### Outline

- Simplification
- Small Multiples
- Typography & Grid systems
- Things to Avoid
- Color
- Proportion & Scale
- Design economy
- Visualization

---

#### Quotes: Mullet and Sano

“Design is not something that can be applied after the fact, when the fundamental organization of the product has already been determined—though this is indeed a common misconception. To be effective, design must be an integral part of the product development lifecycle.”

#### Quotes: Mihai Nadin

“Method helps intuition when it is not transformed into dictatorship. Intuition augments method if it does not instill anarchy. In every moment of our semiotic existence, method and intuition complement one another.”

#### Quotes: Antoine de Saint Exupery

“In anything at all, perfection is attained not when there is no longer anything to add, but when there is no longer anything to take away.”

---

#### Simplification & Reduction
London Underground

Small Multiples

• Economy of line
• Many similarities enable us to notice differences

International Women’s Day

Reid Miles, Blue Note Cover

Jan Tschichold’s Revolution

Type Classifications

• Typeface (Arial) vs Font (Arial Bold)
• Serifs: Structural details in letters that help the reader connect them

<table>
<thead>
<tr>
<th></th>
<th>Option</th>
<th>Font</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roman</td>
<td>answ</td>
<td>answ</td>
</tr>
<tr>
<td>Oblique</td>
<td>answ</td>
<td>answ</td>
</tr>
<tr>
<td>True italic</td>
<td>answ</td>
<td>answ</td>
</tr>
</tbody>
</table>
Asymmetric Typography

How blocks used to be arranged in magazines. Schematic, thoughtless centering of blocks (= ugly).

The same blocks, correctly arranged in the same type-area. Constructive, meaningful, and economical (= beautiful).

JAN TSCICHOLD

Grid Systems

• A key pattern for implementing rationality, modernism, asymmetry
• Note that no elements are “centered”

Quotes: Bringhurst & Tufte

“Some space must be narrow so that other space may be wide, and some space must be emptied so that other space may be filled.”

– Robert Bringhurst
The Elements of Typographic Style

“Information consists of differences that make a difference.”

– Edward Tufte
Envisioning Information

Avoid

• Clutter
• Too much in each screen
• Hard to scan

Avoid

Interference between competing elements

Excessive Detail & Dimensionality

IMG: Kevin Mullet and Darrell Sano, Designing Visual Interfaces
Avoid

Overly literal translation

Avoid

Arbitrary Component Dimensions

Random Window Sizes and Layouts

Avoid

“Pridefully Obvious Presentation”

Color

• Hue is gradation of colour
• Saturation/purity is intensity of the hue
• Luminance is the brightness in an image

Color Spaces

Technology-Centered Colors

• Nice Hex codes, “evenly” distributed
• But yowch! Lime green and hot pink?
Human-Centered Colors

- Munsell (left): Perceptually based
- Pantone (right): Functionally based

Color is problematic

- On-screen color varies widely from device to device for two reasons
- The device may not be able to display that color (e.g. #AF5234), replacing it with something else
  – Web safe sometimes helps here
- The presentation of that color
  – Key: no two monitors looks alike

Color (Java L&F)

- Six color semantic scheme
- Clean, consistent look
- Easy on eyes (mostly gray)

Color: (Edward Tufte)

- Using luminance instead for altitude. Sea is shades of blue (darker -> deeper) and land is brown (in the replacement image, green) (darker -> higher). Better.

How to get color right

- Design in grayscale first
- Keep luminance values from grayscale when moving to color
Palm’s Design Economy

Tree Maps (SmartMoney)

Tree Maps (PhotoMesa)

Visualization

- Tree maps
- Design Galleries
### Some Starting Points

- Gather materials you find successful  
  - Could be from a very different domain  
  - “Good artists borrow, great artists steal” - Picasso  
- Include visual design professionals in the iterative design cycle

### Further Reading

- Kevin Mullet and Darrell Sano, *Designing Visual Interfaces*  
- Edward Tufte’s books and course  
- Anne Spalter, *The Computer in the Visual Arts*  
- Robin Williams, *The Non-Designer’s Design Book*  
- Typography  
  - Jan Tschichold, *The New Typography*  
  - Robert Bringhurst, *The Elements of Typographic Style*  
  - http://www.adobe.com/type/

### Further Reading

- Color: Charles Poynton, *A Technical Introduction to Digital Video*  
  - also his SIGGRAPH course  
  - web http://www.inforamp.net/~poynton/  
- Typography on the web  
  - http://www.microsoft.com/typography/

### Summary

- Grid systems help us put information on the page in a logical manner  
  - similar things close together  
- Small changes help us see key differences (e.g., small multiples)  
- Abstraction is a key to design  
- RGB color space leads to bad colors  
- Use color properly – not for ordering!  
- Avoid clutter