

# Tips and Tools for Creating **ACCESSIBLE COLOR SCHEMES**



Jennifer Dillon and Heather Wozniak  
Disabilities and Computing Program  
UCLA Office of Information Technology

# WHY COLOR CHOICE MATTERS

- ✓ Not just accessibility, but **usability**
- ✓ Affects all users, except those that are blind
- ✓ Special vision needs include:
  - Low vision (can be caused by aging!)
  - Color blindness
  - Intense web use
  - Mobile devices

# WHAT ARE THE STANDARDS?

- ✓ WCAG 2.0

Web Content Accessibility Guidelines, from W3C  
<http://www.w3.org/TR/WCAG20/#visual-audio-contrast>

- ✓ Contrast between foreground and background

AA (minimum): 4.5:1

AAA (enhanced): 7:1

- ✓ Do not rely on color alone to convey important information or possible action

# WHY 4.5:1

Accounts for the loss in contrast that results from moderately low visual acuity, congenital or acquired color deficiencies, or the loss of contrast sensitivity that typically accompanies aging.

# WHY 7:1

Compensates for the loss in contrast sensitivity usually experienced by users with vision loss equivalent to approximately 20/80 vision. Generally provides compensation for the loss in contrast sensitivity experienced by users with low vision who do not use assistive technology and provides contrast enhancement for color deficiency as well.

# EXCEPTIONS

- ✓ Large-scale text (should be 3:1)
- ✓ Incidental text
- ✓ Logotype

# UNDERSTANDING CONTRAST RATIO

The contrast ratio is referring to the difference in color **value**, not **hue**.

# HUE

The “color” of a color.

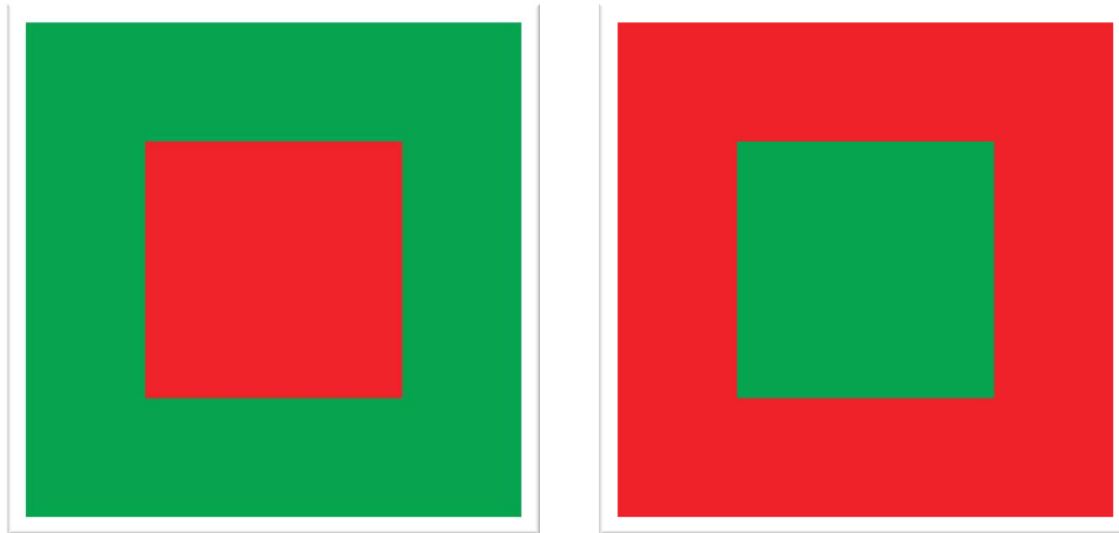




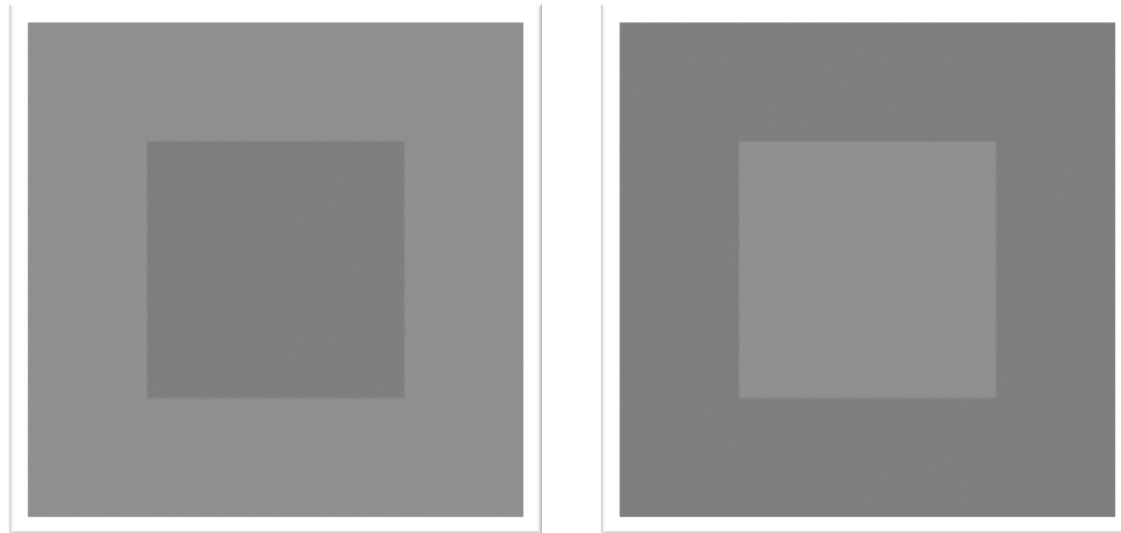
# VALUE

The relative lightness or darkness of a color.



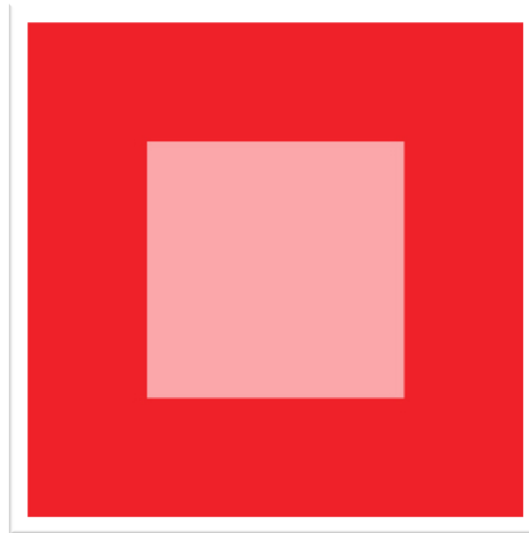
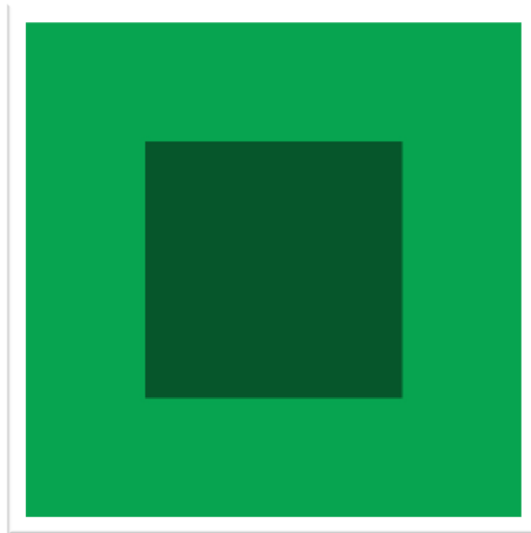


Pairing different **hues**...

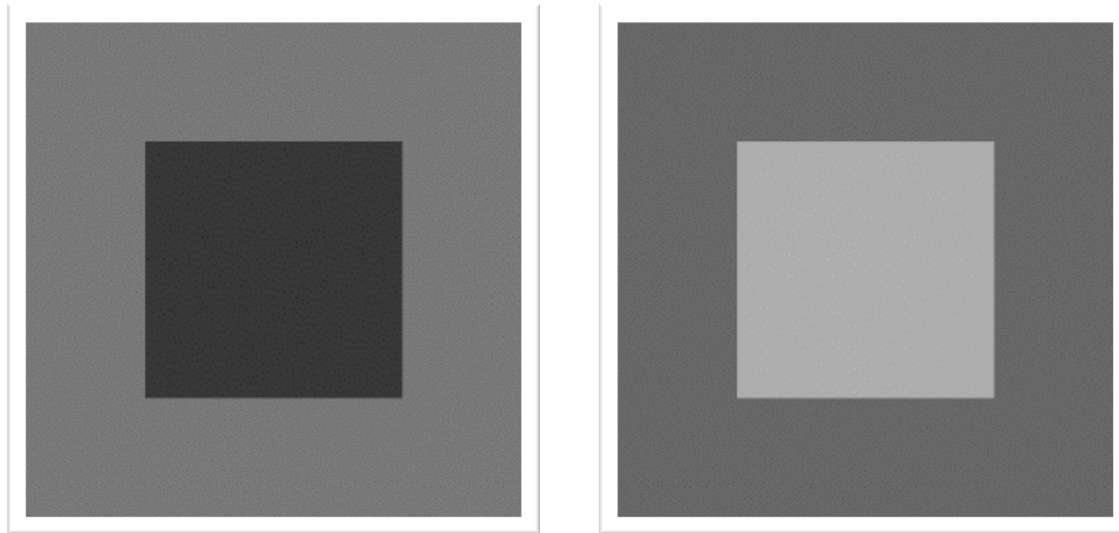


...does not necessarily create **contrast**.

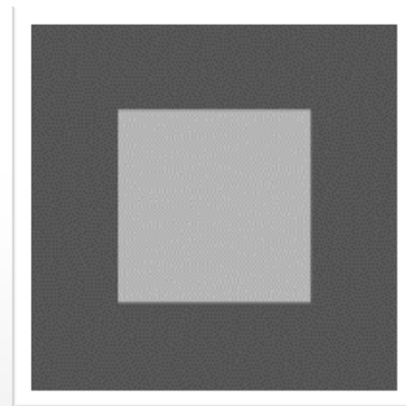
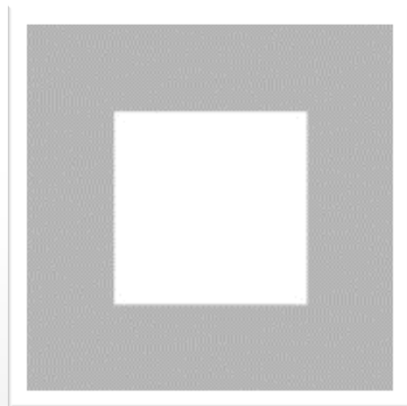
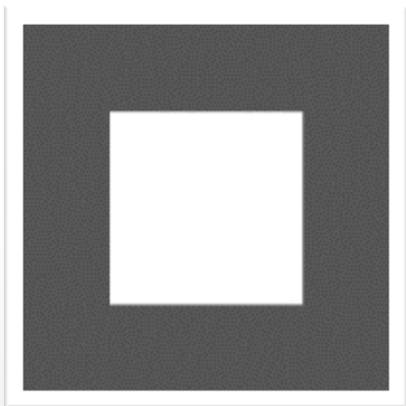
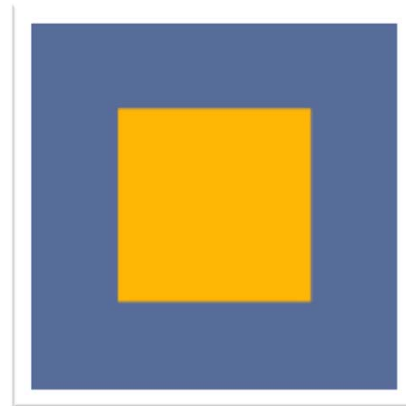
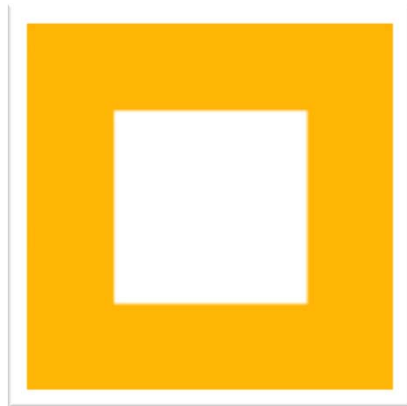
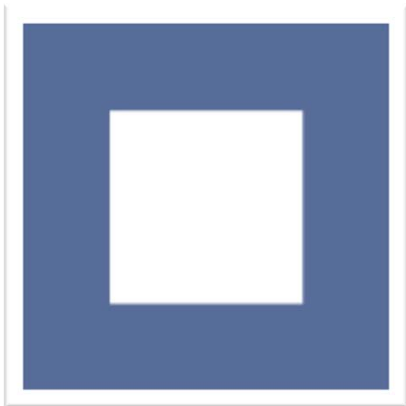
(1.37:1)



Pairing different **values**...



...creates **contrast**.



5.55:1

1.79:1

3.09:1

## EXAMPLE: LOW CONTRAST

- ✓ Hammer Museum  
<http://hammer.ucla.edu/programs/programs>

## EXAMPLE: HIGH CONTRAST

- ✓ UCLA Film and Television Archive  
<http://www.cinema.ucla.edu/education>

# OTHER THINGS TO CONSIDER

- ✓ Be cautious when using text on top of images

<http://www.fishrestaurantcharleston.com/>

- ✓ Carefully consider link and highlighted link colors

<http://hammer.ucla.edu/>



# TIPS



- ✓ Utilize different values of the UCLA graphic identity colors
- ✓ Underline links in order to distinguish them from main text
- ✓ Reserve UCLA Gold for non-text elements (i.e. bullets, arrows, borders)

# EXAMPLE: HIGH CONTRAST, UCLA BRANDED

- ✓ UCLA Mobile Web Framework  
<http://mwf.ucla.edu/>

# TOOLS

- ✓ Juicy Studio accessibility toolbar

<https://addons.mozilla.org/en-us/firefox/addon/juicy-studio-accessibility-too/>

- ✓ Snook contrast check

[http://snook.ca/technical/colour\\_contrast/colour.html](http://snook.ca/technical/colour_contrast/colour.html)

- ✓ Adobe Illustrator color guide feature

[http://help.adobe.com/en\\_US/illustrator/cs/using/WS3B0DBDED-9FA7-47e9-B4BE-0D493E1034E2.html](http://help.adobe.com/en_US/illustrator/cs/using/WS3B0DBDED-9FA7-47e9-B4BE-0D493E1034E2.html)

- ✓ UCLA web accessible color palette  
(in preparation)

# QUESTIONS?

# EALT UPDATE

## (Electronic Accessibility Leadership Team)

- ✓ EALT Report to UC IT Leadership Council  
<http://www.ucop.edu/irc/ealt/documents/committee-report-itlc.pdf>
- ✓ Assessing 7 sites from each campus to provide “electronic accessibility snapshot”  
Main site, Undergraduate Admissions, Graduate Admissions, Housing, Disabled Students Office, Staff Job Listings (HR), Healthcare

# RECENT RECOMMENDATIONS to ITLC

- ✓ Provide campus representatives to pitch in on projects
- ✓ Consider accessibility in hiring
- ✓ Include EALT in RFP-driven IT initiatives
- ✓ Ask procurement staff to consider accessibility in purchases
- ✓ Recognize a policy is forthcoming
- ✓ Fund tools