Color, Typography, and Gestalt

No screens





Prof. Lydia Chilton COMS 4170 29 January 2018



Goal 1

Build websites that suit the needs and abilities of users

The main goal of many websites is to display information users need.

Tools for indicating importance in the visual information hierarchy

- Conceptual grouping
- Location
- Whitespace
- Size
- Images
- Contrast
- Color

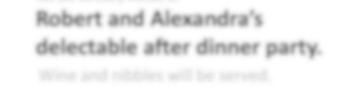














In addition to indicating importance, the colors and fonts you pick will have meaning to users.



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Columbia University in the City of New York

Schedule a tour of the Morningside campus. Five graduates in cap and gown celebrate facing the camera. Commencement. University-wide commencement information. Annette Lopes smiling at camera. Employment. Careers at Columbia. College walk in front of Low Library. Columbia Data. A statistical snapshot of the ...

Columbia University Libraries: Libraries Home

library columbia edu/ ▼

ough the launch of a Shared Collection Service developed in partnership with Princeton University Library and The New York Public Library, Columbia added over seven million items to its catalog this month... Staff Profile: Ben Armintor Ben Armintor discusses his role in open source software for libraries,

Columbia - Wikipedia

Popular in Books

Award Winners

Bargain Books Best Books of the Month

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More in Books

100 Books to Read in a Lifetime Amazon Book Review Blog Amazon Rooks on Facebook Amazon Books on Twitter

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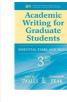
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A Manual for Writers of Research

Wayne C. Booth. ...Gregory G Kate L. Turabian, Wayne C.

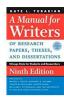


John M. Swales, Christine B **食食食食** 128

\$25.65 Vprim



Wayne C. Booth, Joseph M. **★★★★☆** 384



Kate L. Turabian, Wayne C

\$18.00 **/prime**

More from the Amazon Book Editors

Craft

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Celebrity Picks 2017 Sheryl Sandberg



Best Books of 2017





Trump in Shutdown Talks With Schumer

White House Invites Democratic Leader to Negotiate a Deal

- The government will shut down at 12:01 a.m. Saturda if lawmakers fail to get an agreement on some kind of
- · With Democrats balking. plans to travel to his Florida Chuck Schumer, the Democratic leader
- · Timeline: How Congress Got to the Brink of a Shutdown

The Chaos President

vs. His Iron-Fisted

Chief of Staff



"We are not going to desert these young people," he said, referring to DACA beneficiaries. Senator Bernie Sanders of Vt.

How the Debate in Congress Breaks Down

Lawmakers have until Friday at midnight to pass a short-term spending bill to avoid a government shutdown

Senate to Vote With Shutdown at Stake

Senate Democrats appear ready to block legislation to keep the government funded past midnight, gambling that Mr. Trump will offer concessions on immigration and other issue

VIDEO INTERVIEW

Here's Another Fine Mess They've Gotten Us Into Donald Trump's Radical Honesty Once again, Trump In his own wild way, and Congress cannot this president is as perform a basic task. truthful and preventing a government Clubbable, but in the Worst Krugman: Doomsday Politics The Breakdown in Trust That Could Lead to a Shutdown Donald Trump is a man of his class -

Brooks: It's Time to Talk About the Power of Touch Goldberg: Is This the Collusion We Were Waiting For? Leonhardt: A Warning for Egan: The Mad King

'I, Figure Skating Reporter': Full
Circle With Tonya Harding

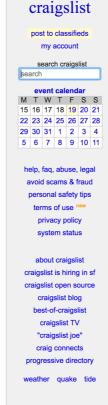
the nouveau-riche, country-

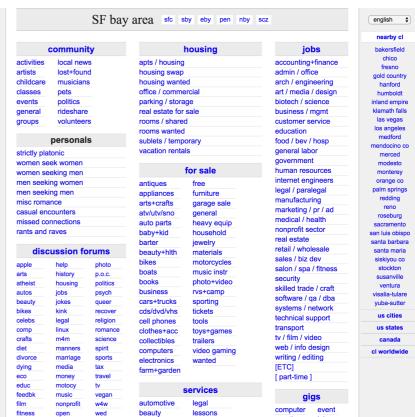
How the Pro-Life Movement Has Promoted Liberal Values
 ICE Detained My Husband for Being an Activist

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The Justice Department wants to ask if you are a U.S. citizen in the 2020 census. But public distrust of the government could lead

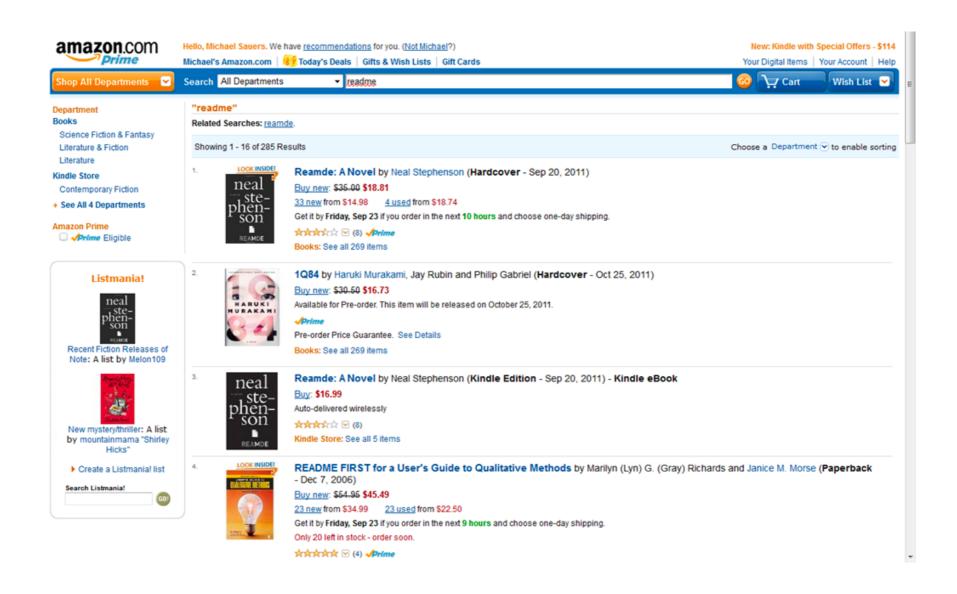




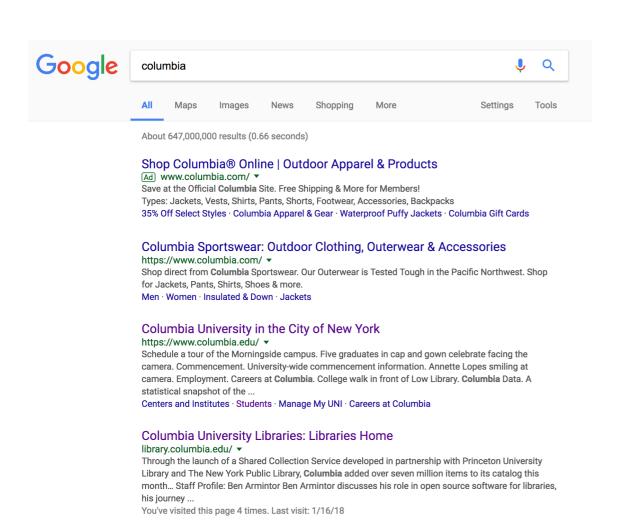


4

What meaning will these **colors** have to users? (in addition to importance)

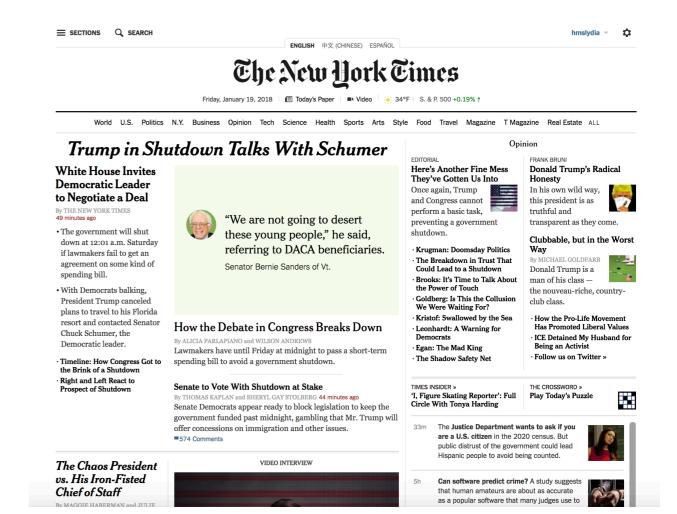


What meaning will these **fonts** have to users? (in addition to importance)

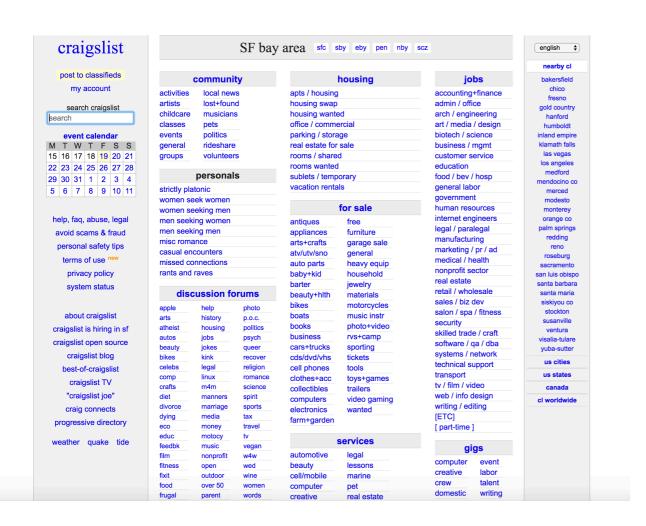


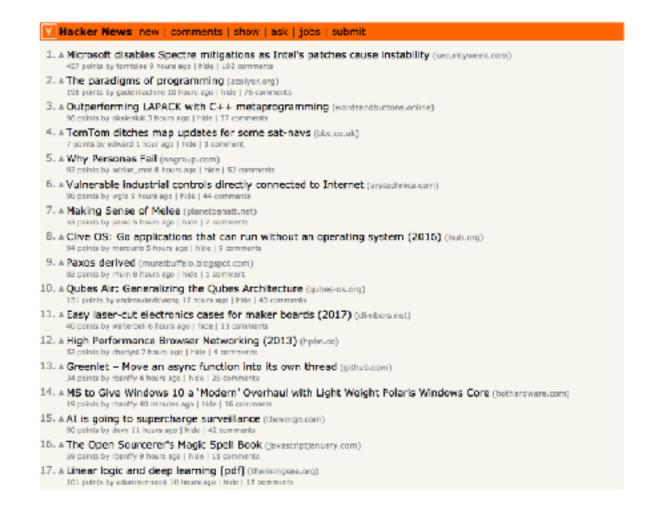
Columbia - Wikipedia

https://en.wikipedia.org/wiki/Columbia ▼



What meaning will these fonts, colors and design have to users?





What meaning does this font have?



At CERN, the European Organization for Nuclear Research, physicists and engineers are probing the fundamental structure of the universe. They use the world's largest and most complex scientific instruments to study the basic constituents of matter - the fundamental particles. The particles are made to collide together at close to the speed of light. The process gives the physicists clues about how the particles interact, and provides insights into the fundamental laws of nature.

The human brain is always perceiving meaning (even when it is not intended)



The human brain is always perceiving meaning (even when it is not intended)



Use color, typography, and design carefully to convey your intended meaning

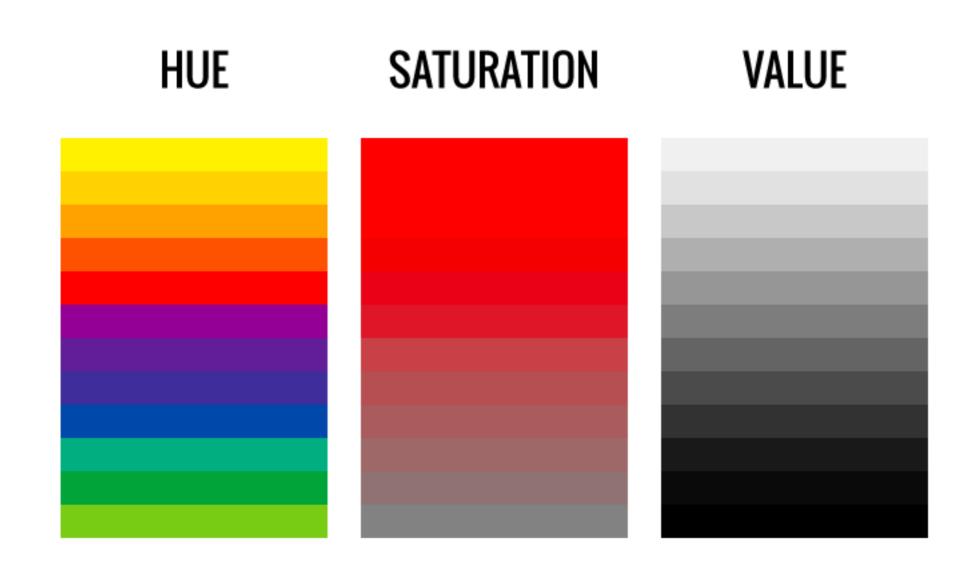
Color

On the web, we mostly use RGB color.

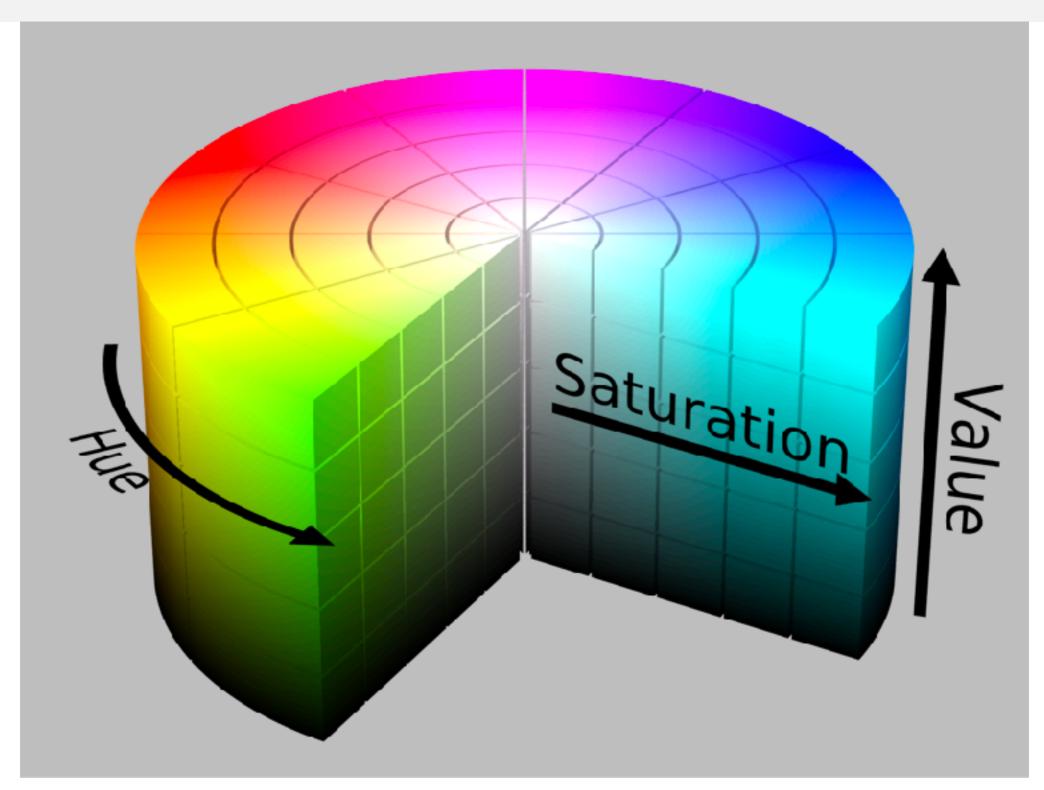
RGB
Mixing amounts of
Red, Green and Blue light



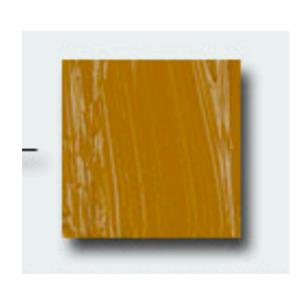
There are three perceptual dimensions of color

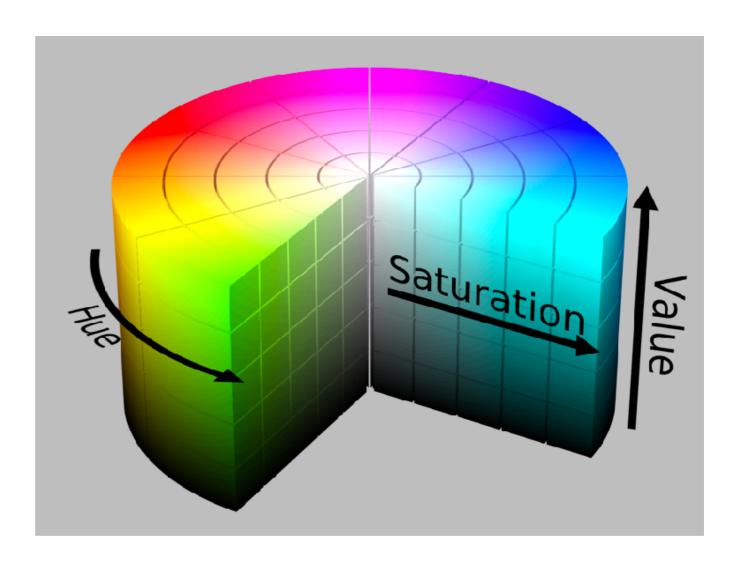


Every color is a point in the HSV space.

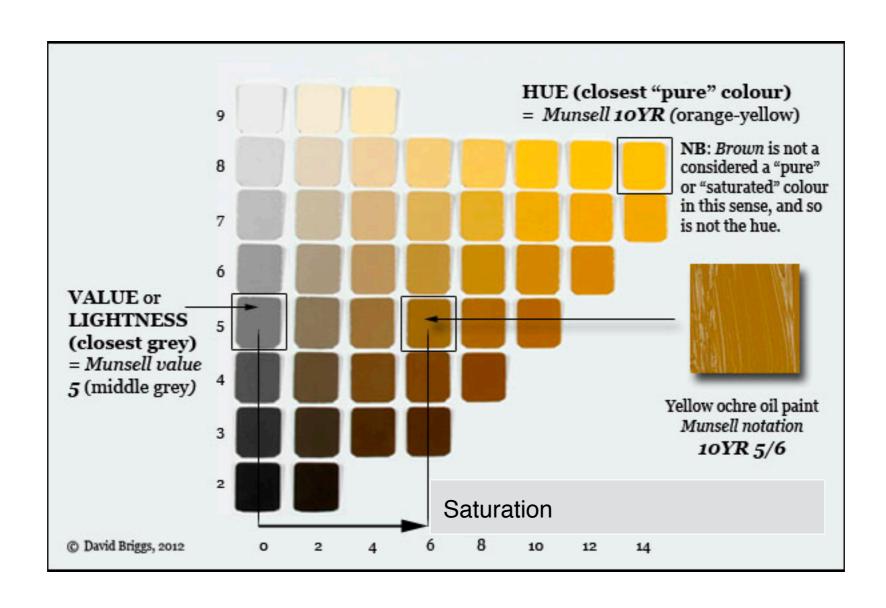


How would we find this color?





From Yellow, how do we get Brown?

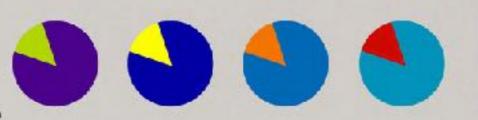


Color Schemes

complementary colors

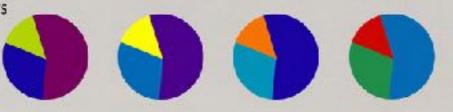
hues apposite the color wheel

complementary colors are more intense, and "vibrate" when placed next to each other as they compete for your attention



split complementary colors

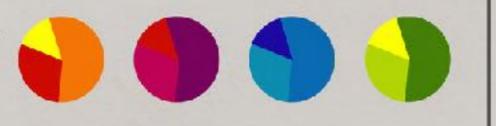
one of the complementary colors is split off into a pair of neighboring hues



analogous colors

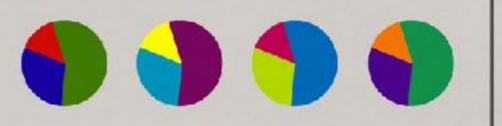
colors that neighbor one another on the color wheel

hues appear to "push" at each other, creating an optical illusion where each zone appears larger when it has your attention

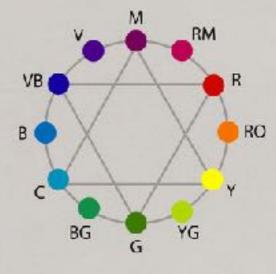


triad colors

hues equidistant on the color wheel



Color Wheel



Y - yellow YG - yellow green

G-green

BG - blue green

C-cyan

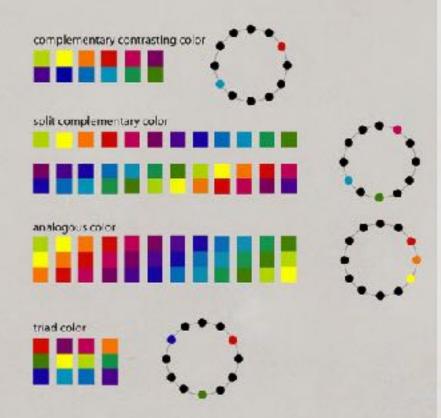
B-blue

VB - violet blue

V - violet

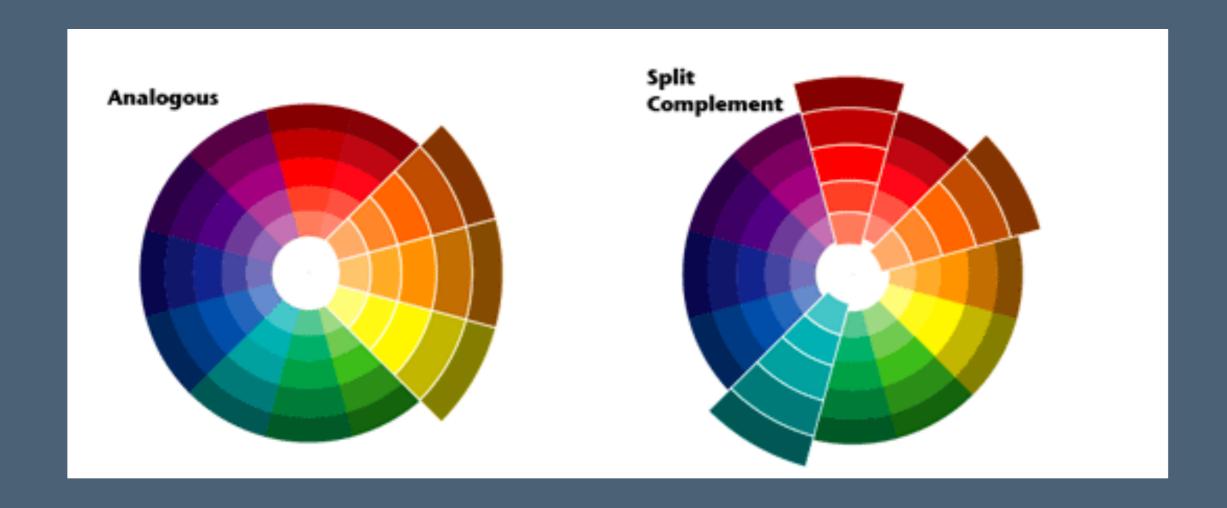
M - magenta

RM - red magenta



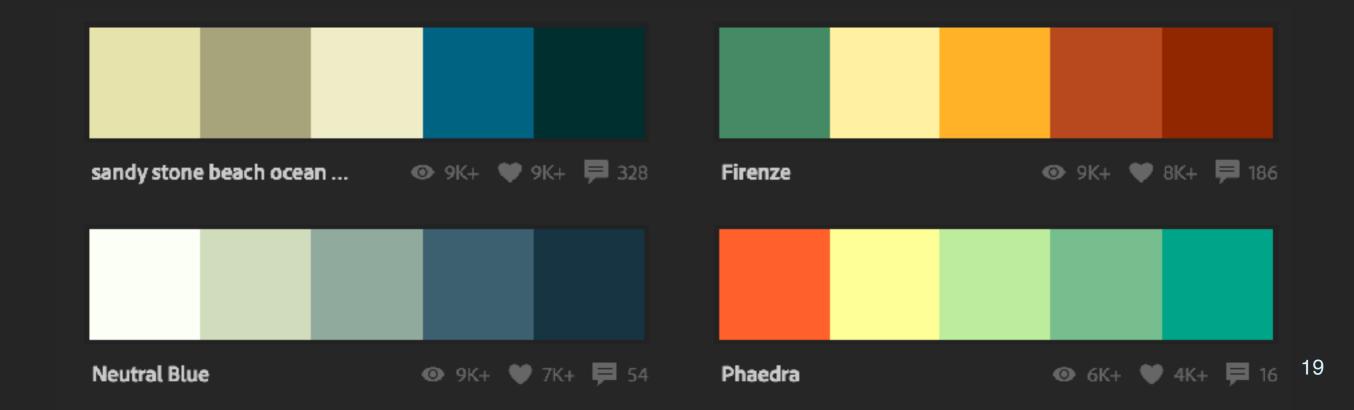
Choosing colors

- · Start in grayscale, then keep the luminance values
- · Common schemes: analogous, split complement



Benefit from others

- Adobe Color CC http://color.adobe.com
- Fork popular schemes https://color.adobe.com/explore/most-popular



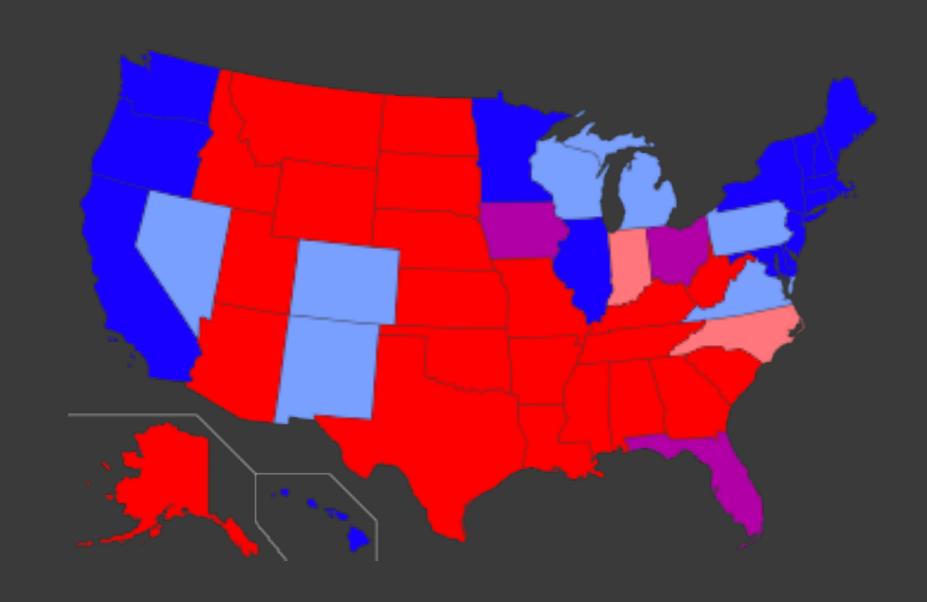
Cultural Differences in Color Interpretation

Cultural differences: color

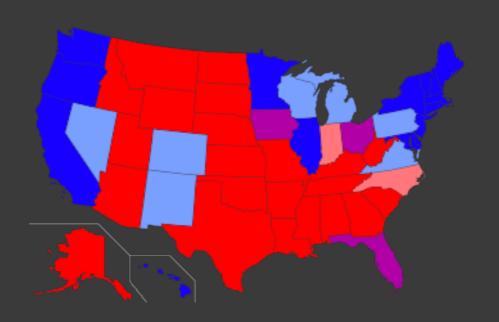
P. Russo & S. Boor, How fluent is your interface? Proc. INTERCHI '93

	Red	Blue	Green	Yellow	White
U.S.	Danger	Masculinity	Safety	Cowardice	Purity
France	Aristocracy	Freedom Peace	Criminality	Temporary	Neutrality
Egypt	Death	Virtue Faith Truth	Fertility Strength	Happiness Prosperity	Joy
India	Life Creativity		Prosperity Fertility	Success	Death Purity
Japan	Anger Danger	Villainy	Future Youth Energy	Grace Nobility	Death
China	Happiness	Heavens Clouds	Ming Dynasty Heavens Clouds	Birth Wealth Power	Death Purity

What cultural connections do these colors have?



Are color meaning arbitrary?



Cultural differences: color P. Russo & S. Boor, How fluent is your interface? Proc. INTERCHI '93 White Red Blue Green Yellow U.S. Danger Masculinity Safety Cowardice Purity Aristocracy Freedom Criminality Temporary Neutrality France Peace Virtue Fertility Egypt Death Happiness Joy Faith Strength Prosperity Truth Life Success Death India Prosperity Creativity Fertility Purity Villainy Grace Anger **Future** Death Japan Youth Nobility Danger Energy Ming Dynasty China Happiness Heavens Birth Death Heavens Wealth Purity Clouds Clouds Power

Are color meaning arbitrary?



But at any time and place, they may mean something you don't intend.

Typography



Gill Sans, designed by Eric Gill and released by the Monotype Corporation in 1928

Six Typographic Terms



S Point size

SS

Gill Sans Calibri

S Leading S

Six \} x-height

Typefaces with high x-height: easier to read at small point size

Typefaces with low x-height: harder to read at small point size

Six Typographic Terms

descenders

Six Typographic Terms

light regular bold

weight

Weights and Styles

Roboto Thin & Thin Oblique

Roboto Light & Light Oblique

Roboto Regular & Oblique

Roboto Medium & Medium Oblique

Roboto Bold & Bold Oblique

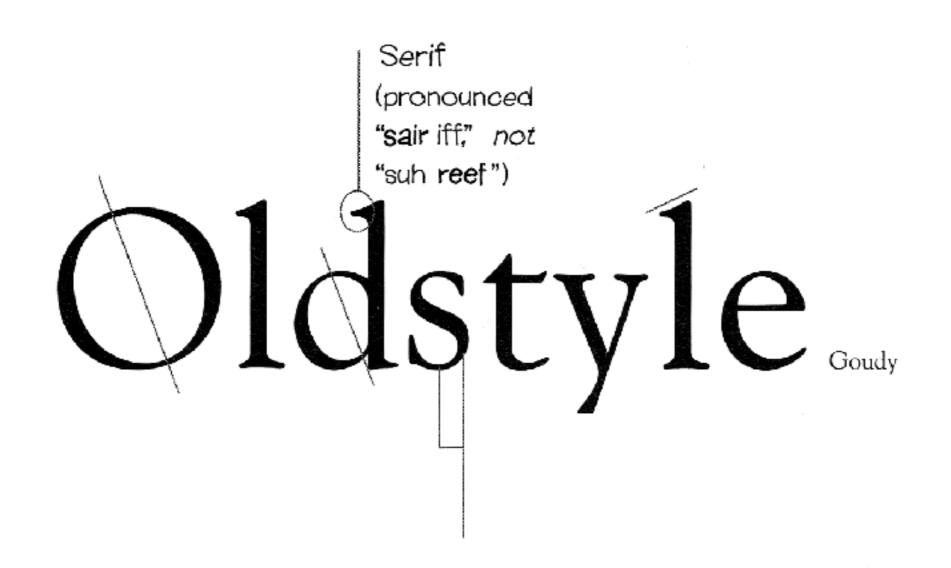
Roboto Black & Black Oblique

Roboto Condensed Light & Condensed Light Oblique

Roboto Condensed & Condensed Oblique

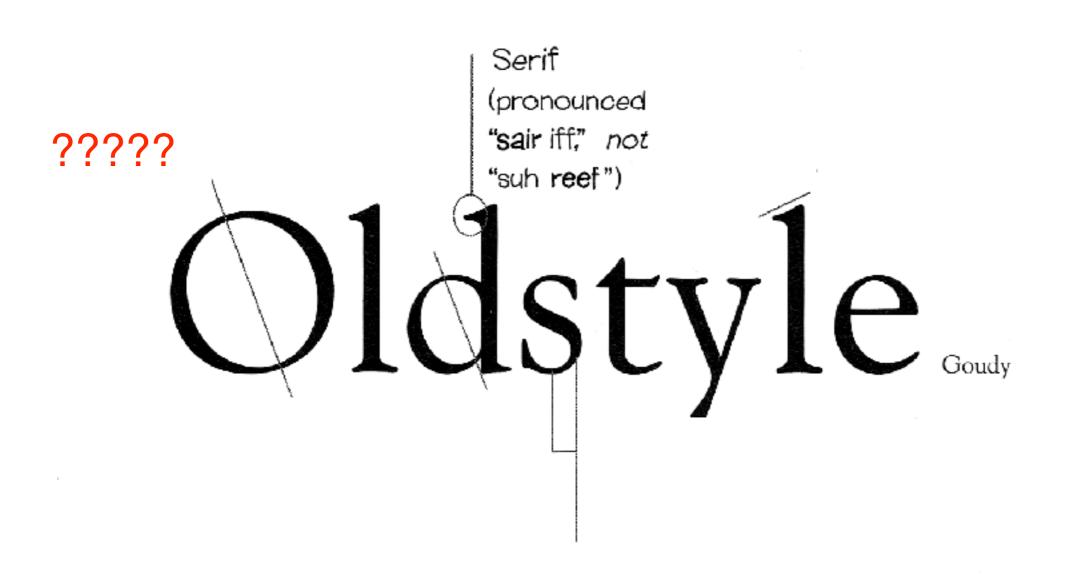
Roboto Condensed Bold & Condensed Bold Oblique

http://developer.android.com/design/style/typography.html



Goudy Palatino Times

Baskerville Garamond



Goudy Palatino Times

Baskerville Garamond



Goudy Palatino Times

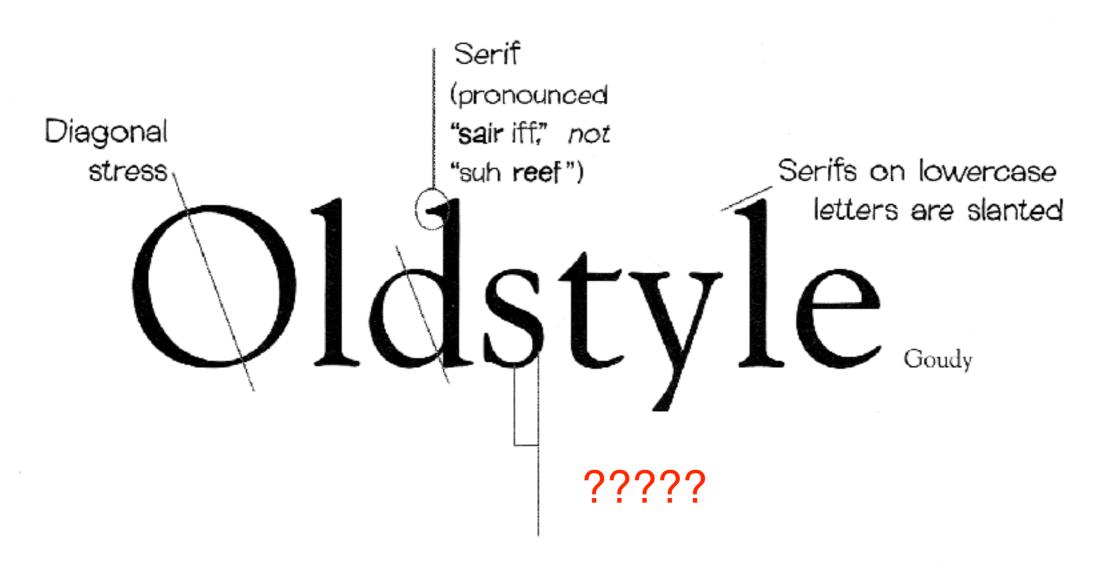
Baskerville Garamond



Goudy Palatino Times

Baskerville Garamond

Six Typographic Terms: Serif

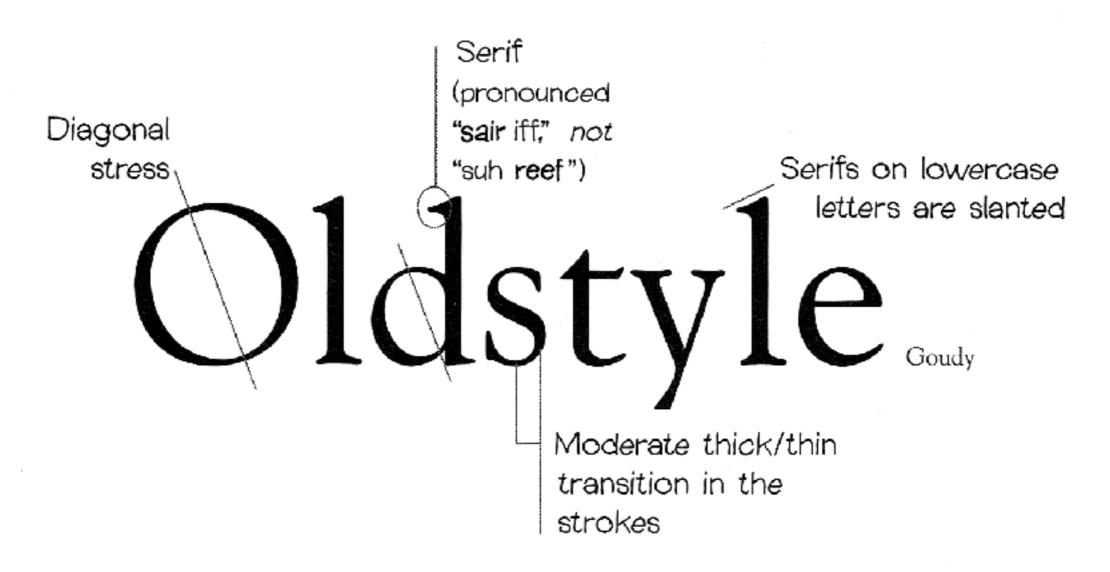


Goudy Palatino Times

Baskerville Garamond

Source: R. Williams
The Non-Designers Design Book

Six Typographic Terms: Serif

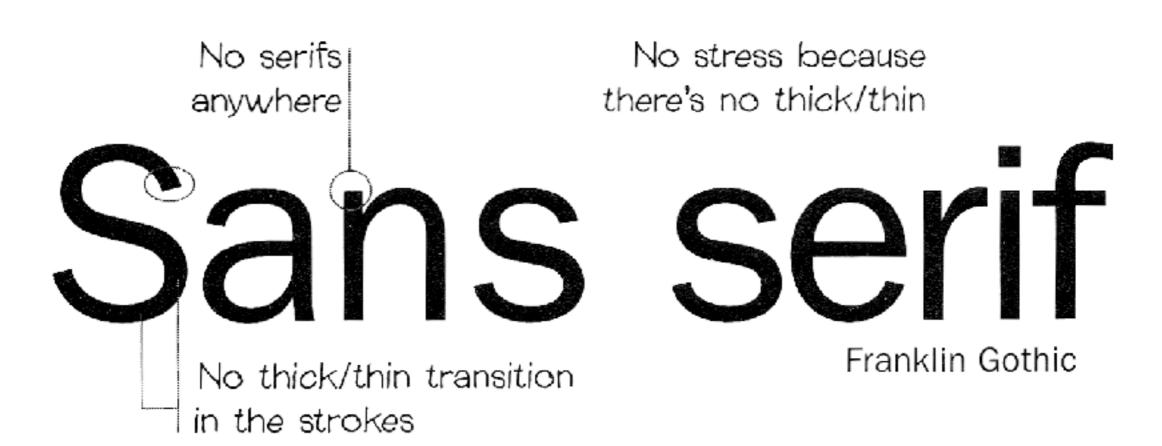


Goudy Palatino Times

Baskerville Garamond

Source: R. Williams
The Non-Designers Design Book

Six Typographic Terms: Sans Serif



Antique Olive Formata

Gill Sans Franklin Gothic

Folio Syntax

Source: R.Williams
The Non-Designers Design Book

SMALL CAPS, lowercase

SMALL CAPS, lowercase

Numbers:

Lowercase

1234567890

Uppercase

1234567890

The Serif Hypothesis

 Serif typefaces are easier to read and thereby preferable for long stretches of text -- because the serifs provide anchors that guide the reader's eye. Sans serif fonts lack these anchors and are therefore inappropriate for long stretches of text.

Challenges

- Individual differences dwarf manipulation effects
 - i.e., some people read faster than others. If there is an effect, it's very small
- Confound: Reading requires familiarity
- Dependent Variable? Speed? Comprehension?

"Legibility, in practice, amounts simply to what one is accustomed to" — Eric Gill, 1931

Combining Type: Concordant

Typography

FROM WIKIPEDIA, THE FREE ENCYCLOPEDIA

Typography is the art and technique of arranging type, type design, and modifying type glyphs. Type glyphs are created and modified using a variety of illustration techniques. The arrangement of type involves the selection of typefaces, point size, line length, leading (line spacing), adjusting the spaces between groups of letters (tracking) and adjusting the space between pairs of letters (kerning).

Adobe Caslon Semibold 48 pt

Adobe Caslon Smallcaps, 14 pt

Adobe Caslon Regular, 12 pt

Combining Type: Contrasting

Typography

From Wikipedia, the free encyclopedia

Typography is the art and technique of arranging type, type design, and modifying *type glyphs*. Type glyphs are created and modified using a variety of illustration techniques. The arrangement of type involves the selection of typefaces, point size, line length, leading (line spacing), adjusting the spaces between groups of letters (tracking) and adjusting the space between pairs of letters (kerning).

Gill Sans Light 48 pt

Gill Sans Light, 16 pt

UC Berkeley OldStyle, 12 pt

Combining Type: Conflicting

Typography

From Wikipedia, the free encyclopedia

Typography is the art and technique of arranging type, type design, and modifying type glyphs. Type glyphs are created and modified using a variety of illustration techniques. The arrangement of type involves the selection of typefaces, point size, line length, leading (line spacing), adjusting the spaces between groups of letters (tracking) and adjusting the space between pairs of letters (kerning).

Arial 36 pt

Futura Medium, 14 pt

Myriad Regular, 12 pt

Typefaces, like everything, build reputations

Baskerville

The Literary
Magazine for
Gifted Kids &
Their Families

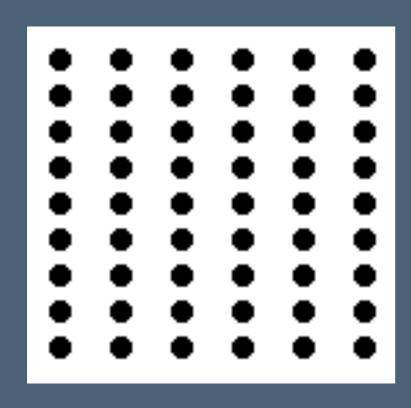


AFTER SHAVE BALM BAUME APRES RASAGE

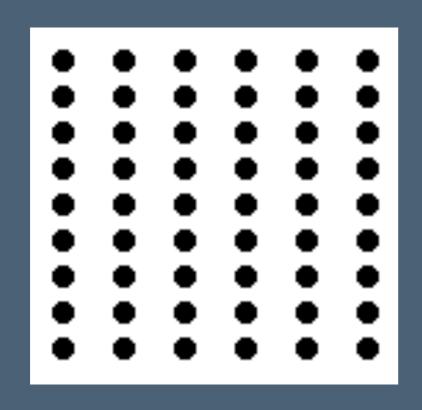
Gestalt

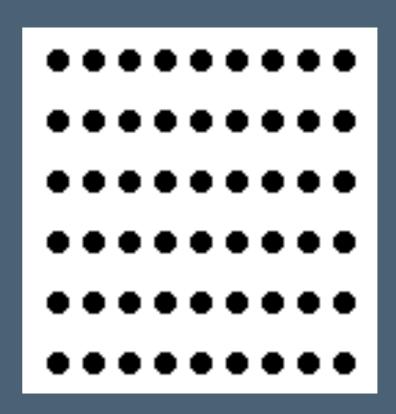
noun
an organized whole that is perceived as more than
a sum of its parts

What pattern do you see here?

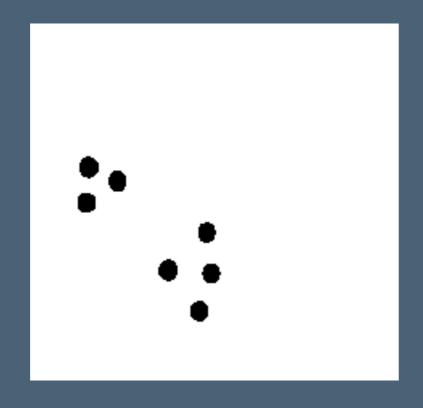


What pattern do you see here?

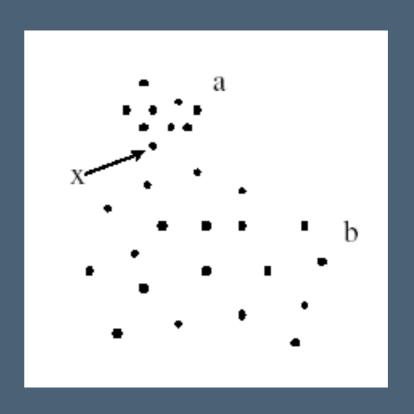




Proximity



Proximity



How is proximity used?

Tuesday, November 4
Election Day
An American Menu \$75
Caesar salad with anchovies, egg, and
Parmesan cheese
Clam chowder with Maine lobster and
pancetta
Grilled chicken with house-made
barbeque sauce with potato purée and
greens
Apple and raspberry pecan crisp with
vanilla ice cream

Tuesday, November 4 — Election Day

An American Menu \$75

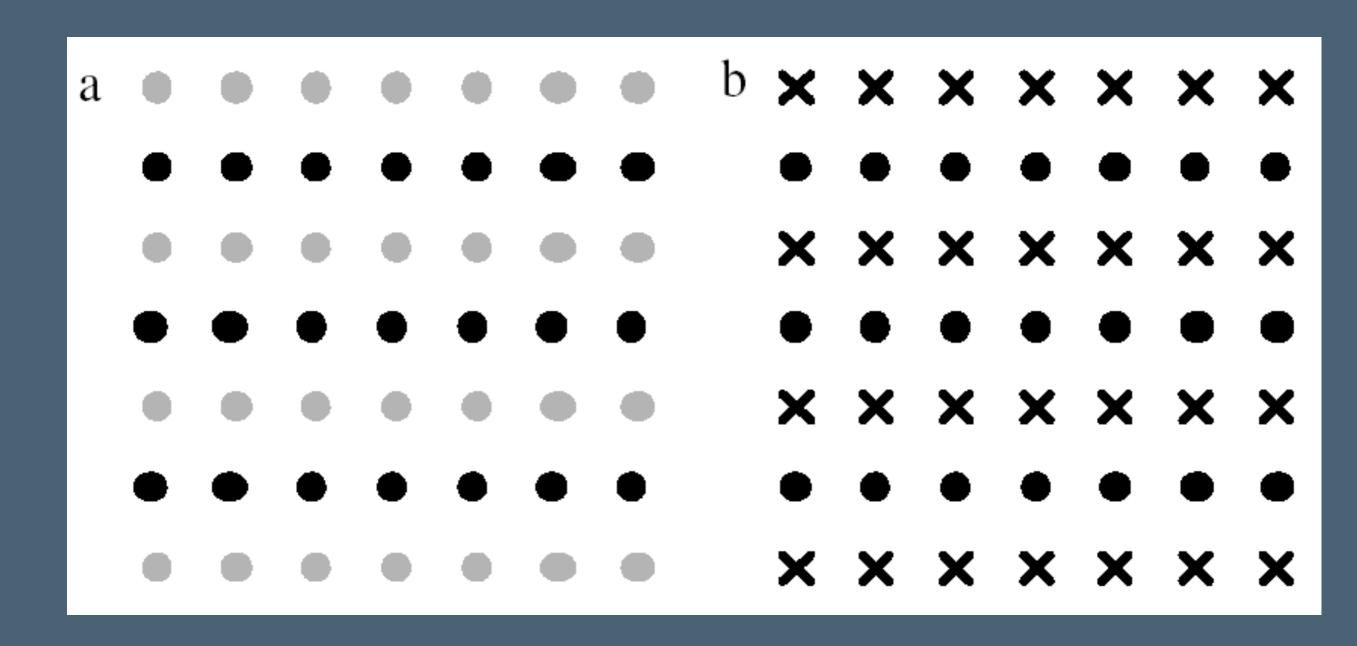
Caesar salad with anchovies, egg, and Parmesan cheese

Clam chowder with Maine lobster and pancetta

Grilled chicken with house-made barbeque sauce with potato purée and greens

Apple and raspberry pecan crisp with vanilla ice cream

What pattern do you see here?



How is similarity used?

TUESDAY, NOVEMBER 4 — ELECTION DAY

AN AMERICAN MENU

\$75

Caesar salad

with anchovies, egg, and Parmesan cheese

Clam chowder

with Maine lobster and pancetta

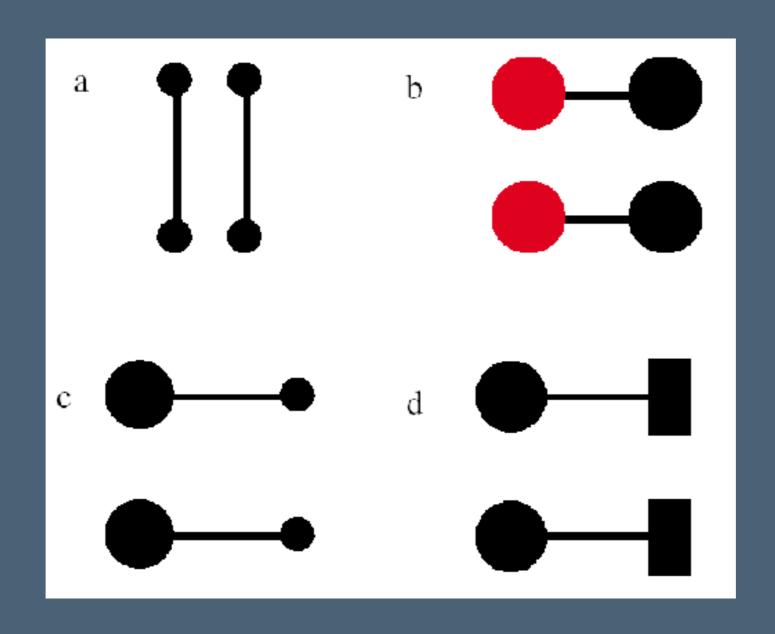
Grilled chicken

with house-made barbeque sauce with potato purée and greens

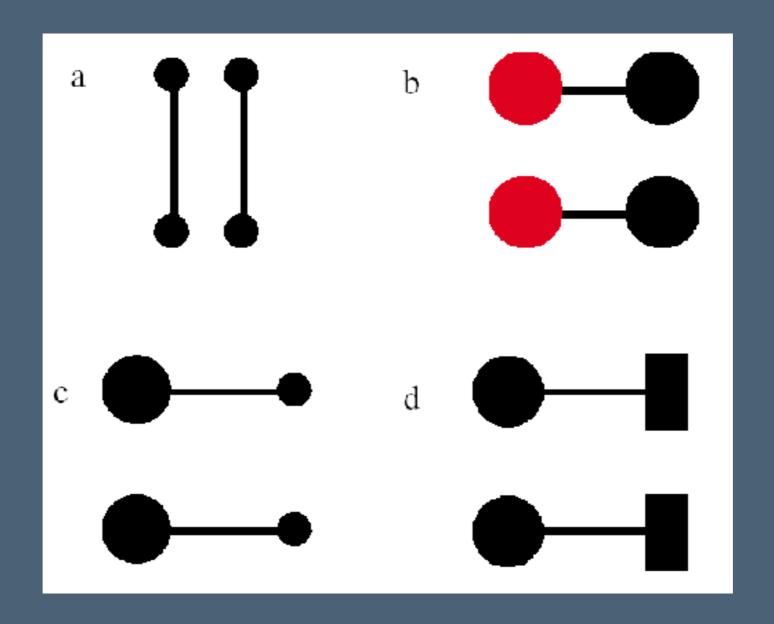
Apple and raspberry pecan crisp

with vanilla ice cream

What pattern do you see here?

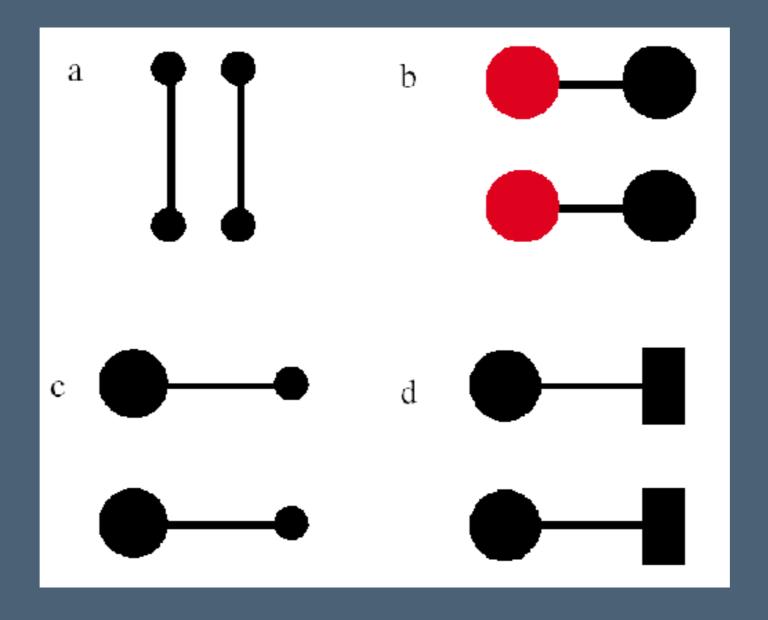


What pattern do you see here?



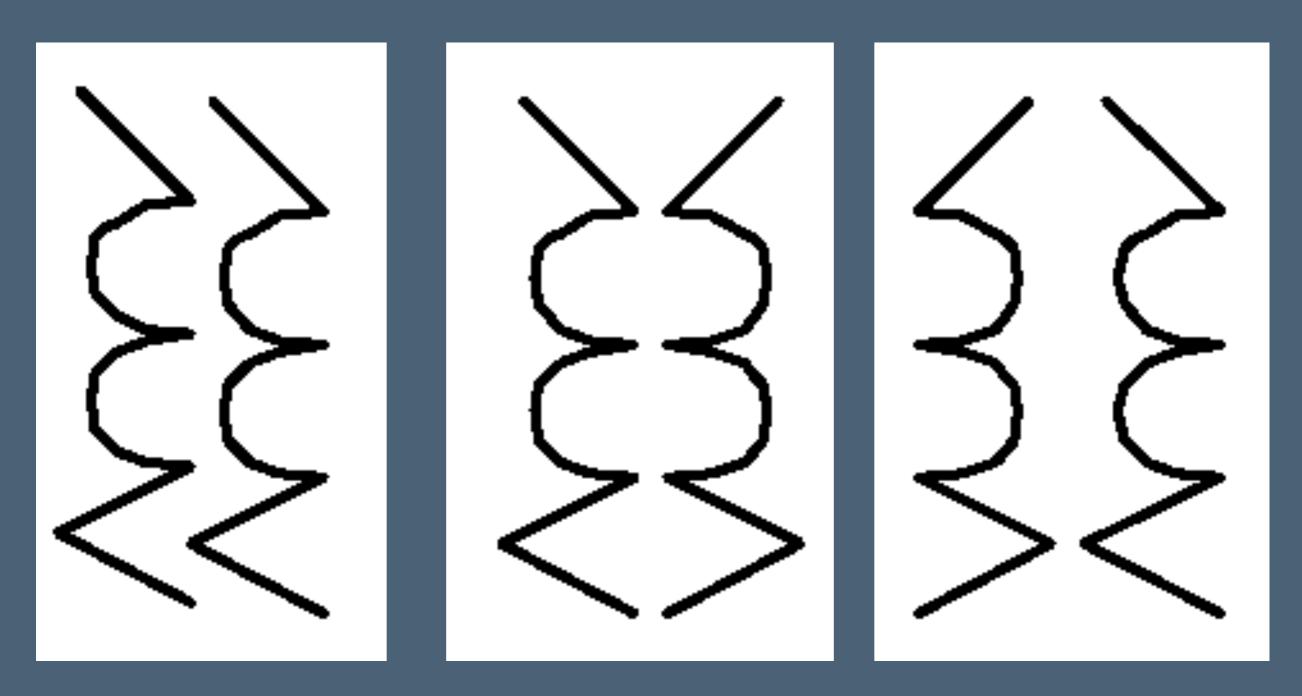
How are proximity and similarity used?

Connectedness

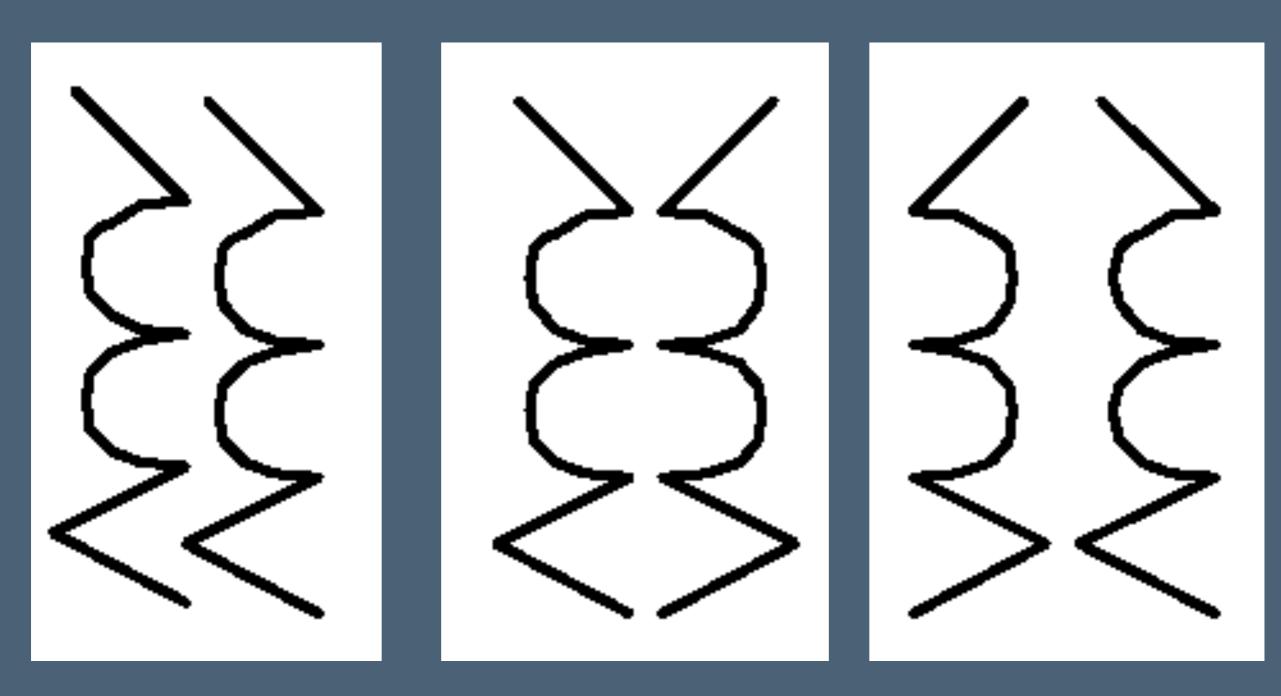


Connection overrules proximity and similarity

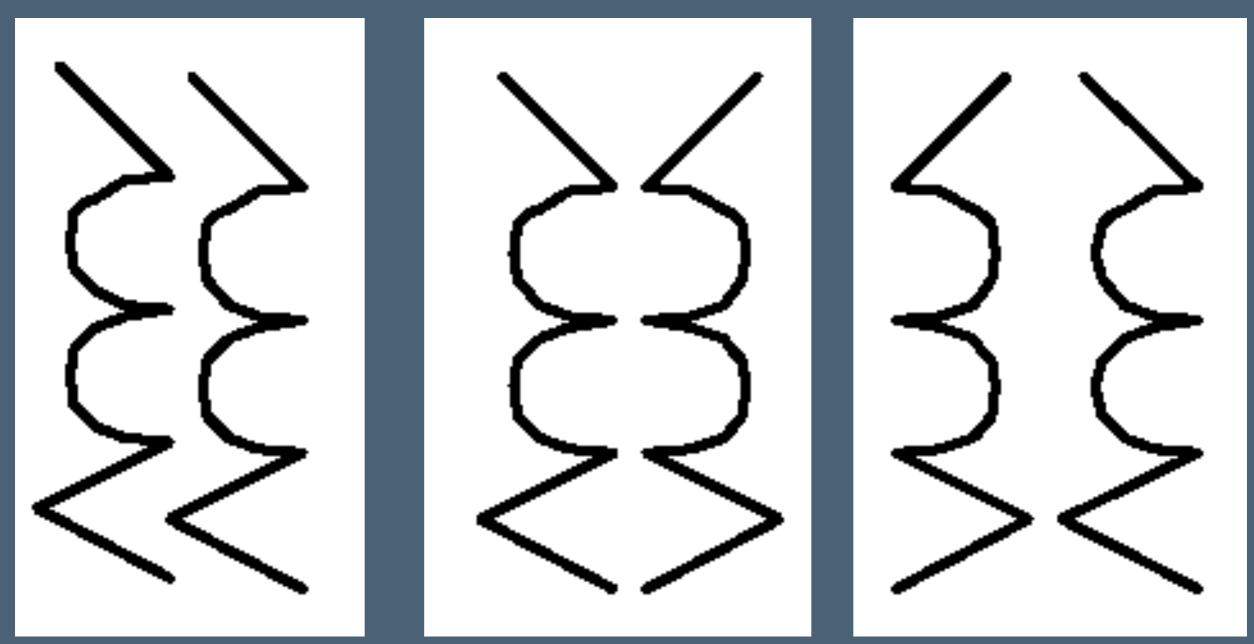
What literal difference do you see between A B and C?



What perceptual difference do you see between A B and C?

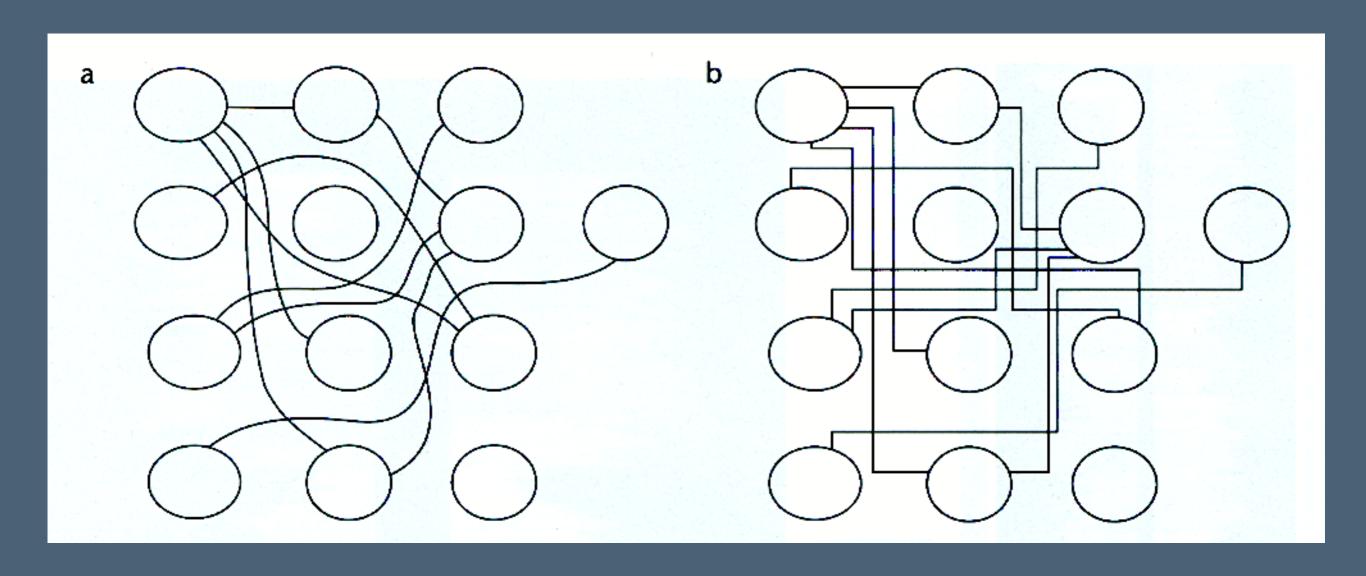


Symmetry

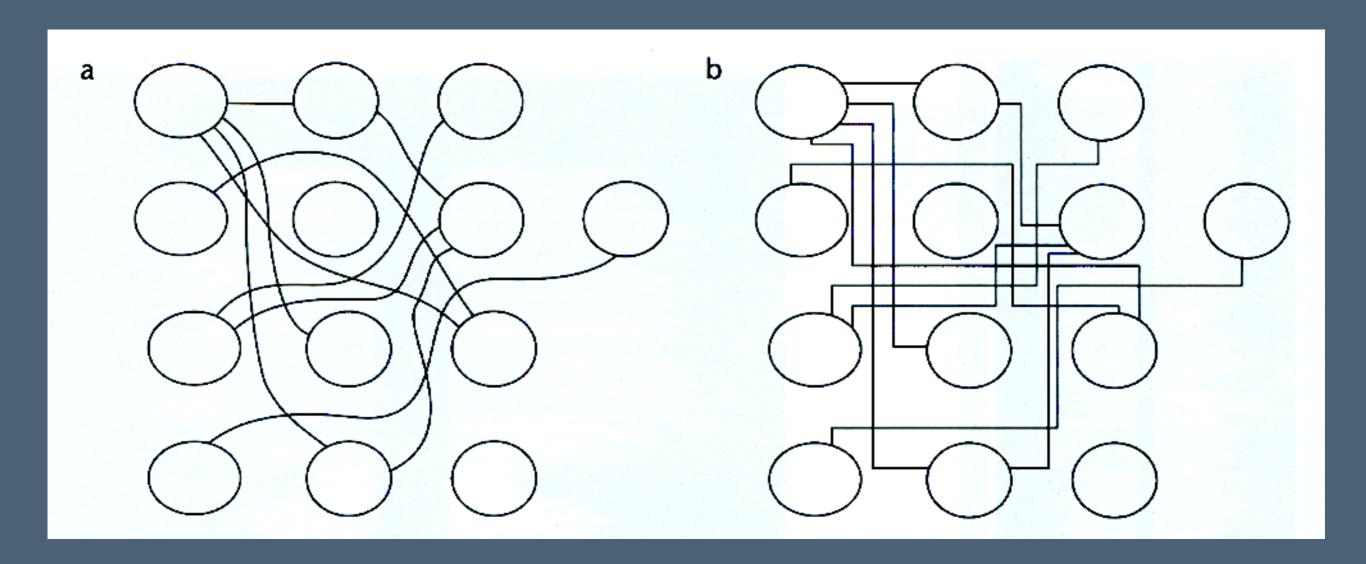


Bilateral symmetry gives strong sense of figure

Which paths are easier to follow?

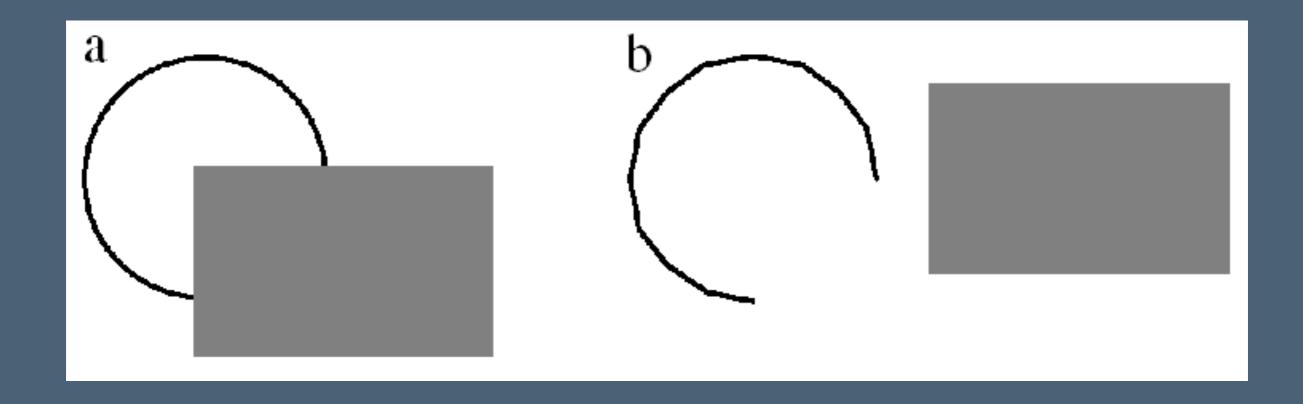


Continuity

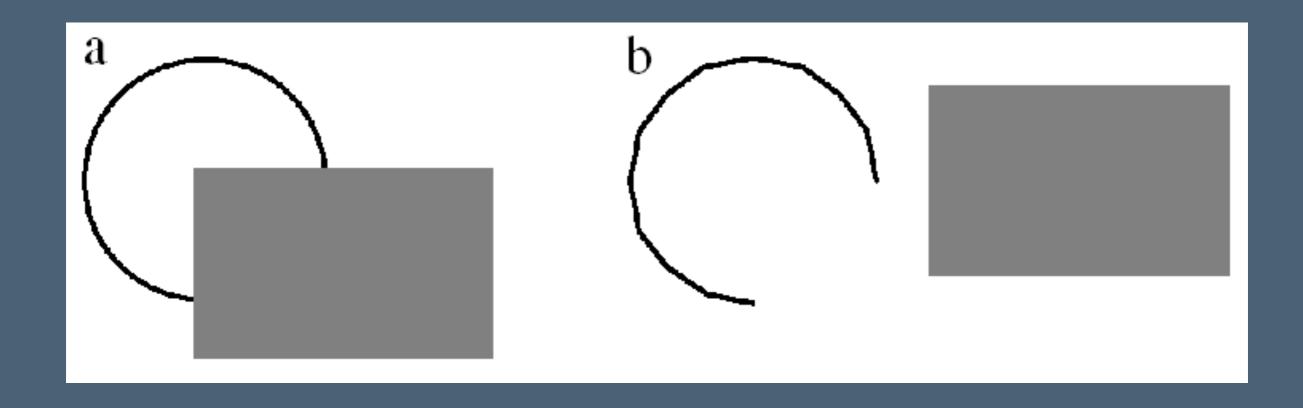


We prefer smooth not abrupt changes
Connections are clearer with smooth contours

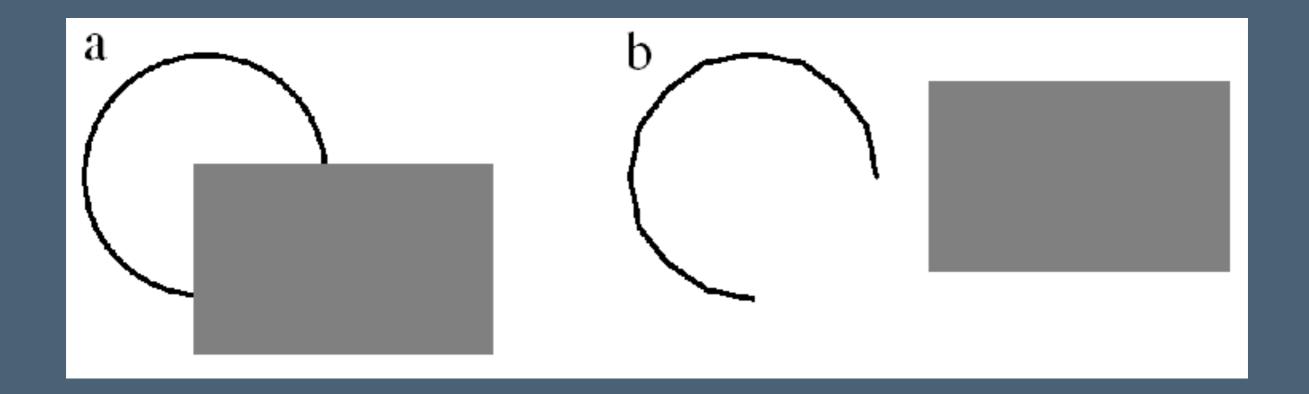
What is the literal difference between a and b?

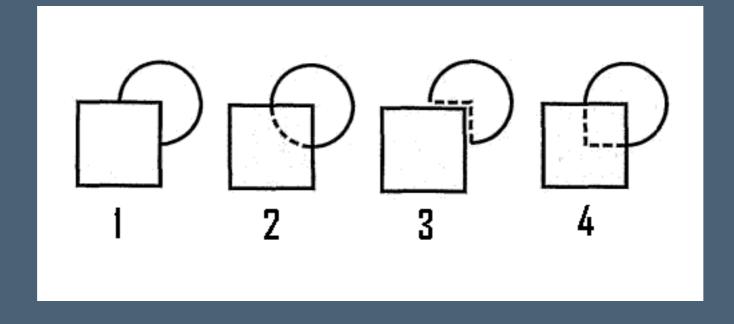


What is the perceived difference between a and b?

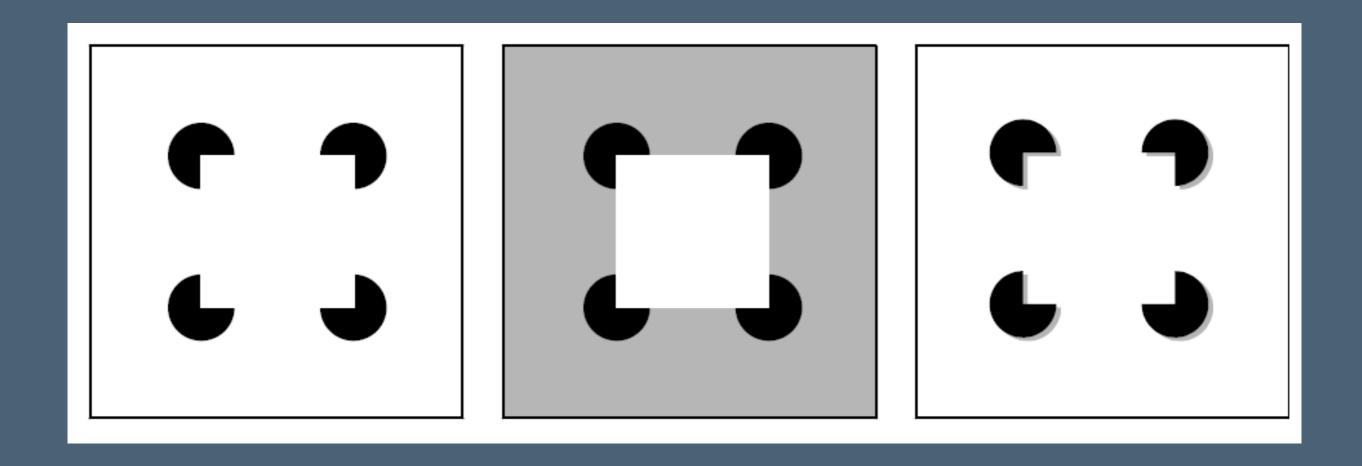


Closure





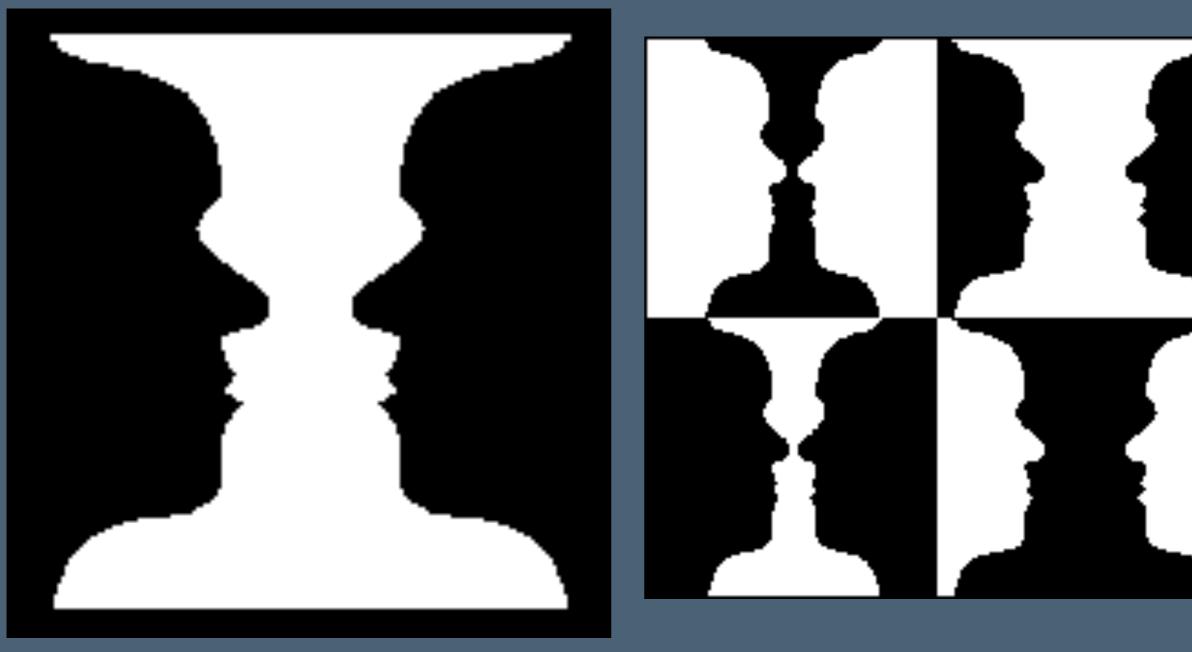
Illusory contours



What do you see?



Figure/Ground



Principle of Relative Size

Figure/Ground

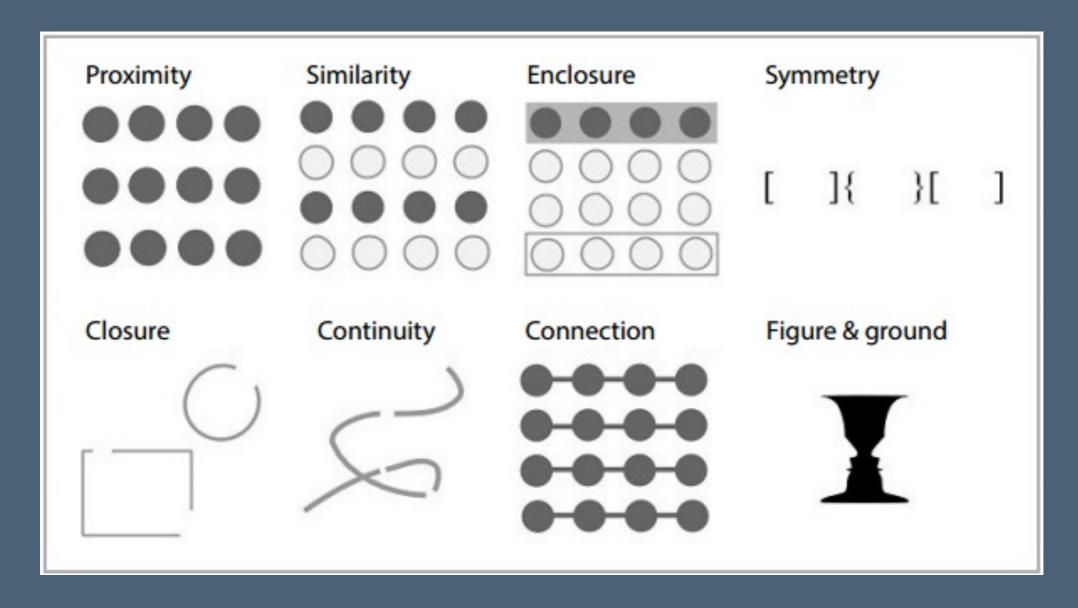


Figure/Ground



Principle of Surroundedness

8 Gestalt Principles

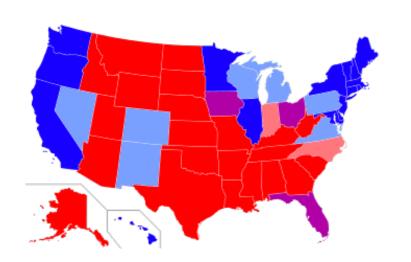


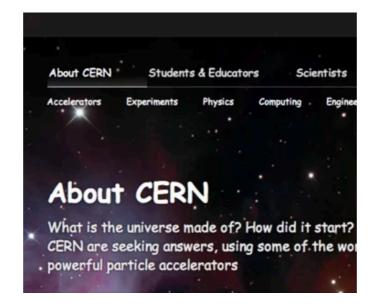
Summary

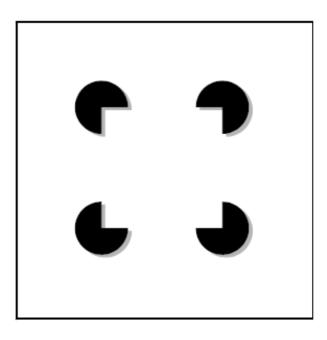
The human brain is always perceiving meaning (even when it is not intended)



Color Font Gestalt

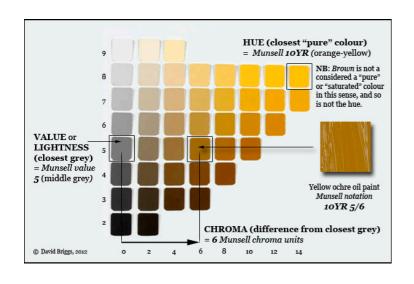






As a designer, you have to know how these principles are represented by the system, and how they are interpreted by the user.

Color Font Gestalt



Typography

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Adobe Caslon Semibold 48 pt

Adobe Caslon Smallcaps, 14 pt
Adobe Caslon Regular, 12 pt

