



Interfaces Hombre-Máquina

Unidad V

**“Recomendaciones para el
desarrollo de Interfaces Web”**

Rogelio Ferreira Escutia



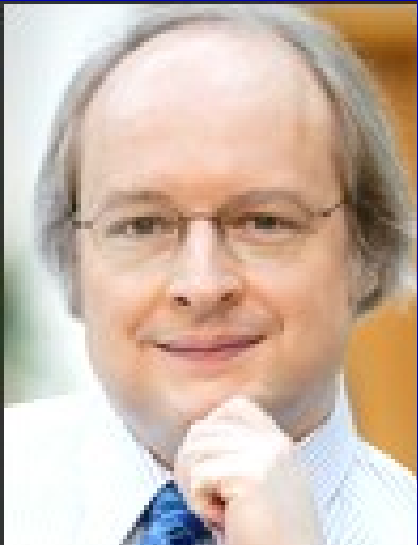
Contenido

- 1) Jakob Nielsen (Alertbox)***
- 2) Aries Ardití (Lighthouse)***

1) Jakob Nielsen (Alertbox)

Jakob Nielsen

- Es fundador del movimiento "discount usability engineering".
- Es un experto líder en el área de usabilidad en la web.
- Es autor de los libros "The Practice of Simplicity" (2000) del cual se vendieron 250,000 ejemplares en 22 idiomas,"International User Interfaces" (1996),"Usability Inspection Methods" (1994),"Usability Engineering" (1993),"Homepage Usability: 50 Websites Deconstructed" (2001).
- Su sitio "Alertbox" acerca de usabilidad en la web fué publicada desde 1995 y actualmente tiene cerca de 200,000 lectores



Original Top Ten Mistakes in Web Design

Original Top Ten Mistakes in Web Design

- **1. Using Frames**
- **Splitting a page into frames is very confusing for users since frames break the fundamental user model of the web page. All of a sudden, you cannot bookmark the current page and return to it (the bookmark points to another version of the frameset), URLs stop working, and printouts become difficult. Even worse, the predictability of user actions goes out the door: who knows what information will appear where when you click on a link?**

Original Top Ten Mistakes in Web Design

- **2. Gratuitous Use of Bleeding-Edge Technology**
- **Don't try to attract users to your site by bragging about use of the latest web technology. You may attract a few nerds, but mainstream users will care more about useful content and your ability to offer good customer service. Using the latest and greatest before it is even out of beta is a sure way to discourage users: if their system crashes while visiting your site, you can bet that many of them will not be back. Unless you are in the business of selling Internet products or services, it is better to wait until some experience has been gained with respect to the appropriate ways of using new techniques. When desktop publishing was young, people put twenty fonts in their documents: let's avoid similar design bloat on the Web.**



Original Top Ten Mistakes in Web Design

- **3. Scrolling Text, Marquees, and Constantly Running Animations**
- **Never include page elements that move incessantly. Moving images have an overpowering effect on the human peripheral vision. A web page should not emulate Times Square in New York City in its constant attack on the human senses: give your user some peace and quiet to actually read the text! Of course, <BLINK> is simply evil. Enough said.**



Original Top Ten Mistakes in Web Design

- **4. Complex URLs**

- **Even though machine-level addressing like the URL should never have been exposed in the user interface, it is there and we have found that users actually try to decode the URLs of pages to infer the structure of web sites. Users do this because of the horrifying lack of support for navigation and sense of location in current web browsers. Thus, a URL should contain human-readable directory and file names that reflect the nature of the information space. Also, users sometimes need to type in a URL, so try to minimize the risk of typos by using short names with all lower-case characters and no special characters (many people don't know how to type a ~).**

Original Top Ten Mistakes in Web Design

■ 5. Orphan Pages

- **Make sure that all pages include a clear indication of what web site they belong to since users may access pages directly without coming in through your home page. For the same reason, every page should have a link up to your home page as well as some indication of where they fit within the structure of your information space.**

Original Top Ten Mistakes in Web Design

- **6. Long Scrolling Pages**

- **Only 10% of users scroll beyond the information that is visible on the screen when a page comes up. All critical content and navigation options should be on the top part of the page. *Note added December 1997:* More recent studies show that users are more willing to scroll now than they were in the early years of the Web. I still recommend minimizing scrolling on navigation pages, but it is no longer an absolute ban.**

Original Top Ten Mistakes in Web Design

- **7. Lack of Navigation Support**
- **Don't assume that users know as much about your site as you do. They always have difficulty finding information, so they need support in the form of a strong sense of structure and place. Start your design with a good understanding of the structure of the information space and communicate this structure explicitly to the user. Provide a site map and let users know where they are and where they can go. Also, you will need a good search feature since even the best navigation support will never be enough.**

Original Top Ten Mistakes in Web Design

- **8. Non-Standard Link Colors**
- **Links to pages that have not been seen by the user are blue; links to previously seen pages are purple or red. Don't mess with these colors since the ability to understand what links have been followed is one of the few navigational aides that is standard in most web browsers. Consistency is key to teaching users what the link colors mean.**



Original Top Ten Mistakes in Web Design

- **9. Outdated Information**

- **Budget to hire a web gardener as part of your team. You need somebody to root out the weeds and replant the flowers as the website changes but most people would rather spend their time creating new content than on maintenance. In practice, maintenance is a cheap way of enhancing the content on your website since many old pages keep their relevance and should be linked into the new pages. Of course, some pages are better off being removed completely from the server after their expiration date.**



Original Top Ten Mistakes in Web Design

- **10. Overly Long Download Times**
- I am placing this issue last because most people already know about it; not because it is the least important. Traditional human factors guidelines indicate 10 seconds as the maximum response time before users lose interest. On the web, users have been trained to endure so much suffering that it may be acceptable to increase this limit to 15 seconds for a few pages. Even websites with high-end users need to consider download times: many B2B customers access websites from home computers in the evening because they are too busy to surf the Web during working hours.

Guidelines for Visualizing Links

Guidelines for Visualizing Links

- To maximize the perceived affordance of clickability, color and underline the link text.
- Assuming the link text is colored, it's not always absolutely necessary to underline it.
- Don't underline any text that's not a link, even if your links aren't underlined. Reserve underlining for links.
- Use different colors for visited and unvisited links.
- Never show text in your chosen link colors unless it's a link.
- There is no need to use special colors or other visualizations when the cursor hovers over a link.
- Don't use tiny text for links.

***Top Ten Web Design Mistakes of
2003***

Top Ten Web Design Mistakes of 2003

- **1. Unclear Statement of Purpose**
- **Many companies, particularly in the high tech industry, use vague or generic language to describe their purpose. Obscuring this basic fact makes it much harder for users to interpret a website's information and services. A strong mental model can grow from small seeds, as each additional design element adds to the user's existing understanding of a site. However, many sites create blurry mental models in users' minds because they fail to offer the one hard fact that users need to place other facts in their proper context.**

Top Ten Web Design Mistakes of 2003

■ 2. Archived Content

- Archives add substantial value to a site with very little extra effort. Although more and more sites are archiving old content, most sites still fail to maintain good archives. Some sites treat archives as a separate site area, assigning pages new URLs when they move them from the main area into the archive.
- Changing the URL when archiving content causes linkrot. It also makes other sites reluctant to link to you. Although sites might consider linking to a current article, if they've been burned by linkrot in the past, they'll often pass you by because they don't want to bother with having to update their own pages when you move yours.

Top Ten Web Design Mistakes of 2003

■ 3. Undated Content

- Without dates on articles, press releases, and other content, users have no idea whether the information is current or obsolete. It's great to keep content in archives.
- The Alertbox, for example, gets 80% of its readership for old columns, which readers continue to find useful. But some facts and recommendations are strongly date-dependent, such as when I recommend using a certain version of a software package for another two years. Obviously, I mean two years from the day the article was written; if readers can't see the date, they won't know how to follow the recommendation.

Top Ten Web Design Mistakes of 2003

- **4. Small Thumbnail Images of Big, Detailed Photos**
- **It's great that websites are now using smaller pictures. Avoiding the bloated designs of the past decreases download time and increases information richness.**
- **It's also good when sites link small pictures to bigger pictures, so users have the option of seeing the image in more detail.**
- **The main problem here is that websites typically produce small images by simply scaling down bigger images. If an original photo has a lot of intricate detail, the thumbnail is often incomprehensible.**

Top Ten Web Design Mistakes of 2003

- 4.
- The left photo is from the whitehouse.gov site. It shows the U.S. President, the Secretary of the Interior, and the Director of the National Park Service walking in the Santa Monica mountains. If I hadn't told you that, you wouldn't have known by looking at the thumbnail: It's just a photo of three people. You can't even really tell that they're in a park, let alone which one.
- The right photo is from cnn.com, which usually does a great job with small images on the homepage. This photo illustrated a story about flooding; in this case, you can clearly see what's going on, even though the image is only 65 x 49 pixels.



Top Ten Web Design Mistakes of 2003

- **5. Overly detailed ALT Text**
- Many sites have begun paying attention to users with disabilities and are following accessibility guidelines, such as including ALT texts for images.
- Unfortunately, some sites don't realize that ALT text is a user interface element, not a statement of political correctness.
- ALT text should help blind users (and others who can't see images) navigate and operate the site. The text should describe the image's meaning for the interaction and what users need to know about the image to use the site most effectively. There is no need to describe irrelevant visual details.

Top Ten Web Design Mistakes of 2003

- **6. No "What-If" Support**
- **Comparing and choosing between alternatives is the basis for most critical Web tasks, yet most websites don't support users who want to consider alternatives. What if I want to travel out Sunday instead of Saturday? How would that affect the price of my airline ticket? On most travel sites, the only way to answer this question is to start again from the first screen and plan an entirely new trip, losing all the work required to build your first itinerary.**
- **What if I want a color copier instead of a monochrome one, but I'm satisfied with all the other attributes of the monochrome copier I'm currently viewing? Can I navigate by attribute and change only one parameter? Usually not.**

Top Ten Web Design Mistakes of 2003

- **7. Long Lists that Can't Be Winnowed by Attributes**
- **It used to be that Web sites offered one or two things.**
- **Now it's common to find sites with thousands or millions of items.**
- **Wonderful, but that means that item listings are often very long and hard to use.**
- **One of the main usability guidelines for category pages is to let users winnow items according to attributes of interest.**
- **To "winnow" a list basically means to filter out elements that don't meet specified criteria, leaving a shorter list that's easier to manage and understand.**

Top Ten Web Design Mistakes of 2003

- **8. Products Sorted Only by Brand**
- Sites that offer many items ought to provide winnowing and sorting, which is a highly useful way to deal with lists and is fortunately fairly common.
- Unfortunately, many sites only let users sort items by brand. So you can find, say, all Armani products, but not all red sweaters.
- To support sorting by attributes of interest to users, the obvious first question is "What attributes do users value?" The answers will differ by product category, but user research can help you discover them, as can a good sales person.

Top Ten Web Design Mistakes of 2003

- **9. Overly Restrictive Form Entry**
- **Put the burden on the computer, not the human: let users enter data in the format they prefer. Two common ways of unfairly restricting users:**
- **Picky, overly specific forms. Splitting what users see as a single piece of information into multiple fields means that users must waste time moving the cursor around. A typical example is when forms ask users for their first and last names as two items, rather than simply letting users enter their full name in a single field, which is much faster to type.**

Top Ten Web Design Mistakes of 2003

- **9.**
- **Human formatting prohibited.**
- **Any text entry field that requires users to type information in a specific way rather than allow the natural variations that humans prefer can be irritating. Many sites, for example, force users to enter credit card numbers as 1234567890123456, rather than letting them put spaces between groups of four digits, which significantly reduces the risk of errors.**
- **Similarly, some sites won't let users enter a phone number with parentheses around the area code, even though many people are used to such parentheses. Our testing has shown that senior citizens are particularly harmed when a website's format is different than a format they've grown accustomed to over many years of use.**

Top Ten Web Design Mistakes of 2003

- **10. Pages That Link to Themselves**

When using photos on the Web

When using photos on the Web

- **Include fewer people and objects, in less complicated settings than you would for photos intended for print.**
- **Emphasize close-up shots with clean backgrounds.**
- **Use relevance-enhanced image reduction when preparing small photos from big ones. Don't just resize; first crop the image to focus on a salient and simple element**

Errores comunes de diseño

Errores comunes de diseño

Design	MistakeViolation Score
Slow download times	84%
Non-standard link colors	17%
Long scrolling navigation pages	15%
Scrolling text or looping animation	12%
Frames	11%
Orphan pages	10%
Bleeding-edge technology	7%
Complex URLs	6%
Lack of navigation support	4%
Outdated information	1%
Average	16%

***When Bad Design Elements
Become the Standard***

When Bad Design Elements Become the Standard

- **Web design is easy:** If you are thinking about how to design a certain page element, all you have to do is to look at the twenty most-visited sites on the Internet and see how they do it.
- If 80% or more of the big sites do things in a single way, then this is the de-facto standard and you *have* to comply. Only deviate from a design standard if your alternative design has at least 100% higher measured usability.
- If 50-79% of the big sites do things in a single way, then this is a strong convention and you *should* comply unless your alternative design has at least 50% higher measured usability.

When Bad Design Elements Become the Standard

- **If less than 50% of the big sites do things in a single way, then there are no dominant conventions yet and you are free to design in an alternative way. Even so, if there are a few options, each of which are used by at least 20% of big sites, you should limit yourself to choosing one of these reasonably well-known designs unless your alternative design has at least 25% higher measured usability than the best of the choices used by the big sites.**

Sample Design Conventions

Sample Design Conventions

- Blue text means "click here" on the Web, so by keeping unvisited links blue, there is no doubt in users' minds as to what they can do. The time they save by *knowing* what to do on a page is probably much bigger than the time they lose by having the few words in the hypertext anchors be a few milliseconds slower to read.
- Even more important, knowing the difference between unvisited (blue) and previously visited (purple) links helps users understand the structure of the website and their own navigation history. On sites that change the colors, we often observe users revisiting the same pages again and again because they do not realize that they have already seen those pages. The added confusion, substantial navigation delays, and reduced probability of ever finding the right page are all very severe usability penalties from changing the default link colors.

Sample Design Conventions

- **Fitts' Law dictates that shorter mouse movements are better: it is always faster to click a target if it is closer to your starting position. Thus, placing the navigation rail next to the scroll bar will usually save users time over placing these two frequently-accessed areas on opposite sides of the window.**
- **Users always look at the content first when they encounter a new web page, so it would be better if the content started at the left border of the window (for users in cultures that read left-to-right). After the users are done with the content, their gaze could naturally shift to the right to decide where to go next. In contrast, placing the navigation rail to the left requires users to skip over it before they can start scanning the content area.**

Readability Guidelines for Websites

Readability Guidelines for Websites

- **Do not use absolute font sizes in your style sheets. Code font sizes in relative terms, typically using percentages such as 120% for big text and 90% for small text.**
- **Make your default font size reasonably big (at least 10 point) so that very few users have to resort to manual overrides.**
- **If your site targets senior citizens, use bigger default font sizes (at least 12 point).**
- **If possible, avoid text that's embedded within a graphic, since style sheets and font size buttons don't have any effect on graphics. If you must use pictures of text, make sure the font size is especially large (at least 12 point) and that you use high-contrast colors.**

Readability Guidelines for Websites

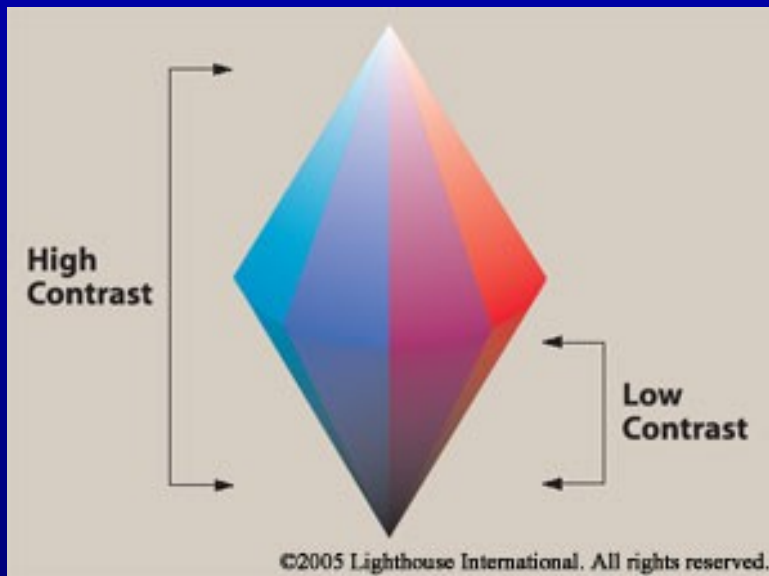
- **Consider adding a button that loads an alternate style sheet with really big font sizes if most of your site's visitors are senior citizens or low-vision users. Few users know how to find or use the built-in font size feature in current browsers, and adding such a button within your pages will help users easily increase text size. However, because every extra feature takes away from the rest of the page, I don't recommend such a button for mainstream websites.**
- **Maximize the color contrast between the text and the background (and do not use busy or watermarked background patterns). Despite the fact that low-contrast text further reduces readability, the Web is plagued by gray text these days.**

2) Aries Ardit
(Lighthouse)

Effective Color Contrast

Effective Color Contrast

- 1. Exaggerate lightness differences between foreground and background colors, and avoid using colors of similar lightness adjacent to one another, even if they differ in saturation or hue.



Effective Color Contrast

- **Dont assume that the lightness you perceive will be the same as the lightness perceived by people with color deficits. You can generally assume that they will see less contrast between colors than you will. If you lighten the light colors and darken the dark colors in your design, you will increase its visual accessibility**



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Effective Color Contrast

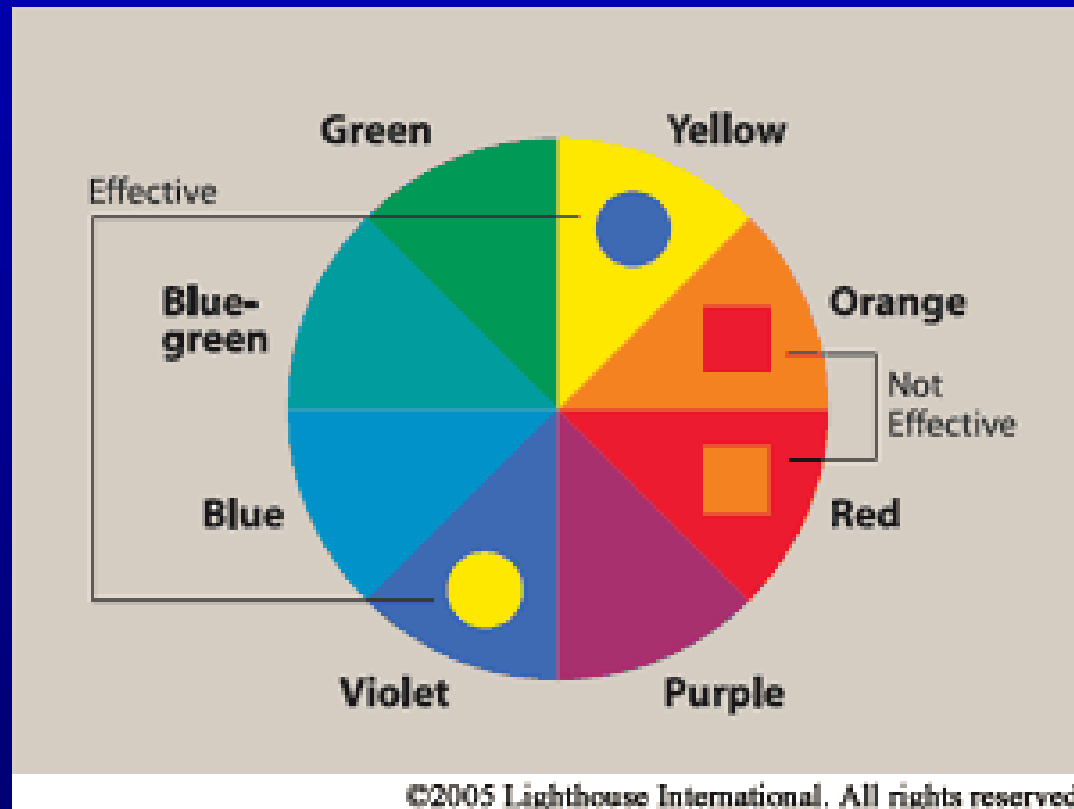
- 2. Choose dark colors with hues from the bottom half of this hue circle against light colors from the top half of the circle. Avoid contrasting light colors from the bottom half against dark colors from the top half. The orientation of this hue circle was chosen to illustrate this point.



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Effective Color Contrast

- For most people with partial sight and/or congenital color deficiencies, the lightness values of colors in the bottom half of the hue circle tend to be reduced



Effective Color Contrast

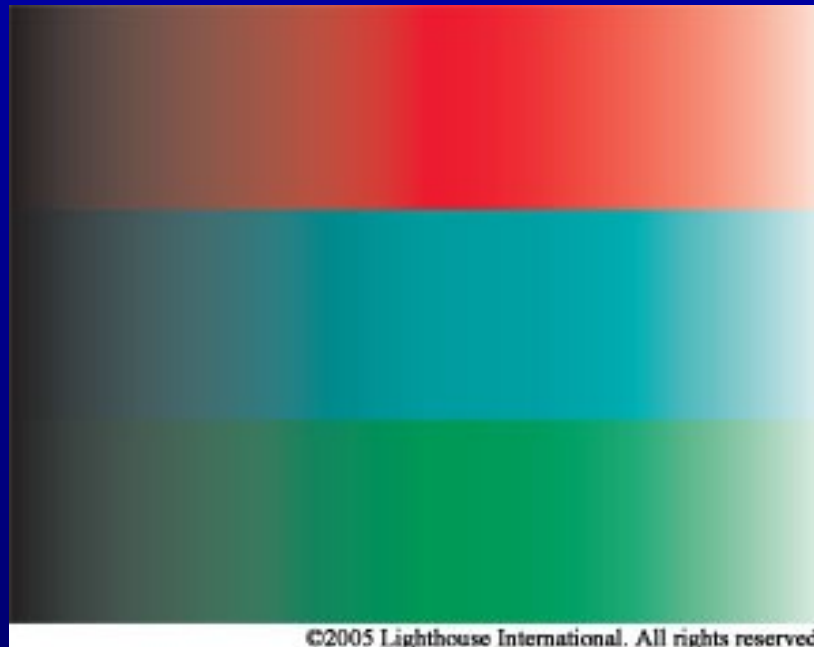
- 3. Avoid contrasting hues from adjacent parts of the hue circle, especially if the colors do not contrast sharply in lightness.



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Effective Color Contrast

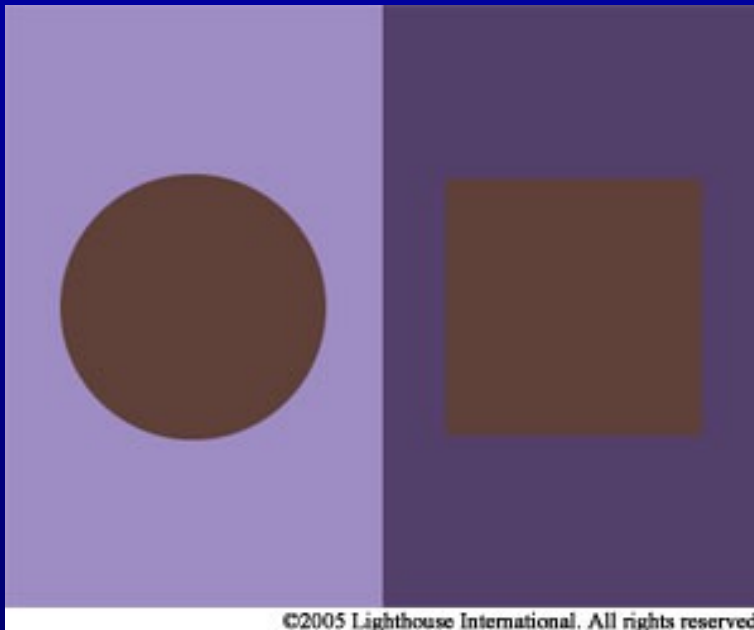
- Hue is the perceptual attribute associated with elementary color names. Hue enables us to identify basic color categories such as blue, green, yellow, red and purple. People with normal color vision report that hues follow a natural sequence based on their similarity to one another. With most color deficits, the ability to discriminate between colors on the basis of hue is diminished.



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Effective Color Contrast

- **Lightness corresponds to how much light appears to be reflected from a colored surface in relation to nearby surfaces. Lightness, like hue, is a perceptual attribute that cannot be computed from physical measurements alone. It is the most important attribute in making contrast more effective. With color deficits, the ability to discriminate colors on the basis of lightness is reduced.**



- **To a person with color-deficient partial sight, the left-hand panel might appear like the right-hand panel appears to a person with normal color vision.**



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