, Motivations, Skills
 - Subcategories can represent points on variable spectrum

FROM AFFINITY DIAGRAMMING TO PERSONAS

- **Step 3: Map interview subjects to variables**
 - Review analysis & transcripts
- **Step 4: Identify significant behavior patterns**
 - Go beyond superfluous patterns
 - Look @ analysis to examine how variables relate
- **Step 5: Synthesize characteristics and define goals**
 - By looking @ data to identify experience/end/life goals & relevant contextual, attitudinal etc. factors

FROM AFFINITY DIAGRAMMING TO PERSONAS

- **Step 6: Check for redundancy & completeness**
 - Gaps? Important findings from analysis not represented in personas?
 - Need to collect more data?
- **Step 7: Designate persona types**
 - Primary: what was most thoroughly represented in your data?
- **Step 8: Expand description**
 - Details should come directly from your analysis



COOPER PERSONAS

Example: Users Mapped Against Behavioral Variables for Online Shopping

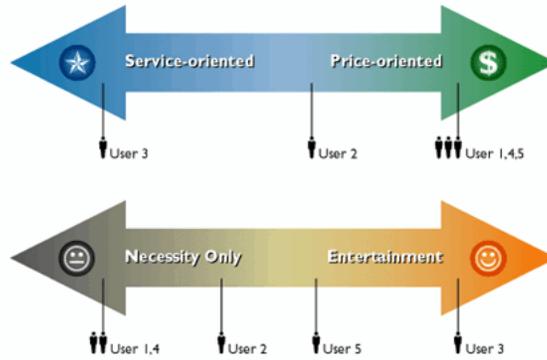


Image: Cooper.com



Image: Vijay Kumar

Jason Sudlow

Strategy Consultant at a major professional services firm | 27 years old



“ To get to the top, you have to make use of all your connections – but make sure to watch out for yourself ”

BACKGROUND

- » With the company for two years
- » Worked at a smaller firm after college
- » Earned an MBA before landing current job

THE LAST TIME I HAD A QUESTION...

...I immediately tried to think of who I knew that would be able to answer my question by going through my Outlook address book. I found a former project member and gave her a phone call to schedule an informal meeting over lunch. I rely on my network of contacts to help me with areas of expertise I am unfamiliar with even though I prefer working alone so that I can demonstrate my individual strengths.

FRUSTRATIONS

- » People discovering my weaknesses
- » Blurring of social and work life
- » Sharing too much of my hard-earned knowledge with others in the company

LIFE GOALS

- » Enjoy an active social life
- » Appear well-connected to others
- » End up at a C-level position
- » Be financially secure while enjoying life's luxuries

EXPERIENCE GOALS

- » Feel in control
- » Take pride in my mastery of the tools
- » Don't waste time with the tool

END GOALS

- » Obtain enough information to allow me to make personal contact with people
- » Get assistance with keeping track of who I know and how I know them

THE MATURE-AGE STUDENT



“ I work during the day and don't want to be disadvantaged by not attending lectures ”

Tracey is bored of her long-standing office job and has decided to study a design course part-time to nurture her creative side. Still working during the day, she needs to be able to watch all lectures online and instant notification when the tutorial timetable changes is vital to arranging her busy work schedule. Tracey relies heavily on communication with her tutor and peers online to keep up with anything she's missed. She does not own a smartphone or tablet and only accesses Moodle nightly from her desktop computer at home.

Tracey Jennings, 42

 TECH SAVVY	 ENGAGEMENT	 VISUAL DESIGN
DEVICES 	FRUSTRATIONS Difficult to navigate Lectures not always recorded No SMS updates	GOALS Lectures easily accessible SMS updates Intuitive interface

BACHELOR OF GRAPHIC DESIGN UNIVERSITY OF CANBERRA FIRST YEAR PART-TIME STUDENT

Jill Anderson



"I'm looking for a site that will simplify the planning of my business trips."

AGE 29
 OCCUPATION Regional Director
 STATUS Single
 LOCATION Portsmouth, NH
 TIER Frequent Traveler
 ARCHETYPE The Planner

Organized	Practical
Protective	Hardworking

Bio

Jill is a Regional Director who travels 4-8 times each month for work. She has a specific region in which she travels, and she often visits the same cities and stays in the same hotel. She is frustrated by the fact that no matter how frequently she takes similar trips, she spends hours of her day booking travel. She expects her travel solutions to be as organized as she is.

Personality

Extrovert	Introvert
Sensing	Intuition
Thinking	Feeling
Judging	Perceiving

Brands



Goals

- To spend less time booking travel
- To maximize her loyalty points and rewards
- To narrow her options when it comes to shop

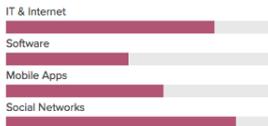
Frustrations

- Too much time spent booking - she's busy!
- Too many websites visited per trip
- Not terribly tech saavy - doesn't like the process

Motivations



Technology



EZ-Write primary persona: the main user type



Fred Fish: Corporate Chef

"Get me out of the office & into the kitchen."

Employer: Boise Controls

Background: Masters from Johnson & Wales University

Computer skills: Novice

Quick take on Fred

Computer skills	Novice Expert
Job situation	Employee Director Manager Vice president
Computer type	Netbook Laptop Desktop
Computer tools	Advanced features Coding tools Email Web browsing Word processing
Background	Business Engineering Marketing Management Other: cooking

Photo from Flickr, some rights reserved

Key goals

Fred doesn't get his hands dirty the way he used to (literally). He stops in at all six Boise Controls sites as often as possible to stay in touch with cooks and cooking. He wants to learn computer tools, but not at the expense of managing his kitchens.

A day in the life

Once a month, he meets with the head chefs and to plan the menu. When they're done, he sends it to his staff and his manager.

He's not a computer whiz. On a good day, he can drag in some clip art and do some formatting with fonts. Once in awhile, he'll format menus with the new editor they on his MacBrook Pro.

He's figured out a lot, but not everything. He always had a problem sending a message without the attachment, or

an attachment with no message. That's annoying and embarrassing and used to keep him away from computers.

The new EZ-Write system seems to have some features to help with that. Anytime he writes something like "...see the attached menu..." the program prompts him if he doesn't attach something. If there were a Nobel Prize for software, he'd nominate the people who designed this.

Chefs are different from other users
 Computers are just tools for a chef. Fred would rather use a cutting board than a keyboard.



Photo credit: Kazuki Kohjima

Persona Name
Age:
Key attribute #1:
Key attribute #2:

Background
Highlights persona's demographic information.
Describes persona's current life and how the product/service fits into her life.

Objectives
Persona's goals and needs for product/service

Pain Points
Persona's concerns and problems

PERSONAS: COMMON FEATURES

- name
- demographic information
- descriptive title (role / archetype)
- quote
- a day-in-the-life narrative / personal story
- end goals (explicit and tacit)
- photograph

<https://www.smashingmagazine.com/2014/08/a-closer-look-at-personas-part-2/>



Gamma: illustration **Beta:** photograph

“The Gamma group were less enthusiastic (than the Beta group) about using the persona and through discussion it became clear that they **did not empathise with 'Marie' to the same extent** as the Beta group did.

The group discussed the fact that their persona was represented by an illustration and therefore was **obviously not a real person...**

The students also discussed how **the illustrated image of the persona made them feel that they could pick and choose** from her characteristics and even **superimpose their own additional features** and information onto her character.”

Long, F (2009) 'Real or Imaginary; The effectiveness of using personas in product design', Proceedings of the Irish Ergonomics Society Annual Conference, May 2009, pp1-10 Dublin.

REMEMBER

- Keep # of personas small
- Base personas on real data
 - Provisional personas can be used temporarily but goal is to get to data-grounded personas

FOR NEXT WEEK

- Lab 2 reflection
 - Due Friday 10/14, 6pm
- Read
 - [IDEO Brainstorming Rules](#)
 - Design, Prototyping & Construction (PSR CH11).
 - Rettig (on Blackboard).
 - Rubin & Chisnell Ch 9 on Blackboard.
- Research Paper Circles
 - Design: Paper Prototyping
 - Dow et al.