The right eye appears to be bluish in the leftmost panel, yellowish in the middle, and reddish in the rightmost panel, though the right eye is the same color as the left one for each panel.

| Multiplicative color change  
| (giving transparent appearance) | Additive color change  
| (giving translucent appearance) |

**Color illusion**

| Actual examples |

| **Formula** |

If the color of a pixel in the target image is \((r_o, g_o, b_o)\),
the color of the filter is \((r_f, g_f, b_f)\),
and its transmittance is \(\tau\)  
\((0 \leq r_o, g_o, b_o, r_f, g_f, b_f, \tau \leq 1)\),
then the resulting color is given as  
\([\tau + (1-\tau) r_f] r_o, [\tau + (1-\tau) g_f] g_o, [\tau + (1-\tau) b_f] b_o\).
Values $x$ and $y$ were obtained using the formula from sRGB to XYZ.
Two-colored image (modified Land’s method)
(red 50%)

Gray or nearly gray appears to be bluish.
Additively color-changed image
(red 50%)

(R, G, B) = (188, 68, 115)
(x, y) = (0.3600, 0.2846)

(R, G, B) = (188, 102, 154)
(x, y) = (0.3313, 0.2898)

(R, G, B) = (189, 98, 145)
(x, y) = (0.3369, 0.2923)

Red purple appears to be bluish.
Multiplicatively color-changed image
(red 50%)

Dark blue appears to be bluish. This demo is not regarded as color illusion because of the same hue.
Two-colored image (Two-colorization and additive color change) (red 50%)

Grayish red appears to be bluish.
Multiplicative color change
(giving transparent appearance)

Additive color change
(giving translucent appearance)

Standard color changes

50%

30%

10%

0%

Pets appear be yellowish as they are (dark grayish yellow). No transmittance (0%) of red and green signals blacks out yellow.

Pets appear be yellowish, though they are gray or of blue hue.

Land's two color method

Pets appear be yellowish, though they are gray or of blue hue.

Two-colorized image

Pets appear be yellowish as they are (dark grayish yellow). No transmittance (0%) of red and green signals blacks out yellow.

Pets appear be yellowish, though they are gray or of blue hue.
Dress debate

"Dress illusion" (February 2015) [http://swiked.tumblr.com/post/112073818575/guys-please-help-me-is-this-dress-white-and-blue].

Ambiguity in the perceived color combination

Explanation given by @budoucha (Twitter) (presented with permission)
Many people see brown as black. How do you see this image?

**Bistable Transparency**
- RGB = 152, 152, 0
- RGB = 152, 152, 177
- Because no blue in yellow

**Multiplicative Color Change**
- 255, 255, 255
- 255, 255, 0

**Unique Transparency**
- RGB = 153, 153, 174

**Additive Color Change**
- RGB = 153, 153, 177
- Produced yellow cannot be so dark as compared with produced blue.

**Note:**
- RGB values represent the intensity of red, green, and blue components, respectively.