Welcome to Interface Aesthetics 2008!
OUTLINE

What is aesthetics?
What is design?
What is this course about?
Why interface aesthetics?
Why interface aesthetics?
Technological as part of everyday culture, so that it’s beautiful and intriguing, so that it has emotive as well as functional qualities.

[Moggridge, 2006]
If we only design the function of something, not what it also communicates, we risk our design being misinterpreted. Worse, we waste an opportunity to enhance everyday life.

[Moggridge, 2006]
Designing for a new broad spectrum of people.
Phases in the adaptation of technology [Liddle, 2006]

- **Enthusiast phase**
  - “Exploit me!”

- **Professional phase**
  - “Help me work!”

- **Consumer phase**
  - “Enjoy me!”
Aesthetics in HCI
Aesthetics in HCI

Visual attractiveness of a web site affected users’ enjoyment as well as their perceptions of ease of use and usefulness.

[van der Heijden, 2003]
Aesthetics in HCI

Aesthetics is a strong determinant of the pleasure the user experiences during the interaction.

[Hassenzahl, 2004]
Does aesthetics have an effect on the user’s performance?
<table>
<thead>
<tr>
<th>usability</th>
<th>aesthetics</th>
</tr>
</thead>
<tbody>
<tr>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>mid</td>
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<td>high</td>
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Aesthetics and usability [Ben-Bassat, Meyer, Tractinsky, 2006]
Manipulating aesthetics [Ben-Bassat, Meyer, Tractinsky, 2006]

“low aesthetics” system

“high aesthetics” system
Results of the study by Ben-Bassat et al.
The more beautiful, the higher the perceived usability. More aesthetic systems were perceived to be slightly more usable.

[Ben-Bassat, Meyer, Tractinsky, 2006]
Usable things appear more beautiful
High usability systems were always judged as more aesthetic.

[Ben-Bassat, Meyer, Tractinsky, 2006]
Perceived usability and aesthetics are positively correlated.
Fast judgment on aesthetics and usability

Importance of first impressions in shaping users’ attitudes towards interactive systems.

[Ben-Bassat, Meyer, Tractinsky, 2006]
No positive aesthetics effect on performance.

Performance with low aesthetic systems was slightly better than with high aesthetic systems.

[Ben-Bassat, Meyer, Tractinsky, 2006]
Aesthetics has a positive effect on perceived usability, but not on performance.
Limitations?
“low aesthetics” system

“high aesthetics” system
Limitations
- Limited aspect of aesthetics
- Nature of the task
- 150 engineering students
What is aesthetics?
What is aesthetics?
The philosophical study of beauty and taste.

Examines what makes something beautiful, sublime, ugly, disgusting, cute, fun, etc.
Your top 10 beautiful objects
Please write them down on the Post-Its.
Aesthetics in design
Three levels of human processing

Visceral level
Behavioral level
Reflective level

[Norman, 2004]
AESTHETICS

Visceral level
What nature does. Physical features, look and feel, dominate.
Visceral design is about initial reactions. “I want it!” And then you might ask, “What does it do?”
Visceral design is about initial reactions. “I want it!” And then you might ask, “What does it do?”
The principles underlying visceral design are consistent across people and cultures. If you design according to these rules, your design will always be attractive even if somewhat simple.
Behavioral level
Behavioral design is all about use. Appearance doesn’t really matter. Performance does. What usability practitioners focus on.
Expectation driven. Positive affect results from feeling in control. Lack of control and mismatch between expectations and actual experiences produces negative affect.
Reflective level
It is all about message, about culture, and about the meaning of an object or its use.
What owning it means for us. Concerned with reflective self-image.
Conscious and aware of emotional feelings. It uses the rich history of prior experiences, one’s own self image, and personal meanings to evaluate any experience.
### Visceral
- What nature does
- Immediate reaction
- Look and feel dominate
- Consistent across people and cultures
- Sub-conscious

### Behavioral
- All about use
- Performance matters
- Appearance doesn’t matter
- Expectation driven
- Usability
- Sub-conscious

### Reflective
- All about the message
- Reflective self-image
- What owning it means for us
- Rich history of prior experiences
- Conscious and intellect driven
HCI as both a research and design discipline

The field is analytical, capable of finding fault, but not capable of actual design. We need to become designers, not just analyzers.

[Norman, 2004]
What is design?
**Design**

**Verb:**
The process of originating and developing a plan for a product, structure, or component.

**Noun:**
The final plan or the result of implementing that plan.
Design in different disciplines [adopted from Moggridge, 2006]
Design in different disciplines [adopted from Moggridge, 2006]

- Industry design
- Physical design
- Mechanical engineering
- Production engineering
- Physical sciences
- Graphic design
- HCI
- Computer sciences
- Web design
- HCI
- Hardware engineering
- Software engineering
- Interaction design
- Digital design
- Human & subjective
- Technical & objective

Physical design: Industry design, physical design, mechanical engineering, production engineering, physical sciences

Human & subjective: Graphic design, HCI, web design, interaction design, computer sciences

Digital design: Industry design, graphic design, web design, interaction design, HCI
Design
Content vs. container
The content is important but...
There is what you say and how you say it

[Paul Watzlawick, 1922]
DESIGN

You cannot not communicate

[Paul Watzlawick, 1922]
Design as communication

Design is a conversation between designer and user, even though the designer is no longer present once the user enters the scene.

[Norman, 2004]
Conceptual models [Norman, 2004]
Designed affordances
Messages from designer to user, attracting attention to the set of desired possible actions.

[Norman, 2004]
Artists and designers are trained to use the language of implicit meanings to add a rich communicative element over and above direct functional communication.

[Moggridge, 2006]
Good designers learn the rules before they start breaking them.
Good design comes from the successful synthesis of a solution that recognizes all the relevant constraints, and the nature of the constraints defines the difference between design disciplines.

[Moggridge, 2006]
Core design skills

1. Synthesis
2. Frame/reframe
3. Envision alternatives
4. Choose best approach
5. Visualize and prototype
“Elements of Design Process” [Moggridge, 2006]

- constraints
  - evaluation
  - prototyping
  - visualization
  - selection
- uncertainty
  - envisioning
  - ideation
  - framing
  - synthesis

Interactions:
- Constraints lead to uncertainty.
- Uncertainty leads to evaluation.
- Evaluation leads to prototyping.
- Prototyping leads to visualization.
- Visualization leads to selection.
- Selection leads to envisioning.
- Envisioning leads to ideation.
- Ideation leads to framing.
- Framing leads to synthesis.
- Synthesis leads back to constraints.
Iterative non-linear process
Like a pinball game.
“Elements of Design Process” [Moggridge, 2006]
Design is never done
GRiD Compass computer: first sketch [Moggridge, 1980]
Design challenges change all the time
### Hierarchy of complexity [Moggridge, 2006]

<table>
<thead>
<tr>
<th>Subject</th>
<th>Description</th>
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<tbody>
<tr>
<td>Ecology</td>
<td>The interdependence of living things, for sustainable design</td>
</tr>
<tr>
<td>Anthropology</td>
<td>The human condition, for global design</td>
</tr>
<tr>
<td>Sociology</td>
<td>The way people relate to each other, for the design of connected systems</td>
</tr>
<tr>
<td>Psychology</td>
<td>The way the mind works, for the design of human-computer interactions</td>
</tr>
<tr>
<td>Physiology</td>
<td>The way the body works, for the design of physical man-machine systems</td>
</tr>
<tr>
<td>Anthropometrics</td>
<td>The sizes of people, for the design of physical objects</td>
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</table>
What this course is about
Technology as part of everyday culture, so that it’s beautiful and intriguing, so that it has emotive as well as functional qualities.

[Moggridge, 2006]
Design in different disciplines [adopted from Moggridge, 2006]

- Physical design
  - Industry design
  - Physical ergonomics
- Technical & objective
  - Mechanical engineering
  - Production engineering
  - Physical sciences
- Human & subjective
  - Graphic design
  - HCI
- Digital design
  - Web design
  - HCI
  - Interaction design
- Computer sciences
  - Hardware engineering
  - Software engineering

Human & subjective and technical & objective intersect.
Designed affordances as communication devices

Landscape of novel UI design approaches.
How to communicate meanings through design

Look at design principles.
Course schedule

<table>
<thead>
<tr>
<th>Topic</th>
<th>Date</th>
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<tbody>
<tr>
<td>Introduction</td>
<td>1/28</td>
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<tr>
<td>Beyond Desktop</td>
<td>2/04</td>
</tr>
<tr>
<td>Typography I</td>
<td>2/11</td>
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<tr>
<td>Typography II</td>
<td>2/25</td>
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<tr>
<td>Layout &amp; the Grid</td>
<td>3/03</td>
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<tr>
<td>Workshop I: Type / Layout</td>
<td>3/10</td>
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<tr>
<td>Color I</td>
<td>3/17</td>
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<tr>
<td>Color II / Symbols &amp; Iconography</td>
<td>3/31</td>
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<tr>
<td>TBD</td>
<td>4/07</td>
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<tr>
<td>Midterm Critique</td>
<td>4/14</td>
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<tr>
<td>Design for Dynamic Display / Web</td>
<td>4/21</td>
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<tr>
<td>Workshop II: Web design</td>
<td>4/28</td>
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<tr>
<td>Synthesis</td>
<td>5/05</td>
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<tr>
<td>Exhibition</td>
<td>5/12</td>
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</tbody>
</table>
Course exhibition
1. Artifact
2. Print media
1. Artifact

Website or a physical artifact you are working on.
2. Print media
Describe the process of your design work.
The course format
Lectures, in-class exercises, and discussions.
The course is NOT about How to use tools, implementing “working prototypes,” or a complete graphic design course.
Week 2
Beyond desktop
Homework for week 2

Think about your favorite object (could be a physical thing or a virtual thing) and describe its aesthetic quality based on the three levels of processing — Visceral, Behavioral, Reflective — we have discussed in the class.

Post your writing on the course website with a photo or a sketch/illustration of the object. Please submit your post by Sunday evening.
course description

How does good design enhance or facilitate interaction between people? How does good design make the experience people have with computational objects and environments not just functional, but emotionally engaging and stimulating? This semester seminar will cover new interface metaphors beyond desktops (e.g., for mobile devices, computationally enhanced environments, tangible user interfaces) but will also cover visual design basics (e.g., color, layout, typography, iconography) so that we have systematic and critical understanding of aesthetically engaging interfaces. Students will get a hands-on learning experience on these topics through course projects, design critiques, and discussions, in addition to lectures and readings.

teaching team

- Kimiko Ryokai, kimiko(at)ischool.berkeley.edu
- Daniela Rosner, daniela(at)ischool.berkeley.edu

auditing policy

If you would like to audit the course, we ask that you please email us and complete the week’s assignment before arriving.

grading

- 20% Weekly mini-assignments (weekly blog posts)
- 20% Participation
- 60% Final project (30% artifact, 30% print)
Thanks!