6 Images

Images are a powerful part of Web design. Good images explain a concept, conjure a feeling, convey information, and enhance people's overall experience on a site. Bad images waste space, are ignored by users, and, even worse, are confusing. In this chapter, we examine what specific attributes attract people or repel them from images on the Web.

There are basically four forms of media for communicating to users on the Web: text, graphics, moving images (such as animation and video), and sound. Graphics are probably the most powerful of these because people respond to them instantly and in a matter of just a few fixations.

There are some very creative, captivating images on the Web today—graphics that evoke emotion, graphics that relay a message far better and faster than words, and graphics that illustrate a process or instructions. People look at and respond positively to these graphics. But generic and pointless images are about as compelling as a garden slug. Our eyetracking research shows that these are even a bigger waste of time than we previously thought because people simply do not look at them.

It's almost as though people have a finite bank of looks to give to Web pages. When they scan a page, they rapidly make decisions about what they are going to view. They are constantly calculating how many looks they have used and have left and whether it is worth allotting them to the image at hand. It's a tough world on the Web, and users are downright miserly with their fixations.

Just how miserly? Depending on the context and types of images, people look at less than half of the images presented to them on average—only 42 percent. And in general, they look at those images for less than two-tenths of a second.

What Does and Doesn't Draw Attention to an Image

Images that people really look at vary greatly in style and quality.

We have found in our eyetracking research that people determine an image to be worth looking at during their first, peripheral glimpse of it. In general, they decide it is worthwhile if it seems substantive and of benefit to them.

People ignore more images than they look at on the Web, and they look at images for just a fraction of a second.

The images people look at most have the following characteristics:

- Are high contrast and high quality (crisp and colorful)
- Are cropped, rather than overly reduced, when necessary to fit a small space
- Are not excessively detailed: easy to interpret, almost iconic
- Are highly related to the content on the page
- Possess magnetic features

Features that make images magnetic include the following:

- Smiling and approachable faces
- People looking at (or at least facing) the camera
- Sexual anatomy (and sexy bodies)
- Appetizing food
- Clear instructions or information

People ignore images that have the following characteristics:

- Are low contrast and low quality
- Are too busy for the space
- Look like advertisements
- Are not related to content on the page or only slightly related to it
- Are boring
- Include people or objects that are generic or obvious stock art
- Are cold, fake, or too polished

Images as Obstacles

People often treat Web pages as obstacle courses and the images they perceive to be unhelpful as obstacles they must go around. This was the case when our users went to the Adelphia cable company's homepage to learn about digital video recording.

The page offers horizontal navigation and text, buttons, and links in the content area. It includes several images that are not very magnetic. They are low contrast or too small for the space allocated to them, and the people in the images are not looking at the camera (**Figure 6.1**). Amazingly, almost all our users looked everywhere on the page but at the images (**Figure 6.2**).

Figure 6.1 Adelphia's homepage tries to entice with images of people happily using the company's cable products or services.



Figure 6.2 Most people went out of their way to avoid the generic-looking images on the page.

On Web pages with multiple superfluous images, people treat the entire page as an obstacle course they must navigate. They look at the text around images, but not at the images.

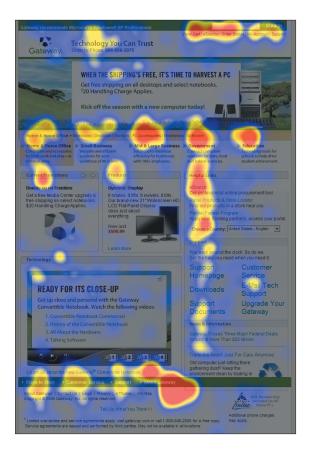


It may seem that even generic images on a page provide users with a visual break from heavy text. But since people work to avoid useless images, it actually adds to their cognitive load.

Figure 6.3 People looked anywhere but at the boring images on the Gateway homepage.

Why do designers include lackluster images like these? One reason is simply to give people's eyes a break from the text. But this can also have the opposite effect. When users' cognitive load is taxed from trying to avoid the images, they're not getting a break.

On the Gateway computer company's homepage, people also avoided the images that they believed were of no help to them: the PC monitors, the cow-skin patterned box, the hill and trees (**Figure 6.3**). Of course, what constitutes a "pointless" image is subjective. Presumably, Gateway included the image of computer monitors to draw attention to the text about its new 21-inch monitor. But the image is so small that it does not do a good job of showing that the monitor rotates and swivels. And at first glance, it appears that there are two monitors, not one in different modes. Users didn't even get that far, however, because the image seemed too generic to even merit a look.



Don't add images to a page simply to fill white space. Instead, lay out the page differently. Most Web pages are too cluttered anyway, and users appreciate a short page with clear, large text or a single, useful image.

People don't waste time trying to figure out what the subject of a lowcontrast image is. They simply ignore it. Part of the reason people ignored the smaller images is because the large, irrelevant background farm image at the top of the page hardened them to other images. The small pictures may have a bit more relevance, but by the time users got to them, they were already using an image-skipping strategy to work down the page.

Obstacle-course behavior is not exclusive to homepages, which are known for being "prettied up." It certainly occurs with interior pages too. For example, we asked people to use *New York Magazine*'s Web site to find restaurants in New York City where they might like to dine. Many people looked at the *Food and Restaurant* pages with reviews of big-name restaurants and several images of different sizes.

One image was of celebrity chef Anthony Bourdain, star of the TV show *No Reservations* and author of the best-seller *Kitchen Confidential*. Users looked around the photo of Bourdain, not at it. They also avoided the photo of prolific chef and TV personality Mario Batali (**Figure 6.4** and **Figure 6.5**). They ignored pictures of restaurants and other small photos on the page. Why?

Above all, as a closer look at the images shows, the contrast in almost all of these images is pitiable. Bourdain—a colorful, adventurous guy—is as gray as the backdrop behind him. And a photo of him is not highly related to the page content. It accompanies an article about celebrity chefs' opinions, not about Bourdain himself. Although this is commonly done for this type of magazine article, it is not necessarily effective on the Web.

The photos of restaurant interiors are also too dark and too detailed to be of much use. The illustrations of the woman's head and the chef's hat look like filler images, while the larger-than-life Batali is squeezed into a postage stamp—sized space. Can't a premier chef get a few more pixels? As a result, users did all they could to avoid these images as they negotiated the page.

Figure 6.4 Web page as obstacle course: Users searching for restaurants read the text on *New York Magazine's* restaurant page but avoided the small and low-contrast images—even of high-profile chefs.



Figure 6.5 A closer look at the images on the page. They were meant to draw people's attention, not turn them off.

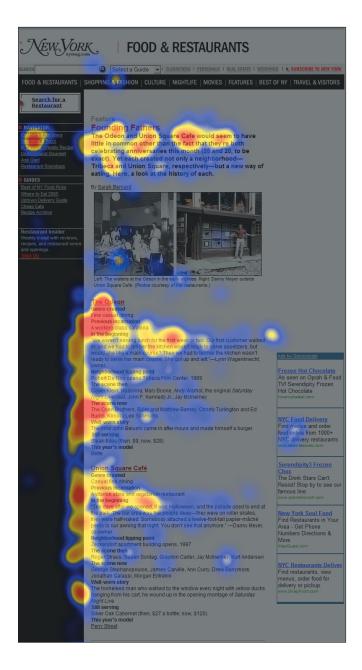


While still looking for restaurants on the same site, several users also hit a page with a blurb under the headline *Founding Fathers*. The text and two photos were about the history of two seminal restaurants in Manhattan (**Figure 6.6**). Again, people read much of the text related to the photos but avoided the low-contrast images (**Figure 6.7**). They would have needed to give several fixations and a few seconds to figuring out what the images are of, and people aren't willing to do that.

Figure 6.6 The images of two Manhattan restaurants have poor contrast.



Figure 6.7 Even images that are highly related to the content on the page will be ignored if they are too dark and have poor contrast like these.



Omit Filler Images

Designers should beware of using images that accompany text but don't do anything to enhance it. We believe that these images should not be on a page. They are a waste of pixels, of the designer's work, and of users' time. We also

Stay Away from Gray

In our study, we came across several black-and-white images with poor contrast between the subject and background. This is no reason to avoid black and white. Although a punch of color can attract the eye, a sharp black-and-white image can get a lot of attention as well. But shades of gray tend to have weaker contrast and attract the eye less.

argue that you should always use great images, although we understand that realistically you may need to run some that are medium quality. If that's the case, at least avoid big irrelevant ones.

A designer might ask, "Well then, what would we put in that empty space?"

Our recommendation: nothing. Use white space. Alternatively, decrease the page length or increase the default size of the text on the rest of the page.

Most important, economize. Spend resources on one image that is meaningful instead of a few that are not. For example, the Gateway homepage could have had a more dynamic illustration or photo of the new monitor converting from the horizontal to vertical view—or maybe even a small animation. And to really showcase the new product, the site designers should have given it more space on the homepage and an eye-catching headline. Similarly, *New York Magazine* could have displayed one clear image of a restaurant instead of two small, unclear images. Of course, this would involve prioritizing and discipline because the article was about two restaurants.

Attributes That Draw Attention

There are images that you can't help but look at and images you can't stop looking at. A crisp silhouette draws attention on the Web. A strong relationship to content, interesting subjects, and base appeal keep attention on an image.

Contrast, Quality, and Detail

High contrast between the subject and background of an image may be the main factor that determines whether people look at the image. Users are more likely to grant a fixation to an image if they can tell from a peripheral look that they will be able to decipher it.

For example, one of our users was seeking information about the feeding habits of mallard ducks on the Ducks Unlimited Canada Web site. She looked at quite a lot of the text and text links on the page but not at the image on the right (**Figure 6.8**). It did not have peripherally attractive properties: It is a landscape in a small space without a main element as the subject—the pond, grass, trees, and sky all compete.

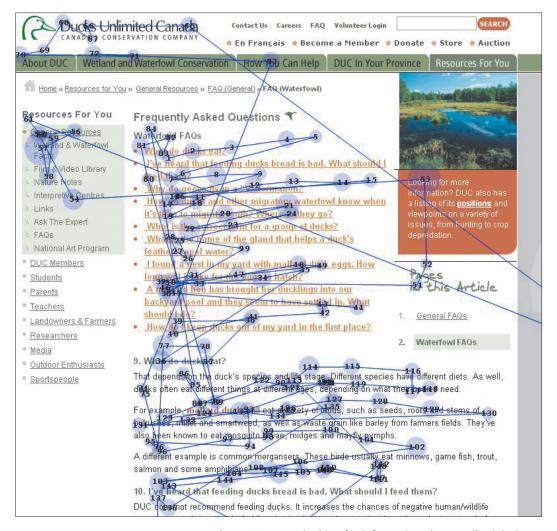


Figure 6.8 A user looking for information about mallard ducks avoided the rather useless image of a pond in the upper-right corner of this site. Peripherally, the image is just a lot of blue and green spots with no real clear subject.

In another task, a user looking to invest \$10,000 in retirement did the same thing. On the CityFeet Web site, he looked at a few of the links and headings but gave no fixations to the low-contrast, unrelated images of the map and woman (**Figure 6.9**). He also ignored the rest of the images on the page, which are far too difficult to make out quickly (even if he had looked at them) and too detailed for the small space allocated to them.

Figure 6.9 A user's few fixations on this page were reserved for headings, links, and text—not for the low-contrast and small images.



Motivation and Expectations Can Help Even Bad Images Get Looks

Sometimes people look at an image despite its flaws if they specifically selected a link to images and are interested in the topic to which they relate. For example, on the Travelocity site, the participants in our study who were interested in bike tours looked at a very scenic, though small, image of a mountain biking trip (**Figure 6.10** and **Figure 6.11**). Why? They had expressly chosen the *Photos* tab to view photos of the trip. So, a combination of interest, expectations, and photo quality drew their attention to the image despite its size.



Figure 6.10 This image of a mountain biking trip is small, but people who had selected a link to see photos still looked at it.



Figure 6.11 The large amount of red in this heat map indicates that there were still usability problems with the biking trip photo.

Still, a larger image would have been better for users. The cyclists are scaled down so small that people need to stare at the photo for a long time to understand what it is. If the image absolutely needs to be this small, it should have been cropped in on the cyclists. But since the landscape is part of the story, why not allocate more space for the photo? Why is it getting less than 4 percent of the available pixels?

Similarly, users on the 1900 Storm Web site chose to look at a slide show of photos from the aftermath of a devastating storm that hit Galveston, Texas, in 1900. The old black-and-white photos are not high quality, but people stuck with them because they had selected the slide show option and wanted to see the wreckage of the storm (**Figure 6.12**). The photo subjects are also captivating, and the quality of the photos adds a historical feel.

Figure 6.12 Even though the slide show images of a storm in 1900 had poor contrast, people were so interested in the subject that they continued to look at them.



When users select a link to a photo section, they usually expect some value-add in that area, such as larger photos or ways to zoom in. Our users who were researching information about vacationing in Shanghai on the Lonely Planet travel site did not look at the small accent images in the upper-left corner of pages about the city (**Figure 6.13**). When they selected the *Image Gallery* page, the same images in the same size appeared, but here they looked at them because they had specifically selected to do that (**Figure 6.14**).

Figure 6.13 People looked at the text and menus on this travel page about Shanghai but did not look at the small image with poor contrast in an upper corner, even though it was related to the content.

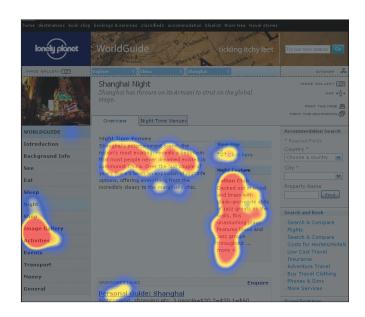
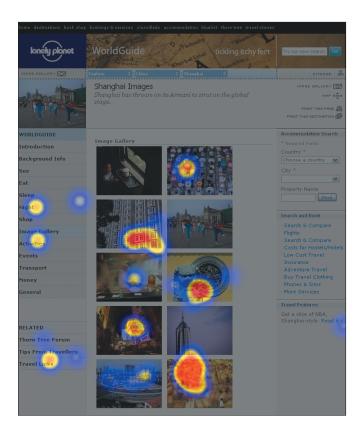


Figure 6.14 When people chose to view images on this site, they looked at images they had ignored on other pages.



Icons

Iconic images are ones that instantly convey what they are: a printer, a trash can, a bolded letter. They have clear lines, high contrast, and messages that are easily understood. If users wonder even for a moment what an image is, it is not iconic. Contrary to their name, iconic images do not necessarily have an icon in them, nor do they need to be buttons of any sort.

Iconic images do not get looked at if they are difficult to make sense of quickly. The Colorado Fishing Network homepage is full of icons. One of our users who was planning a fly-fishing trip in Colorado gave a fixation to the homepage photo of a man fishing but ignored the icons on the page (**Figure 6.15**). Why? Although the image of the fisherman is small, it is also decipherable and related to the content of the page. But most of the icons are far too small to make out and not even remotely helpful. Does the

binoculars icon add anything to the text *Search CFN*? How does the image that appears to be a pond represent *Shopping*? These images clutter the page without providing something of value for users. If this were our Web site, we'd drop the icons, get a better fly-fishing photo, and allot it the space it deserves.

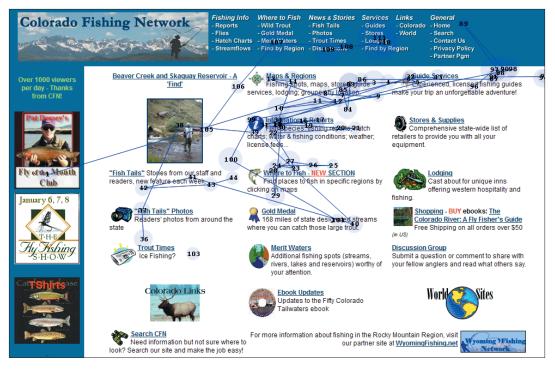


Figure 6.15 A user looked all around this homepage except at the tiny, useless icons.

Consider whether it's beneficial to use small graphics as signposts or bullets. Most tiny images are too difficult to decipher even if users spend time trying to figure out what they are. And most users don't bother.

In contrast, the graphics on File Forum, a site with software downloads and reviews, are simple, clear, and useful. One graphic employs blocks of color to depict consumer ratings on a scale of one to five. A single teal block indicates a score of one, two fuchsia blocks indicate a score of two, and so on. A user who was researching the product Skype went to the site in search of less than favorable reviews of the product. Once he understood the graphic's simple color scheme, it made it easy for him to quickly scan for them (**Figure 6.16**).

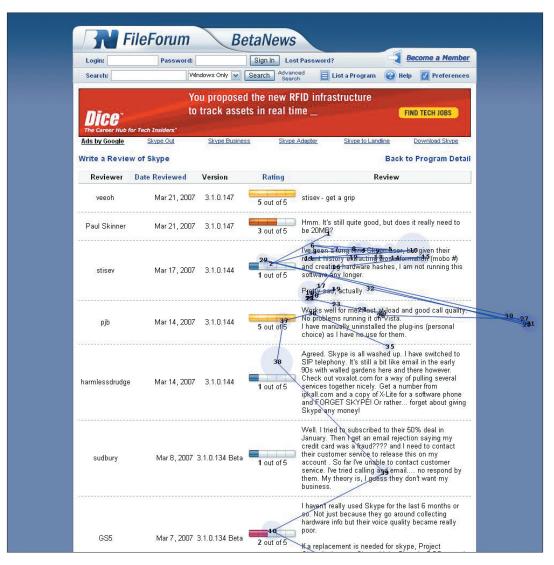


Figure 6.16 The rating icons helped one user quickly scan to one of the worst reviews of Skype on this site.

If One Icon on a Page Is Good, Are 19 Icons on a Page Great?

When Kara worked on Freelance Graphics at Lotus Development in the early 1990s, the group had a new feature called Smartlcons that were incredibly helpful to users. These included a big letter *B* that instantly made selected text bold and the now ubiquitous trash can for getting rid of things. But as Smartlcons got accolades from users and the press, the powers that be decided that each of the more than 100 menu commands in the product needed its own icon. So, they gave the poor visual artists the impossible task of representing many complex commands in a tiny image. Imagine boiling

down to a simple icon a complicated, multifaceted concept like "snap to grid"—a tool that helped users align their drawings with horizontal and vertical lines on a grid. Soon most of the icons became meaningless and overwhelming to users.

We see a similar result today on Web pages where someone has decided that every link needs an icon for consistency. So, instead of one or two great icons, the site ends up with too much of a good thing: an assortment of tiny, bad images on the page.

The Impact of Background

We've found that people are more likely to look at images of an object set against a very simple background than against a crowded one. People look at 28 percent of objects in a vacant setting and at only 14 percent of images in a busier setting. For Web users, a picture of a tree on a plain white background is more iconic and easier to decipher than a picture of a tree in front of other trees or bushes.

However, people spend slightly more time and fixations on images with more complicated settings—an average of 2.5 seconds and 8.19 fixations on these, and 2.05 seconds and 7.6 fixations on those with plainer settings. This seems logical because busier backgrounds have more detail to decipher. But we can't say that this is necessarily good. We *can* say that people sometimes seem to look longer at an image out of interest and sometimes because they are using *exhaustive review* to try to decipher the image.

People also look slightly more at images of a single object—26 percent—than at images with multiple objects—20 percent. This difference is not particularly great, but it does reinforce the idea that people are more attracted, at least peripherally, to simpler images. People also look slightly more and longer—for 2.13 seconds and 7.74 fixations—at images of one object than at images of multiple objects—1.61 seconds and 6.33 fixations. The lesson? Less is more with images.

Simplicity Wins

Image Attributes	Amount Viewed (Avg.)	Seconds Viewed (Avg.)	Number of Fixations(Avg.)
Single object	26%	2.13	7.74
Multiple objects	20%	1.61	6.33
Simple background	28%	2.05	7.60
Crowded background	14%	2.50	8.19

Originality

With so many creative Web designers, one must wonder why basic stock-art images keep finding their way onto sites. Although some designers must make the dubious decision to use boring images that have appeared on countless other sites, we believe that many designers don't. They snub generic "computer on desk" and "calm forest scene" images that could be on any site and that convey nothing unique or specific about an organization or its products, services, or values.

Take the ubiquitous "smiling woman wearing headset" image. Really, just about any company could boast customer support people who are happy to serve you. Does the woman wearing a headset (who obviously doesn't work for your company because she is too polished and made up to be answering support calls in a big Skinner Box of a room with 50 other people for 8 hours a day) really convey to your users that you are there for them?

The Adelphia Web site is one of many that has succumbed to the "smiling woman wearing headset" syndrome. And sure enough, no fixations (**Figure 6.17**).

We asked Web designers why these images keep popping up. Many of them say that a manager or other person with branding responsibilities often tells designers that they need to "punch up" a page because it is "too boring."

What's a designer to do? They can refuse to use a useless image and then risk being reprimanded or earning a reputation as "difficult." They can do the easy thing and use stock art—a choice that's often hastened by schedule and resource constraints. And maybe stock art will appease the people who wanted the page to be more exciting. But in

People ignore stock images 85 percent of the time.

85 percent of cases, users do not give these images the time of day. Not even one fixation. So, why not punch things up with something more original?

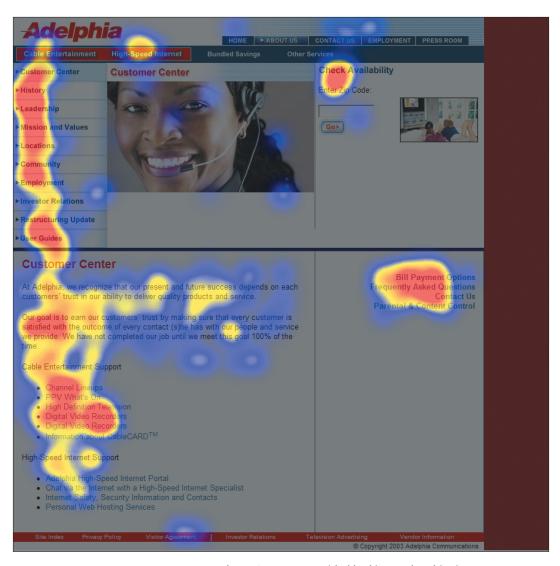


Figure 6.17 Users avoided looking at the ubiquitous "woman wearing headset" image on this site.

The site for Hansen's Natural beverages offers a humorous send-up of the "smiling woman wearing a headset": a deranged-looking man in a suit holding a tin can to his ear. This has visual interest, and our users looked at it (**Figure 6.18**).

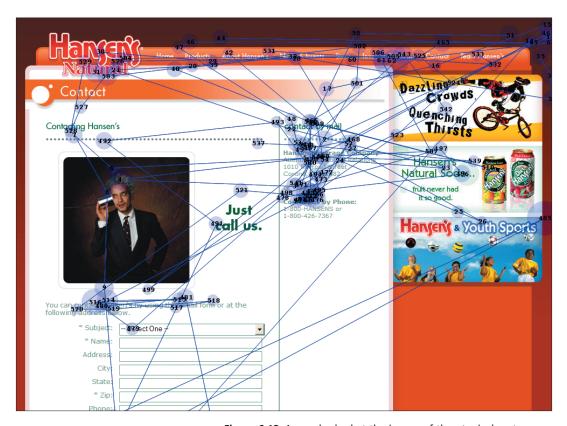
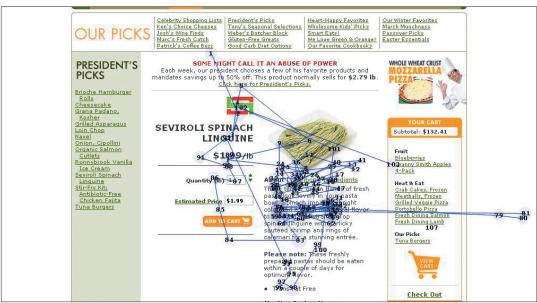


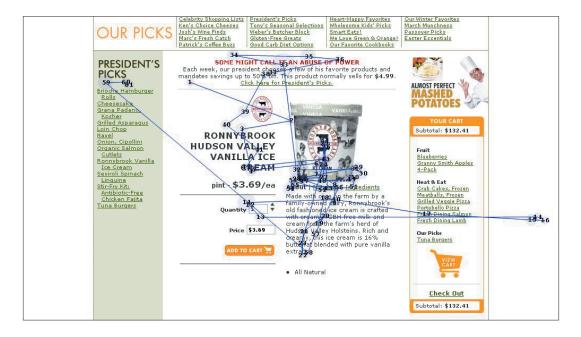
Figure 6.18 A user looked at the image of the atypical customer support representative at the Hansen's Natural Web site.

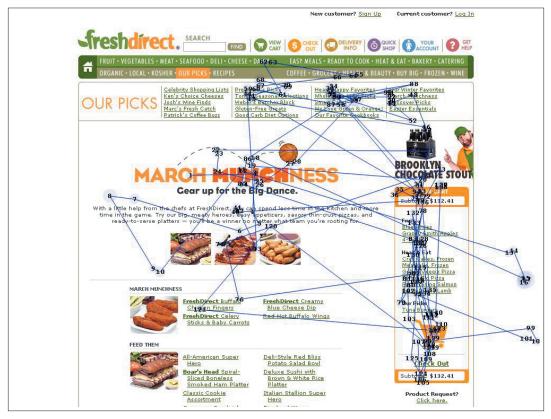
FreshDirect's twist is to have a small image of a person who looks like one of the grocery service's knowledgeable and friendly employees plugging featured food and drink items in the upper-right edge of pages. The idea of having a little chef (or a little deli bar man, little fishmonger, little produce worker, and so on) giving an OK sign to a featured item may seem as if it would add credibility, interest, and fun. But it loses its charm rather quickly (**Figure 6.19**).

Figure 6.19 People usually ignored the little man in the upper right of pages on this site after seeing him once, but they looked at images of food such as tuna burgers, pastas, and ice cream.







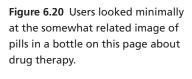


In fact, users rarely looked at these images. So, does this mean they should not be there? It's unlikely that the images increase users' page load time, and because the images have similar shapes and appear on the edges of the page, people may even learn to tune them out peripherally at the right times, selective disregard. And a few users might like them—at least the first one they see. So, they are pretty harmless. But knowing that people look at them very rarely, the site designers might want to come up with a better image or more effective use of the space instead.

Relationship to Content

Many images that appear on pages are simply not related to the main ideas the page is trying to convey, and users ignore or barely look at them. People look at unrelated or somewhat related images just 14 percent of the time. Sadly, all those images of blue skies and oceans, sunny flower meadows, and smiling customer support people are probably not getting the time of day.

Images that are only marginally related and not very help-ful don't get much response from users either. On the Gerd Institute Web site, for example, people barely looked at the image of pills spilling out of a bottle on a page about drug therapy (**Figure 6.20**).



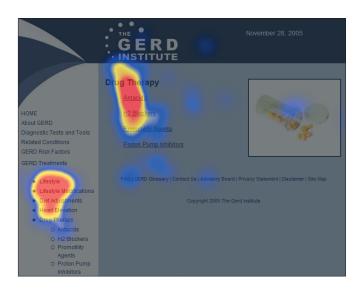
People look far more at

related to the written con-

tent on a page than they

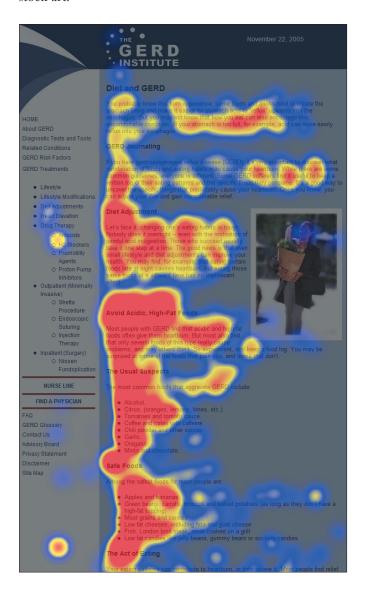
do at unrelated images.

images that are highly



People already know what pills look like, so there is not much added value from this photo. If this were a site that educates patients about how to tell real Viagra pills from the fakes sold by spammers, many people would have looked closely at the pills. Users also didn't look much at the generic image of a woman carrying groceries on the site's page about diet (**Figure 6.21**). It is too obviously stock art.

Figure 6.21 Most people didn't bother looking at a generic image of the woman holding groceries on the site's diet page.



Exciting Images Related to Content

Users look at images that are related to content about twice as often—29 percent of the time. Even peripherally, people seem to sense when images surrounded by written text are stock art or relate to content. It may be that certain characteristics signal this. For example, people may be more likely to interpret an image as relevant if it has high contrast or seems related from a peripheral view.

For example, users looking for the fastest swimming speed of a make shark looked at the simple, but gripping, photo of the shark (**Figure 6.22**).

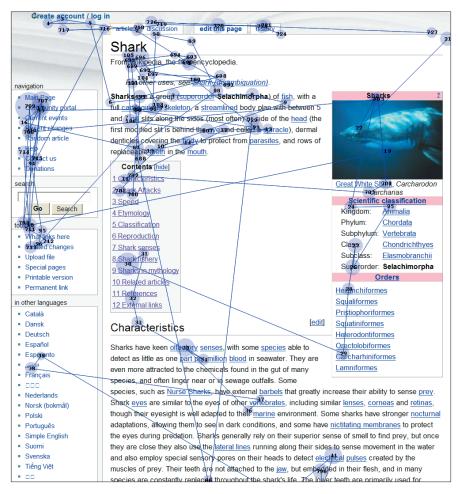


Figure 6.22 A user scanning a Wikipedia page for information about make sharks was drawn to the photo of one.

Users researching the 1900 storm in Texas were very interested in the text, but they were also drawn to the accompanying images (**Figure 6.23** and **Figure 6.24**). Everyone looked at the photo of a house turned on its side.

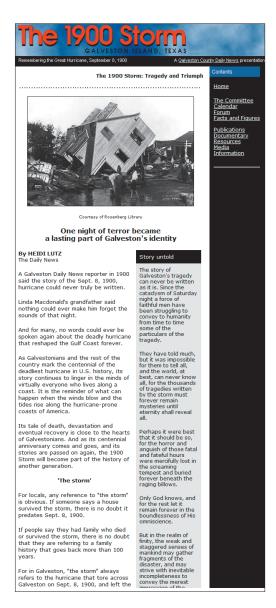


Figure 6.23 The 1900 Storm site runs relevant—and compelling—photos of a storm in Texas at the turn of the century.



Figure 6.24 All of our users who read about the storm looked at the related image of the house on its side. People commonly look in the windows of buildings in photos.

When reading a CNN article about smugglers who forced Somali refugees from their boats into shark-infested waters, people looked at the image of the boats that accompanied the article (**Figure 6.25**). Some looked at the boats a few times.

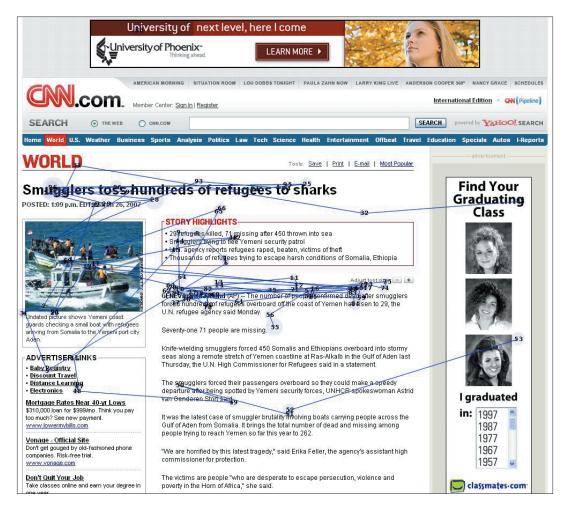


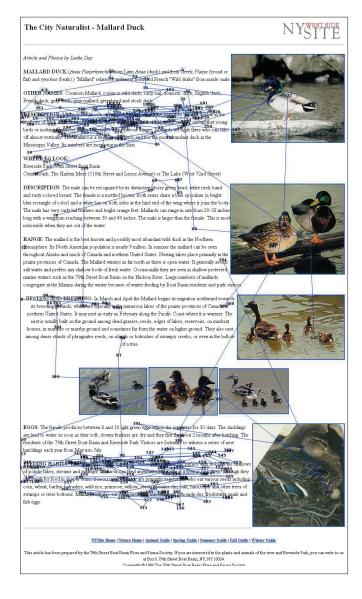
Figure 6.25 A user read the beginning of an article about smugglers mistreating refugees and looked at the related image on the CNN site.

Unexciting Images Related to Content

Smugglers, sharks, and storms are pretty thrilling topics, so it's not surprising that people look at related images. But they look at images related to less-exciting topics as well.

When researching whether mallard ducks dive for food, users looked at several good images of ducks on a page of NYSite. Although most of the photos did not relate directly to their task, people looked at them because they related to the subject of the text, mallard ducks, and some of the images did show the ducks feeding. One person looked at all seven duck photos on the page (**Figure 6.26**).

Figure 6.26 A user looking for information about the feeding habits of mallard ducks was drawn to all the photos of the ducks on this page.



Similarly, users reading about the Bedford-Stuyvesant neighborhood in New York looked at images of the neighborhood on a page of the Living Cities site (**Figure 6.27**).



Figure 6.27 A user reading about Bedford-Stuyvesant looked at photos of buildings in the neighborhood. He looked in the window of the top image.

When learning about the John F. Kennedy Presidential Library and Museum, people looked at a relevant photo of the past president, even though they hardly needed to be reminded of what JFK looked like. One user also looked at the photo of Kennedy's mother, Rose, who was the subject of an exhibit (**Figure 6.28**).

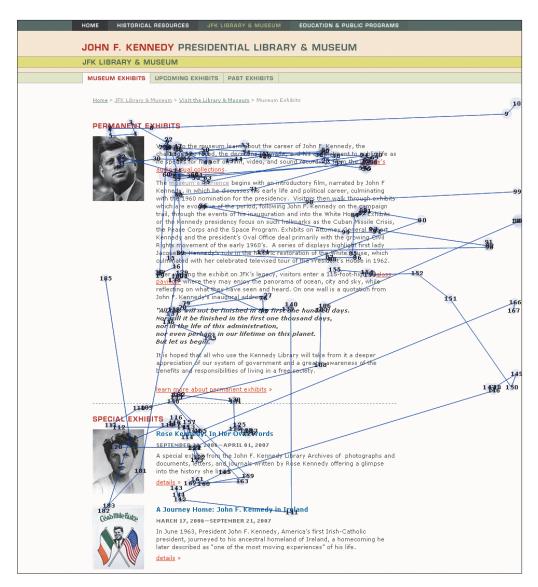


Figure 6.28 A user read the text and was attracted to the clear, relevant images of John F. Kennedy and Rose Kennedy on the JFK Library Web site.

Even a washed-out grayscale photo that is visually interesting and highly related to content can get looks. Users researching onetime New York mayor Fiorello La Guardia looked at the image of him on Answers.com (**Figure 6.29**). The grimace on La Guardia's face was probably part of the draw.

Figure 6.29 La Guardia's grimace helped attract users to an otherwise washed-out photo on this site.



Dump watered-down stock art, and instead use your resources to create a few high-quality, strategically placed magnetic images.

Magnetic Elements

Some images are downright captivating, and users are drawn to them. Many magnetic images exhibit several of the attributes that generally attract people's attention. They are crisp, are the right size, have good contrast, and highly relate to the accompanying text.

It may seem somewhat unrealistic to think that every image can be magnetic. But why can't most of them be? Rather than spending money and resources on several pieces of stock art or having your designers make stock art—like images to pepper all over your site, why not let these talented artists use their talent to create just a few potent images? Think about what you want to convey with