




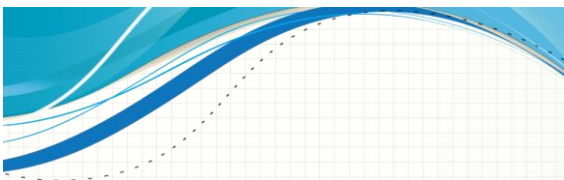
HUMAN FACTORS FOR SOFTWARE DEVELOPERS-2

Can Kültür, PhD
Summer 2015, CMU



Previously

- We talked about understanding users and human perception.



VISUAL DESIGN & PERCEPTION

– GESTALT PRINCIPLES –
– BASIC DESIGN PRINCIPLES –



What do you see? How many?

| || || |



How do you percieve?

[] [] []



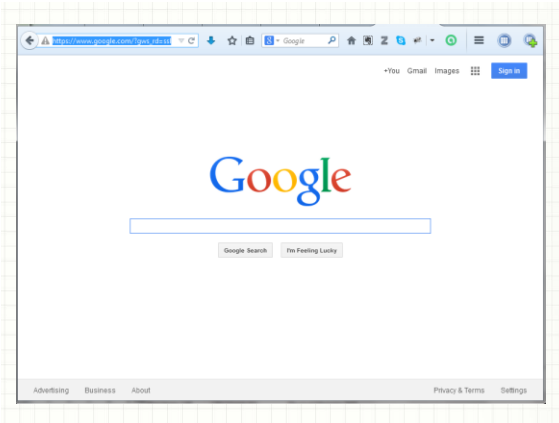
How do you percieve?

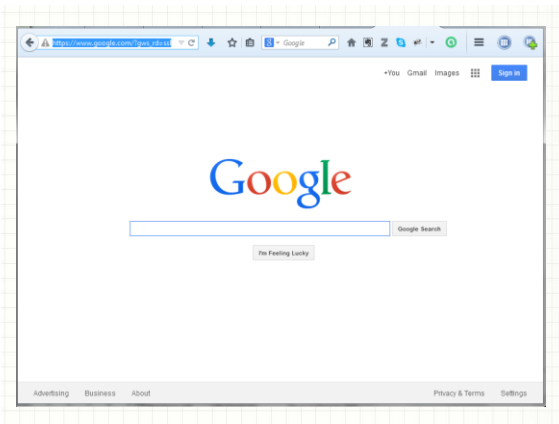
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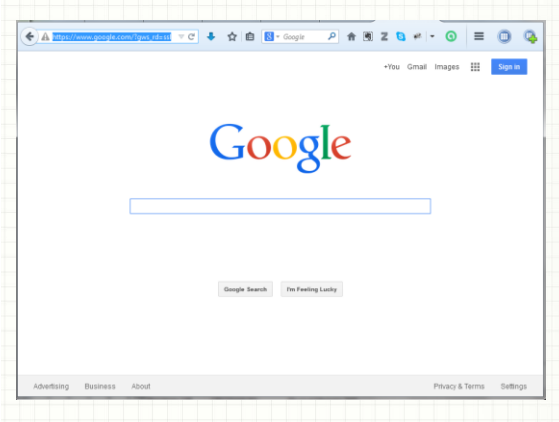


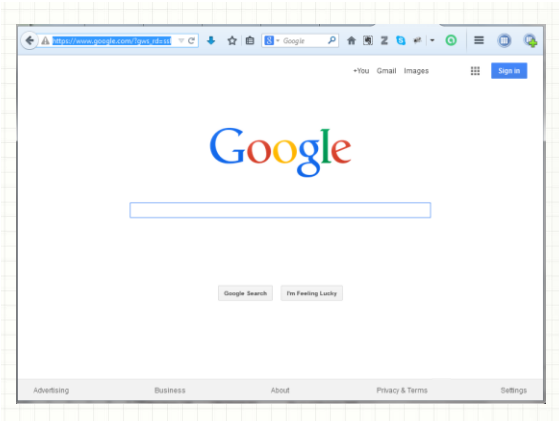
How do you percieve?

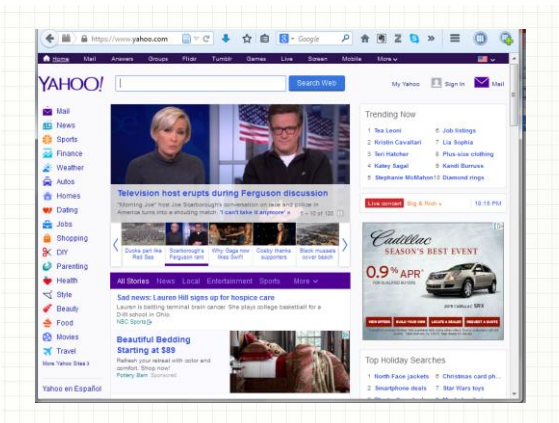
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How they talk to their user?

What is their main message?



Gestalt

- German word for "form"
- In gestalt psychology it means "unified whole" or "configuration"

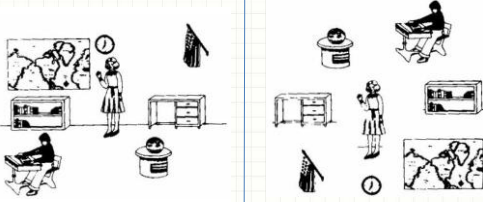


Gestalt Principles



a clip
a strip
one identity apart
something entirely different together...
the whole is greater than the sum of its parts

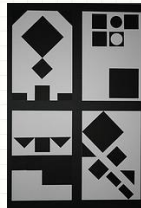
Which is easier to remember?



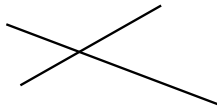
Gestalt Principles

- The **sum of whole** is greater than its **parts**.
- Each part have meaning on their own, but taken together, the meaning may change.

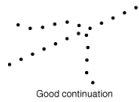
Law of Balance/Symmetry



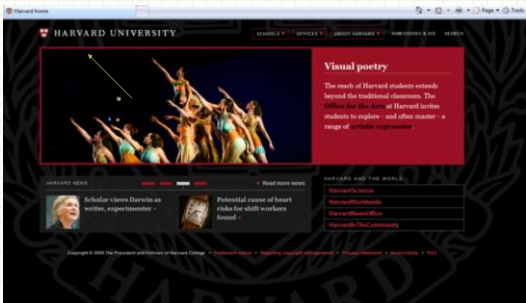
Law of Continuation



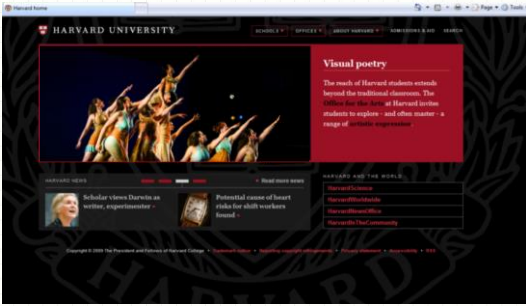
People tend to continue contours whenever the elements of a pattern establish an implied direction



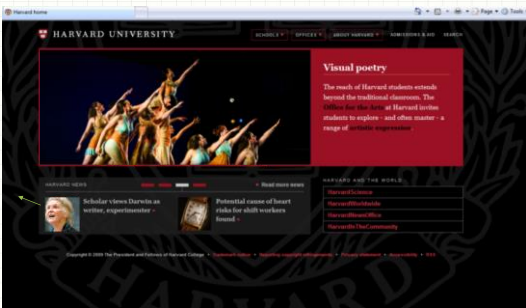




What if we change some lines?



What if we change some lines?



What if we change some lines?

Law of Closure



Law of Closure



Our minds will tend to complete objects that are incomplete

Law of Figure-Ground



Vase



Two Faces



A stimulus will be perceived as separate from its ground.

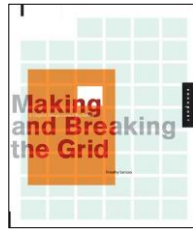
Law of Focal Point



Every visual presentation needs a focal point, called the center of interest or point of emphasis.

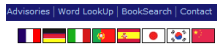


Law of Focal Point



- This focal point catches the viewer's attention and persuades the viewer to follow the visual message further

Law of Isomorphic Correspondence



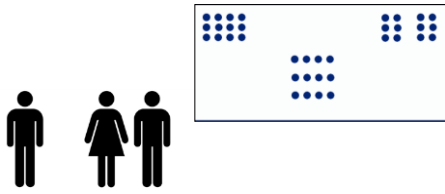
if we see a familiar symbol we make assumptions about the rest of the image.

Law Of Prägnanz (Good form)



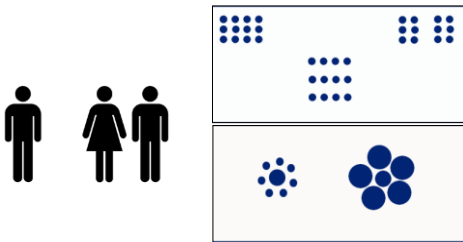
A stimulus will be organized into as good a figure as possible. Good means symmetricla, simple and regular.

Law of Proximity



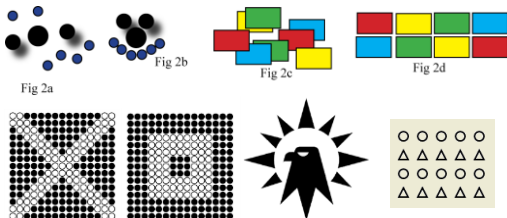
Closely spaced elements are related and those further apart are unrelated.

Law of Proximity



Elements that are closer together will be perceived as related or as a coherent object.

Law of Similarity



Elements that look similar will be perceived as part of the same form

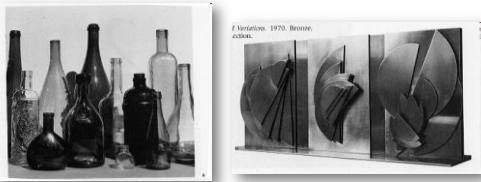
Law of Simplicity



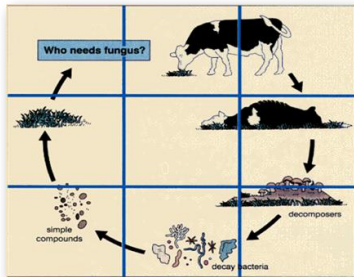
- The simplest way to achieve simplicity is through **thoughtful reduction**
- **Organization** makes a system of many appear fewer

Law of Unity/Harmony

Congruity or agreement exists between elements of a design.
They look as if they belong together



Law of Unity/Harmony

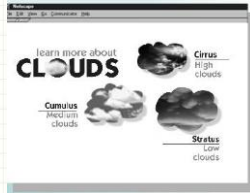
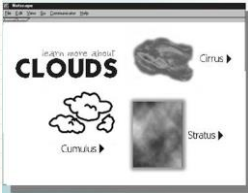


Law of Unity/Harmony



Law of Unity/Harmony

Which one is better?



Color



Structure
Colors
Font style
Expressions

Design decisions

One column Two columns Three columns Menu plus tabs

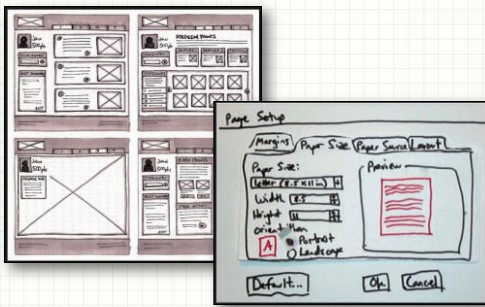
So,
HOW TO BE SUCCESSFUL?

FOCUS ON USER

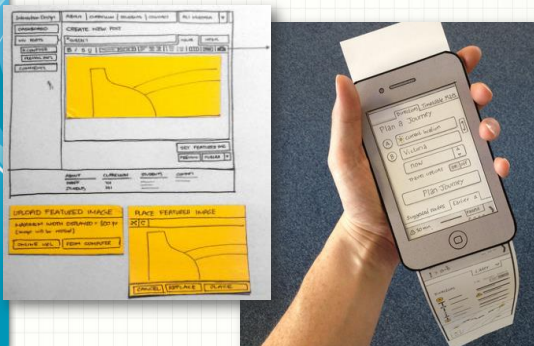
Usability testing & Prototyping

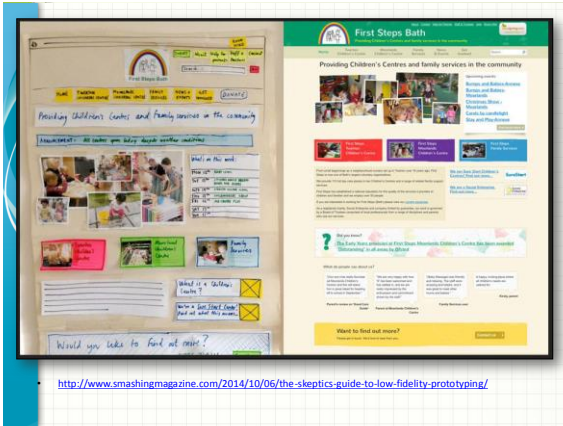
- You have to test (you know too much)
- Testing one user is 100% better than testing none
- Testing one user early in the project is better than testing 50 near the end

Usability testing & Prototyping

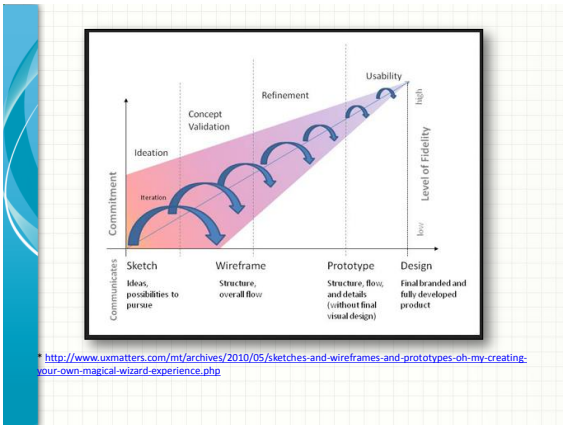


Usability testing & Prototyping

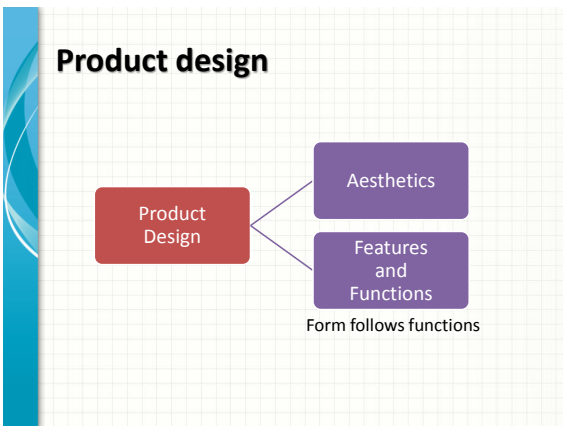




<http://www.smashingmagazine.com/2014/10/06/the-skeptics-guide-to-low-fidelity-prototyping/>

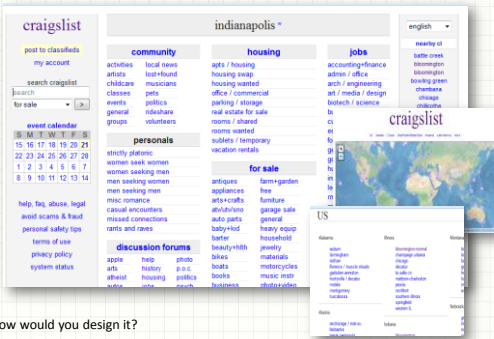


<http://www.uxmatters.com/mt/archives/2010/05/sketches-and-wireframes-and-prototypes-oh-my-creating-your-own-magical-wizard-experience.php>



UX Design

- Deals with context
- Design for **experience** → use matters
- The more complex a product is the more difficult to identify how to deliver a successful experience to the user.



How would you design it?

<http://indianapolis.craigslist.org/> -----
<http://www.craigslist.org/about/sites>

HCI Methods

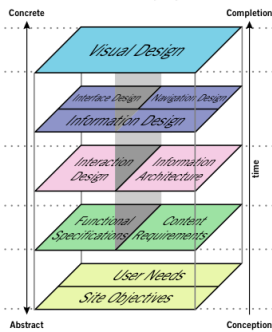
What I can do

- Communication Design
Typography
- Wireframes
Think Aloud
Heuristic Evaluation
- Storyboards
Cognitive Walkthrough
- Contextual Design
Affinity Diagrams
- Contextual Inquiry
Interviews
Focus Setting

Julian Missig, 2006

Elements of User Experience

Jesse James Garrett, 2000



- <http://www.msOE.edu/welcome>







