THE PRINCIPLES OF BEAUTIFUL WEB DESIGN

BY JASON BEAIRD
SECOND EDITION

DESIGN BEAUTIFUL WEBSITES USING THIS SIMPLE STEP-BY-STEP GUIDE
You Don't Need to Go to Art School to Design Great Looking Websites

Hi there and welcome!

The chapters you are about to read are from the second edition of SitePoint’s most popular design book, *The Principles of Beautiful Web Design*.

What has made it such a hit?

This design book caters for a wide variety of web professionals.

You see, designers spend years studying the art of design. So by the time they start working on the web, a combination of knowledge and experience means that most have the talent to create beautiful web sites with only one eye open.

But for everyone else, it isn’t that simple.

In particular, if you’re a developer, the common belief is that good web design is out of reach unless you’re a designer. You might think it requires years of practice, or creativity that you don’t feel you posses.

But, thankfully, this isn’t true.

There are certain design principles and techniques you can learn and apply that will ensure your website is not only functional, but also looks great. No art school required.

This book will guide you through the design process—from getting inspiration and sketching ideas out, to choosing a color scheme, designing the layout and selecting effective imagery.

Whether you’re looking to improve the look of your web site, or impress clients with your new skills, *The Principles of Beautiful Web Design* will teach you the fundamentals of good design.

But to start, go through the following two chapters and discover why this book comes so highly recommended by all who read it!
What's in this excerpt?

Chapter 1: Layout and Composition
An awareness of design relies heavily on understanding the spatial relationships that exist between the individual components of a design. The layout chapter kicks off the design process by investigating possible page components. With these blocks defined, we discuss some tools and examples that will help you start your own designs on a solid foundation. To wrap up this discussion, we'll examine how Squared Eye developed the layout for Southern Savers, a real client project that we'll be following as an example through each chapter.

Chapter 2: Color
Perhaps the most mysterious aspect of design is the topic of color selection. Chapter 2 sheds light on this as we delve into both the aesthetic and scientific aspects of color theory. Armed with these simple guidelines, and some tips for creating harmonious color combinations, you'll see how anyone can choose a set of colors that work well together to complement the overall message of a website. Finally, we'll learn how the palette for the Southern Savers site started with a mood board presentation.

What's in the rest of the book?

Chapter 3: Texture
An aspect of web design that's often overlooked, texture is the key to creating designs that stand out. By understanding how the individual elements of texture function, you'll learn how to use points, lines, and shapes to communicate and support your site's message on a number of levels. We'll then get to see firsthand how subtle textures helped shape the identity and character of our example website.

Chapter 4: Typography
The importance of typography is undeniable. Type is everywhere, and understanding the mechanics of written language is essential for any visual designer. In this chapter, we'll dive beneath the surface of this rich topic, exploring the basics of the letterform, and investigating various typeface distinctions. Afterwards, we'll have a behind-the-scenes look at the typographic decisions that helped give Southern Savers its distinct voice.

Chapter 5: Imagery
The necessary companions to any well-designed site are the images and illustrations that grace its pages. In the final chapter, we'll discuss what we should look for in the visual elements that we use on our pages, and locate sources of legitimate supporting imagery. Of course, finding the right image is often just the beginning. We'll also learn some image-editing basics before we see the final steps in our example project: incorporating illustrations and imagery that supports the client's branding, and helps communicate the message they're trying to convey.
The Principles of Beautiful Web Design
by Jason Beaird

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Layout and Composition

For many web developers, myself included, the most intimidating part of the design process is getting started. Imagine for a moment that you’re sitting at your desk with nothing other than a cup of coffee and the business card of a potential client who needs a basic corporate website. Usually, a business card speaks volumes about a company’s identity, and can be used as design inspiration.

Unfortunately, that’s not the case with the card for Smith’s Services in Figure 1.1. It’s black and white, all text, no character, blah. Talk about a blank canvas! So, where do you go from here? You need a plan … and you need to contact Mr. Smith. With some critical input from the client about what his company actually does, and by gathering information about the content you have to work with, you’ll be able to come up with a successful layout and design.

Figure 1.1. A bland client business card
Anyone, no matter what level of artistic talent, can come up with a design that works well and looks good—all it takes is a little experience and a working knowledge of some basic layout principles. So let’s start with the basics, and before long you’ll have the foundation necessary to design gallery-quality websites.

The Design Process

If you were to ask me to design a bridge, I’d have a lot of questions. Is it going to span the ditch in your front yard or Lake Pontchartrain? Can I use concrete and steel, or does the entire creation need to be constructed with toothpicks? I certainly would stop short of taking your business card at a bar and promising you the Golden Gate before knowing more about who you are and why you think you need it. On the other hand, if you commissioned me to create a sculpture for your garden, I’d probably feel a lot more comfortable aiming to create a unique and artistic piece.

The process of designing a website falls somewhere between bridge building and sculpture. Yes, we want to create an individual site that’s aesthetically pleasing, but our highest priority should be to meet the needs of our client. These needs may be lofty and elaborate, or they might just be about making information available. If we fail to listen carefully, though, the entire project will come falling down, along with our reputation. The technical details of developing, hosting, and maintaining a website or application can be, well, technical. The process of creating a design comp, however, can be boiled down to just three key tasks: discovery, exploration, and implementation.

What’s a Comp?

The word comp is an abbreviation of the phrase “comprehensive dummy,” a term that comes from the print design world. It’s a complete simulation of a printed layout that’s created before the layout goes to press. In translating this term to web design, a comp is an image of a layout that’s created before we begin to prototype the design in HTML.

Discovery

The discovery component of the design process is about meeting the clients and learning what they do. This may feel a little undesign-like, but gathering information about who your clients are and how they run their business is vital in coming up with an appropriate and effective design.

Before you schedule your first meeting with a client, spend some time researching their business. If they’ve asked you to design a website, they may currently be without one, but google them anyway. If you’re unable to find any information about their business specifically, try to learn as much as you can about their industry before the first meeting. Whenever possible, the first meeting with a client should be conducted in person. Sometimes, distance will dictate that the meeting has to occur over the phone; but if the client is in town, schedule a time to meet face-to-face.
Keep in mind that this meeting is less about impressing the client, selling yourself, or selling a website than about communication, and establishing just what it is the client wants. Try to listen more than you speak, and bring a pad of paper on which you can make notes. If you bring a laptop or tablet with you to talk about website examples, limit the time spent using it. Computers have screens, and people tend to stare at them; hence, if the client isn’t staring at the screen the whole time, you will be as you write your notes. If you must drag some technology into the meeting, use an app like iTalk Recorder for iPhone or Voice Recorder for Android devices to record your conversation—with the client’s permission, of course. In my experience, though, a pad of paper is less threatening and far less distracting to the often not-so-tech-savvy client.

Client Meetings Don’t Have to Take Place in an Office

Even when I worked for a company in a big office, I had some of my most productive client meetings at a café or over lunch. The feasibility of this approach depends on the client. If your contact seems to be more the formal business type, don’t suggest it; in many cases, though, it’s a good way to make a business meeting more personal.

Here are a few of the questions I like to ask in initial client meetings, even if I’ve already established the answer myself via a search engine:

- What does the company do?
- What is your role in the company?\(^1\)
- Does the company have an existing logo or brand? What is your goal in developing a website?
- What information do you wish to provide online?
- Who comprises your target audience? Do its members share any common demographics, like age, sex, or a physical location?
- Who are your competitors and do they have websites?
- Do you have examples of websites you like or dislike?
- What kind of timeline do you have for the project and what is the budget?

If the project is to redesign an existing website, I also like to ask:

- What are your visitors usually looking for when they come to your site?
- What are the problems with your current design?
- What do you hope to achieve with a redesign?
- Are there any elements of the current site that you want to keep?
- How do you think your visitors will react to a new site design?

Sometimes I start off with more questions than those listed here. Use your imagination and try to come up with some creative queries that will really give you more insight into the client’s organization. If you’re a programmer, avoid the tech jargon. If you’re a designer, avoid talking specifically

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\(^1\) This question is especially important if this person is going to be your main point of contact.
about design. Sure, that may be all you’re thinking about, but semantic markup, fluid and fixed layouts, and color schemes will likely mean very little to the client. Worse still, these types of conversations can bring misguided design opinions your way before you have a chance to start thinking about the design yourself.

**Exploration**

The next stage of the design process is to take the information you’ve learned from the client back to your laboratory for analysis, dissection, and experimentation. You want to gain a grasp on all the information, products, and services they have to offer, and play around with how these should be arranged. Put yourself in the shoes of the website visitors and ask yourself what these people are looking for. If you’re thinking about buying a product, what do you need to know before you buy? If you’re signing up for a service, where would you learn about the different offerings and which level of service you need? What is the clearest title possible for page x, and how many steps does it take to reach page y?

In the world of web design, this is the beginning of a process known as **information architecture**, or IA for short. For expansive websites and complex web applications, information architecture is a career unto itself, but the guiding principles of this field can provide a solid foundation for even the smallest websites. For the exploration stage of our process, we want to focus on organizing the content and flow of the website into a structure we can design around.

Two of the most essential tools for this task are scrap paper (or a whiteboard if you have one) and a big pad of sticky notes. Make a list of all the bits and pieces of the website and start arranging them into groups and subgroups. These are likely to move around quite a bit, and that’s where the sticky notes come in handy. If you make a note for every section, subsection, and page of the site, you can arrange them on a wall in the order they’ll appear in your site’s navigation. You’ll want to avoid overwhelming the visitors with too many options, but you also don’t want to bury information too deeply within the site; that is, too many clicks away from the home page. There are no hard-and-fast rules for this activity; just make the information as obvious and as easy to reach as possible.

**Implementation**

Now that we’ve thought through how we want to organize the information we’re working with, the implementation step of our design process begins with creating a layout. Regardless of the project, try to avoid being caught up in the technology associated with building websites—at least at first. At this point, it’s unimportant whether the site is going to comprise straight HTML, a template for a content management system, or a Ruby on Rails application; the bottom line is that we have an interface to design and a blank sheet of paper. “Paper?” That’s right, paper. Did you really think I was going to let you go back to your precious computer already? No way. Here’s why: it’s easy to lose focus on the design if you start thinking about the layout in front of a computer. If you start out on paper, you can ignore the technical limitations of browsers and CSS, and focus on how you want the final product to look. Now you might think that all good designers carry around fancy
hard-bound sketchbooks in which they use expensive markers and paintbrushes to design Da Vinci-esque renderings of potential web page layouts. For my part, I use a 79-cent spiral-bound notebook and any writing instrument I can find on my desk that still works.

I start out by sketching a few possible layouts. After I’ve produced a few, I decide on one I like, jump into Photoshop, and use the rectangle tool to block out the areas I’ve marked down on my paper. Once I’ve defined my layout, I experiment with foreground and background colors until I have a solid color scheme. I continue twiddling the Photoshop knobs and pushing around pixels until, finally, magically, I have a comp to show the client.

Simple, right? Okay, perhaps I skipped a few steps in that brief description. Honestly, though, when people ask me how I do what I do, they usually receive a similar explanation. The truth is that there are bundles of now-subconscious information from my past experience and those old college design and art classes that have helped me to define my own design process.

Learning how to design is like learning how to program. Some people have a bit of a knack for it, but anyone can learn. Just as there’s good code and ugly code, there is good design and ugly design. Learning some of the principles and conventions associated with design will help you to understand the difference between the good, the bad, and the ugly, moving you towards establishing your own design process.

**Defining Good Design**

There are two main standpoints from which most people determine whether a website design is “good” or “bad.” There’s a strict usability angle, which focuses on functionality, the effective presentation of information, and efficiency. Then there’s the purely aesthetic perspective, which is all about the artistic value and visual appeal of the design. Some people become caught up in the aesthetics and graphics, and forget about the user, while some usability gurus get lost in their user testing and forget about visual appeal. In order to reach people and retain their interest, it’s essential to maximize both.

The most important point to keep in mind is that design is about communication. If you create a website that works and presents information well, but looks ugly or fails to fit with the client’s brand, no one will want to use it. Similarly, if you make a beautiful website that is hard to use or inaccessible, people will leave. Indeed, the elements and functionality of a finished website design should work as a single cohesive unit, so that:

**Users are pleased by the design but drawn to the content**

One of the biggest concerns among usability professionals is the time it takes users to scan the page for the information they want, be it a piece of content, a link to another page, or a form field. The design should not be a hindrance; it should act as a conduit between the user and the information.
Nick La’s Web Designer Wall\(^2\) (pictured in Figure 1.2) is a great example of a design that's both beautiful and usable. Nick’s rich, colorful illustrations flow around the structure of the page, which is embellished with navigation and site elements that look as if they were cut from a sketchbook. The abundance of handcrafted, organic elements creates contrast and helps to draw your eyes to the content of the blog posts without interfering with the pages’ readability or how it’s organized.

Users can move about easily via intuitive navigation

We’ll talk more about the placement of navigation later, but the main navigation block itself should be clearly visible on the page, and each link should have a descriptive title. A navigation structure that not only changes appearance when hovered over with the cursor, but also indicates the active page or section (as the menu shown in Figure 1.3 does), helps users to recognize where they are, and how to get where they want to go.

\(^2\)http://www.webdesignerwall.com/
Secondary navigation, search fields, and outgoing links should not be dominant features of the page. If we make these items easy to find, and separate them visually from the content, we allow users to focus on the information—yet they’ll know where to look when they’re ready to move on to other content.

**Users recognize each page as belonging to the site**

Even if there’s a dramatic difference between the layout of the home page and the rest of the site, a cohesive theme or style should exist across all site pages to help hold the design together.

Take a look at the three screenshots from the Moore School of Business website\(^3\) in Figure 1.4. Although the content blocks on these pages are divided differently, there are several visual indicators that let users know that these are pages from the same site. Much of this unity is due to the repetition of the identity and navigation blocks. The consistent use of a very limited color palette (black, gray, yellow, and red) also helps to unify the pages.

![Figure 1.4. Pages from the Moore School of Business](http://mooreschool.sc.edu/)

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\(^3\) [http://mooreschool.sc.edu/](http://mooreschool.sc.edu/)
Web Page Anatomy

Even from a nondesigner’s standpoint, defining a design that satisfies all the requirements I outlined above is a simple task. It’s similar to making a phrase on your refrigerator with magnetic poetry words. Although there are millions of ways to arrange the words, only a few arrangements make any sense. The magnetic words are like the components, or blocks, of the web page. Although the number of these necessary blocks depends on the size and subject of the site, most websites have the components seen in Figure 1.5.

Let’s look at each of these components in turn:

**Containing block**
Every web page has a container. This could be in the form of the page’s body tag, an all-containing div tag. Without some sort of container, we’d have no place to put the contents of our page. The elements would drift beyond the bounds of our browser window and off into empty space. The width of this container can be fluid, meaning that it expands to fill the width of browser window; or fixed, so that the content is the same width no matter what size the window is.
Logo
When designers refer to an identity, they’re referring to the logo and colors that exist across a company’s various forms of marketing, such as business cards, letterhead, brochures, and so on.\(^4\) The identity block that appears on the website should contain the company’s logo or name, and sit at the top of each page of the website. The identity block increases brand recognition while informing users that the pages they’re viewing are part of a single site.

Navigation
It’s essential that the site’s navigation system is easy to find and use. Users expect to see navigation right at the top of the page. Whether you plan to use vertical menus down the side of the page, or a horizontal menu across the page, the navigation should be as close to the top of the layout as possible. At the very least, all main navigation items should appear “above the fold.”

Above the Fold
The fold, as many designers call it, is where the content of a page ends before users scroll down. This metaphor is derived from the fold in a newspaper. If you look at the cover of a folded newspaper, most of the headlines and biggest news appear in the top half, so that the most important news items can be seen at a glance when the newspaper is folded. The location of the fold on a web page depends on the browser dimensions and the user’s screen resolution. At a resolution of 1024×768 pixels, accounting for browser chrome—that is, the space taken up by the browser application itself in the form of tabs, buttons, the address bar, and a bottom status bar—the fold is usually just over 500 pixels from the top.

Content
Content is king. A typical website visitor will enter and leave a website in a matter of seconds. If visitors are unable to find what they’re looking for, they’ll undoubtedly close the browser or move on to another site. It’s important to keep the main content block as the focal point of a design, so that visitors can scan the page for the information they need.

Footer
Located at the bottom of the page, the footer usually contains copyright, contact, and legal information, as well as a few links to the main sections of the site. By separating the end content from the bottom of the browser window, the footer should indicate to users that they’re at the bottom of the page.

Whitespace
The graphic design term whitespace (or negative space) literally refers to any area of a page without type or illustrations. While many novice web designers (and most clients) feel a need

\(^4\) Many people use the words “identity” and “branding” interchangeably. Branding is a broad term that describes the process of developing an awareness of a company, product, or service. The branding process involves advertising, market research, customer feedback, and much more. Identity is actually a subset of branding in that it deals only with the visual aspects of branding.
to fill every inch of a web page with photos, text, tables, and data, empty space on a page is every bit as important as having content. Without carefully planned whitespace, a design will feel closed in, like a crowded room. Whitespace helps a design to *breathe* by guiding the user’s eye around a page, but also helps to create balance and unity—two important concepts that we’ll discuss in more detail later in this chapter.

At this point, we’ve had our initial meeting with Mr. Smith, our theoretical client, and it was helpful. He explained very thoroughly what his business does and what he wants the site to achieve. Even though we’ve yet to see actual content, we can use the standard blocks of web page anatomy to start developing a layout. Although other site-specific blocks are worked into the designs of many website layouts, the web page anatomy works to summarize the most common blocks.

Now that we have this information, how can we use it to create a foundational layout for Smith’s Services? It’s time for some grid theory.

## Grid Theory

When most people think about grids, they think about engineering and architecture. However, the grid is an essential tool for graphic design as well, and the use of grids in website design have exploded in popularity in the last few years.

Using a grid is more than just about making elements on the page be square and line up: it’s about proportion as well. That’s where the theory comes into grid theory. Many art historians credit Dutch painter Piet Mondrian as the father of graphic design for his sophisticated use of grids. Yet classical grid theory has influenced successful artistic efforts for thousands of years. The concept of dividing the elements of a composition extends back to the mathematical ideas established by Pythagoras and his followers, who defined numbers as ratios rather than single units.

The Pythagoreans observed a mathematical pattern that occurred so often in nature that they believed it to be divinely inspired. They referred to this pattern as the golden ratio or golden ratio or divine proportion. The basic idea is illustrated in Figure 1.6.

![Figure 1.6. The golden ratio](image)

A line can be bisected using the golden ratio by dividing its length by 1.62. This magical 1.62 number is really 1.6180339 ..., an irrational number that’s usually represented as Φ (pronounced
phi). Explaining the math used to come up with this number is a bit too involved for this discussion, and is likely to be of no real help to you becoming a better designer, so I’ll spare you the details. Besides, my math is a little rusty.

So just what does this ratio have to do with graphic design? In general, compositions divided by lines that are proportionate to the golden ratio are considered to be aesthetically pleasing. The artists of the Renaissance used divine proportion to design their paintings, sculpture, and architecture, just as designers today often employ this ratio when creating page layouts, posters, and brochures. Rather than relying on artistic notion, divine proportion gives us logical guidelines for producing appealing layouts.

This sunflower is an example of the golden ratio in nature, as Figure 1.7 shows. The diameter of the sunflower’s center the total diameter of the sunflower, including the petals, divided by Φ.

![Figure 1.7. The golden ratio in nature](image)

**The Rule of Thirds**

A simplified version of the golden ratio is the rule of thirds. A line bisected by the golden ratio is divided into two sections, one of which is approximately twice the size of the other. Dividing a composition into thirds is an easy way to apply divine proportion without your calculator.

For quick layout experimentation, I like to start off by drawing a bunch of simple rule-of-thirds grids with pencil and paper. Just draw a rectangle, divide it into thirds horizontally and vertically, then draw a line between each vertical line to create six columns to work within.

With this simple gridwork in place, we can begin to lay out our elements. The large, original rectangle represents the container that we talked about in the section called “Web Page Anatomy”. When
using this method of layout design, I like to place the biggest block first. Usually, that block represents
the content. In my first rule-of-thirds grid, I place the content block within the two-thirds of the
layout at the lower-right. Next, I place my navigation block in the middle third of the left-hand
column. I place the text part of the identity block over the left side of the content, and the image
part of the identity over the menu. Finally, I squash the copyright block below the content, in the
right-hand column of the grid. The result is the top-left of the four possible layout arrangements
shown in Figure 1.8.

These initial sketches provide a quick look into what general layout approaches might work for
your website. No need to stop there, though—the growth in popularity of grid-based design on the
Web has inspired many great articles about—and tools for—designing websites on a grid.
960 Grid System

One of my favorite tools for laying out website components are the templates and sketch sheets from Nathan Smith’s 960 Grid System.\(^5\) Inspired by articles from web designers Khoi Vinh and Mark Boulton, the 960 Grid System is primarily a CSS framework. The width of the templates comes from an article by Cameron Moll. In contemplating what width would fit within 1,024px wide displays, Moll landed at 960px, and pointed out that the number was divisible by 3, 4, 5, 6, 8, 10, 12, 15, and 16—making it an ideal width for grids. Nathan combined these ideas into a framework and created three layout foundations: one with 12 columns, one with 16 columns, and one with 24. I personally prefer to work from the 12-column templates, as they allow me to easily divide content into quarters by spanning four columns, thirds by spanning three, and halves by spanning six.

As you experiment with different arrangements for your own layouts, use the columns of whatever grid you’ve chosen as alignment guides for the identity, navigation, content, and footer blocks. It’s very tempting to arrange all your elements within the same one or two blocks, but try to avoid this—it’s not very interesting visually. Instead, consider pushing some elements into another column or off the grid entirely. One of the biggest complaints new designers have about working with grids is that everything looks boxed in and gridsy. To those opposed to using grids for this reason, I say take a look at websites such as 10K Apart,\(^6\) seen in Figure 1.9 (on the next page). The red columns you see are from the 16-column 960 Grid System template, and do not exist in the actual website. With those columns hidden, you might never realize this design was created on a grid.

To quote Josef Müller-Brockmann, graphic design pioneer (and author of *Grid Systems in Graphic Design*): “The grid system is an aid, not a guarantee. It permits a number of possible uses and each designer can look for a solution appropriate to his personal style. But one must learn how to use the grid; it is an art that requires practice.”\(^7\)

\(^5\) [http://960.gs/](http://960.gs/)

\(^6\) [http://10k.aneventapart.com/](http://10k.aneventapart.com/)

The longing we have for structure, grids, and ideal proportion is deeply ingrained in human nature. A layout that “doesn’t look quite right” can often be fixed by moving elements and resizing them on the grid. So if a layout isn’t working, keep experimenting. At some point, all the pieces will click together and the Tetris level-up sound will play in your head. You will have achieved balance.
Balance

In a figurative sense, the concept of **visual balance** is similar to that of physical balance illustrated by a seesaw. Just as physical objects have weight, so do the elements of a layout. If the elements on either side of a layout are of equal weight, they balance one another. There are two main forms of visual balance: symmetrical and asymmetrical.

**Symmetrical Balance**

**Symmetrical balance**, or formal balance, occurs when the elements of a composition are the same on either side of an axis line. The digital painting *Contemplation* by David Lanham, shown in Figure 1.10, illustrates this concept well. Notice how the male and female figures are similar in position and proportion. Even the shaded background boxes are mirror images of one another.

![Figure 1.10. Symmetrical balance: Contemplation by David Lanham](http://dlanham.com/)

Although it may not be practical for all designs and clients, this type of symmetry—called **horizontal symmetry**—can be applied to website layouts by centering content or balancing it between columns.

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8 [http://dlanham.com/](http://dlanham.com/)
The home page layout of my personal site design is an example of such symmetry. Notice on the screenshot in Figure 1.11 that the content areas graduate from two columns at the top of the page to three columns at the bottom, yet the layout still maintains its symmetrical balance.

The two other forms of symmetrical balance are less common in website design, due to the nature of the medium. They are, however, commonly exhibited in logo and print design:

- **bilateral symmetry**, which exists when a composition is balanced on more than one axis
- **radial symmetry**, which occurs when elements are equally spaced around a central point

**Asymmetrical Balance**

Asymmetrical balance, or informal balance, is a little more abstract (and more visually interesting in general) than symmetrical balance. Rather than mirror images on either side of the layout, asymmetrical balance involves objects of differing size, shape, tone, or placement. These objects are arranged so that, despite their differences, they equalize the weight of the page; for instance, if you have a large object on one side of a page, and partner it with several smaller items on the other side, the composition can still feel balanced.

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*The Principles of Beautiful Web Design (www.sitepoint.com)*
The concert poster by my friend Jeremy Darty presented in Figure 1.12 is a fine example of asymmetrical balance. The visual weight of the large pink flamingo on the left is balanced by the combined weight of the smaller flamingos and text blocks on the right-hand side of the layout. Notice, also, Jeremy’s use of the rule of thirds. The blue cloud behind the Pop Sucks title takes up one-third of the vertical space and spans two-thirds of the horizontal.

![Figure 1.12. Asymmetrically balanced design by Jeremy Darty](image)

Take a look at the photo of the three stones in Figure 1.13. It may not be a particularly exciting picture, but as far as balance goes, it rocks! If you were to use a piece of paper to cover any one of the three stones below, the entire photograph would feel unbalanced and unfinished. This is generally the way balance works. It’s as if the entire composition is in a picture frame hanging by a single nail on the wall. It barely takes much weight on one side or the other to shift the entire picture off balance.

![Figure 1.13. Asymmetrical rocks that don’t roll](image)
Unlike symmetrical balance, asymmetrical balance is versatile and, as such, is used more often on the Web. If you take a look at most two-column website layouts, you’ll notice that the wider column is often lighter in color—a tactic that creates a good contrast for the text and main content. The diminutive navigational column is often darker, has some sort of border, or is made to stand out in another way, in order to create balance within the layout. The About Us page of the Steinway & Sons website, shown in Figure 1.14, is an excellent example of asymmetrical balance. In this example, there’s no defined right column, just a large stoic image of the company’s founder. That epic moustache carries a lot of weight, but it’s balanced out by the sizeable italic headline atop the main content.

In this example, there’s no defined right column, just a large stoic image of the company’s founder. That epic moustache carries a lot of weight, but it’s balanced out by the sizeable italic headline atop the main content.

There are many other principles at work in Jesse Bennet Chamberlain’s design of the Steinway & Sons site, and it goes beyond asymmetrical balance. The site has great harmony, which comes from the repeated use of curves, textures, and consistent typefaces. Much of that harmony can be explained via the principles of unity.

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10 http://www.steinway.com/about/
11 No pun intended.
Unity

Design theory describes unity as the way in which the different elements of a composition interact with one another. A unified layout is one that works as a whole rather than being identified as separate pieces. Take the monkeys in Figure 1.15, for example. Their similarity of shape (not to mention their sameness of color) enables them to be recognized as a group, rather than four disparate elements.

Although less of an issue these days, unity is one of the many reasons why web designers have always despised HTML frames. It’s important that unity exists not only within each element of a web page, but across the entire web page—the page itself must work as a unit. We can use a couple of approaches to achieve unity in a layout (aside from avoiding frames): proximity and repetition.

Proximity

Proximity is an obvious, but often overlooked, way to make a group of objects feel like a single unit. Placing objects close together within a layout creates a focal point towards which the eye will gravitate. Take a look at the digital painting in Figure 1.16. While composed of a seemingly random assortment of strokes, the five strokes that are the closest to each other appear to form a unified object.
We practice the concept of proximity on the Web when we start setting margins and padding for elements. For instance, when I define the CSS style rules for sites, I usually change the default margin that exists between common HTML elements such as headings (h1, h2, h3 …), paragraphs, blockquotes, and even images. By altering these values, I can cause more or less space to appear between elements, thereby creating groups.

If you look at the two columns of text in Figure 1.17, you’ll notice that they look similar. The only difference is in the placement of the headings. In the column on the left, the word “Unkgnome” is equidistant from the top and bottom paragraphs. The result is that it looks more like a separator than a heading for the next paragraph. In the second column, the “Gnomenculture” heading is placed closer to the paragraph that follows it. In accordance with the rules of proximity, this heading appears to belong to that block of text.

Repetition

A gaggle of geese, a school of fish, a pride of lions. Any time you bring a set of like items together, they form a group. In the same way, repetition of colors, shapes, textures, or similar objects helps to tie a web page design together so that it feels like a cohesive unit. The example in Figure 1.18 illustrates repetition. Even though there exists other similar strokes, the nine red strokes on the left-hand side appear to be a unified group because they repeat a shape, color, and texture. The strokes to the right of this group have no repeated pattern, so they appear isolated even though there are other shapes nearby.
Whether you notice it or not, repetition is often used in website designs to unify elements of the layout. An example of this concept at work among unmodified HTML elements is the bulleted list. The bullet that precedes each list item is a visual indicator that the bullet items are parts of a whole. Repeated patterns and textures can also help to unify a design. Take a look at the screenshot of Odosketch, a digital canvas app and art community created by Odopod. This layout contains many eye-catching elements, but the repeated thumbnail images with the “Featured” banners create a unified gallery, while the sketchy header elements make the user-created thumbnails fit with the site.

12 http://sketch.odopod.com/
Emphasis

Closely related to the idea of unity is the concept of emphasis or dominance. Rather than focusing on the various elements of a design fitting together, emphasis is about making a particular feature draw the viewer’s attention. When you design a web page layout, often you’ll identify an item in the content, or the layout itself, that you want to stand out. Perhaps it’s a button for users to press, or an error message for them to read. One method of achieving such emphasis is by making that element into a focal point. A focal point is any element on a page that draws the viewer’s eye, rather than just being part of the page as a whole or blending in with its surroundings. As with unity, there are a few tried-and-true methods of achieving a focal point.

Placement

Although the constraints of practical web design do not often allow for it, the direct center of a composition is the point at which users look first, and is typically the strongest location for producing emphasis. The further from the center an element is, the less likely it will be noticed first. On the Web, the top-left corner of the page also tends to demand a lot of attention for those of us who read from left to right (remember that many languages, like Hebrew and Arabic, are read from right to left) and scan a page from top to bottom.

Continuance

The idea behind continuance or flow is that when our eyes start moving in one direction, they tend to continue along that path until a more dominant feature comes along. Figure 1.20 demonstrates this effect. Even though the bottom splotch is bigger and so tends to catch your eye first, your brain can’t help but go “Hey, looky there, an arrow!” Soon enough, you’ll find yourself staring at the smaller object.

![Figure 1.20. Continuance and placement: creating emphasis](image)

Continuance is one of the most common methods that web designers use to unify a layout. By default, the left edge of headings, copy, and images placed on a web page form a vertical line down the left side of a page before any styling is applied. A simple way to make additional use of this concept is to align elements to the lines of your grid. This creates multiple lines of continuance for your visitors’ eyes to follow down the page.
Isolation

In the same way that proximity helps us create unity in a design, isolation promotes emphasis. An item that stands out from its surroundings will tend to demand attention. Even though he’s sad to be apart from his buddies, the isolated monkey in Figure 1.21 stands out as a focal point on the page.

Figure 1.21. Isolation: a sad monkey

Contrast

Contrast is defined as the juxtaposition of dissimilar graphic elements, and is the most common method used to create emphasis in a layout. The concept is simple: the greater the difference between a graphic element and its surroundings, the more that element will stand out. Contrast can be created using differences in color (which I’ll discuss in more detail in Chapter 2), size, and shape. Take a look at the Twitter home page in Figure 1.22.

Figure 1.22. Twitter: using orange for contrast

If there’s a singular link or button you want your visitors to click on in a page, it’s known as a call to action. When you look at the preceding layout, what first grabs your attention? For me, it’s the

You Don't Need to Go to Art School to Design Great Looking Websites
Sign Up button in the right column. It’s the only place on the page that uses those bright orange and yellow colors, and the text is much bigger than the Search and Sign In buttons. By placing it in a block that crosses over that trending topics bar, it has plenty of continuance, isolation, and contrast. Twitter really wants you to click that button, so it’s creating as much emphasis as possible to ensure its call to action is effective.

**Proportion**

Another interesting way of creating emphasis in a composition is through the use of proportion. Proportion is a principle of design that has to do with differences in the scale of objects. If we place an object in an environment that’s of smaller scale than the object itself, that object will appear larger than it does in real life, and vice versa. This difference in proportion draws viewers’ attention to the object, as it seems out of place in that context.

In Figure 1.23, I’ve taken our sad, isolated monkey and superimposed him over the skyline of Manhattan to prove my point. Between the sharp contrast in color and the difference in proportion, your brain immediately says, “Hey, this isn’t quite right,” and you’re left staring at the monkey until you force yourself to look away.

![Figure 1.23. Proportion: a monkey in Manhattan](image)

This principle works for miniaturization as well. Take a look at the BeerCamp event website[^13] in Figure 1.24, designed by David DeSandro. The first element you probably notice is the massive BeerCamp headline. From here, though, my eye jumps straight to the arrow and into the row of

[^13]: http://sxsw.beercamp.com/
buildings. This is due to both continuance and eye-catching use of proportion. For those interested in the possibilities of CSS3, I should point out that no images are used to create what you see here.

Creating emphasis in your design isn’t just the key to making your call to action stand out. It’s also how we move a viewer’s eyes across the page. By giving elements a descending level of emphasis, you can suggest an order for visitors to follow. If you keep this in mind as you build your sites, you can echo the emphasis you create with semantic HTML markup and CSS. For instance, by matching h1 to h6 headline tags with a respective level of visual emphasis, you can provide a similar view of what’s visually important in the page to search engines and vision-impaired visitors.

Next, we’ll look at some well-tested examples of designs from which you can work.

**Bread-and-butter Layouts**

Most of what we’ve talked about thus far has been design theory. Theory’s helpful, but it can only take us so far towards understanding why some ideas work—and others don’t—in a website’s design. In my opinion, examples and practice are much more valuable. Most academic graphic design programs include a curriculum that’s rich in art history and fine art. These classes provide a great foundation for an understanding of graphic design from an art perspective, but they do little to prepare you for the specific challenges you encounter when you take your designs to the Web.
Pablo Picasso once said, “I am always doing that which I cannot do, in order that I may learn how to do it.” While I like to take that approach when designing a new website, it’s important first to know what you can do. When you look out across the Internet, you can see that the possibilities for layout are endless. Depending on the goals of the site, though, only a few of those possibilities make good design sense. That’s why we see certain configurations of identity, navigation, and content over and over again.

In this section, we’ll talk about the three most common layouts, and explore some of their advantages and disadvantages.

**Left-column Navigation**

Regardless of whether we’re talking about liquid or fixed-width layout design, the left-column navigation format is a time-honored standard. The layout of the Porsche site, ![Figure 1.25. Left-column navigation at Porsche](http://www.porsche.com/usa/models/911/) pictured in Figure 1.25, is a classic example of this configuration. Many sites that fit into this mold don’t necessarily use the left column as the main navigation block—sometimes you’ll see the navigation along the top of the page—but they still divide the layout below the header into a narrow (one-third or less) left column and a wide right column. It’s like a security blanket, or that comfortable shirt with holes in the armpits that you wear once a week—even though it drives your spouse crazy. For those reasons, a layout featuring left-column navigation is a safe choice for most projects.

The downside to sites that use left-column navigation is that they can appear to lack creativity. It’s been done so many times, in so many ways, over so many years that they tend to look the same. That’s not to say you should avoid using a left-column navigation layout. At a guess, I’d say that 75% of the sites I’ve designed have a secondary left-column navigation, but I do try to mix it up a little when I can.

Speaking of mixing it up, how about picking that left column up and sticking it on the other side of the content? Then you’d have a right-column navigation layout.

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Right-column Navigation

If you’re going to restrict your main content to one side of the page, it’s more widespread these days to push it to the left, placing navigation, advertising, and subsidiary content on the right. This is an especially common configuration for news sites, social networks, and websites with expansive navigation schemes that are unable to be contained within a simple top navigation. BlueCross BlueShield of South Carolina\(^\text{15}\) is an example of such a site. It features several different layouts and color schemes for each section. The screenshot you see in Figure 1.26 is a fourth-level page—that is, it’s four clicks away from the front page. By keeping the secondary navigation on the right, it stays out of the way of visitors who, if they’re this deep already, are looking for some very specific content.

![Figure 1.26. Right-column navigation at BlueCross BlueShield of South Carolina](http://www.southcarolinablues.com/)

Ultimately, the decision on whether to put a navigation column on the left or the right is a judgment call that’s really about the amount and type of content you have to organize. If it’s a simple site that doesn’t require any secondary navigation, consider a narrow, column-less layout. Good design is often more about what you leave out than what you put in. If you do need a secondary column, just remember that the content is what your visitors are there for … and more and more, they’re looking for it on the left.

Three-column Navigation

The typical three-column layout has a wide center column flanked by two diminutive navigational columns. The ThinkGeek\(^\text{16}\) store shown in Figure 1.27 is an example of this web page layout staple. Although three columns may be necessary on pages that have a ton of navigation, short bits of content, or advertising to display, whitespace is essential if we’re to keep a layout from appearing cluttered.

\(^\text{15}\) [http://www.southcarolinablues.com/](http://www.southcarolinablues.com/)

\(^\text{16}\) [http://www.thinkgeek.com/](http://www.thinkgeek.com/)
Finding Inspiration

Just because the left-column, right-column, and three-column layout configurations are the bread and butter of most web page designs, there’s no need to feel confined to these layouts. A plethora—yes, a plethora—of design showcase and design pattern sites have been created to feature new and innovative ideas that might help you think outside the box, including the following (just to name a few):

There are a ton of great CSS galleries out there. Unmatched Style is more selective than others, and the video podcasts and interviews are usually interesting as well.

**CSS Drive at [http://cssdrive.com/](http://cssdrive.com/)**
Like Unmatched Style, CSS Drive is a CSS gallery. What makes this one special is that they do a good job of categorizing featured sites by color schemes and layout.

**Design Meltdown at [http://designmeltdown.com/](http://designmeltdown.com/)**
From 2005-2009, Patrick McNeil collected and cataloged thousands of interested web designs. He has published two books, and the Design Meltdown site continues to be a great source of inspiration.

**Pattern Tap at [http://patterntap.com/](http://patterntap.com/)**
Unlike the first three examples, Pattern Tap is a gallery of interface patterns rather than entire websites. Here you’ll find collections of navigation styles, contact forms, pagination, tabs, and more.

Similar to Pattern Tap, but with far fewer examples and variations, the Yahoo Design Pattern Library is a great place to learn about standard user interface elements.
Using a Morgue File

I know what you’re thinking: “Great, I have a bunch of galleries and pattern libraries to look at—now what?” One of the most useful tips my first graphic design professor taught me was to create a morgue file whenever I was collecting inspiration for a large project. The concept is fairly simple: if you’re doing an illustration or marketing project that involves trains, you clip out and print up anything you can find that might give you inspiration and keep it all in a folder. It helps with your current project, and should you ever need to do another project involving trains, you’ll have lots of inspiration on hand.

The morgue file idea slipped my mind until a few years ago. I found myself looking for a site I’d seen in a gallery site that I liked, but of which I was unable to remember the name or address. Sure it’s great to have access to lots of great inspiration resources, but they useless if you can’t find the specific example you’re looking for. That was when I started my own digital morgue file. Lately, I’ve been using an application called LittleSnapper\(^\text{17}\) for Mac that allows me to create a screenshot of part of the screen, or even a whole web page (no more scroll, snap, scroll, snap). LittleSnapper also lets you give each snapshot a name, and tags to make them easy to find later. Of course, no matter what operating system you prefer, there are plenty of ways to take a snapshot for your morgue file. Having a repository of website designs that I can look at has been a handy resource on countless occasions when I’ve been searching for inspiration.

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Capture a Screenshot for Your Own Morgue File

1. Select the browser window that’s displaying the page you wish to save as a screenshot.

2. Copy a screenshot of the browser window to your clipboard:
   - **On a PC, press** Alt+Print Screen **or use the native Snipping Tool (Windows Vista or 7) to grab a section of the screen.**
   - **On a Mac, press** Shift+Command+4 **then** Space **to turn the cursor into a camera. Then, hold down** Ctrl, **and click on the browser window.**

3. At this point, you should have a screenshot of the browser window in your clipboard. Open a new document in your favorite graphics program or document editor, and paste in the screenshot.

4. Save your image or document.

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\(^{17}\) [http://www.realmacsoftware.com/littlesnapper/](http://www.realmacsoftware.com/littlesnapper/)
Fresh Trends

If you’re feeling so overwhelmed by the above resources that even to contemplate starting a morgue file for inspiration is beyond you, take a few minutes to browse through those sites. Look past the colors and textures to the boxes that make up the layout, and try to identify standard ideas and design trends. By doing this, I’ve started to notice a few trends that seem to be emerging in website layouts.

Navigationless Magazine Style

If you’re reading this paragraph, I’m guessing you probably didn’t arrive via the table of contents. On the Web, we tend to be a lot more goal-oriented and consume information in bits and pieces. Site navigation allows us to be quick, efficient … and erratic. What if you don’t want your visitors skipping to another page? What if the information you need to convey is best consumed as a whole, like a book or magazine article? If that’s the case, why include navigation at all? That’s the approach that Design Informer\(^\text{18}\) takes with each of its art-directed articles. Other than a tiny Design Informer logo in the header graphic, there are no site navigation links on each article’s page until you reach the comments section in the footer. A trend from one website, you ask? Take a look at the other examples in Figure 1.28, from The Bold Italic\(^\text{19}\) and 52 Weeks of UX\(^\text{20}\).

Figure 1.28. Not much navigation going on here, just great uninterrupted content

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\(^{18}\) [http://designinformer.com/](http://designinformer.com/)

\(^{19}\) [http://thebolditalic.com/](http://thebolditalic.com/)

\(^{20}\) [http://52weeksofux.com/](http://52weeksofux.com/)
Expansive Footers

This one is less of a trend and more an ongoing phenomenon. I featured expansive footers in the first edition of this book, and these continue to grow today, both in size and in the types of information people are putting in them. Rather than using the footer for just essential links and a copyright notice, many sites are utilizing this once-neglected piece of page real estate to include contact information, expanded site navigation, and social media content. Although putting a site’s main navigational element at the bottom of the page is a bad idea, including “bonus” navigation and content in that space is an obvious solution. A great example of this trend is the FortySeven Media-designed Show & Tell Consignment Sale.21

![Figure 1.29. Presenting extra content in the footer at Show & Tell Consignment Sale](image)

See also:

- Mozilla at http://mozilla.org/
- Creamy CSS at http://creamycss.com/
- And yes, even http://sitepoint.com/

21 http://showandtellsale.com
Bare-bones Minimalism

Similar to the navigationless magazine style and quite contrary to the expansive footer concept, many sites are removing a lot of the standard web content fare. Minimalist design is all about reducing your design down to the most essential elements. In Figure 1.30, Analog Coop\(^{22}\) accomplishes this by reducing its copy to a single, fun-to-read page. For Kha Hoang,\(^{23}\) being a minimalist is having a home page with simply a list of portfolio links, a quote on design, and some contact info. It’s an easy concept to apply: just go through each element of each page and ask yourself what it’s adding to your website. If you’re without an answer, toss it out.

![Figure 1.30. Two flavors of minimalism: the Analog Coop and the portfolio of Kha Hoang](image)

Minimalism isn’t a new design trend by any stretch of the imagination—even on the Web. In the art world, the minimalist movement of the 1960s and ‘70s was a reaction against the overly self-expressive era of abstract expressionism. Similarly, the recent explosion in minimalism and single-page designs on the Web is a reaction against the overly interactive Web 2.0 era. It’s an attempt at balancing out the hustle and bustle of social media with the equivalent to a peaceful café or quiet art gallery.

See also:

### Resizing: Fixed, Fluid, or Responsive Layouts

Back when we were drawing our first layout blocks with pencil and paper, I explained that the outer rectangle we were designing within was the containing block. In print design, the containing block is a physical object like a business card or a billboard. On the Web, our container is the browser

\(^{22}\) [http://analog.coop/](http://analog.coop/)

\(^{23}\) [http://khahoang.com/](http://khahoang.com/)
window. Should the design fill the browser window, or should it have a set width? This decision is one that has plagued web designers for hundreds, if not thousands of years—all the way back to the days when we used tables and spacer.gif files to lay out web page content. Okay, maybe not thousands of years ago, but this is a long-standing debate nonetheless.

**Fixed Width**

If you’ve started your layout with the 960 Grid System that I talked about earlier, chances are you’re working toward a **fixed-width** layout. These designs are wrapped with a div that’s given a pixel-based width (say, 960 pixels), and centered within the body tag using margin:0 auto; If the browser window is wider than 960 pixels, you’ll see the body element’s background to the left and right of the container; and if it’s narrower, you’ll have a horizontal scrollbar. Fixed-width layouts are easier to design for—and maintain—because you’re essentially building exactly what you design in Photoshop. Figure 1.31 shows a similar layout structure as fixed and as fluid in the same width of browser space.

![Figure 1.31. Fixed and fluid—or crunchy and squishy if you prefer](image)

**Fluid Width**

A **fluid** or **liquid** layout is designed with percentage-based widths, so that the container stretches when you resize the browser window. These take more thought to plan, as you have to foresee problems that might occur at every possible width. Sometimes pixel-width columns are mixed with percentage-based columns in a fluid layout, but the idea is to show the user as much horizontal content as will fit on their screen. Typically, fluid layouts take advantage of the min-width and max-width properties of CSS, ensuring the container doesn’t become ridiculously narrow or wide.

One reason some designers reject fluid layouts is because they think it impedes them using a grid to create their designs. There are several resources available for designing fluid layouts on a grid, including a fluid adaptation of the 960 Grid System. 24 Ultimately, though, the decision to use one type of layout over the other should really be determined by the target audience, and the accessib-

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ility goals of each individual website. The pros and cons of each layout type are fairly well-defined, as Table 1.1 shows.

Table 1.1. Fixed versus liquid layouts: the pros and cons

<table>
<thead>
<tr>
<th></th>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed width</td>
<td>■ gives designer more control over how an image floated within the content will look</td>
<td>■ can appear dwarfed in large browser windows</td>
</tr>
<tr>
<td></td>
<td>■ allows for planned whitespace</td>
<td>■ takes control away from the user</td>
</tr>
<tr>
<td></td>
<td>■ improves readability with narrower text blocks</td>
<td></td>
</tr>
<tr>
<td>Liquid width</td>
<td>■ adapts to most screen resolutions and devices</td>
<td>■ challenging to read when text is spanning a wide distance</td>
</tr>
<tr>
<td></td>
<td>■ reduces user scrolling</td>
<td>■ harder to execute successfully</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ limits or imposes on whitespace</td>
</tr>
</tbody>
</table>

With these pros and cons in mind, I’ve designed more fixed-width layouts than liquid. I like having control over how the content will display, and working with the background space. On the flip side, I sometimes enjoy the challenges that liquid layouts bring to the table. But, regardless of personal preferences, it’s important to put the needs of your client first. If you’re deciding on the width of a fixed-width layout, you have to think about the audience for which you’re designing, and create a layout that meets the needs of those users.

An Alternative: Responsive Layouts

It’s been said that for every rule, there’s an exception. That’s usually true in the web world, and designers have come up with many variants and hybrids of fixed-width and fluid-width layout structures. I’ve seen articles recently that list up to ten different layout types. For the purpose of this chapter, however, most of those could be categorized as either fixed or fluid. One recent *A List Apart* article, though, introduced a novel layout type that I think we’ll be seeing a lot more of. The article was titled “Responsive Web Design” and it was written by Ethan Marcotte.

Rather than repeat the entire article here, I highly recommend that you check it out. If I had to name this layout technique myself, I would call it the Omnipotent Mercury Morphing Methodology, but that’s probably why I didn’t come up with it. The idea is that as the mobile market makes browser window widths more and more inconsistent, the need for our layouts to be fluid and adapt to different widths is increasingly vital. The technique takes advantage of some fancy fluid scaling and

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CSS3 media queries to completely change the layout as it hits certain width thresholds. Figure 1.32 shows screenshots of Ethan’s example at three different browser widths.

Ethan’s responsive web design (or Omnipotent Mercury Morphing Methodology) is a great solution to a problem we’ve yet to discuss: screen resolutions.
In comparison to the fixed-versus-fluid debate, the argument about designing for particular screen resolutions has been quite tame these past few years. When designers say that a site is designed, or optimized, for a particular screen resolution, they’re actually talking about the resolution of the viewer’s monitor. In the past, the screen resolution debate was focused on whether our designs should still accommodate monitor resolutions of 800×600 without displaying a horizontal scrollbar.

According to W3Schools’ screen resolution statistics,26 in January 2010, 1% of web users had their screens set to 800×600 pixels (down from 4% in 2009), 20% had their resolutions set at 1024×768 pixels (down from 36%), and a whopping 76% of visitors had a resolution higher than 1024×768. Figure 1.33 illustrates these trends.

These days, it’s a given assumption that desktop browsers display at least 1024×768. Even the majority of netbook computers have a 1024×600 or higher resolution. For that reason, 960px has become the de facto width for most web design projects. With W3Schools reporting the growth of users with resolutions greater than 1024, you’d think we’d be looking to push the standard width past 960, but there are a couple of reasons why this probably won’t happen. First, most users with larger monitors still keep their browser window set less than 1024px wide, so they can see other applications they have running. The other reason is line length. If a line of text is too long, it becomes less readable. Therefore, a wider default layout width would really only allow us to add more columns.

![Screen Resolution](http://www.w3schools.com/browsers/browsers_display.asp)

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26 http://www.w3schools.com/browsers/browsers_display.asp
Although desktop browser statistics like those provided by W3Schools justify our use of 960px layouts, they ignore a major segment of the web browsing population: mobile users. Citing the same article I mentioned earlier about responsive web design, mobile browsing is expected to outpace desktop-based access within three to five years. As mobile screen resolutions increase and mobile browsers catch up to their desktop cousins, it’s safe to say that your website design will be readable in modern mobile devices. You should still include popular mobile devices in your browser testing, though; if we’re struggling to make the sites we design look right in IE7, shouldn’t we be checking them on mobile browsers as well?

Taking the increase in mobile usage a bit more seriously, a greater amount of websites are providing mobile-optimized versions of their sites; this, of course, means that more and more clients will be demanding mobile-optimized sites as well. This used to be a complicated task, dealing with mobile-specific languages like WML and awful, inept browsers like Blackberry’s old RIM OS.

Fortunately, designing a mobile-optimized site today is mostly about revamping your layout to work on mobile screens while possibly leveraging some of the bonus features of the OS to make it shine. Covering the technical details of designing a mobile-optimized site is outside the scope of this book, but the layout principles and design theory discussed in the rest of the chapter still apply. At the end of the day, no matter what you’re designing, the needs of your client and their target audience should be the driving force behind your decisions.
Application: Southern Savers

Often, much of what we do as designers is subconscious. We can usually tell you on a choice-by-choice basis why we made specific decisions, but it doesn’t come naturally to verbalize the procedures we follow. Sometimes the best way to explain how to apply graphic design principles is by walking through the design process of an actual client website.

Enter: Southern Savers, a real web design project for a real client. In June of 2008, Jenny Martin started Southern Savers on Blogger.com to share the best grocery deals she found with her friends. After a few short months, the site grew too big for Blogger and her husband James migrated it to a self-hosted WordPress install. Neither Jenny nor James had any design experience, so they purchased a WordPress theme, created a header graphic, and Jenny carried on blogging. A little over two years since starting out, the site now receives over three million hits a month and has over 60,000 fans on Facebook—all with the basic design template you see here in Figure 1.35.

Figure 1.35. The old Southern Savers design

27 http://www.southernsavers.com/
Jenny knew a redesign was long overdue, and hired the rock-star design agency Squared Eye\(^{28}\) to do the job. Being a friend of Jenny and of Matthew Smith of Squared Eye, it’s been interesting to see the design process unfold from both the client and agency perspective. I knew that following this process through each chapter of this book would be insightful for you as well, and am extremely grateful that both Jenny and Matthew agreed to let me use the project as an example.

### Getting Started

Usually, clients have specific ideas about what their site should look like and how it should work. Depending on the client, these preconceptions can either help or hinder the design process—more often, the latter. However, on this project, Squared Eye was given free rein to completely redesign and rebrand the site. Matthew knew it was important that he and his team not only understand how the website worked, but who the Southern Savers visitors were and why they were there. Freelance web strategist Emily Smith, the information architect for the project, explains, “Before design could start, we went through a discovery phase to find out what the goals were. We also went to one of Jenny’s Couponing 101 workshops and talked to attendees. We evaluated how recurring visitors use the site—watching over their shoulders, talking about what features and functionality they depend on, and observing how they navigate.”

#### User Testing

This is a term for the activity Emily describes as “watching over their shoulders.” Monitoring actual user behavior before and after a redesign is a good way to gauge its success. A great DIY tool for user testing is Silverback.\(^{29}\)

Taking what they learned from their time with Jenny and her website users, Emily and the rest of the Squared Eye team went back to their shared working space. “We mapped out the personalities that were currently using the site, and broke them down into actual personas,” Matthew said. From there they started exploring how to organize the information on the site, so that new users and regulars alike could find what they were looking for.

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\(^{28}\) [http://squaredeye.com/](http://squaredeye.com/)

\(^{29}\) [http://silverbackapp.com/](http://silverbackapp.com/)
I mentioned earlier that sticky notes and whiteboards were great tools for information architecture. Emily made good use of both in the exploration stage of the Southern Savers redesign. As you can see in Figure 1.36, there was a lot of content that had to be organized, and the office wall was the best place to sort it all out.

Once Emily had all the pages grouped into appropriate navigation sections, it was time to start working on a layout. She knew the layout for the site was going to be 960px wide, and that for most of the pages, a two-column layout would be necessary. Because there were so many navigation elements to work with, she designed the layout structure as a wireframe in a Mac application called Omnigraffle. Figure 1.37 shows her proposed wireframe for the home page.

Figure 1.36. Sticky-note information architecture

Figure 1.37. Proposed home page wireframe for Southern Savers

http://www.omnigroup.com/products/omnigraffle/
Notice that there are no colors, no real images, and no actual HTML elements in this example. The goal of a wireframe is simply to establish the layout structure and the positioning of elements. Earlier in the chapter, I said that in a good design, users “recognize each page as belonging to the site.” That doesn’t necessarily mean that the layout of each page has to be exactly the same. In fact, it’s good to work in some contrast between the home page and other pages in the site. As Emily created the wireframes for the rest of the site, she spiced it up by planning alternate layouts for some sections, like the “Learn to Coupon” section shown in Figure 1.38.

Okay, maybe “spiced things up” was a bit of an overstatement when talking about colorless wireframes, but the design ball is certainly rolling here. Now that the Southern Savers layout is mapped out, it’s time to move on to the next subject: color!
Color

Whether you’re defusing a ticking time bomb, or trying to design a decent-looking site, if you choose the wrong color—you’re doomed. Okay, so the wrong color selection for a client’s site might not be the death of you, but it could curtail your budding career as a web designer. Choosing colors is no simple matter. There are aesthetic, identity, and usability considerations to take into account. And, to make matters worse, most modern displays can render more than sixteen million colors. That’s an infinite number of horrible color combinations just waiting to happen!

Fortunately, there’s no need to be a swatchbook-carrying color consultant to make good color choices. A wealth of knowledge is available, from touchy-feely (as I like to call them) psychological guidelines to tried-and-true color theories that will help you make the right choices when it comes to color.

The Psychology of Color

Color psychology is a field of study that’s devoted to analyzing the emotional and behavioral effects produced by colors and color combinations. Ecommerce website owners want to know which color will make their website visitors spend more money. Home decorators are after a color that will transform a bedroom into a tranquil Zen retreat. Fast-food restaurant owners are dying to know which color combinations will make you want to super-size your meal. As you can imagine, color psychology is big business.

Although it’s important to know how your color choices might affect the masses, the idea that there’s a single, unified, psychological response to specific colors is spurious. Many of the responses
that color psychologists accredit to certain colors are rooted in individual experience. It’s also interesting to note that many cultures have completely different associations with, and interpretations of, colors. With those caveats in mind, let’s explore some general psychological associations that the majority of people in Western cultures have in response to specific colors.

**Color Associations**

Describing the emotional connections that people can have with colors can be a very hippy-esque topic. If you find that hard to believe, just head over to your favorite online music store and sample some tracks from *Colors* by Ken Nordine. Although most designers will stop short at relying solely on the supposed meanings, characteristics, and personalities of specific colors, it’s still handy to have an understanding of the emotional attributes of some of the main color groups.

**Red**

The color red has a reputation for stimulating adrenaline and blood pressure. Along with those physiological effects, red is also known to increase human metabolism; it’s an exciting, dramatic, and rich color. Red is also a color of passion. Nothing says love like painting a wall bright red on Valentine’s Day for your sweetheart, as seen in Figure 2.1. The darker shades of red, such as burgundy and maroon, have a rich, indulgent feeling about them—in fact, they can be quite hoity-toity. Think about these colors when designing anything for wine enthusiasts or connoisseurs of fine living. The more earthy, brownish shades of red are associated with the season of autumn and harvest.

![Ames, will you be my Valentine?](image)

*Figure 2.1. Red, the color of affection (two gallons of it!)*

**Orange**

Like red, orange is a very active and energetic color, though it doesn’t evoke the passion that red can. Instead, orange is thought to promote happiness, and represents sunshine, enthusiasm, and creativity. Orange is a more informal and less corporate-feeling color than red, which is perhaps a reason why the designers behind the location-based service Gowalla[^1] chose it for

[^1]: http://gowalla.com/
their logo. Because orange doesn’t show up often in nature, it tends to jump out at us when we see it. For that reason, it’s often used for life jackets, road cones, and hunting vests. Since orange also stimulates metabolism and appetite, it’s a great color for promoting food and cooking. That’s probably why the picture of a tangerine in Figure 2.2 is making you hungry, even if you don’t like citrus fruits.

Figure 2.2. Orange you glad I didn’t say banana?

Yellow

Like orange, yellow is an active color, and being highly visible, it’s often used for taxicabs and caution signs. It’s also associated with happiness and, as Figure 2.3 illustrates, is the signature color of smileys. The original orange and lemon-lime flavors of the sports energy drink Gatorade are still the best-selling of the brand’s products; this is likely due, in part at least, to the energetic characteristics associated with the colors orange and yellow.

Figure 2.3. Yellow, the color of smileys

An anonymous quote that’s often used with color associations says, “Babies cry more in yellow rooms, husbands and wives fight more in yellow kitchens, and opera singers throw more tantrums in yellow dressing rooms.” Whether this comment is true or not, the point is that too much
yellow can be overpowering. Come on—if you were a baby stuck in a dressing room with fighting spouses and tantrum-throwing opera singers, you’d cry too!

Green

Green is most commonly associated with nature. It’s a soothing color that symbolizes growth, freshness, and hope. There’s little doubt why the color has been so closely tied with environmental protection. Visually, green is much easier on the eyes, and far less dynamic than yellow, orange, or red. Although many website designs using green appeal to visitors’ sense of nature, green is a versatile color that can also represent wealth, stability, and education. When bright green is set against a black background, it really pops—giving the design a techy feel. For me, it brings back memories of my first computer, a trusty old Apple IIe. This was the inspiration for the MailChimp loading screen I designed recently, shown in Figure 2.4.

![Figure 2.4. ASCII version of Freddie Von Chimpenheimer IV](image)

Blue

When I was a kid, my favorite color was blue. Not just any blue, but cerulean blue from Crayola crayons. While most kids are less particular, blue is often cited as the universally favorite color. On the touchy-feely level, blue symbolizes openness, intelligence, and faith, and has been found to have calming effects. On the other hand, blue has also been found to reduce appetite. This is probably due in part to the rarity of blue in real food. Aside from blueberries, how many
naturally blue foods can you count? Blue, it would seem, is excluded from nature’s appetite-inducing palette; therefore, it’s less than ideal for promoting food products.

In addition, blue is sometimes seen as a symbol of bad luck and trouble. This emotional color connection is evident in blues music, as well as in the paintings of Picasso’s depression-induced “blue period.” It’s not all about unnatural food colors and melancholy forms of art, though; blue has universal appeal because of its association with the sky and the sea. For me, the presence of blue in the stacked stones image in Figure 2.5 makes me feel more at ease.

This visual connection makes blue an obvious choice for websites associated with airlines, air conditioning, pool filters, and cruises. Have you ever noticed that blue is the primary color in the logos of IBM, Dell, HP, and Microsoft? That’s because blue also conveys a sense of stability and clarity of purpose ... that is, until you’ve experienced the blue screen of death!

**Purple**

Historically, the color purple has been associated with royalty and power, as it is on the postage stamp in Figure 2.6. The secret behind purple’s prestigious past has to do with the difficulty of producing the dye needed to create purple garments. To this day, purple still represents wealth and extravagance. That extravagance is carried over into nature. Purple is most often connected with flowers, gemstones, and wine. It balances the stimulation of red and the calming
effects of blue. According to Patrick McNeil, author of *The Web Designer’s Idea Book*, purple is one of the least-used colors in web design. He explains that finding good examples of website designs featuring purple was so hard that he almost had to cut the section from his book. If you’re trying to create a website design that stands out from the crowd, think about using a rich shade of purple.

![Purple coat of arms on a Norwegian postage stamp](image)

**Figure 2.6. Purple coat of arms on a Norwegian postage stamp**

**White**

You might think there’s nothing special about the color of the wind turbines in Figure 2.7, but the use of white actually helps promote the idea that this is clean power. In Western cultures, white is considered to be the color of perfection, light, and purity. This is why crisp white sheets are used in detergent commercials, and why a bride wears a white dress on her wedding day. For an idea of how ingrained the meaning of white is in our culture, read the poem *Design* by Robert Frost. In it, Frost symbolically contradicts our associations by using white to represent death and darkness. Interestingly, in Chinese culture, white is a color traditionally associated with death and mourning. Such cultural distinctions should serve as a reminder to research the color associations of your target audience, as they may vary greatly from your own perception.

In design, white is often overlooked because it’s the default background color. Don’t be afraid to shake it up, though. Try using a dark background with white text, or put a white background block on an off-white canvas to make it pop. Using colors in unexpected ways can make a bold statement.

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3 This can be found in many a good poetry book, but I used *The Norton Anthology of Poetry* (5th edition), eds Margaret Ferguson, Mary Jo Salter, and Jon Stallworthy, WW Norton & Company, New York, 2004.
Black

Although black often suffers from negative connotations such as death and evil, it can also be a color of power, elegance, and strength, depending on how it's used. If you're considering using a particular color and are wondering what the associations are for that color, just ask yourself, “What are the first three things that come to mind when I think about this color?” When I think about black, for instance, I think about Johnny Cash, tuxedos, and Batman. When I think about Johnny Cash, his dark clothing, deep voice, and sorrowful songs give a tangible meaning to the mental associations I perceive between the man and the color.

If you treat all your color choices this way, establishing three word associations for each, chances are you’ll gain a good idea of how that color is widely perceived among your audience.
Even though color psychology plays a role in the way a visitor may see your site, keep in mind there is no wrong color to use. While psychological reasoning may help to start your palette, the success of a color scheme depends on the harmony that exists between all the colors chosen. To achieve this harmony, we’ll need to be mindful of a few other attributes of color.

## Color Temperature

One attribute that exists across the entire spectrum is the notion of color temperature. Which color faucet gives you hot water? What color do you associate with ice? Why? The answers are obvious, and are enforced by both culture and nature.

### Warm Colors

Warm colors are the colors from red to yellow, including orange, pink, brown, and burgundy. Due to their association with the sun and fire, warm colors represent both heat and motion. When placed near a cool color, a warm color will tend to pop out, dominate, and produce the visual emphasis that we talked about in Chapter 1.

### Cool Colors

Cool colors are the colors from green to blue, and can include some shades of violet. Violet is the intermediary between red and blue, so a cooler violet is, as you probably guessed, one that’s closer to blue, while a reddish violet can feel warm. Cool colors are calming, and can reduce tension. In a design, cool colors tend to recede, making them great for backgrounds and larger elements on a page, since they won’t overpower your content.
Chromatic Value

The measure of the lightness or darkness of a color is known as its chromatic value. Adding white to a color creates a **tint** of that color. Likewise, a **shade** is produced by adding black to a given color. Figure 2.9 illustrates this distinction.

As with colors themselves, the chromatic value of colors you’re using can impact upon the psychological connection users will have to the content. One use of chromatic value might be to accent the time of day that customers associate with a company or organization. If you were designing a website that’s all about nightlife or concerts, for instance, you’d probably want to go with dark shades and limit your use of light tints. Tints tend to be associated with daylight, springtime, and childhood. Think: sunrise, baby clothes, and Care Bears. These light pastel colors can be used in professional, sophisticated, grown-up ways, too, as anyone who’s ever spent time in a hospital can attest. This is because tints are soothing colors that provide personality to sterile environments without startling the ill or making babies cry. Color designers are generally uninspired by colors such as “Hospital Green,” but if you’re working on a website for a day spa, tints would be a great foundation for your color palette.

Saturation

The **saturation** or **intensity** of a color is described as the strength or purity of that color. It’s obvious that intense, vivid colors stand out. Even though cool colors tend to recede, a vivid blue will draw more attention to itself than a dull orange. When we add gray (black and white) to a color, it becomes dull and muted. Like an office with beige walls, or an overcast winter morning, these colors are less exciting or appealing as bright, vivid colors. On the bright side—no pun intended—dull colors help to reduce tension, giving compositions a meditative, dreamy mood.

The relationship between value and saturation is illustrated in Figure 2.10.
Color Theory 101

To take our foundational knowledge of color any further, we’ll need to gain a grounding in some of the more technical concepts associated with the subject, such as how colors are formed and how they can be categorized.

The colors displayed on your computer screen (that is, the colors we’ll be using in our website designs) are based on an additive color model. In an additive color model, colors are displayed in percentages of red, green, and blue (RGB) light. If we turn all three of these colors on full blast, we’ll have white light. If we turn red and green all the way up, but switch off blue, we have yellow.

If you’ve ever owned a color printer, you might be familiar with the acronym CMYK (cyan, magenta, yellow, and black). Your ink-jet printer, laser printer, and industrial four-color printing press all create images using cyan, magenta, yellow, and black inks or toners. This process uses a subtractive color model; by combining colors in this color model, we come close to achieving a grayish black. There’s no way of producing black combining just cyan, magenta, and yellow. This is why they’re always supplemented with black—the K in CMYK. Take a look at Figure 2.11 for a better idea of how additive and subtractive color models work.

Regardless of whether you’re designing for print or the Web, the lessons of traditional color theory are key to helping us classify colors and group them together. Recorded studies of color classification date back to the third century BC and the works of Aristotle. Since then, many other great artists and philosophers have contributed to our knowledge of how colors work, including Isaac Newton, Johann Wolfgang von Goethe, and Johannes Itten. The works of these individuals, in the 17th, 18th, and 19th centuries respectively, provide the foundations on which much of our understanding of color lies. All three theorists explained colors in relation to a color wheel, using red, yellow, and blue as the primary colors. The color wheel is a simple but effective diagram developed to present the concepts and terminology of color theory. The traditional artists’ wheel is a circle divided into 12 slices, as Figure 2.12 indicates. Each slice is either a primary color, a secondary color, or a tertiary color.
Primary colors
The primary colors of the traditional color wheel are red, yellow, and blue. These hues form an equilateral triangle on the color wheel, and commencing from a primary color, every fourth color represents another primary color.

Secondary colors
By mixing two primary colors, we create secondary colors, indicated here by the small gray triangles. The secondary colors are orange, green, and purple.

Tertiary colors
There’s a total of six tertiary colors: vermilion (red-orange), marigold (yellow-orange), chartreuse (yellow-green), aquamarine (blue-green), violet (blue-purple), and magenta (red-purple). As you might already have guessed, mixing a primary color with an adjacent secondary color forms the tertiary colors.

Red, Yellow, and Blue, or CMYK
I’m constantly amazed by the lack of respect that exists for the red, yellow, and blue primary color wheel. I’ve heard people call it invalid, archaic, and a kindergarten tool. It’s true that the red, yellow, and blue color wheel is not a scientifically accurate model of the perception of light. Many people want to eliminate the red, yellow, and blue color wheel from art curricula, and establish the CMYK color wheel, shown in Figure 2.13, as the universal color model. Note that the secondary colors in the CMYK color wheel are red, green, and blue, meaning that we could use the CMYK to illustrate both additive (using light) and subtractive (on paper) color.
To illustrate the reasoning behind the push to move to CMYK, I’ve used gouache paints, which are basically watercolors that come in a tube. When mixed with water, they are fairly translucent and produce the colors you would expect to see on the modern CMYK color wheel, as Figure 2.14 shows. Magenta and yellow mix to produce nice shades of orangey reds, while cyan and yellow mix to produce green and minty tones. This is how CMYK printing works. The inks are translucent and the overlap between them (along with the use of black—don’t forget good ol’ K) gives us most of the colors we can see on an additive, light-emitting monitor or TV. As the famous TV painting instructor Bob Ross might have said, “That’s a happy little color model.”

Wait! What’s that purple splodge? Yes, equal amounts of cyan and magenta form a violet or purple, instead of the pure blue suggested by the CMYK color wheel. Numerous anomalies like this crop
up when we mix opaque pigments. Basically, if your paint is so thick that you’re unable to see the white paper or canvas on which you’re painting, the concepts of a CMYK color wheel start to fail. In this regard, the traditional red, yellow, and blue color wheel developed by Goethe, Itten, and others over the last four centuries or so is a much better model.

But we’re using pixels, not paint! The reason many digital artists still keep a red, yellow, and blue color wheel handy is because the color schemes and concepts of traditional color theory are based on that model. As we’ll see shortly, the relationships between colors are largely determined by their relative positions on the color wheel. But those positions differ depending on the wheel; for instance, on the traditional color wheel, red and green are opposite, whereas on the CMYK wheel, cyan is opposite red. We can’t simply shift the red and blue around the color wheel and call it a day. Because of this, the color schemes that I’ll be discussing in the next few pages are based on the red, yellow, and blue color model.

There are flaws to be found in both color wheel models, and complementary colors are a prime example. But what’s really going to bake your noodle is when I tell you that there is no color wheel that can fully describe the complexities of the way in which we perceive color from light. Even though I design mostly for the Web—a medium that’s displayed in RGB—I still use red, yellow, and blue as the basis for my color selections. I believe that color combinations created using the red, yellow, and blue color wheel are more aesthetically pleasing, and that good design is about aesthetics. Therefore, I’m going to present color theory as I learned it in my sophomore design fundamentals class in college: from the traditional red, yellow, and blue color wheel.

The Scheme of Things

Currently, we know enough about colors to talk about their values, intensities, psychological associations, temperatures, and locations on the traditional color wheel. That’s all well and good, but how do we find multiple colors that work together? This is where color schemes come in handy. Color schemes are the basic formulae for creating harmonious and effective color combinations. Six classic color schemes exist:

- monochromatic
- analogous
- complementary
- split complementary
- triadic
- tetradic (also called double complementary)

In order to employ any of these classic color schemes, we must start with a color. Consider the subject of the website you’re working on, and choose a base color that suits the site’s purpose. Of course, this choice may be out of your hands. Sometimes, you’ll have to work within a company’s rules, perhaps adhering to seemingly inane and eccentric color guidelines. Let’s assume that the
site you’re designing is for a proud family of hoity-toity circus monkeys. These circus monkeys still believe they have a royal lineage, so they have requested that we incorporate a regal purple into the design. Silly monkeys … but you know what they say: “the client is always right.”

**A Monochromatic Color Scheme**

When we talked about the value of color earlier, we talked about tints and shades. A monochromatic color scheme—like the one shown in Figure 2.15—consists of a single base color and any number of tints or shades of that color.

![Figure 2.15. A monochromatic monkey](image)

**Monochromatic Color Scheme Examples**

Hot pink is a super-saturated color that packs a powerful punch when paired with black and white. This is obviously what Indiana-based web agency Solid Giant\(^4\) was going for with the monochromatic color scheme you see in Figure 2.16. Each section of this single-page, scrolling site alternates between a textured white background and a pink one that’s as bright as the “superawesome” copy on the home page.

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\(^4\) [http://www.solidgiant.com/](http://www.solidgiant.com/)
Another example of saturated, monochromatic design can be found in the personal site of author, speaker, and user experience designer Aarron Walter. Each page of the site features a different monochromatic color scheme. The darkening content rows you see on Aarron’s home page in Figure 2.17 are the result of a clever use of RGBA transparency. Each row of content has a transparent black background. When the page loads, JavaScript assigns an incrementally higher alpha (opacity) value to each block, creating a rich monochromatic color scheme for each page.

5 http://aarronwalter.com/
Changing Color Schemes

Many websites use different color schemes for each section of content. This approach can add richness and character to the content, but may also produce some identity issues. If you’re going to use multiple color schemes within a single site, be sure to keep the logo, menu, and overall layout of the site consistent to avoid confusion.

Art in My Coffee\(^6\) is a Tumblr blog created by Jina Bolton and designed by Meagan Fisher, which catalogs latte art from all around the world. It’s no surprise, then, that the site features a monochromatic color scheme based around creamy tints of tasty brown coffee, as you can see in Figure 2.18. If you know that the photos and content of your site will feature lots of the same color, it’s a terrific idea to follow Meagan’s lead and design your color scheme around the content.

The site for New Zealand’s Black Estate Vineyard\(^7\) in Figure 2.19 features a special breed of monochromaticism. Yes, I just made that word up. Any set of colors that consists solely of black, white, and shades of gray is known as an achromatic color scheme. The word achromatic literally means “without color.” Just because the overall scheme of the site has no color, it doesn’t mean the content

\(^6\) http://artinmycoffee.com/
\(^7\) http://blackestate.co.nz/
has to be colorless as well. Because of the dark background, ample use of “white” space, and lack of surrounding color, the vibrant photographs pop off the page, giving life and light to the design.

**An Analogous Color Scheme**

An analogous color scheme consists of colors that are adjacent to one another on the color wheel. If our color wheel were a delicious pie (mmm, pie!), then an analogous color scheme would be a fairly large slice. The key to creating a good analogous scheme is to remember that your eyes are bigger than your appetite. As a rule of thumb, avoid having a slice that’s bigger than one-third of the whole, or you’re bound to make users sick. Returning to our hoity-toity monkeys in the design shown in Figure 2.20, we’ve taken their regal purple and warmed it up with some orange tones.
Analogous Color Scheme Examples

The playful illustrations on the home page for Forrst\(^8\) deepen the metaphor of this designer/developer community. While you’re snickering at the park ranger’s SpongeBob-like legs or the “Log In” pun in Figure 2.21, note the rich analogous color scheme. From the teal sky to the orangey browns, the colors of this design are contained within a one-third wedge of our color wheel pie.

\(^8\) [http://forrst.com/](http://forrst.com/)
Blinksale, shown in Figure 2.22, is a hosted web application that creates, manages, and sends CSS-formatted and plain-text invoices. It’s also an excellent example of what a creative analogous color scheme can do for a business website. It crumples up those preconceived notions of how corporate websites should look, and tosses them into a cool sea of colors ranging from blue-green to yellow. Be sure to note how color contrast makes their call to action the first thing you see. The perspective lines of the screenshot on the right also take advantage of continuance, constantly guiding your eyes back toward that sign-up button.

While Blinksale’s home page is designed to dazzle and amaze, the Zappos home page (Figure 2.23) gets straight down to business. This is achieved by relying on a solid analogous color scheme of blues and greens. The brightly colored search button at the top of the page stands out because it introduces a completely different hue from the rest of the site. One might even say it complements the blues on the page ... but what does that mean? Read on to find out.

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9 http://blinksale.com/
A Complementary Color Scheme

Complementary color schemes like the one featured in our updated hoity-toity illustration—shown in Figure 2.24—consist of colors that are located opposite each other on the color wheel. Placing red-violet and yellow-green together is uncommon, but the monkeys insisted that I keep some of their royal purple in the picture. Sheesh... these clients are a bunch of primates.

Figure 2.24. A funky complementary monkey
Complementary Color Scheme Examples

The University of Florida is my wife’s undergraduate alma mater, and the school’s orange and blue team colors provide a strong foundation for a complementary color scheme. Some people may be put off by the stark contrast of complementary color schemes found on its athletics website\(^\text{10}\) (seen in Figure 2.25), but when the colors represent the business or entity for which you’re designing, you can’t go wrong.

![Figure 2.25. The University of Florida Athletics website uses bold complementary colors](image)

Pittsburgh’s Sprout Fund Spring Program website\(^\text{11}\) in Figure 2.26 proves that complementary color schemes don’t have to be as bold as UF’s orange and blue. By toning down the saturation, this red and green design looks very natural and earthy, helping support the message of biodiversity. The beautiful illustrations and artistic textures really make this design sing.

\(^{10}\) http://www.gatorzone.com/

\(^{11}\) http://www.sproutfund.org/spring/
I’m really unsure why so many musicians insist on having all-Flash websites, and then never update them—but I digress. Regardless of the publishing platform, the website for musician Zach Hendricks is a beautiful textbook example of a complementary color scheme, as you can see in Figure 2.27. It’s impossible to choose complementary colors without pairing cool with warm, and the designers of this site were well aware of that. The city skyline and bright round sun glow hot against the cool teal water. If you wanted to experiment with this exact color scheme, the secret formula is right there in the overlapping circles of the logo. To this site’s credit, there’s a non-Flash fallback for those of us trying to access it via iPhone or iPad.

12 http://zachhendricks.net/
Common Complementary Pitfalls

Since complementary colors are so different from each other in many ways, they can cause an effect known as simultaneous contrast when placed together: this is when each color makes the other appear more vibrant and dominant. This is actually what makes complementary color schemes so successful at moving visitors’ eyes around a composition. However, it can be horribly painful when complementary colors are used in a foreground–background relationship, as they are in Figure 2.28.
Another common pitfall is to choose colors that aren’t directly opposite one another on the color wheel, yet aren’t close enough to be analogous colors. These combinations are known as discordants because the colors will often clash with one another, causing viewer discord. In fact, 1980s fashion was all about discordant colors. Seeing a discordant color scheme these days tends to bring back fond memories of that geometric “designer series” of Trapper Keeper binders I loved so dearly at school—one’s depicted in Figure 2.29.

As this example shows, this pitfall can be made workable if it’s used intentionally. Discordant colors are whizbang combinations that really appeal to children, teens, and tweens, so using them for youth-oriented sites or products is worth considering. They can also be used sparingly in more grown-up designs to create greater emphasis than can be achieved with just a simple complementary combination. For an example of this type of color scheme, check out Bulls+Arrows in Figure 2.30. The site features several randomly loading background images, each with a color scheme of its own. This particular image pairs bright red with a blue-green that’s just far enough from complementary to give this design an edgy look.

13 http://www.bullsandarrows.com/
Split-complementary, Triadic, and Tetradic

Split-complementary, triadic, and tetradic color schemes sound technical, but they’re just simple variations of a basic complementary color scheme.

To create a split-complementary color scheme, use the two colors adjacent to your base color’s complement. For example, take the left-most color scheme shown in Figure 2.31. Red is the base color here, so instead of using green to form a complementary scheme, we’ll use the two colors adjacent to green, chartreuse (yellow-green) and aquamarine (blue-green), to form a three-color split-complementary scheme. Note that, since you’re using your base color with two discordant colors, this type of color scheme can look juvenile and extreme, but that may be just the effect you want.
For a **triadic** color scheme, we just push our split-complements out one more notch on each side, so that all the colors are equally spaced on the color wheel. Starting with red as our base color again, we select yellow rather than chartreuse, and instead of aquamarine, we select blue. This divides the color wheel into thirds, hence the *tri* prefix in triadic. In this example, which is the left-most scheme in Figure 2.32, we have the three primaries (red, yellow, and blue) making up our color scheme. If you turned the scheme clockwise one notch, you’d have chartreuse (yellow-green), violet (blue-purple), and vermilion (red-orange), as shown in the middle example in Figure 2.32.

Knowing that triadic color schemes involve three colors, you have probably deduced from your extensive knowledge of the Greek language (okay, so maybe you haven’t) that a tetradic color scheme involves four colors. A tetradic color scheme combines any complementary color scheme with another complementary color scheme. The left-most example in Figure 2.33 is a tetradic color scheme that combines orange and blue with yellow and purple.

The website for River City Church[^14] in Jacksonville, Florida (shown in Figure 2.34) is an excellent example of a tetradic color scheme. Notice that there are exactly four colors in this design besides black and white. We have the complements orange and blue, paired with pink and green. Finding pure examples of the six classic color schemes I’ve described above is a difficult task. That’s because sometimes designers make one up from scratch, or it’s because they use a slight variation on one of these themes. In the section called “Other Variants” below, we’ll discuss a few options.

[^14]: http://www.rccjax.com/
Other Variants

Although most designers are aware of the standard color schemes, the combinations can tend to feel basic and uninspired. However, if you treat the color wheel like a dartboard, and pick whatever colors you land on, you’re likely to come up with some truly awful combinations—trust me, I’ve tried it. Rather than taking that risk, there are other ways to tweak the classic color schemes to create a fresh combination. Once you have a handle on monochromatic, analogous, and complementary color relationships, try experimenting with some of the following:

Monochromatic with mo’ pop

Rather than just using tints and shades of your base color, try incorporating pure gray, black, and white. This will create more contrast, and more “pop” within a monochromatic color scheme.

Analo-adjust

Adjust the saturation of one of the colors in your monochromatic scheme up and adjust the others down. A highly saturated color will stand out when placed among muted colors. There should be no analo-guessing which one is the saturated color.
Mono-split-complement

If you have a good thing going with a split-complement color scheme but want to add some depth, try using a few tints and shades of your base color in the design.

Obviously, I just made those names up, but you’ll notice that all three variants are similar to the main traditional schemes. It’s easy to tweak the traditional color schemes a little for more character, but remember that the color scheme you choose is the foundation from which you’ll build your website’s color palette. It’s important to build on a firm foundation, or the rest of your design could come tumbling down.

Creating a Palette

“A palette?” you might ask. “Isn’t that the same as a color scheme?” Well, yes and no. A color scheme will only give you two, three, or four colors to work with. Although a limited palette can be beautiful, you’re probably going to need a few more colors to design your website. It’s better to nail down this process while you’re thinking in the language of color, rather than pick ancillary colors at random as you need them for your layout. The number of colors you’ll need will depend on the complexity of your design. I like to start off with at least five or six solid color choices before I even think about applying them to my layout.

Hexadecimal Notation

Since this is the stage in which we become specific about each color we’re choosing, we’re going to need a standard way to refer to the colors in our palette. You probably already know about hexadecimal RGB color values, but if you don’t, here’s the quick drive-through version of the theory.

The hexadecimal counting system is much like the decimal counting system you’re used to, except that instead of being based on multiples of ten, it’s based on multiples of sixteen, and has six additional digits: A (which is the equivalent of decimal 10), B (11), C (12), D (13), E (14), and F (15). Table 2.1 shows how we count from 1 to 255 in decimal and hexadecimal.

So, what does this have to do with color palettes? Earlier in the chapter, I explained that your monitor uses an additive RGB color model, and that every pixel in the screen is “painted” using a combination of red, green, and blue light. What I failed to mention was that there are 256 different levels of red light, 256 levels of green light, and 256 levels of blue light; we can use these to create 16,777,216 distinct colors.

Thankfully, we have a way of describing each of these colors quickly and easily—using hexadecimal color codes. A hexadecimal color code specifies the levels of red, green, and blue that go into a given color. For example, combining red, green, and blue at their highest possible levels makes white. To use white in a web page, we set its red component to 255 (FF in hexadecimal), its green component to 255 (FF), and its blue component to 255 (FF). We then combine these hexadecimal values in the order red, green, and blue and come up with the code FFFFFF.
Black, which is made by setting red, green, and blue to zero (00), has the code 000000. Red, which we can create by setting red to FF and leaving green and blue at 00, has the code FF0000. Figure 2.35 shows several standard colors with their hex value. After you’ve seen and used a lot of hex colors, you’ll start to see the colors in the code. #F26382, for instance, is a coral-colored shade of pink and #371324 is the color of a slightly purple red wine. Once you think you’ve reached that Jedi Hex-Master status, head over to http://yizzle.com/whatthehex/ for a little game of “What the Hex?”

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<th>Decimal</th>
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<td>255</td>
<td>FF</td>
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</tbody>
</table>

![Hexadecimal color examples](image)
Color Tools and Resources

Now we all have a basic understanding of how colors are represented as hexadecimal values. The next step is to find out those values for each color with which we want to work. Many resources are available to help you choose colors for your palette, including a ton of stand-alone applications and plugins for both Macs and PCs. Here are a few of my favorites:

**Color Scheme Designer 3**

Although there are many online color pickers out there, my favorite is Color Scheme Designer[^15] (formerly known as the WellStyled Color Scheme Generator), shown in Figure 2.36. Where many other applications use an RGB or CMYK color wheel, this awesome HTML tool uses the traditional red, yellow, and blue color wheel. With just a few clicks, you can choose and customize a color scheme, as well as identify a variety of other colors from which to build a harmonious palette. Once you have a palette you like, you can use the Vision Simulator to see what those colors look like to people with various levels of color blindness; then you can export your colors as HTML/CSS, XML, Text, a Photoshop palette, or a GIMP palette.

![Color Scheme Designer 3](image)

Figure 2.36. Color Scheme Designer 3—the author’s pick

[^15]: http://colorschemedesigner.com/

*The Principles of Beautiful Web Design (www.sitepoint.com)*
Adobe Kuler

Another excellent color selection resource is Adobe Kuler. On the Kuler website, you can create color combinations based on the standard color scheme configuration similar to the way Color Scheme Designer 3 works. Unlike that site, though, Kuler will also generate a palette from an uploaded image. Another key feature of Kuler is its community. If you create a login for the site, you can save and share your color palettes with other Kuler users, and anyone can browse the most-recent and highest-rated color combinations on the site. Figure 2.37 shows the handy AIR app version of the site, which can be installed on both Macs and PCs.

![Adobe Kuler](http://kuler.adobe.com/)

Figure 2.37. The cooler Adobe Kuler

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COLOURlovers

If Kuler provides too limited a community to suit your social needs, the COLOURlovers website, shown in Figure 2.38, certainly will. It’s less of a color generator tool and more of an inspiration-sharing website. It started off with just color schemes, but now you can also share patterns and view color (or colour if you insist) inspirations for a variety of design fields.

![COLOURlovers](image)

Figure 2.38. COLOURlovers—for lovers of color

Color Stream iPhone App

Color Stream is an app (available for $2.99 from the iTunes store) that puts some of the best features of Color Scheme Designer and Adobe Kuler into the palm of your hand. Created by Sahil Lavingia, Color Stream lets you create and store color palettes that are either created from scratch, extracted from a photo, or even generated automatically using a built-in color schemer. It really is an elegant, well-polished application that makes picking a color palette fun and easy. Figure 2.39 shows what selecting a color palette from a photo looks like in the app. I called that tasty scheme “heirloom.” For you Android users out there, I’d bet a version of this app will be available by the time this book is in your hands.

17 http://www.colourlovers.com/
Pictaculous

Kuler and COLOURLovers are great tools to meticulously tweak and gain social feedback about color schemes you’re working on, but what if you see some color inspiration on the go? That’s where Pictaculous\(^\text{18}\) comes in handy. Pictaculous is a free MailChimp Labs project that provides color schemes based on your pictures via email. You simply take a picture with your smartphone and email it to colors@mailchimp.com. Within a couple of minutes, you’ll receive an email with a five-color palette, an assortment of suggested color schemes from Kuler and COLOURLovers, and an attached Adobe color palette (.aco) file. There are alternatives to doing it by email, though. Figure 2.40 shows Pictaculous’s color suggestions for a picture that I uploaded to http://pictaculous.com/ from my computer.

\(^{18}\) http://pictaculous.com
Colour Contrast Check

When choosing the colors for your palettes, it’s always good to try to pick at least two colors that have enough contrast to be used as background and text colors. Having a proper contrast between text and background colors is essential for interactive design; without it, some people may be unable to read your site. An easy way to confirm that there’s enough contrast between two colors is to plug the RGB values for your foreground and background into Jonathan Snook’s Colour Contrast Check\(^{19}\) website.

Sometimes combinations that you think would be valid fail to meet the color difference and brightness requirements of the Web. As Jonathan says in his blog post about the contrast checker,\(^{20}\) “… this tool shouldn’t be taken as gospel … but rather should help guide you towards better colour choices.”

Being able to come up with a unique color palette is all about keeping your eyes open. If you see a website, advertisement, illustration, or other graphic that stands out, try to figure out what the dominant colors are, and what type of color scheme underlies the palette. Remember, though, that color inspiration can come from anywhere. Is there a color that reminds you of a certain song? How about the colors of your favorite meal? Maybe there’s even a color in that tacky seventies wallpaper in your parents’ house that would work well for you. Being aware of the kinds of issues associated with color usage will give you an eye for color and an ability to come up with original palettes that fulfill the requirements of your client.

\(^{19}\) http://snook.ca/technical/colour_contrast/colour.html
\(^{20}\) http://snook.ca/archives/accessibility_and_usability/colour_color_co

*The Principles of Beautiful Web Design (www.sitepoint.com)*
Application: the Color of Coupons

Returning to our design case study, when we left off with Southern Savers at the end of Chapter 1, team Squared Eye was making great progress on the redesign. They went through a discovery phase of becoming familiar with the site, its users, and how Jenny manages the content. They attended a couponing workshop, performed some usability testing, and even did a bit of sticky-note information architecture before planning some layout concepts in Omnigraffle. Now it’s time to bring a little color to the project.

To do that, Matthew Smith of Squared Eye pulled in co-working partner and branding specialist Andrew Ramos to create a visual brand identity and begin work on the printed assets for Southern Savers. “From the outset,” said Matthew, “we all realized Southern Savers could use a rebranding. It lacked a clear visual identity, but the concept and business was extremely strong, so we had a lot to work with.” To start the branding process, they needed to know what colors would work best for the design. Along with asking Jenny directly for colors she liked, Andrew put together a mood board for the project.

If you’ve ever watched television shows about interior or landscape design, you’ve probably seen designers present a board to their clients with fabric samples, furniture pictures, and paint colors. These presentations help designers gauge the client’s reactions about design decisions before putting a lot of work into creating fancier, more time-consuming visuals. The process works just as well in the world of web design. Figure 2.41 shows some of the imagery Andrew included in the mood boards he created for Southern Savers.

Figure 2.41. A mood board of beautiful Southern imagery

21 http://andrewramos.com/
As you look through the elements of the image above, you’ll notice that there are a wide variety of colors, textures, and typography. Andrew’s inspiration, and the concept that ties all of these thumbnails together, is the keyword “Southern.” A few of the images Jenny liked best are shown below in Figure 2.42.

While Jenny didn’t pick these images specifically for the colors, you’ll notice a common theme that runs through all three—teal! Whether she knew it or not, Jenny provided a foundation for her site’s color scheme with her mood board picks. Another color that’s present in all three of these images is red-orange. As you know from the section called “The Scheme of Things” we covered earlier, this would have made for a beautiful complementary color scheme, but Andrew and the Squared Eye team instead opted to build a complementary palette based on Jenny’s love for teal. They pulled some of the greens from the 20,000 Leagues Under the Sea cover she picked, which play double duty, reminding visitors of the money they can save on the site. They then paired those greens with some creamy yellows, and added a bright blue from the opposite side of this analogous color block to use as an accent color. The final color scheme in Figure 2.43 is fun, casual, and friendly.

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22 This is one of those instances where cultural considerations would need to play into your color choices. In this case, the site’s visitors are primarily located in the US, so the association of the color green with money is a safe one.
When I asked Jenny her thoughts on the color choices, she explained that despite a large percentage of her visitors being female, she wanted to avoid the site looking too girly. “I want everybody to feel comfortable using the site,” she said. From an emotional standpoint, this color foundation was an obvious choice. “Blues and greens generally evoke a sense of calm and casualness,” said Andrew. “This is obviously very appropriate for approaching ... Southern Savers, where people may think it’s going to be complicated based on their past couponing fiascoes.” This exercise gave Andrew the color inspiration he needed to move on with his branding work. It also added depth to what the Squared Eye team knew about the project. In fact, depth is exactly what we’ll be exploring next. No, I won’t be reading from 20,000 Leagues Under the Sea; instead we’re going to talk about texture.
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