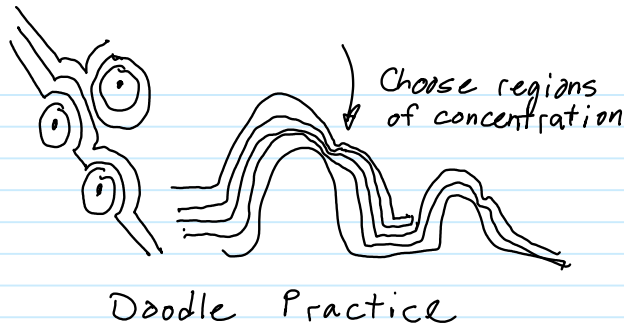


# 13 Color

Saturday, February 20, 2016 10:51 PM

Today:

- 10 minute team time
- Housekeeping
- Schedule
- New text resources
- Universal aesthetics topics
- Color



## Housekeeping:

3 ITLL lockers available 48" x 54" x 36" (LxWxH) ; see Kai Amey; first come first served. Free, open storage in 1B bay along the RIGHT side. Must not block access to projects on the LEFT. I have a placeholder for 1 spot in back corner. Space will fill, take now.

**Idea Forge:** 9 Lockers available, and shared locked room storage. See Shirley Chessman. Act soon!

## Schedule:

Can't do in-class sketching or clay, but can do 5 pm workshops by Kara Priest, artist and art instructor  
1 or 2 hrs x 3 sessions? Probably M 3/7, W 3/30, M 4/4

A *Faster Horse* dinner/movie Weds 3/9, 5 pm, yes? Pizza or subs?

When to have team evals? After design review?

### Lecture topics coming up:

Universal Aesthetics

20th Century design aesthetics timeline

Case study: The Chair

Chair design will be case study, including Taschen and Phaidon curation, plus more detailed look at Eames/Herman Miller lounge chair



\$4,935.00USD

## New text resources in my office library:

*Phaidon Design Classics, Volumes 1, 2 and 3.* London ; New York: Phaidon Press, 2006.

The three-volume book is an authoritative collection of design classics, which will include 999 industrially manufactured products, carefully selected by a group of experts. From cars to furniture, from tableware to cameras, from everyday objects to aeroplanes, this breadth of classic design has never before been collated. These volumes will be the sourcebooks on design from the early 1800's to the present, bringing together patents, prototypes, old advertisements, original drawings, images showing the process of manufacture, as well as rare archival photographs. Over fifty authors ranging from designers to curators, critics, and academics, have contributed with short texts for each objects, providing detailed research and precise information. Each artifact gets 2 pages

Available as an app for iPad, \$15 (hardcopy is \$160)





From <[https://www.google.com/search?q=phaidon+design&tbm=isch&tbo=u&source=univ&sa=X&ved=0ahUKewiPnf\\_A25PLAhVELmMKHf7LCyYQ7AkIRa&biw=1010&bih=327](https://www.google.com/search?q=phaidon+design&tbm=isch&tbo=u&source=univ&sa=X&ved=0ahUKewiPnf_A25PLAhVELmMKHf7LCyYQ7AkIRa&biw=1010&bih=327)>

Taschen, publisher of **inexpensive** art and design texts. <https://www.taschen.com/>

TASCHEN. "Design of the 20th Century. TASCHEN Books (Bibliotheca Universalis)." =[https://www.taschen.com/pages/en/catalogue/design/all/45407/facts.design\\_of\\_the\\_20th\\_century.htm](https://www.taschen.com/pages/en/catalogue/design/all/45407/facts.design_of_the_20th_century.htm). \$20

A-Z plus timeline. 2 page spread per artifact. We will discuss timeline in lecture after universal aesthetics.

TASCHEN. "1000 Chairs. TASCHEN Books (Bibliotheca Universalis)." Accessed February 25, 2016. [https://www.taschen.com/pages/en/catalogue/design/all/45416/facts.1000\\_chairs.htm](https://www.taschen.com/pages/en/catalogue/design/all/45416/facts.1000_chairs.htm). \$16.00

Here is a free eBook on details of Arts and Crafts style design. A long recipe/tutorial from 1916: Varnum, William Harrison. *Industrial Arts Design :a Textbook of Practical Methods for Students, Teachers, and Craftsmen* /. Peoria, Ill. :, c1916. <http://hdl.handle.net/2027/wu.89057179780>.

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[ 8 ]



PLATE 2

## Universal Principles of Design (UPDes)

Book and video series, available on Lynda.com (<http://www.colorado.edu/lynda>)

Many good functional design rules, based on ergonomics, psychology, market research; what do people do when they interact with designs? Text has references that video omits.

And some good aesthetics rules, based on research on human likes/dislikes.

## Possible lecture/discussion topics

I will curate, but requests will be taken

20 Aesthetic-Usability Effect

<http://www.lynda.com/Higher-Education-tutorials/Aesthetic-usability-effect/193717/436485-4.html>

24 Alignment <http://www.lynda.com/Higher-Education-tutorials/Alignment/193717/421223-4.html>

26 Anthromorphic Form

28 Archetypes

30 Area Alignment

32 Attractiveness Bias

34 Baby-Face Bias

Black effects <http://www.lynda.com/Higher-Education-tutorials/Black-effects/193717/436476-4.html> 2/22/16

42 Classical Conditioning

46 Cognitive Dissonance

48 Color

70 Defensible Space

80 Entry Point

86 Exposure Effect

88 Face-ism Ratio

94 Fibonacci Sequence

108 Framing

114 Golden Ratio

130 Hunter-Nurturer Fixations

156 Mimicry

164 Most Average Facial Appearance Effect

174 Operant Conditioning

190 Propositional Density

192 Prospect-Refuge

202 Red Effect <http://www.lynda.com/Higher-Education-tutorials/Red-effects/193717/436475-4.html>

208 Rule of Thirds

212 Savanna Preference

216 Scarcity

218 Self-Similarity

224 Signal-to-Noise Ratio

226 Similarity

228 Stickiness

230 Storytelling

234 Symmetry

Supernormal stimuli <http://www.lynda.com/Higher-Education-tutorials/Supernormal-stimuli/193717/436479-4.html> 2/22/16

240 Top-Down Lighting Bias <http://www.lynda.com/Higher-Education-tutorials/Top-Down-Lighting-Bias/193717/426774-4.html>

242 Uncanny Valley

248 Veblen Effect

256 Wabi -Sabi

258 Waist-to-Hip Ratio

White effects <http://www.lynda.com/Higher-Education-tutorials/White-effects/193717/436477-4.html> 2/22/16

White effects: White = good, light. Timeless, high-value

Black effects: Black = serious, aggressive, threatening. Timeless, high-value

Red effects

Color physics and notation (not video)

## Color

UPDes

Nomenclature

Digital, photoshop

Pantone <https://en.wikipedia.org/wiki/Pantone>



Color1

Additive/subtractive physics

# Color

Color is used in design to attract attention, group elements, indicate meaning, and enhance aesthetics.

Color can make designs more visually interesting and aesthetic, and can reinforce the organization and meaning of elements in a design. If applied improperly, however, color can seriously harm the form and function of a design. The following guidelines address common issues regarding the use of color.<sup>1</sup>

## Number of Colors

Use color conservatively. Limit the palette to what the eye can process at one glance (about five colors depending on the complexity of the design). Do not use color as the only means to impart information since a significant portion of the population has limited color vision.

## Color Combinations

Achieve aesthetic color combinations by using adjacent colors on the color wheel (analogous), opposing colors on the color wheel (complementary), colors at the corners of a symmetrical polygon circumscribed in the color wheel (triadic and quadratic), or color combinations found in nature. Use warmer colors for foreground elements, and cooler colors for background elements. Light gray is a safe color to use for grouping elements without competing with other colors.

## Saturation

Use saturated colors (pure hues) when attracting attention is the priority. Use desaturated colors when performance and efficiency are the priority. Generally, desaturated, bright colors are perceived as friendly and professional; desaturated, dark colors are perceived as serious and professional; and saturated colors are perceived as more exciting and dynamic. Exercise caution when combining saturated colors, as they can visually interfere with one another and increase eye fatigue.

## Symbolism

There is no substantive evidence supporting general effects of color on emotion or mood. Similarly, there is no universal symbolism for different colors—different cultures attach different meanings to colors. Therefore, verify the meaning of colors and color combinations for a particular target audience prior to use.<sup>2</sup>

See also Expectation Effect, Highlighting, Interference Effects, Similarity, and Uniform Connectedness.

<sup>1</sup> A nice treatment of color theory is *Interaction of Color* by Josef Albers, Yale University Press, 1963. For a more applied treatment, see *The Art of Color: The Subjective Experience and Objective Rationale of Color* by Johannes Itten, John Wiley & Sons, 1997; and *Human-Computer Interaction* by Jenny Preece, et al., Addison Wesley, 1994.

<sup>2</sup> It is reasonable to assume that dark colors will make people sleepy, light colors will make people lively, and irritating colors will make people irritated. Otherwise, the only observable influence of color on behavior is its ability to lead people to repaint walls unnecessarily. For those determined to try to calm drunks and win football games through the application of color, see *The Power of Color* by Morton Walker, Avery Publishing, 1991.





Analogous



Example from Nature



Triadic



Example from Nature

Analogous color combinations use colors that are next to each other on the color wheel.

Triadic color combinations use colors at the corners of an equilateral triangle circumscribed in the color wheel.



Complementary



Example from Nature



Quadratic



Example from Nature

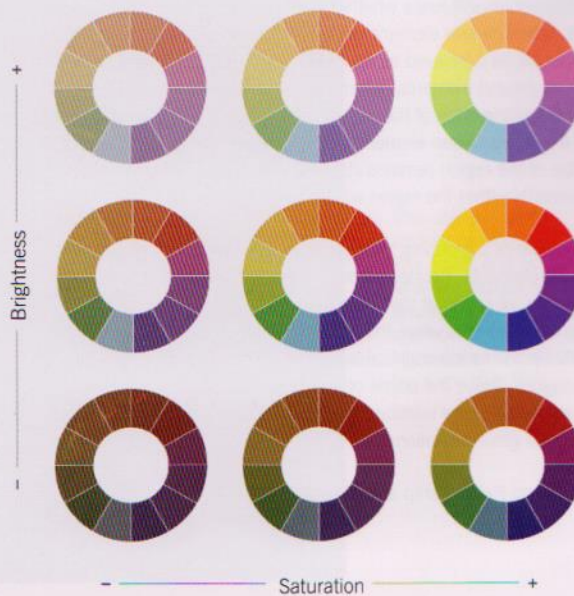
Complementary color combinations use two colors that are directly across from each other on the color wheel.

Quadratic color combinations use colors at the corners of a square or rectangle circumscribed in the color wheel.



Hues from yellow to red-violet on the color wheel are warm. Hues from violet to green-yellow are cool.

Saturation refers to the amount of gray added to a hue. As saturation increases, the amount of gray decreases. Brightness refers to the amount of white added to a hue—as brightness increases, the amount of white increases.



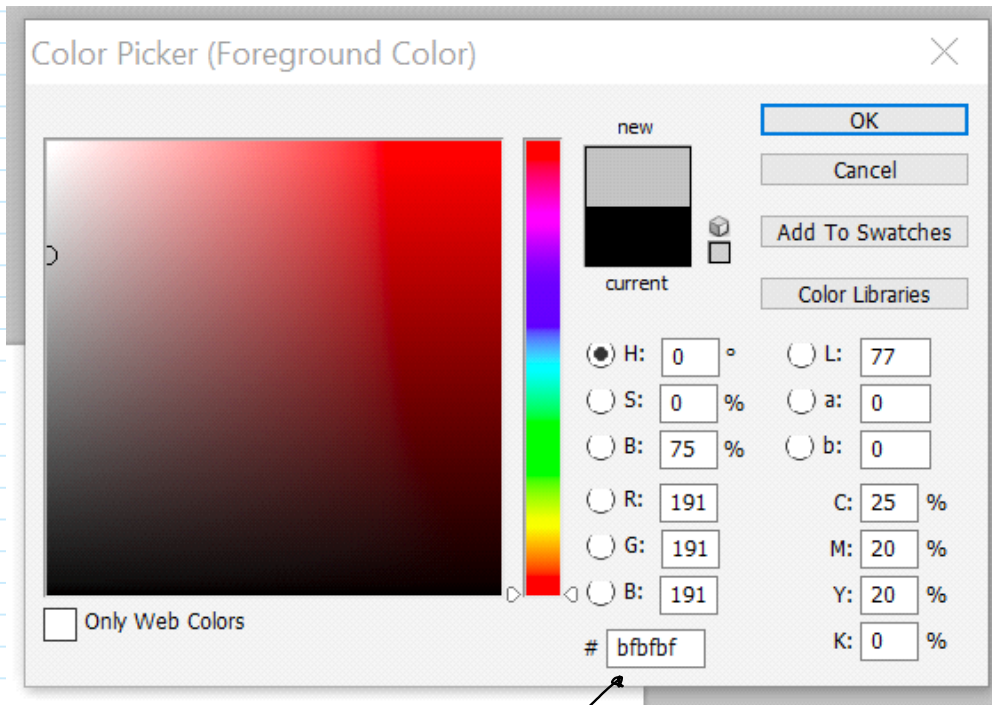
## Color Nomenclature

Range of colors that can be produced by a technology = gamut

Matching across devices, technologies = color management

From Photoshop:



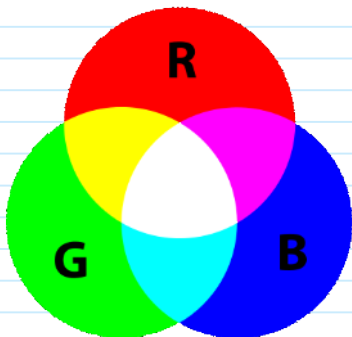


Pantone <https://en.wikipedia.org/wiki/Pantone>

Another color nomenclature and color management system. Common in design world.

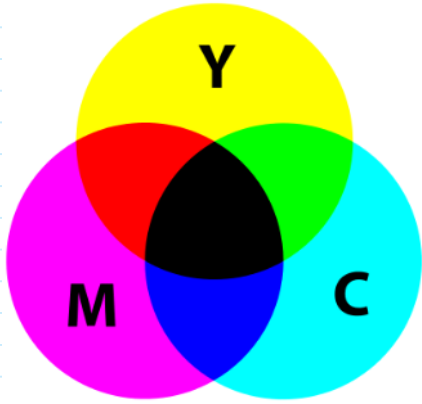
## Additive/subtractive color

Additive color = light



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Subtractive color = surfaces; dyes, pigments, inks



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