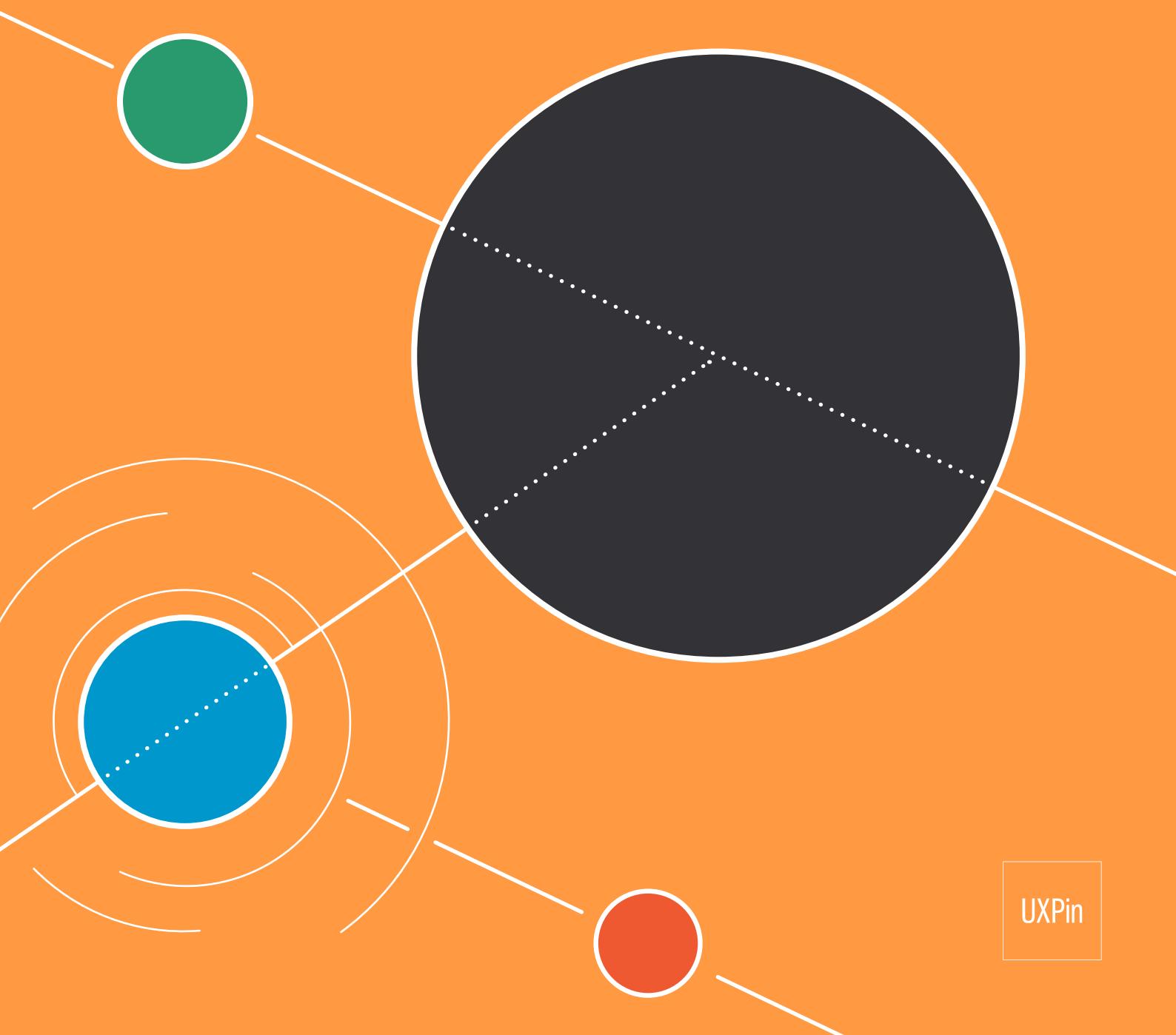
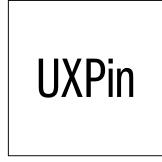


# Interaction Design Best Practices

Mastering Words, Visuals, Space





# Interaction Design Best Practices

Mastering Words, Visuals, Space

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# Introduction

*A quick note from the authors*

Interaction design can be broken down into 5 dimensions: words, visuals, objects/space, time, and behavior. Words are interactions. Visuals and objects/space are what users interact with. Time is what users interact within. And finally, behavior is how users and the interface act and react.

The first three dimensions allow for interaction, while the last two dimensions define interaction. In this volume, we'll dissect the first three tangible dimensions: Words, Visuals, and Objects/Space.

Language is the core of interaction and communication since the wording can either enhance or cripple the foundation of interaction. Visuals are equally important to the copy, since the experience suffers if the words and appearance do not complement one another. Finally, space creates the context for interactions with the right look, feel, and relationship between all on-screen elements.

In this e-book, we cover topics spanning UX design, UI design, psychology, and human-computer interaction. While these topics can get quite theoretical at times, we want to explain them as practically as possible. In our experience, we've always found it helpful to analyze visual examples, so you'll find plenty of explanations in plain English.

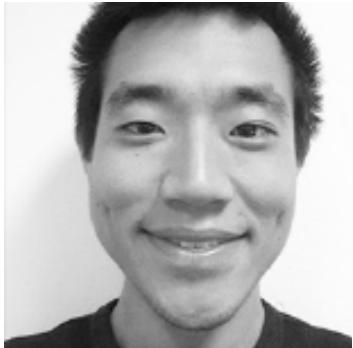
Beginners can learn about the fundamentals of interaction design such as predictability, learnability, and usability. More advanced readers will learn how to practically apply the principles of affordances, Fitts' Law, Gestalt Principles, and other design theories towards the crafting of delightful experiences. To make this book as actionable as possible, we've also analyzed visual case studies from 30+ companies including **Apple**, **AirBnB**, **Google**, **Facebook**, **Etsy**, **Virgin America**, **Dribbble**, **Hootsuite**, and **Behance**.

We'd love your thoughts on what we've written, and feel free to share if you find this book helpful.

For the love of interaction design,

Jerry Cao

co-written by Kamil Zieba & Matt Ellis



Jerry Cao is a content strategist at UXPin where he gets to put his overly active imagination to paper every day. In a past life, he developed content strategies for clients at Brafton and worked in traditional advertising at DDB San Francisco. In his spare time he enjoys playing electric guitar, watching foreign horror films, and expanding his knowledge of random facts.

[Follow me on Twitter.](#)



Co-founder and head of product, Kamil previously worked as a UX/UI Designer at Grupa Nokaut. He studied software engineering in university, but design and psychology have always been his greatest passions. [Follow me on Twitter @ziebak](#)

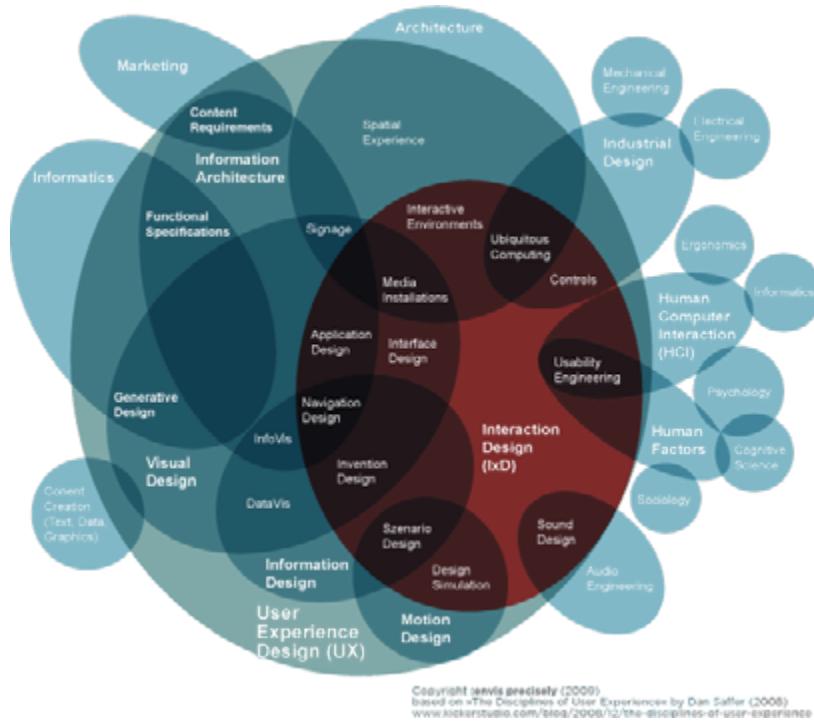


With a passion for writing and an interest in everything anything related to design or technology, Matt Ellis found freelance writing best suited his skills and allowed him to be paid for his curiosity. Having worked with various design and tech companies in the past, he feels quite at home at UXPin as the go-to writer, researcher, and editor. When he's not writing, Matt loves to travel, another byproduct of curiosity.

# The Interactive Imperative

*The What & Why of Interaction Designs*

Interaction is the essence of all user experiences. It is the conversation between your product and your user, and if the conversation is boring, your user will leave and talk to someone more interesting.



*Photo credits: "Interaction Design Disciplines". Wikimedia. Creative Commons 2.0*

In today's world of infinite-scrolling websites and touch-driven mobile apps, you must understand interaction design (abbreviated as

IxD) in order to create user experiences that feel fluid and lifelike. As you can see above, interaction design requires an understanding of multiple UX disciplines – which makes sense, since it's not easy to make a system of objects and text be friendly, learnable, and useful.

Interaction design is the conversation between your product and user.

If the conversation sucks, they'll just leave.



Let's start by defining IxD, breaking down the core principles, and explaining a 5-step process to better interaction design.

## Defining Interaction Design

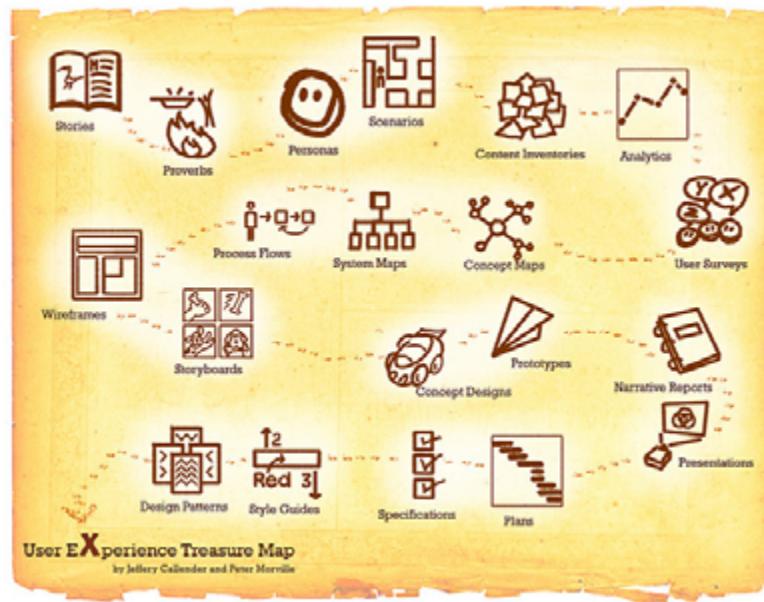
IxD is everywhere: BluRay player menus, smartphone controls, your Facebook page. Every time you make a decision on a digital device – checking sports scores, returning your mom's email – you project your needs into a machine that must then respond as though it knows you.

### 1. What Is Interaction Design?

Interaction design requires art and skill to move beyond human-to-computer interfaces and embrace human-to-human design. The skill of IxD is taking into account the human element of your users, and in creating that *human* connection built from human-to-computer interaction (HCI).

It's important to distinguish IxD from UI. As discussed in our free ebook [\*The Guide to Mockups\*](#), the UI is what the user actually sees. IxD is concerned with how users engage with the UI, and how that UI will respond so that users know how to accomplish their goals. As a result, the user's enjoyment of the interface (which becomes part of the larger product enjoyment) forms the overall user experience.

Interaction design makes you think beyond human-to-computer interfaces and embrace human-to-human design.



*Photo credits: "User Experience Treasure Map". Peter Morville. Creative Commons 2.0*

You can't really design a user experience any easier than a business can just make more money, but you can certainly design better UIs and interactions. And that's why IxD is so imperative – it makes the difference between having a system that merely works, and having one that your users actually enjoy.

Your design is an extension of your brand. You need to think about the UI as your digital staff, the “people” who facilitate interactions between your “customers” and your “store.” Interaction design, then, is how your digital staff engages with customers to meet their needs. Naturally you’ll want your staff to be helpful, accommodating, and friendly – that will make your customer enjoy shopping at your store. But a poorly designed interface is like a staff that’s unhelpful, rude, and at times doesn’t even do their job.

Making the right decisions in UI design is like hiring the right staff. Making the right decisions in interaction design is like training that staff to work in the most efficient and pleasant manner possible.

A poorly designed interface is like a staff that's unhelpful, rude, and doesn't even do their job.



[tweet this](#)

## 2. Why Does Interaction Design Matter?

To understand feedback as the heart of IxD, let’s look at a story of analog interaction design told by Robert Fabricant of Frog Design [in his piece for FastCo.Design](#). He explains the evolution of the UI for the NYC subway, which is a prime example of how technology is only as powerful as the interactions it produces.

If you’re old enough to remember subway tokens, that’s a good place to start. You put the coin in the slot (an interaction), you

heard that satisfying *click* as the coin fit into its place in the mechanism (feedback), and that's how you knew you now had access (result). That sound of the coin falling into place was not intentional, but rather an accidental interaction design decision, albeit a fortunate one. This action-reaction feedback loop is the groundwork of all interactions, digital or analog.



*Photo credit: "Subway". Hernan Pinera. Creative Commons 2.0*

Then came the metrocard, which replaced the coin drop with a card swipe. This made using the subway easier because users didn't need to carry around coins, but as an action, the swipe proved a little more difficult (and sometimes takes two or three tries to get it right). It also didn't create the *click* noise of a token sliding into place, signalling to people to lean into the turnstile.

While the metrocard makes people's lives easier, some people still talk fondly of the old tokens for the clearer feedback and simpler interaction. From a digital perspective, this means that not everyone will be quick to abandon the status quo unless your

site or app takes into account all the nuances and shortcomings of human behavior. Your app might be a technological marvel, but don't forget that it's people who need to interact with it.

## The 5 Pillars of Interaction Design

Good interaction design is driven by a human connection. But what drives human connection and how does that translate into a computerized interface? The answers to these questions aren't so black-and-white; but thankfully Andrew Maier, designer and co-founder of UX Booth, [explains in an article for his site](#) some of the core principles of interaction design. In our experience, we've found 5 concepts to be critical for even the most basic interaction design.

### 1. Goal-driven Design

While you might not be the person who's conducting the user research (especially if there's a UX researcher or UX designer around), you still need to know how to apply the results. As Maier writes:

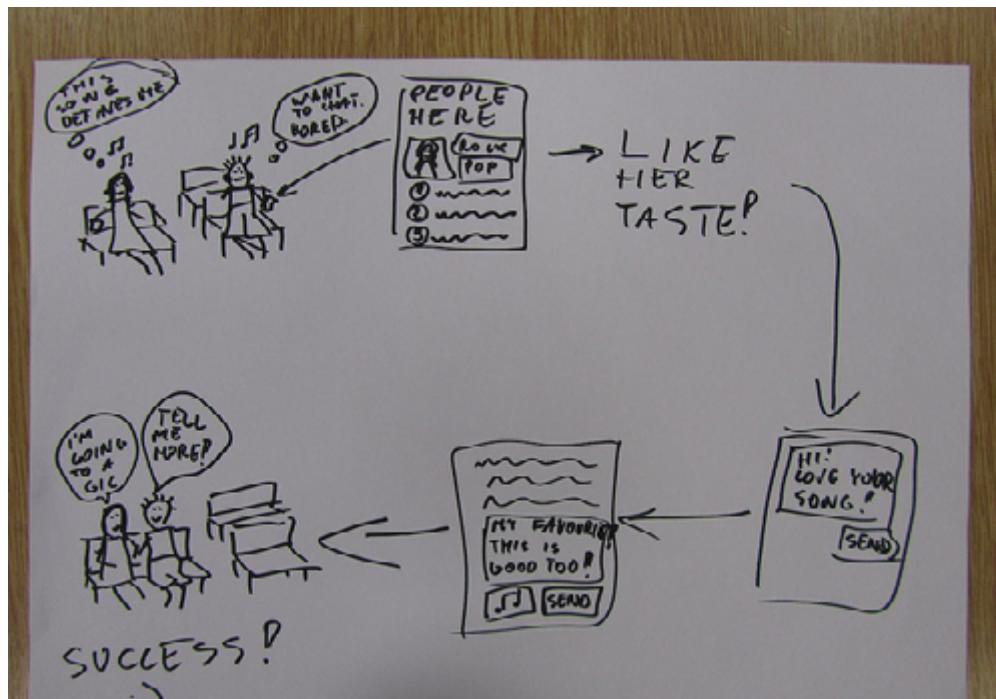
*In every design discipline, the artist must first acknowledge their constraints, and then devise a solution. In the case of interaction design, users themselves generally form the basis of an interface's constraints.*



*Photo credits: “Personas.” Nicolas Nova Creative. Creative Commons*

So, discussing the goals of interaction design becomes very people-centric, especially your target user. In our free ebook [\*The Guide to UX Design Process and Documentation\*](#), we outlined 3 fundamental tactics for designing for your target user, which can be applied just as well – perhaps better – to IxD specifically:

- **Personas** – Personas are fictional characters created from the behaviors and psychologies of your target users. Personas come in handy as a reference when making crucial design decisions, for example, “What kind of checkout process would Sally the Seasonal Shopper prefer?” To take personas a step further, try [turning them into characters](#).
- **User Scenarios** – Related to personas, user scenarios explain how the personas act when using the site. For example, “It’s Black Friday, and Sally the Seasonal Shopper has a long list of presents to buy online before work.” User stories urge you to think critically about your personas’ behaviors so you design the UI to suit them. Kristopher Layon gives more details [in this piece for A List Apart](#).



*Photo credits: “Design Jam London 3” Monika Szczygiel. Creative Commons*

- **Experience Maps** – Going one step further than user scenarios, experience maps chronicle all the different conditions surrounding a single interaction, including emotions and external circumstances. “Angry that her skiing trip ended in a broken leg, Sally the Seasonal Shopper must do her Black Friday Christmas shopping online – though as quickly as possible.” Chris Risdon, Design Director at Adaptive Path, explains the anatomy of an experience map [in this post](#).

Following these people-centric methods for general design will help you stay focused on what’s most important for your IxD: the people. For more information on how personas and scenarios can benefit your interaction design, we recommend [reading this piece on goal-driven design](#) from Christina Wodtke, former General Manager of Zynga.

## 2. Usability

In many ways, usability is the bare minimum of interaction design. If your audience can't use your product, they certainly won't desire it.

For an example that goes above and beyond, let's look at **EventBrite**'s seat designer. This online app lets event organizers create a reserved-seating event from start to finish with a high level of detail (such as determining rows, tables, and a dance floor, if needed). It consolidates what otherwise would be a multi-step, multi-program process into a single linear path.

Usability is the bare minimum of interaction design.  
If it's not usable, it's certainly not desirable.

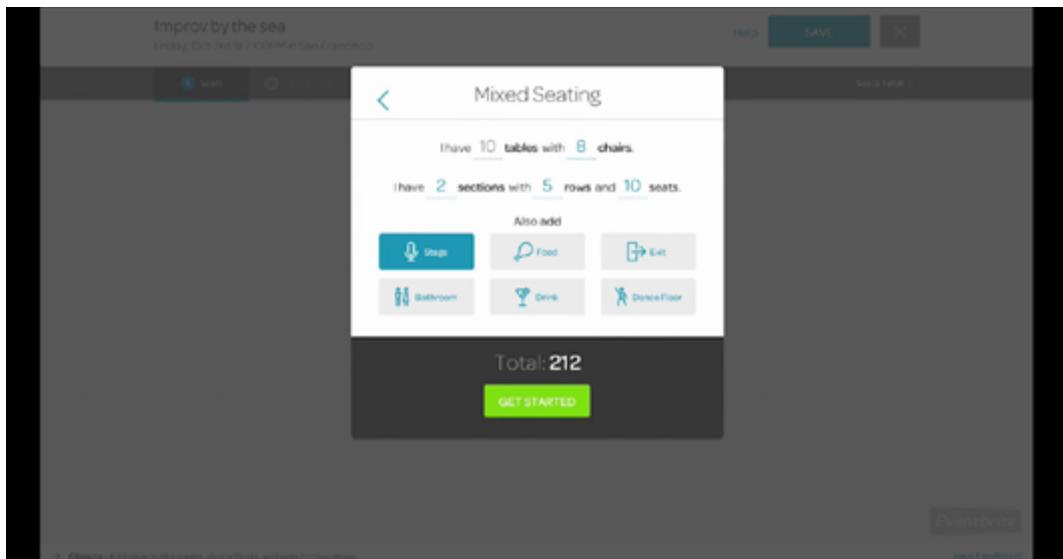
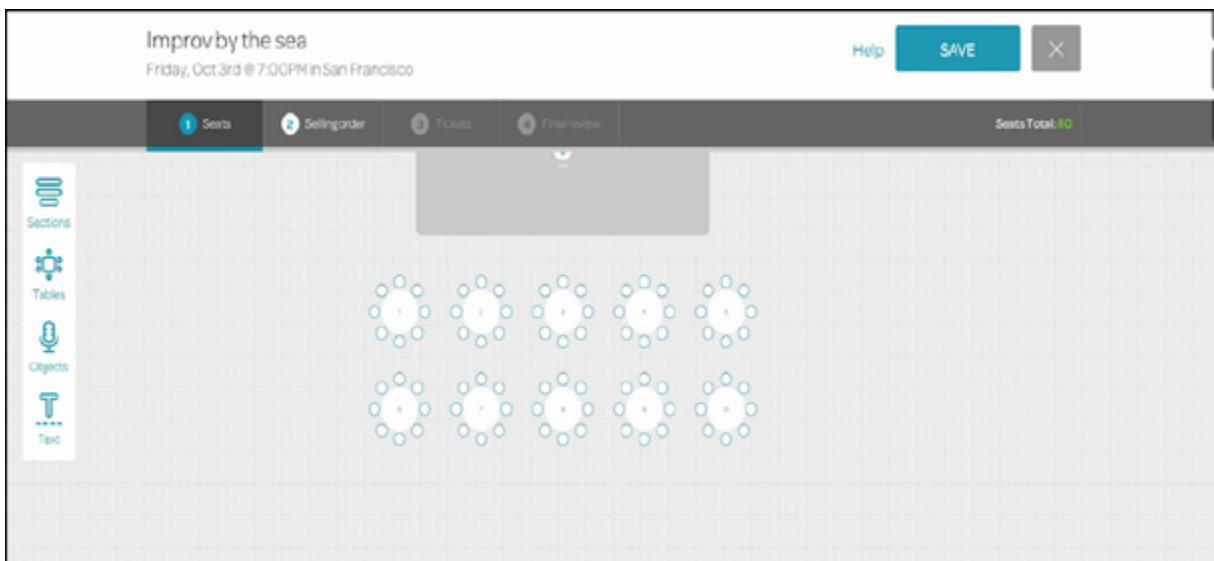


Photo credits: [EventBrite via IXDA](#)

A system's usability should be effortless. The less attention the user pays to figuring out how to use the system, the more they can



*Photo credits: EventBrite via IXDA*

accomplish the task at hand. For this reason, usability is essential – a system must first be usable before you can work on making it desirable. To learn more, **ZURB** illustrates how **usability**, **utility**, and **desirability** are all required for good design.

### 3. Affordances & Signifiers

The concept of affordances is that a function should speak for itself, and suggest its own use (i.e., a road *affords* walking). Signifiers are what hint at the affordance (i.e., the road's flat surface *signals* you to walk with your feet).

One of the most common signifiers is the blue underline for link text. This is a cue to almost every user that clicking on the text will take you to a new page.

Without signifiers, users won't be able to perceive the affordance. The play button on a video invites you to watch it, whereas a



*Photo credits: [uxpin.com](#) via [www.blog.teamtreehouse.com](#)*

video with no play button might be mistaken for a static photograph. In the above example, you can see the progression of button design. The first stage lacks any signifiers and looks just like standard text, while the third stage starts to resemble a button with its rounded edges and gradient.



*Photo credits: “iPhone”. Pixabay. Creative Commons*

Signifiers also work on a metaphorical level, because people also need to know *why* they would interact with something, not just *if* it's possible. In the above **iPhone** dock example, you can see how the rounded edges let us know that we can interact with the buttons, while the metaphorical images (phones, envelope, musical note) let us know what purpose will be served.

#### 4. Learnability

In an ideal world, a user would remember every function after only a single use, but we do not live in idealism. The reality is

that familiarity and intuition must be consciously designed into the interface.

**Tesler's Law of the Conservation of Complexity** states that every system has an immutable amount of complexity that must be dealt with during development, specifically when designing your UI. Successful interaction design boils down this complexity into the most comprehensible manner through **consistency** and **predictability**. For example, don't make some links open in a new tab while others redirect the user. Likewise, don't use a lightbox for some images while others open in a new tab. Consistency creates predictability, which improves learnability.

## Be consistent not uniform



*Photo credits: "Be consistent not uniform." Paul Downey. Creative Commons*

A common tactic for improving learnability is using UI patterns. Many sites and apps already use these patterns so the user is familiar (plus the design is consistent), and you're still allowed plenty of creativity to customize the design elements for your site.



*Photo credits: [www.newegg.com](http://www.newegg.com)*

For example, breadcrumbs – the navigational strategy that lists where on the site you are by showing its place in a hierarchy – is a common web pattern for helping users get around. It doesn't matter what site you're on, if you see breadcrumbs, you understand how they work. This familiarity lends itself to a product's learnability. And when products are learnable, it encourages people to use those products, which also improves usability.

Ultimately, the goal of learnability is to hook users on your product faster, as explained in serial entrepreneur Nir Eyal's best-selling product design book *Hooked: How to Build Habit-Forming Products*.

For a fuller list of web UI patterns, check out the [Yahoo! Pattern Library](#) and [UI-Patterns](#). We also wrote this free e-book analyzing 63 of the most popular web UI patterns.

The ultimate goal of a learnable interface is getting someone hooked on your product faster.



## 5. Feedback & Response Time

As we saw by the NYC subway example, feedback is the heart of interaction. If user interaction is a conversation between your user and the product, then your product better participate in a friendly, interesting, and helpful manner.

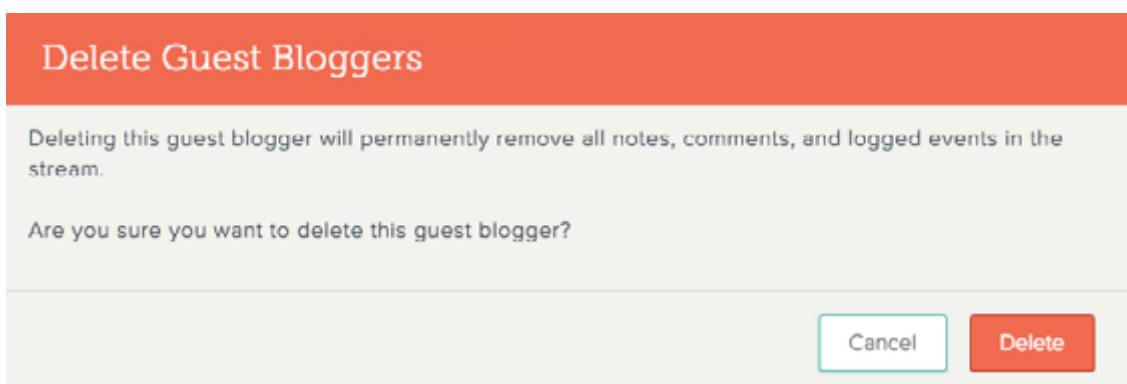


Photo credits: [www.relateiq.com](http://www.relateiq.com)

Whether an elaborate animation, a beautiful [micro-interaction](#), or a simple *beep*, a response gives the user the satisfaction of knowing if their task was or was not accomplished (and what to do next).

Every interaction is a conversation between the product and user,  
so your product better be friendly, interesting, and helpful.



In [this example](#) from **Hootsuite**, the owl simply “goes to sleep” after a long period of user inactivity, which makes sense since the app pulls in data from Twitter (and doesn’t want to overload the API). The feedback is intelligent and fun, and actually turns a possibly negative experience (stopping updates) into a positive one.

It's also important to mention that a key factor in feedback is response time. The best response times are [as immediate as possible](#), with any lag time killing the user's momentum. If you don't understand why, imagine how infuriating it would be if you were playing a guitar, and every note came seconds after strumming. The best interaction designs are barely there: they respond promptly and don't require much thought.

The best interaction designs are barely there:  
they respond promptly and don't require much thought.



## 5-Step Process for Improving Interactions

Now that you know the fundamentals, we'll describe a process we've found helpful to nailing the details.



*Photo credits: “Conversation.” AJ Cann. Creative Commons*

As notable interaction designer Stephen P. Anderson advises, it can be eye-opening to have someone **pretend to be your interface while you interact with them as a user**. You'll be able to hear out loud any awkward responses from the interface, which will help you avoid creating robotic interactions that feel inhumane. Once you're done with the roleplay, you can start scripting the narrative and restructuring interaction.

Here's the process:

### 1. Roleplay the interaction

As Anderson suggests, Grab 2 people, one to act as the interface and the other to take notes. Make a browser window prop to be held by the interface person and show the interface on a projector. Then, start a dialog with you as the user explaining their

goal, and the “interface” limiting their responses only to labels, menus, and anything else on the UI. Check out this [video](#) and [transcript](#) to see how it plays out.

## 2. Map out the narrative

Document each step of the experience, including tasks and emotions. As discussed in [\*The Guide to UX Design Documentation\*](#), this can be as simple as a few user scenarios or as complex as a [4-stage experience map](#).



*Photo credits: “Narrative Scroll”. Wikimedia. Commons 2.0*

## 3. Simplify the steps

Users sometimes have goals that require many steps (buying a car online, booking airline tickets). As recommended in [\*The Guide to Prototyping\*](#), your interface must be able to separate a complex goal into simple steps (like asking for a destination, then

The screenshot shows a flight booking interface for Virgin America. At the top, it displays the route (SFO → LAX, LAX → SFO), number of adults (1 Adult), and total price (\$0.00). Below this, the heading "Who's flying?" is centered. There are three input fields: "Adults" (containing the number 1), "Children (Age 2-14)" (containing 0), and "Lap Infants (Age 0-2)" (containing 0). Each field has plus and minus buttons for adjustment. A link "Have special requests?" is visible below the input fields. At the bottom, a purple button says "CONTINUE WITH 1 ADULT".

*Photo credits: [virginamerica.com](http://virginamerica.com)*

a departure/arrival date, etc). For example, **Virgin America's** stepped form design make the booking process feel much easier than it is.

#### 4. Limit user choices

This is probably the hardest step, but you must minimize the actions available to users. Always ask yourself if all the choices

It's better to have an extra step that feels effortless,  
instead of less steps but more clutter.



are critical for that moment in time. If not, separate it for another conversation. As you can see in the example below, this also ties into the previous point because it's better to have an extra step that feels effortless, rather than less steps but more clutter.

## 5. Pay attention to micromoments

According to Anderson, a micromoment is when a person might hesitate, advance, or stop when engaging with interfaces. If you look back to the role-playing exercise, you'll remember the moments of apprehension. To clarify the conversation, [take advantage of microcopy](#) and UI patterns like contextual actions and selection-dependent inputs (which we discuss in *Web UI Patterns 2014*).

Just like a magician's trick will fail if the details are off, just one bad interaction can ruin the entire user experience. The process we described above will help you approach interaction design as a conversation rather than just a way of animating interfaces.

If you'd like more inspiration and examples of good interaction design, [this Quora thread](#) includes great sources ranging from films to websites like [Core77](#) and [PatternTap](#).

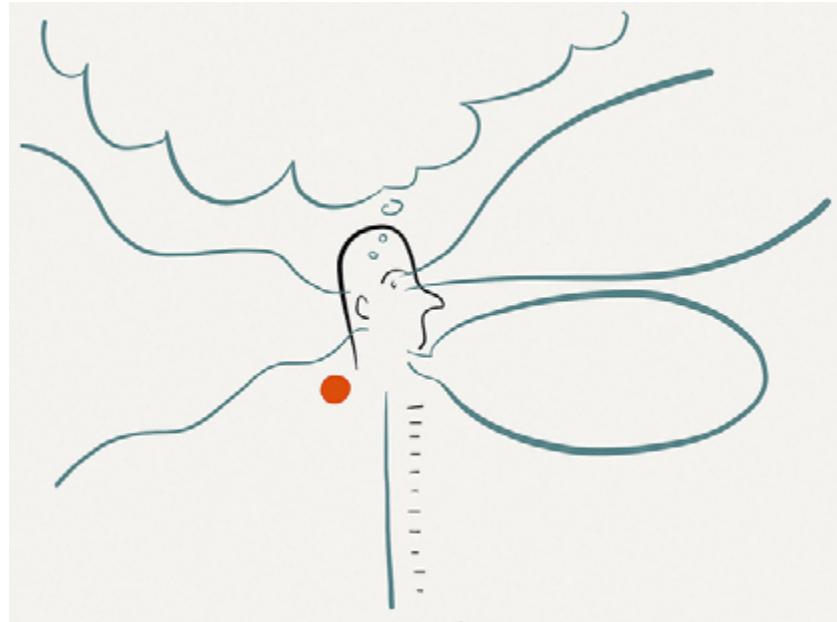
Just like a magician's trick will fail if the details are off,  
just one bad interaction can ruin the UX.



## Takeaway

Interaction design isn't about how interfaces behave, it's about how people behave, and then adapting technology accordingly. It's a two-part challenge: first, you must know your target users on a level that reveals what they like and what they expect; second, you

must figure out how to satisfy those needs given your technological constraints.



*Photo Credit: “Sketchy Empathy Map Template”. Zak Greant. Commons 2.0*

When in doubt, think about your own experiences interacting with similar designs, and use that to improve your own designs. And of course, keep reading – we'll explain the finer points of interaction design in the following chapters.

Interaction design isn't about interface behavior.  
It's about human behavior, and adapting technology accordingly.



*How does your current IxD perform? Take a look at this [IxD Checklist](#) to pinpoint any areas of improvement.*



# The Fundamentals of Language in IxD

## *How Your Copy is the Foundation for Interaction Design*

Communication is the basis for interaction, and we don't need to remind you how important language is to communication. Copy may not seem like an immediate priority (especially if you have a larger team with content strategists and copywriters), but you must understand that writing is affected by (and also affects) the design. After all, if a visual designer only leaves enough space for 10 characters in a headline, that can disrupt the flow of the entire page.



*Photo Credit: "Words." Jim Pennucci. Commons 2.0*

The words you choose, and how you put them together, will greatly influence your product's overall message – and we'll explain how using some words of our own. Below we'll show you why words are the base of interaction design and how to know the context of the copy.

Users might interact with visuals on screen, but words are themselves interactions.



## Why Words Are the Foundation of Interaction Design

As technology advances and new modes of communication become commonplace, on-site and in-app copy may be given less attention than impressive graphics, animations, and touch-screen gestures.



Photo credits: “Content is Like Water”. Wikimedia. Creative Commons 3.0

Not to downplay the new possibilities opened up by technology, but it's important to ensure that the written word doesn't get left behind. Just as a finger swipe can accomplish things that written copy cannot, words, also serve functions that can't be replaced – no matter how far technology advances.

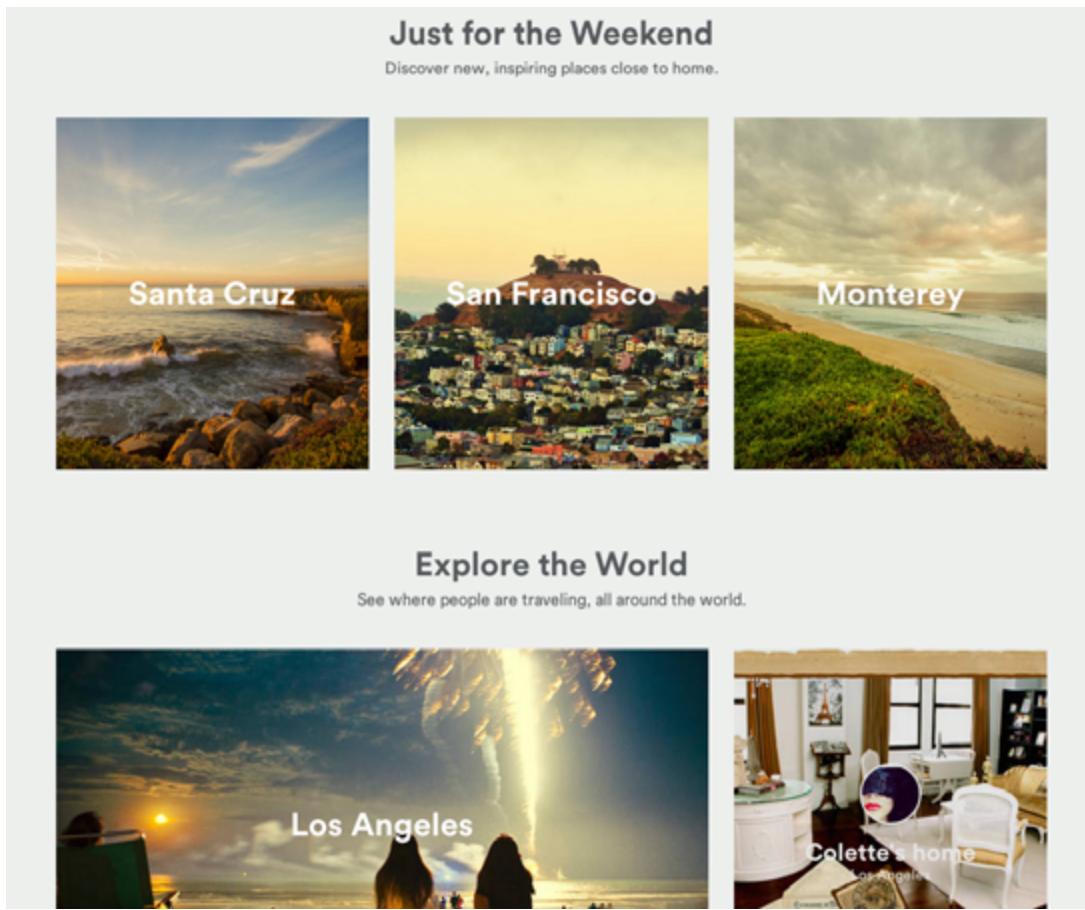
Words complement the other dimensions instead of competing with them. Since they are one of the first meaningful interactions that users seek out on-screen, words help frame our experience with the other elements of interaction design. In her piece *Copy As Interface*, Erika Hall, Co-founder of Mule Design Studio, cites the specific roles writing fulfills in a product's interaction design. Let's examine the 4 main duties of your copy.

## 1. Greeting

More than just a friendly “Hello!” your product’s copy explains what the site is and recommends a good first step, whether suggesting signing up or directing to content that’s likely to hook your user. As we mentioned in the previous chapter, interaction design should be treated as a conversation, so this is your first opportunity at creating a sense of humanity.

Words are a layer of humanity for your interface





Source: [AirBnB](#)

You can see in the above example that **AirBnB** uses copy in a minimalistic yet effective manner. The titles *Just for the Weekend* and *Explore the World* help users visualize the benefits of AirBnB before diving into specific locations. The interaction is subtle, but it frames the experience as one step closer to a dream vacation.

## 2. Navigation

Copy tells users where they are and suggest new or lesser-known options to deepen the user's experience. Any advertiser knows how word choice can make a difference in promotion, and an enticing description can “sell” a specific webpage as well as tell users what content is contained within.

The screenshot shows the Fitbit homepage. At the top, there's a navigation bar with links for 'Products', 'Experiences', 'Fun', 'Help', 'Setup', 'Log in', 'Store' (with a shopping cart icon), and 'Premium Membership'. Below the navigation is a secondary menu with links for 'Mobile App + Dashboard', 'Compatible Apps', 'PurePulse', and 'Why Fitbit'. The main content area features a banner titled 'MEET THE FITBIT FAMILY.' It displays several Fitbit products: a green Fitbit Zip (EVERYDAY FITNESS), a black Fitbit Flex (EVERYDAY FITNESS), two pink Fitbit Flex 2 bands (ACTIVE FITNESS), a purple Fitbit Charge HR (ACTIVE FITNESS), a black Fitbit Surge (PERFORMANCE FITNESS), and a white Fitbit Aria Wi-Fi Smart Scale. Each product has a 'NEW' badge above it. Below the banner, a large headline reads 'There's a Fitbit product for everyone.' followed by a subtext 'SEE OUR FAMILY OF EVERYDAY, ACTIVE AND PERFORMANCE FITNESS PRODUCTS'.

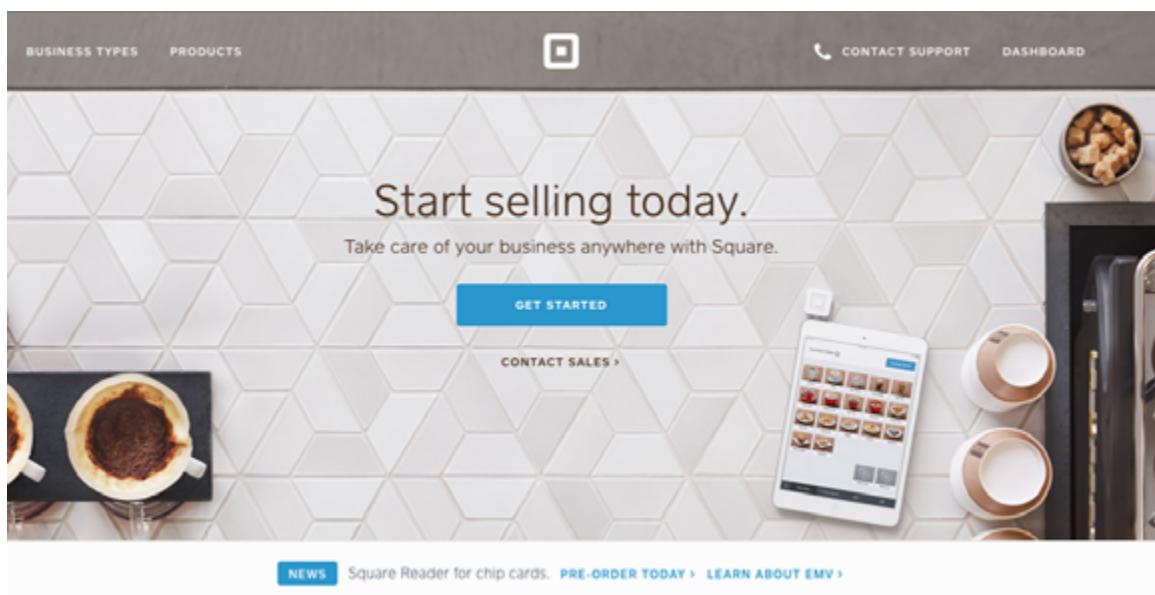
*Source: [Fitbit](#)*

When you look at **FitBit**'s homepage above, you can see the multiple functions of the site copy. First, it serves the immediate purpose of navigation with clear copy on the dropdown menus. Second, it helps explain the different products available (with smartly placed subcopy next to each product). Third, it entices on-the-fence users to dive deeper in the site with a section titled “There’s a Fitbit product for everyone,” which drives users to a page featuring products categorized by level of use.

### 3. Suggesting Actions

Words in menus, on buttons, and within instructions are all necessary to the usability of your product – without them the user would grow frustrated figuring out the mechanisms on their own. Simple writing saves time, and with the right word choice you

can increase the chances of a sign-up, sale, etc. Users are coming to your site to do something to achieve their goals, so create copy that encourages interaction.



Source: [Square](#)

Payment processor **Square**'s homepage is an excellent example of action-oriented copy because it connects the site pages to user motivation without cluttering the interface. As a user, I only need to know that I want to get started; the interface handles the rest by pointing me to the right action. Of course, if I want more control, I can simply scroll down for more options.

#### 4. Providing Service

Along the same lines as the actionable functions, wording also plays a vital role in certain services. In addition to explaining clearly a problem and/or resolution, wording influences the users' mood – which can help take the edge off when things go wrong (whether it's your fault or not).

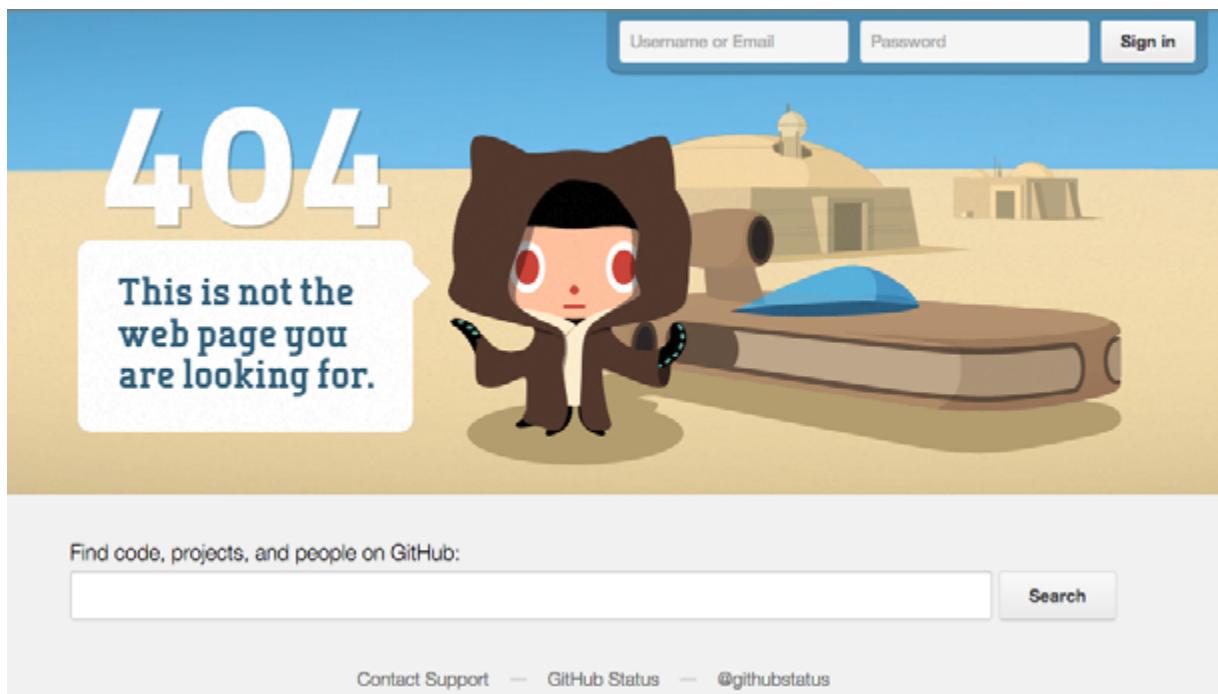


Photo credits: [github.com](https://github.com) via [www.fastcodesign.com](http://www.fastcodesign.com)

**GitHub's** 404 error page is a perfect example of great customer service during a frustrating experience. The copy is funny, syncing with the visuals to distract the user with a *Star Wars* reference. But functionally, the copy at the bottom of the page also tells users how to get back on track. This is most important to call out, because personality will only get you so far until users remember that they still aren't where they need to be.

Just as a color scheme, graphics, or layout will show a product's personality, so too will the style of writing affect the "big picture." For example, a no-nonsense banker may appreciate by-the-book language on a investment website, but the same language wouldn't suit a new social media outlet for younger users. Remember that understanding context is the first step to fulfilling the 4 purposes of interface copy.

## Context Is King

It doesn't matter how funny you think Larry the Cable Guy is, he'd probably bomb with the audience at the Metropolitan Opera House. Copywriting for interfaces is a mostly subjective process, but the context is always fixed. That's why the first step to any writing endeavor is to know both your audience (your target users) and your medium (web page content, sidebar, pop-up, etc.).



*Photo credits: "Audience at Humanities Theatre". Mohammad Jangda. Commons 2.0*

As we recommended in our free ebook *Web UI Design Best Practices*, if you've developed personas, now would be a good time to dig them out. They can help you determine your writing tone just as readily as they help with layout and system choices.

Copywriting for interfaces is a mostly subjective process, but the context is always fixed.



But there's more to it than just knowing whom you're writing for. In a piece on writing for interaction design, Des Traynor, Co-founder of Intercom, presents some helpful questions to ask yourself. Use the below checklist to identify the specific context for the interface copy:

- **Who will read it?** – More than simply knowing who your target users are, you need to know what category they fall into: new users, old users, account-holders, free users, etc. For example, new users require more direct language.
- **When will they read it?** – Does a message appear out-of-the-blue, or as a response to a user action? Will they expect it, or should it grab their attention? These timing details can help smooth over otherwise jarring interactions.
- **What do they need to know?** – Make sure your wording conveys exactly what you want to say, in the best way possible. We'll discuss how to communicate clearly in the following chapter.
- **What's the next step?** – Is the task completed, or are further actions required? Like the Github example earlier, every interaction needs to get the user at least one step closer to achieving their goal.
- **What is the format?** – By format, we mean the medium of the interface (website, app, email, etc). Will you use pop-ups or an

alert on the top of the screen? Each different format has its benefits and shortcomings. For example, a pop-up alert needs to be more concise than a [modal window](#). Pay attention to subtleties since [250ms might make the difference between annoyance and delight](#).

- **What's the best tone?** – A product's tone should be the voice of the brand, so it's a stylistic choice that needs to be taken seriously. A fun tone or a serious tone are not inherently good or bad, but in the wrong environment they can be downright atrocious.

With the “characters” (your users) and the “setting” (user scenarios) in place, you’re able to move forward and create the best “story” possible for your site or app.

## Takeaway

Interaction design succeeds or fails based on how well you can communicate with your user – or more accurately, how well you can design your automated system to communicate with your users. Don't underestimate the power of words in your communication, especially because the “speaker” is using prewritten text.

### *User Experience & Copywriting*

## THE IMPORTANCE OF GREAT COPY

30%

Just by changing the words (...) we saw an increase of paid sign-ups of nearly 30%.

/Jeff Gothelf, *The Secret Weapon of UX: Copywriting*



#### INFORMATION

Great copy is informative. Whether it's a headline, or an error message, it's always right to the point.



#### INTERACTIONS

Great copy encourages people to interact with your product. Professional copy led to **35%** increase in social shares of UXPin.com.



#### EMOTIONS

Great copy not only informs, but also appeals to emotions, creating a unique bond with consumers. Think Mailchimp.



#### PERSUASION

Great copy is persuasive. Magic of words can turn visitors into customers in a blink of an eye.

*Forget Lorem Ipsum - Work on copy while wireframing/prototyping!*

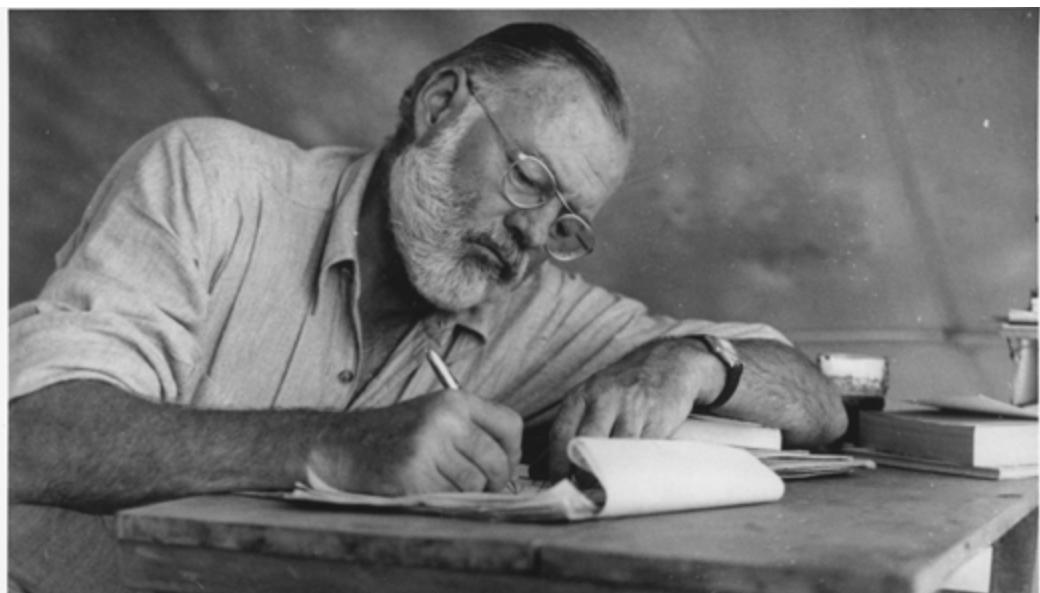
Work with Your Copywriter in UXPin - The UX Design App (<http://uxpin.com>)



# Create Amazing User Conversations with Your Copy

*Using Language to Humanize the Experience*

Shakespeare and Hemingway may have manipulated words in a way that make us reflect on the human condition, but could they increase your conversion rate? The answer may surprise you.



*Photo credits: “Ernest Hemingway Writing at Campsite in Kenya.” Creative Commons*

In this chapter, we’re going to discuss the best practices for writing the user interface design for your product, which covers some methods that work for all interfaces, and some that are unique to digital copy.

## Clarity is Your #1 Priority

Ambiguity is the enemy of good design. This is especially true for interface copy, because the confusion will only be amplified since words are such a direct interaction.

In this section we'll provide essential tips for saying what you mean, based on those originally listed by John Zeratsky, design partner at Google Ventures, [in his post on interface copywriting](#).

We have found 4 in particular to be most applicable to interaction design, so let's take a deeper look:

### 1. Be Specific

State precisely what you mean, with little room for vagueness. A lot of this simply goes back to choosing the right words. For example, the *Save* function is not the same as *Submit*. Similarly, a *Filter* function is sometimes misrepresented as a *Search*.



Photo credits: [zenefits.com](#)

In the above example from **Zenefits**, you can see how the benefits button is labelled *Manage*, while the personal and financial

information are labelled View & Edit. It's a very subtle difference, but it makes sense based on the required user effort. The Manage button is more accurate because the menu provides actions like adding dependents, changing plans, and printing confidential information. Meanwhile, the personal and financial menus are just simple data input.

Interface copy matters. ‘Save’ does not equal ‘Submit’. ‘Filter’ does not equal ‘Search’.



Another tip for specificity is proper titling. Let's say your product creates an activity stream of the companies you follow. While this may be self-explanatory to you, to a new user it may be confusing or even negligible. A specific title, something as simple as “Company Updates,” could save the user from confusion.

In the case of multipage wizards – a series of pages where users enter information on each page, as in an account sign-up – being specific can help set you apart. While most products label next step buttons as *Next* or *Continue*, explaining exactly the next step can create a more helpful interaction. This can be done with smaller sized copy, i.e., “[Save & continue] *Next, we'll ask for payment info.*”

## 2. Avoid buzzwords

An easy mistake in interaction design is using the same language with your users as you do around the office. Unless you're design-

ing for other designers and developers, your jargon will either fly over your users' heads, or slow them down as they struggle to comprehend. While we use *UX*, *IxD*, and *UI* frequently in our ebooks, the average person probably won't have a clue what we're talking about.



*Photo credits: “Bullshit.” Wikimedia. Creative Commons*

As discussed in [\*The Guide to Usability Testing\*](#), you should always test for a clear understanding of terminology. You can set your demographics and receive test results within an hour with [\*\*User-Testing\*\*](#), or go with a cheaper route like [\*\*Mechanical Turk\*\*](#) (the process for testing interface language is [described here](#)).

### **3. Important Words First**

Important words should appear front and center. For example, in a form field, the label “First name” is far better than “Name

(first).” If you want to draw attention to additional details at the bottom of a page, “Below you’ll find additional details,” is not as effective as “Additional details below.”

## ② Shipping Address

### Shipping Address

The screenshot shows a series of input fields for a shipping address. At the top are two side-by-side fields: 'First Name' and 'Last Name'. Below them is a single field for 'Company Name (optional)'. The next row contains two side-by-side fields: 'Area Code' and 'Primary Phone'. Following that is a single field for 'Street Address'. Below that is another single field for 'Apt, Suite, Bldg. (optional)'. At the bottom left is a field for 'ZIP Code', and to its right is a larger text input field with the placeholder 'Enter ZIP for City and State'. Below these fields are two buttons: 'United States' on the left and a checkbox labeled 'This is a business address' with a help icon on the right.

First Name	Last Name
Company Name (optional)	
Area Code	Primary Phone
Street Address	
Apt, Suite, Bldg. (optional)	
ZIP Code	Enter ZIP for City and State
United States	<input type="checkbox"/> This is a business address

Source: [Apple Store](#)

The **Apple Store** demonstrates good word placement by using inline form validation (a pattern described in [Web UI Patterns 2014](#)). Because the description sits in the form fields, you don’t need to clutter the interface with descriptions of each entry. The descriptions also disappear as the fields are completed, creating cleaner interactions as the user progresses.

## 4. Omit Needless Words

The eternal advice of William Strunk, Jr. in the timeless *Elements of Style*, omitting needless words is fundamental to all writing. It holds extra weight with digital design given the size, character, and attention span limitations. You can't ignore this advice, considering that a study on 205,873 web pages shows it only takes users about **10-20 seconds to decide if a site is worthwhile**.



*Photo credits: “Elevator pitch.” Ron Mader. Creative Commons*

As a general rule of thumb, try to say everything in as few words as possible (while still retaining the meaning). For example, *Click to Continue* can be simply *Continue*, and *All changes have been saved* can be shortened to *Changes saved*.

## Don't Force Personality

Cheeky and aggressively personable wording may have been an effective strategy years ago, when a casual tone stood out against other products using corporate-speak. But these days, most products use a casual tone, so this strategy isn't as unique as it once was.



*Photo credits: "Our fair share of hipsters." Christopher Michel. Creative Commons 2.0*

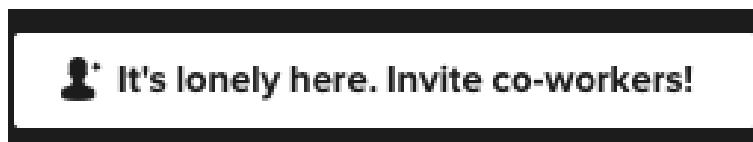
Don't get us wrong – we're not saying your product should be stripped of a distinct personality. Just don't force it. Far too often, brands prioritize being clever or standing out over clearly stating their meaning. When personality gets in the way of clarity, it's time to cut it out. As Randy Hunt, Creative Director at **Etsy**, advises, the

When designing for interactions, don't let personality dilute clarity.



cleverness of first impressions doesn't survive the first few minutes – but the frustration of obscurity certainly will.

Headlines and buttons make up the backbone of your product, so don't risk weakening them with wording that can be misinterpreted. Clarity is prioritized over personality for key interactions, so *Save* and *Continue* will work better than a *Awesome, let's go!* If you're intent on flexing your creative muscles, save it for the subheadings and supporting text.



Source: [UXPin](#)

In our button above [inviting others to collaborate](#), we balanced personality with functionality by still explicitly describing the action. It's a subtle touch, since the action would be muddled if the second sentence was something like "Start the fun with a coworker!"

As you can see in [this article](#), the Everyday photo app strikes a similar balance with its onboarding message, turning an otherwise annoying reminder into a delightful interaction that has probably cracked a few smiles. Again, the key here is that the user action remains crystal clear.

Your design's personality will come out one way or another, regardless of your word choice. Besides, a company personality is not something you want to force or consciously build – it should appear organically and truthfully. People are more attuned to being manipulated than you might think, and friendly words won't necessarily make you friendlier.

To learn more about how to infuse your design with the right amount of personality, read this excellent [A List Apart](#) piece by Mailchimp UX Director Aarron Walter. Then, take a look at some excellent examples of [emotional design](#).

## Emotional Connections Over Length

What does a legendary Renaissance-era battle have to do with a modern-day coffee company? Read the [Our Story](#) section of the **Blue Bottle Coffee** website and you'll see.

As [John Zeratsky first mentioned](#), Blue Bottle's page on their company is perfect example of how readability trumps length. A common misconception about copywriting is that shorter is always better – but don't confuse the art of omitting needless words with omitting as much as you can.



In the late 1600s, the Turkish army swept across much of Eastern and Central Europe, arriving at Vienna in 1683. Besieged and desperate, the Viennese needed an emissary who could pass through Turkish lines to get a message to the nearby Polish troops. Franz George Kolschitsky, who spoke Turkish and Arabic, took on the assignment disguised in a Turkish uniform. After many perilous close calls, Kolschitsky completed his valiant deed, returning to give the Viennese the news of the Poles' imminent rescue of their city. On September 13, the Turks were repelled from Vienna, leaving everything they brought: camels, tents, honey, and strange bags of beans, which were thought to be camel feed. Kolschitsky, having lived in the Arab world for several years, knew these were bags of coffee. Using the money bestowed on him by the mayor of Vienna for his heroic deed, Kolschitsky bought the Turks' coffee, opened Central Europe's first coffee house (The Blue Bottle), and brought coffee to a grateful Vienna.

*Source: [Blue Bottle Coffee – Our Story](#)*

Most companies would shy away from such a roundabout company description. But if you scroll down the page, this story serves a smarter purpose. It describes how the founder was inspired to produce fresh, no-BS, responsibly-sourced coffee, separating the brand from other “hundred flavors and one” coffee shops.

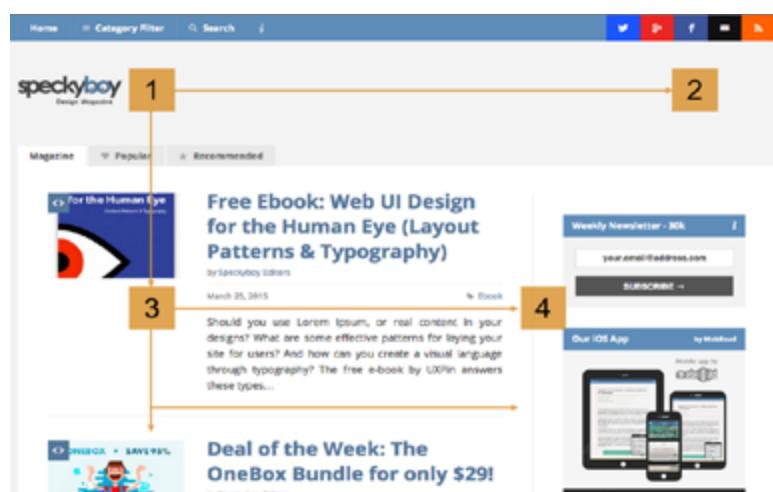
Longer content is fine, as long as it is highly engaging and serves a purpose. In this case, the copy creates an interaction that leads to deeper trust and credibility, which is one of the pillars of **infusing your personality in design**.

## Take Advantage of Human Reading Patterns

You also need to know how to lay out the content so that it's readable. Longform content has mostly received a bad rap because of the way it's been presented, without hierarchy or structure. That's why you layout and typography matter.

### 1. Layout

As superficial as it sounds, sometimes how it looks is just as important as what is said.



*Photo credit: Speckyboy.com*

In our free ebook *Web UI Design Best Practices*, we discuss the different trends in how users' eyes commonly scan a page, including the **F-Pattern** and the **Z-Pattern**. The significance of these patterns is that, by predicting where your users' eyes go, you know where to place the most important content.

While it might sound superficial, how your interface looks is just as important as what you say.



tweet this

In terms of interaction design, designing according to reading patterns improves the familiarity of your interface (which, as we described previously, improves [learnability](#)). We can also examine the importance of scanning patterns by looking at how the [FDA redesigned their nutrition labels](#).



*Photo credits: “FDA Nutrition Facts Label 2014” Wikimedia. Creative Commons 3.0*

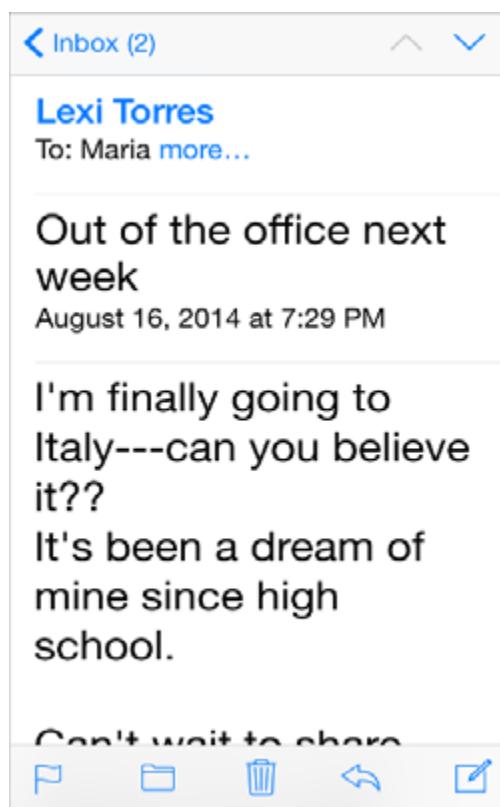
Let's look at this from interaction design's [goal-oriented framework](#).

Reading nutrition labels helps achieve the goal of staying healthy. The excessive white space in the old version created lag time when reading. As you can see from the above example, the new, condensed version is more streamlined, allowing the reader to process the information quicker and more effectively. This interaction is now simplified, reducing the obstacles between the user and their goal.

The other improvement to the nutrition label, the varying text sizes, also demonstrates the power of font size in prioritizing important information.

## 2. Typography

If your typography is lacking, your user may be distracted from the content, or unable to read it at all. Conversely, a well-planned typography can complement your content and direct your user's eyes where you'd like. The [iOS Human Interface Guidelines](#) lists some helpful typography tips applicable to any design.



Source: [iOS Human Interface Guidelines](#)

- **Text must always be legible** – As it says in the guidebook, “If users can’t read the words in your app, it doesn’t matter how beautiful the typography is.”

- **Prioritize content by text size** – To draw your reader's eye to more important text, make it bigger. Notice how, in the example below, the parts of the email that concern the user (title, body) are large, while the optional details (date & time, recipient) are small. The email sender is also in blue, helping to differentiate important information.

Test custom fonts at all sizes – If you're using a custom font, be careful. You'll want to test it at different sizes to make sure it's legible at each.

For a more detailed examination of typography, see our [Web UI Design Best Practices](#), which discusses the strategies and best practices for typography.

Readability is king. If users can't read the words, it doesn't matter how beautiful your typography looks.



[tweet this](#)

## Remember the Importance of Microcopy

It's not just the main content that matters – the secondary copy (microcopy) can't be neglected either. As a testament to its value, Jared M. Spool, Founder of User Interface Engineering, tells the story of how a microcopy adjustment [increased profits for an ecommerce site by \\$300 million a year](#).

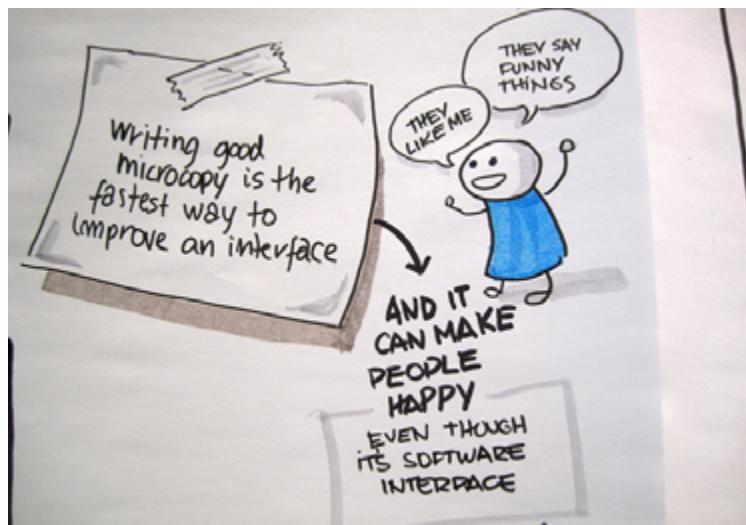
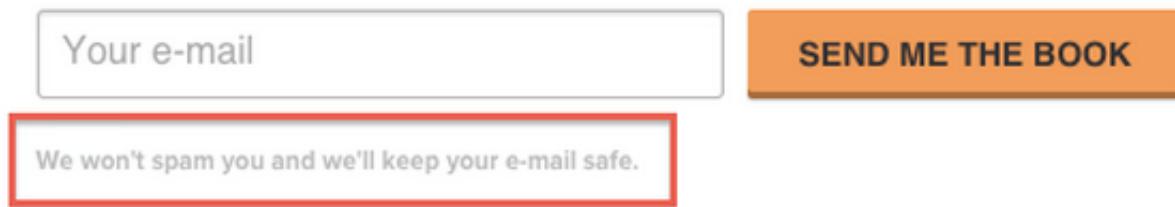


Photo credits: "[Writing good microcopy](#)". visualpun.ch. Creative Commons 2.0

In a nutshell, the addition of a well-placed, well-worded, and brief explanation patched a problem on the checkout page. The page had been designed in a way that confused a lot of users, and so they replaced a button and added a simple piece of microcopy: *"You do not need to create an account to make purchases on our site. Simply click Continue to proceed to checkout. To make your future purchases even faster, you can create an account during checkout."*

The result? A 45% increase in purchases, raking in \$300 million new profits at the end of the year.

Despite its small-sounding name, microcopy can wield an enormous influence on the way people interact with your site or app. The skill of microcopy lies in knowing what to say and where to say it. Usability tests can help you pinpoint where some explanatory text or instructions are needed – as was the case for Spool’s example – but you don’t need a \$300 million mistake in order to use microcopy to your advantage.



Source: [UXPin](#)

The benefits of microcopy typically fall under the categories of giving instructions or alleviating your users’ fears and concerns (which improves their interactions for key steps like registration, signing up, etc.). Before you start deconstructing your entire design to solve a specific problem, try adding or changing a few key words to see if that helps.

If you’d like to learn more about microcopy, learn the [5 ways to avoid bad microcopy](#).

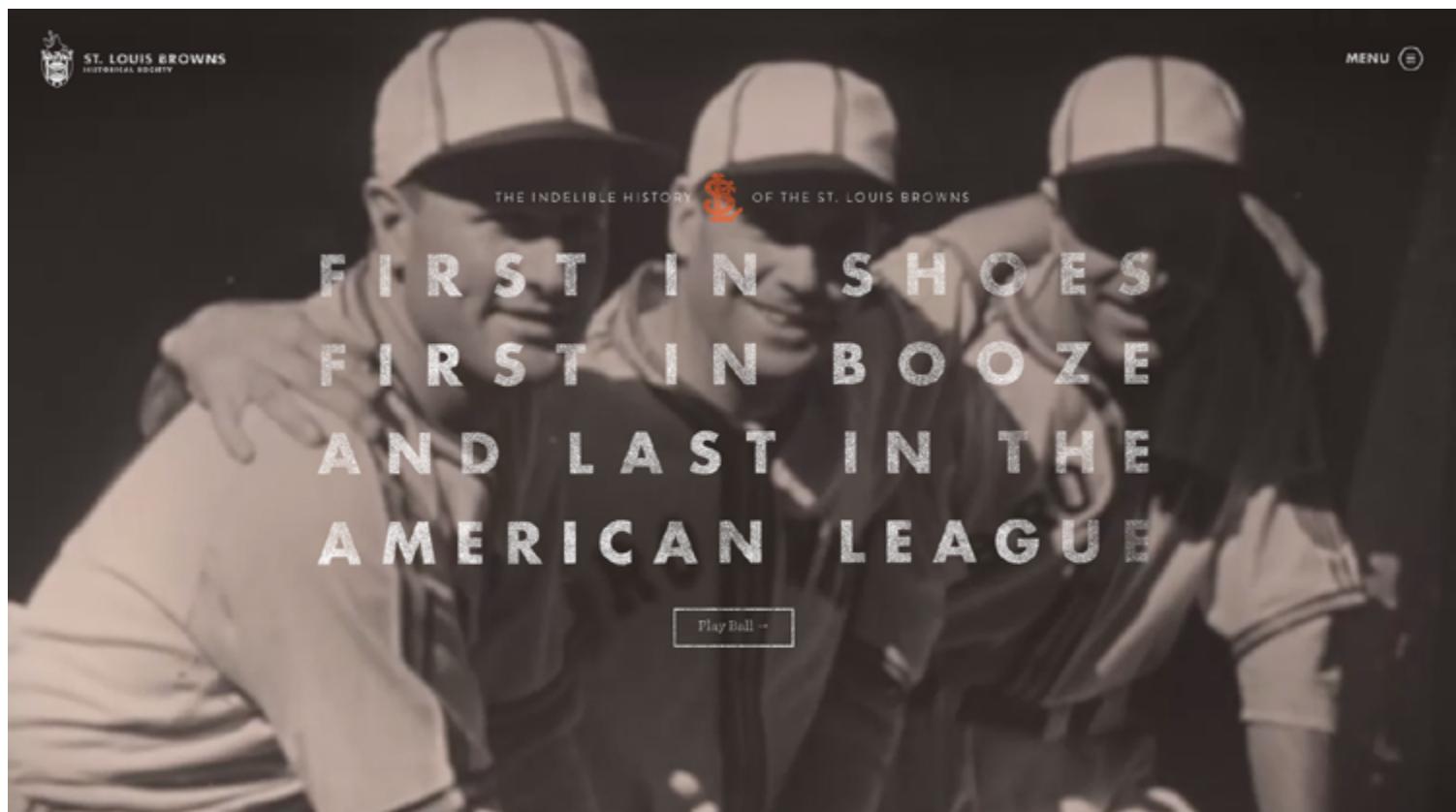
## Takeaway

There's an inner Shakespeare and Hemingway inside all of us, so it's time to get to work. All you need to do is follow the guidelines we've listed above and focus on what you want to communicate. Speak like a person who must help the user accomplish a goal, and optimize the content for readability. We'll close our chapter on words fittingly, with the words of a poet: as George Herbert once said, "Good words are worth much, and cost little."

# Visual Direction in Interaction Design

*How Appearance Affects Interaction*

We don't want to undercut the significance of words, but we don't want to downplay visuals, either. Both are equally important elements of interaction design. Words are interactions, but the visuals (like icons, menus, graphics, etc.) are what users actually interact *with*.



*Photo credits: [thestlbrowns.com](http://thestlbrowns.com) via [awwwards.com](http://awwwards.com)*

While some usability experts might cite **Craigslist** or even **Amazon** as examples of ugly but usable (and popular) sites, there's no doubt that aesthetics serve a function. Emotion is key to the user experience: websites with nice visuals relax users and improve credibility and usability. Considering the short attention span of most users, perception is oftentimes reality: if the visuals are terrible, users won't bother diving deeper into your interaction design.

Words are interactions, but the visuals are what users actually interact with.



We'll examine the importance of vision as it relates to interactions and how to ensure clear orientation, navigation, and consistency.

## Respect the Dominance of Vision

Let's start with a demonstration. Take a look at the word below:

**YELLOW**

Clearly, we all know which color the word "yellow" represents. But when most people read the above, they likely comprehend only red. The look of the typeface supersedes the actual meaning of word.

As humans, vision is our dominant sense. While other animals rely more on hearing and smell, we are sight-driven creatures. As David McCandless, Data Journalist and Infographic Expert, [explains in a compelling TED Talk](#), we use all of our senses, but most of our

brainpower goes into sight – though we may be hardly aware of it. Using the graphic below, he describes it with a computer analogy:

*“Your sense of sight is the fastest. It has the same bandwidth as a computer network. Then you have touch, which is about the speed of a USB key. And then you have hearing and smell, which has the throughput of a hard disk. And then you have poor old taste, which is like barely the throughput of a pocket calculator. And that little square in the corner, a naught .7 percent, that’s the amount we’re actually aware of. So a lot of your vision – the bulk of it is visual, and it’s pouring in – it’s unconscious.”*



Source: [Photo credits: “Human “I” in Closeup”. Nithi Anand.Creative Commons 2.0](#)

But what does that mean for you with regards to interaction design? It means that every visual decision you make for your product will have an enormous impact on the interaction, even if only subconscious.

Stephen P. Anderson, Product Design Consultant, points out that visuals will affect more than the experience, they'll also **affect the user's behavior**. This means that a good visual design can improve sales, increase signups and conversions, and encourage certain user behaviors. Take a look at the two checkout forms below:

This screenshot shows a complex and cluttered checkout form. It includes sections for Shipping Information, Email Notification, Billing Information, and Payment Method. The form is filled with numerous input fields, dropdown menus, and small explanatory text. A specific field for the card ID number is highlighted with a green oval, drawing attention to it.

*Checkout Form A (Photo credits: LA Police Gear)*

This screenshot shows a clean and organized checkout form from REVOLVE. It features a header with a phone number, live chat, and secure shopping icons. Below is a navigation bar with tabs for Delivery Options, Payment Options, and Review & Confirm. The main area is divided into two columns: Shipping Address and Order Summary. The Shipping Address section contains fields for Country, Name, Address, City, State, Zip code, and Telephone. The Order Summary section displays a product image, details (Polo Galler Bench, S-Size, Green, Size M, Quantity 1, \$89.00), estimated shipping (\$89.00 FREE), and estimated total (\$89.00). At the bottom are links for Required Fields, Create an Account, and Sign Up for REVOLVE's Weekly Newsletter, along with a Save and Continue button.

*Checkout Form B (Photo credits: revolveclothing.com)*

Keeping in mind that one of the goals of interaction design is to make the user think as little as possible, which would you guess is more conducive to a sale? Which is more visually pleasing?

The top sample seems to repulse users with its claustrophobic spacing and overload of text, while the bottom sample is clear, sleek, and feels manageable thanks to its 3-step process (even though the user will more-or-less enter the same data). Because interaction design is all about creating things that people actually want to use, attractive things are more desirable and therefore work better.



*Photo credits: [oldtownspiceshop.com](http://oldtownspiceshop.com) via [awwwards.com](http://awwwards.com)*

But more than just inviting interaction, smart aesthetic design also provides an extra layer of understanding. If you look at the **Old Town Spice Shop** example below, you can see how the cabinet layout of the site immediately suggests the company's purpose and spice products. While you can debate whether users would see the cabinet first or the words like "Spices" and "Extracts" first, there's no doubt that the two work in harmony.

Every visual decision will affect the interaction, even if subconsciously.



## Provide Clear Visual Orientation & Navigation

Users browsing the web are not unlike nomads. People have a general sense of where they want to go, but still need some direction and cues. The way they do it is by creating mental maps, and since we just established that humans are visual creatures, we're going to need a few visual markers to find our way.

In a way, your navigation needs to act like a GPS. Users need to know their current location, what routes are possible, and what the next steps should be.

Breadcrumbs are the most explicit way of satisfying all three requirements. A common UI pattern like its shown from [Newegg](#) below, this treatment leaves a clear visual trail for users to track their visit.

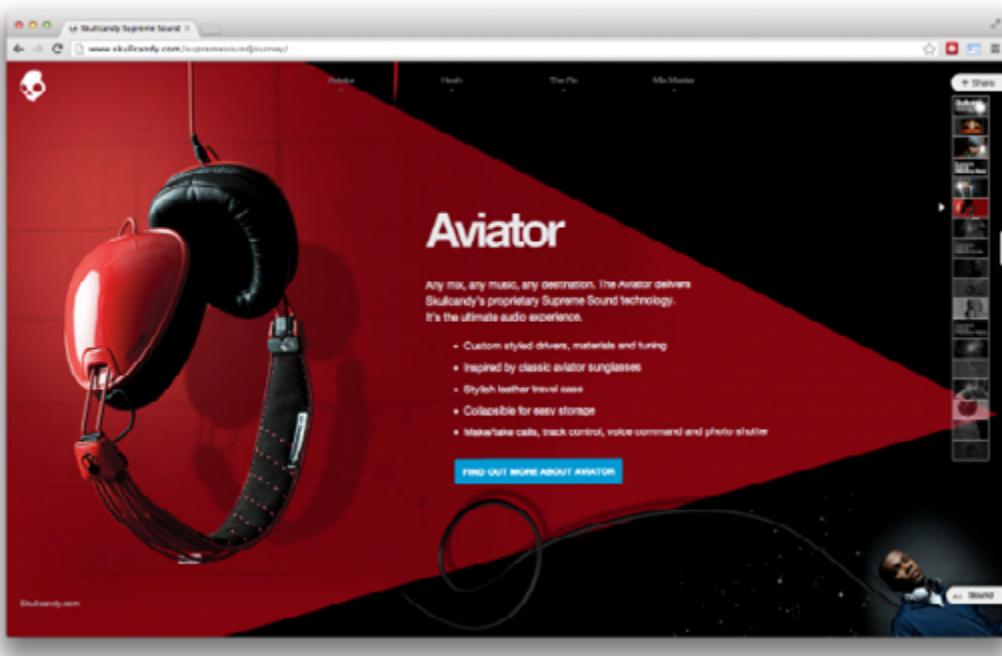


*Photo credits: [newegg.com](#)*

But breadcrumbs must be treated as a backup option for users, because they're not a visually intuitive method of clicking between pages. They're mostly used in sites with complex hierarchies, such as e-commerce sites, and aren't required for simpler sites. When in doubt, refer back to your site map and see if adding breadcrumbs would improve usability or just add clutter.

Signifying words, breadcrumbs, links – in addition to menus, search fields, and clickable icons – are all sight-based tools in your design toolbox that help you create a sense of orientation and navigation. When it comes to the primary navigation, you need to make a strong visual impression.

As you can see **below**, [Skullcandy's Supreme Sound](#) site is a great example of a visual-based navigation system. Not only does it have a simple and understandable vertical menu on the right side of the screen, but the icons themselves are enticing pictures. The vertical menu highlights in red the current location (providing orientation), while the horizontal menu includes dropdowns for further exploration (providing navigation). If I'm interacting with the content, the blue calls-to-action also provide unmissable next steps (thanks to their standout color).



*Photo credit: [skullcandy.com](#) via [freshconsulting.com](#)*

As you can see above, orientation and navigation are not mutually exclusive. Better orientation is usually linked to better navigation.

If you'd like to learn more about navigation best practices, check out our free ebook [Web UI Design Best Practices](#), and this [5-part series](#) on simplifying navigation for interaction design.

## Ensure Visual Consistency

Consistency is important in all aspects of interaction design, not just visuals. However, *inconsistencies* in visuals are glaring (just check out the [The World's Worst Website Ever](#) to get a vision of design hell).



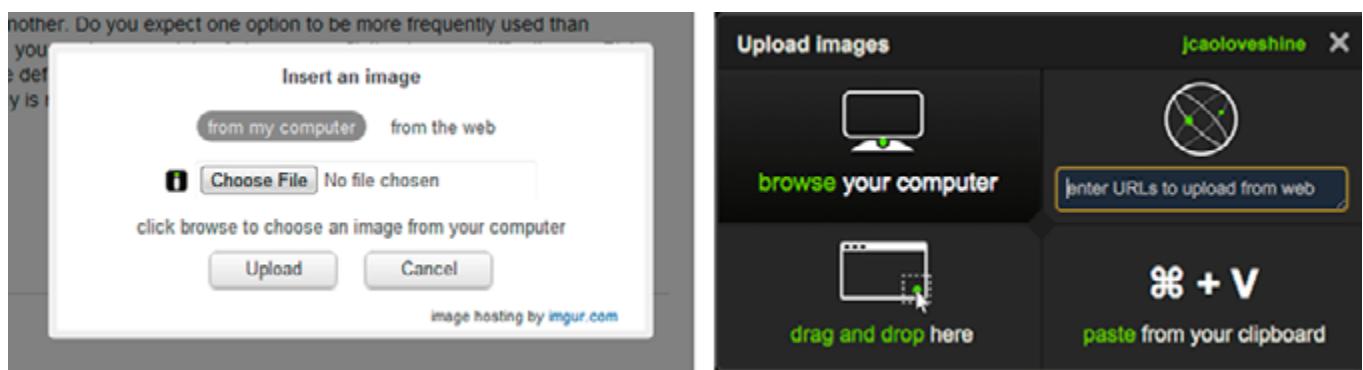
*Photo credit: “Wallpaper 001- Paint Whirlpool”. Patrick Hoesly. Creative Commons 2.0.*

Consistency creates a sense of logic in how your site is designed and arranged, which creates a more gratifying experience (and we all know happy users are returning users). People prefer consistency because, as we mentioned before, it improves predictability (which increases learnability). And when your interface is easier to learn,

it's also more usable. People also don't like unpleasant surprises, as the [Principle of Least Astonishment](#) states:

*"When two elements of an interface conflict or are ambiguous, the behavior should be that which will least surprise the human user."*

The trouble with inconsistency is that it increases the "cognitive load." As Kathryn Whitenton, UX Specialist at the Nielson Norman Group, [explains in a blog post on the topic](#), cognitive load is how much the users have to think when using a product. Every inconsistency forces the user to stop and process what the difference means, why it's different, and how it affects their behavior. Therefore, the less inconsistencies, the smoother the interactions, and the better the experience.



*Photo credits: [stackoverflow.com](#) / [imgur.com](#)*

As you can see in the above left example of **StackOverflow**, consistency applies to visuals and copy. The icon says *Choose File*, yet the copy says "click browse." On the other hand, **Imgur** demonstrates *consistency* by highlighting action words like *browse*, *paste*, and *drag and drop* in green.

Radio buttons in one section of an interface that allow for a single selection shouldn't allow multiple selections in other sections. This also extends to copy as well, since if you call it "Save" in one section, you shouldn't call it "Store" in another. And as designer [Timothy Smith suggests](#), if a picture opens up as a lightbox, it shouldn't open as a new tab elsewhere. Base your interface decisions on the desired user behaviors.

Consistent design is more predictable.

Predictable designs are easier to learn, which improves usability.



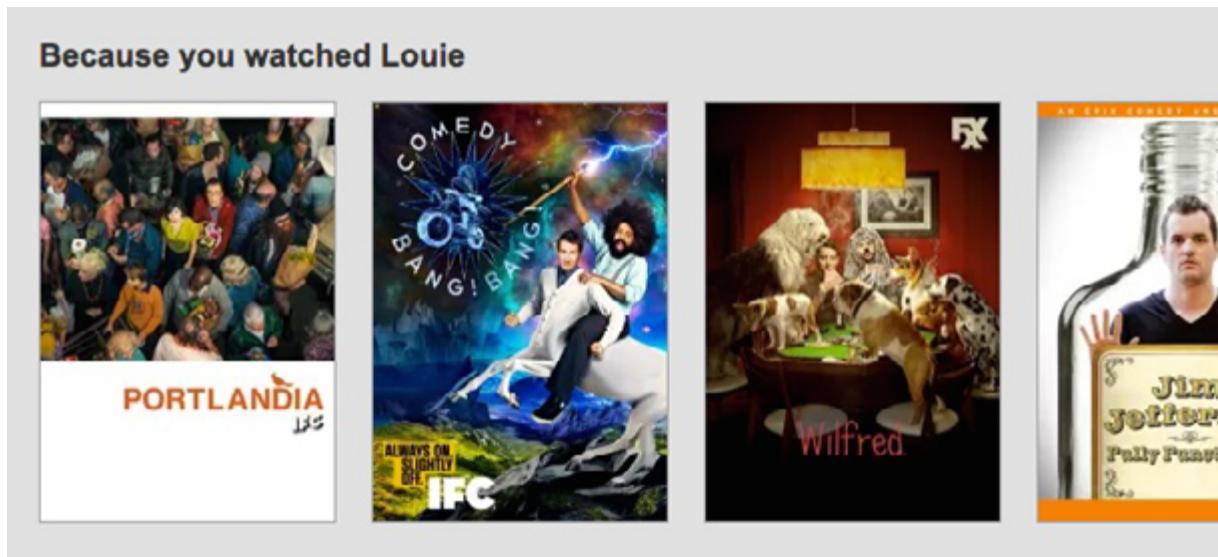
tweet this

Because inconsistencies are such a consistent problem, the two best strategies to combat them are following UI design patterns and using a style guide.

## 1. Use UI Design Patterns as a Baseline

Think of UI patterns as design best practices that are specific to use cases. Since users are already familiar with design patterns, their use reduces the learning curve for your interface. Common UI patterns include carousels, related links, slideshows... the list goes on (as you can see by [this site](#) dedicated to cataloging them).

For instance, **Netflix** employs a "Related Content" UI pattern to help users find other movies or shows they might like. Because the content is intelligently generated, the interaction with the user feels more like a person suggesting something helpful. This isn't a groundbreaking design, but it is a quick and effective solution that makes your interface feel alive.



Source: [Netflix](#)

Of course, UI patterns aren't just plug-and-play templates, so you should still customize them based on the look and feel of your site.

To find the right patterns for your product, check out any number of pattern libraries, where you can browse patterns by their category, like "navigation" or "input." This year, we have released 2 separate catalogues of UI patterns (along with analysis of use cases as demonstrated by Fortune 500 companies): [Web UI Design Patterns 2014](#) and [Mobile UI Design Patterns 2014](#).

## 2. Create Quick Style Guides

While UI patterns help improve familiarity, style guides ensure site-wide consistency. Style guides are manuals that list your product's specific preferences for any area that could be hard to remember – things like the size and font for all site content, color gradients for secondary versus primary navigation, the behavior of buttons upon clicking, etc.

### Action links

Add action links to the top left of a photo box.

```
.photo-box_actions .photo-box_action-link
```



Minor actions should appear on the right.

```
.photo-box_actions--right
```



Source: [Yelp Style Guide](#)

At [UXPin](#), we create our style guides as we update our site. This helps eliminate extra work down the line because we can just add new screenshots with technical details to our internal company wiki. As we described in [The Guide to Mockups](#), this “chop and paste” method works perfectly for lean style guides that can be shared with the whole company.

We discuss style guides at length in our [Web UI Design Best Practices](#), including how to make one, and what they include.

For more examples of style guides, check out these great resources:

- [Starbucks](#)
- [MailChimp](#)
- [Yelp](#)
- [BBC Gel](#)

To learn more about consistency in interaction design, check out this overview of [creating consistency in all areas of UX](#) and this explanation of [system, platform, and real-world consistency](#).

## Takeaway

When people are online, they say they're "looking" at a website, not "interacting" with one, even though the latter is more accurate. We rely heavily on sight, and visuals guide us in the creation of our opinions, our solutions to problems, and what we believe is our best course of action. Because interaction design is so closely linked to the user experience, using visuals to create the best UX will indirectly but assuredly lead to better interactions.

# Affordances: The Interaction Designer's Secret Weapon

*Different Types of Signifiers and How to Use Them*

Let's get philosophical for a second. Pretend you've never seen a hammer before, but now there's one in front of you. You see a hard metal part, with weird shapes, spikes, and knobs. Then you see a long wooden part, smooth, and a little bigger than the size of your hand. Which part would you grab when you pick it up? And what is a hammer for, anyways?



*Photo credits: "hammer". tony. Creative Commons*

The hammer applies force to objects, but you only know that because of its signifiers. The hammer's handle tells you that you can

grab it. Its size, shape, and look are all subtle cues to its use, and even if you don't know what a hammer is for, you can at least guess how to pick one up.

While affordances might not be a top priority for tool-makers, for interaction designers they are absolutely essential – otherwise users wouldn't know what they can and cannot interact with. In this chapter, we'll first discuss the connection between affordances, perceived affordances, and signifiers. Then, we'll dissect the types of signifiers, and explain how to use each type to make sure perception matches reality.

Use affordances wisely to ensure perception matches reality.

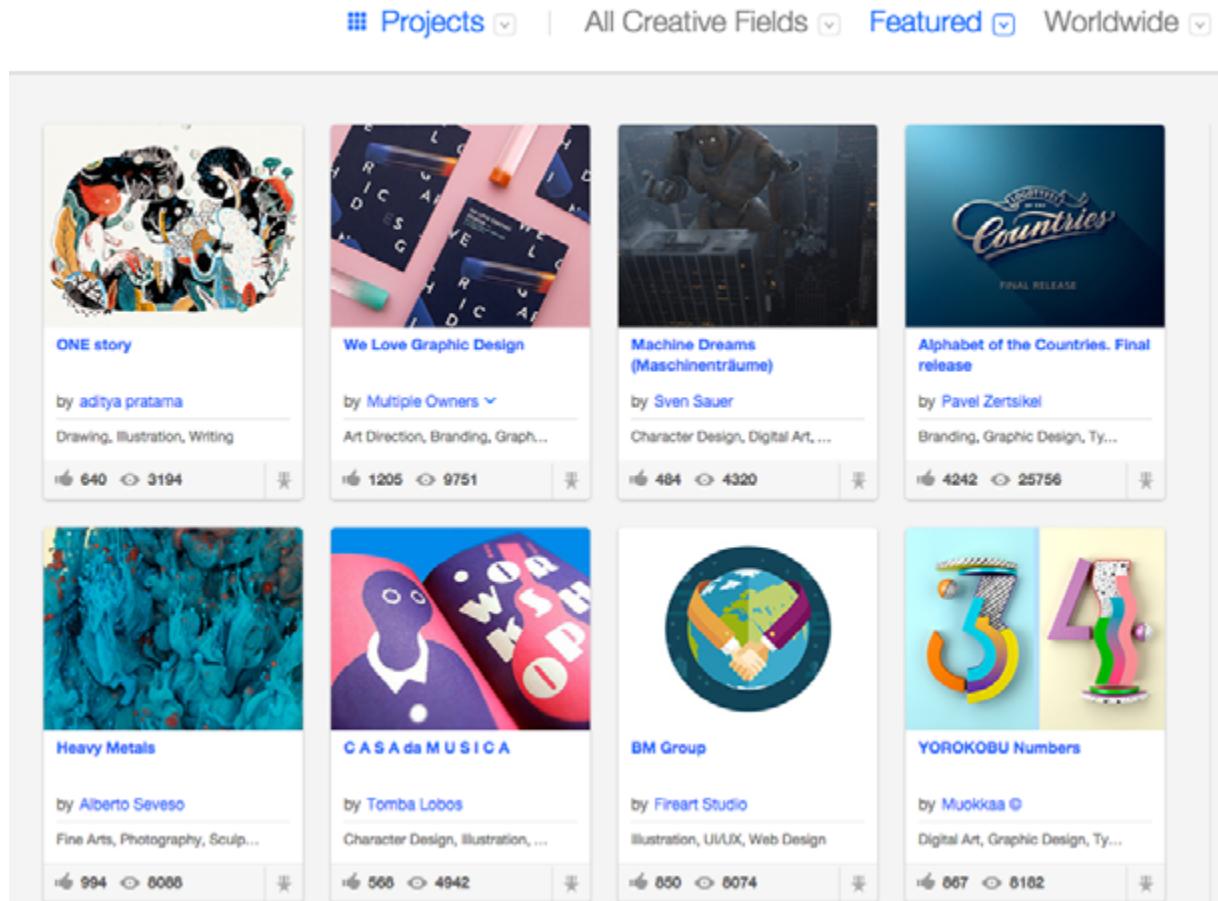


## Let Form Suggest Function: Affordances vs. Signifiers

Affordances are what a product can do. For instance, a website affords navigation. But how does the user know that function is possible? A **perceived affordance** is therefore how the user thinks the navigation might work, which of course must match the actual affordance.

The beauty of signifiers is that, when they're used properly, the product feels intuitive and familiar, as if the user already knows what the feature is for. As Andrew Maier, Co-founder of UX Booth, **points out**, the effectiveness of perceived affordances depends upon

*signifiers.* A signifier can be anything that suggests meaning, whether a word, a shape, a color, or a movement.



*Photo credits: [behance.net](#)*

Let's look at an example from **Behance**. Their use of the infinite scroll UI pattern (as described in *Web UI Patterns 2014*) is one way to afford navigation. As you scroll downwards, a **loading circle** appears before more content loads, signifying that the content stream is dynamic. Without the signifier, you might be disoriented as to why a bunch of new content appeared (when it seemed as though the page was finished). In this case, the subtle touch of a signifier provides a split-second interaction that results in an immediate understanding of the affordance.

If we look at the above screenshot from a higher level, you can also see other signifiers: the thumbs-up icon signals that liking content is possible, the arrow icon in the navigation signifies a dropdown, etc. None of these affect the functionality, but simply suggest that these interactions are possible.

Signifiers come in different types, each serving different purposes, and we can organize them best into four groups, based on Natasha Postolovski's [excellent article](#) on the topic:

- **Explicit Signifiers** – Obvious signifiers, such as words or appearances.
- **Pattern Signifiers** – Trends and customs that have been popularized to the point of common understanding. See [Web UI Patterns 2014](#) for visual case studies.
- **Hidden Signifiers** – Signifiers that do not become apparent unless certain conditions are met.
- **Metaphorical Signifiers** – Using a metaphor to signify its meaning, for example, an envelope icon representing email.

Knowing when and how to use these types will provide a layered feel to your interaction design, so let's go into detail for each.

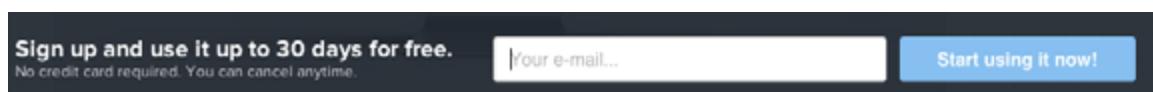
## Explicit Signifiers

The most obvious of the types, explicit signifiers include language or appearance to show function. Something as blatant as text reading “Click Here” would certainly belong in this category.

At times a bit on-the-nose (“Write your comments here...”), explicit signifiers should only be used when necessary. Imagine how wordy (and annoying) your page would be if every link read “Click Here.”

In brief, only use explicit signifiers when subtler options aren’t as effective.

In the below example from our own [UXPin](#) website, the call-to-action is an explicit signifier. We decided on the text “Start using it now!” because there just wasn’t a simpler way of conveying that information. An icon representing that message would be too obscure, and it’s not exactly a “Log In” because that implies you need to create an account beforehand. Since providing your email directs you immediately into the app, it was best to keep the language explicitly clear.



Source: [UXPin](#)

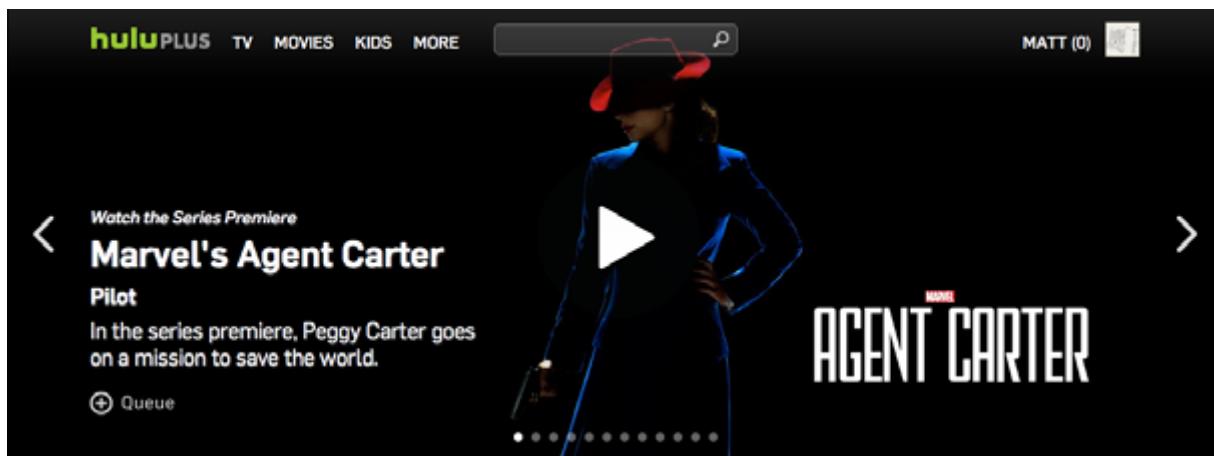
## Pattern Signifiers

No one really knows why clicking on a site's logo takes you back to the homepage, but most of us know that it will. This is so common on most sites that it's become an established trend, or pattern. Below we've listed some common patterns, most or all of which you'll recognize:

- Blue text representing links
- Logos representing the homepage
- Asterisks representing mandatory form fields
- Cards representing clickable teasers
- Hamburger menu representing navigation

**Hulu** makes excellent use of pattern signifiers on their homepage. In the picture below, you'll notice the clickable logo for the homepage, the top navigation menu, the magnifying glass search field, the account manager in upper-right, the standard video play button, and the image carousel with both arrow controls and dot positioning indicating that the user can cycle content. Since other video sites like **Youtube** and **Netflix** use similar patterns, this tactic increases familiarity (and therefore learnability) for the user.

Pattern signifiers allow meaningful interactions to happen at the speed of thought (we intuitively know the magnifying glass indicates a search functionality). As such, these should be used whenever possible (especially if you're designing for tech-savvy audiences).



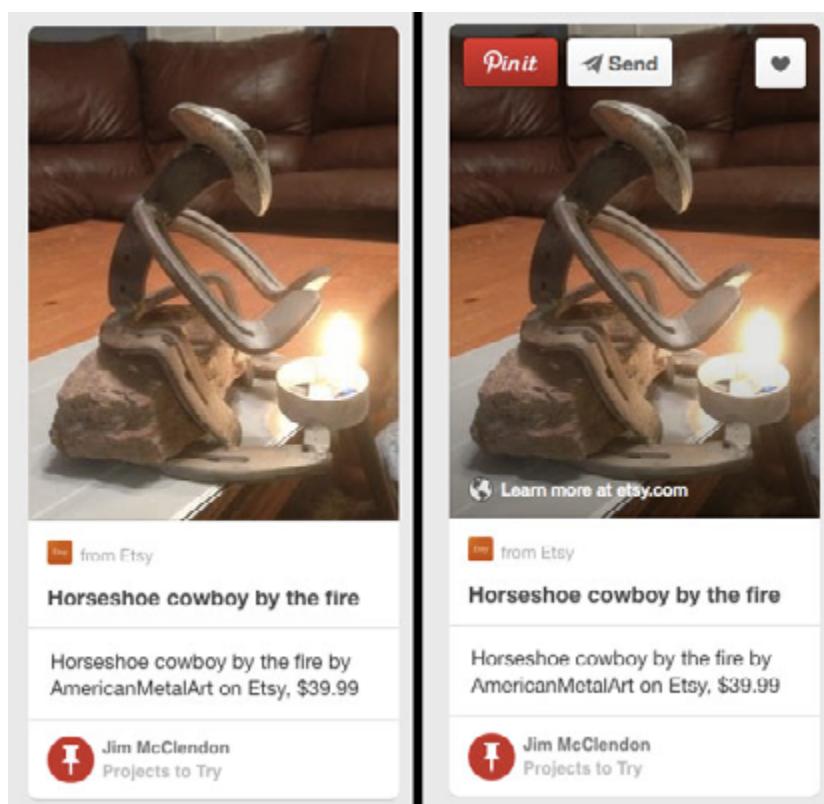
Source: [Hulu](#)

The greatest strength of pattern signifiers, however, is also their weakness. Because its effectiveness depends upon familiarity, you'll want to use these less if you're designing for younger audiences (like children) or less technically adept people (such as the elderly, or those with limited technological access).

For a thorough analysis of 100+ effective patterns, download our free ebooks, [\*Web UI Design Patterns 2014\*](#) and [\*Mobile UI Design Patterns 2014\*](#).

## Hidden Signifiers

Have you ever accidentally moved your cursor over a piece of text and suddenly it changed color, revealing that it was a link? This is an example of hidden signifier, a subtle but useful way to illustrate a feature's function. If you're familiar with *Pinterest*, you'll recognize how the options to *Pin*, *Send*, and *Like* a photo appear only when you hover over them.



Source: *Pinterest*

The appeal of hidden signifiers is that they save space. You give the users the controls they want without sacrificing screen real estate – having your cake and eating it, too. But, hidden signifiers can be risky (you don't want to hide important info), so they should be used carefully.

Hidden signifiers are generally recommended for secondary actions. For example, selecting “Add to Favorites” for an item is an interaction that helps users prioritize content or products, but it isn’t a non-negotiable. Therefore, it’s acceptable to put the “favorite” function as a hidden signifier.

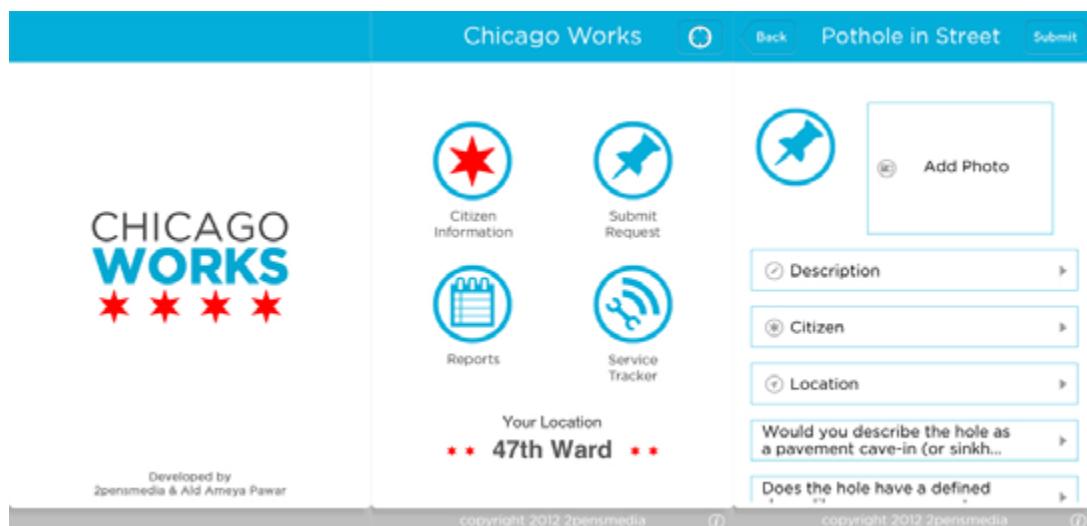
If you’d like to learn more about balancing minimalism with discoverability, check out this [helpful piece](#) by Dan Saffer, Founder of Kicker Studio.

## Metaphorical Signifiers

A simplistic house icon means homepage, an envelope means email, a folder means... a folder. These are all examples of metaphorical signifiers, and rely on a user’s common sense (and familiarity with everyday objects) to draw a connection.

Metaphorical signifiers are closely linked with patterns; because metaphors have been so successful, they have been used repeatedly by hundreds of companies until they became established patterns. That’s why you most often see envelopes representing email instead of, say, the mailbox from the AOL era. But as technology advances, new functions require digital representation, and so metaphorical signifiers still live on the frontier of design.

You'll find most metaphorical signifiers as part of an app or site's navigation (as either icons on the page or menu items). As shown in the below example from the **Chicago Works** app, it's not a bad idea to include some text next to the metaphors when you have only a few items. Combining text with visual cues will help users understand functions even faster.



Source: [Chicago Works App](#)

One of the most important things to remember about metaphorical signifiers is context. A magnifying glass, for example, might indicate a type of search function on a website. However, in an image editor, that same icon might signify zoom in/out. Keep in mind your context when designing, and if you think there might be confusion, there's nothing wrong with communicating more explicitly.

## Takeaway

Speed and ease-of-use are two of the biggest goals in interaction design, and signifiers create both. Knowing how to properly use signifiers is as relevant to a designer as knowing how to use colors is as relevant to a painter; the strengths of the different signifier types are akin the differences in colors, and the skilled designer/painter knows the best time to use each, and when to mix them.

It's a shame that something as useful as understanding affordances can be easily overlooked, but don't make the mistake of ignoring them. Experiment with signifiers until you can confidently apply them; you'll discover they can be one of the most powerful weapons you have in your design arsenal.

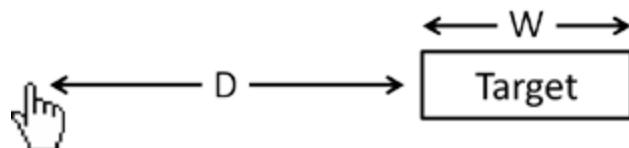
# Size & Distance in Interaction Design

*When To Apply Fitts's Law (and When Not To)*

While he never lived to see the Internet, engineering psychologist Paul Fitts nonetheless had a huge influence on digital design with his 1954 proposal now known as Fitts's Law. We can describe [Fitts's Law](#) as:

*...a model of human movement in HCI and ergonomics which predicts that the time required to rapidly move to a target area is a function of the distance to and the size of the target.*

What this means in layman's term's is that the larger and closer a target, the faster and easier it is to select the target. Fitts proved his idea mathematically, and the law is still popular today in digital design (just play [this quick game](#) and you'll understand immediately).



*Photo credits: “Fitts’s Law” Wikimedia. Creative Commons 3.0*

Of course, that doesn't mean you should fill your page with enormous buttons squeezed next to each other. As Anastasios Karafillis,

IxD Designer and Philosopher, points out, Fitts's Law must be [executed with finesse](#). Interaction design is meant for people, which means that you need consistency, enjoyment, accessibility, and discoverability – none of which can just be calculated with clicks or pixels.

We'll start by deconstructing Fitts's Law down into its 4 central components and examine the benefits and limitations of each (so you can treat Fitts's Law as a design tool rather than rule set in stone). Afterwards, we'll analyze **Netflix** as a case study of best practices.

Let's take a look at some of Karafillis' [excellent points](#) in more detail below (which we've expanded upon with more examples).

## Create Bigger Clickable Areas

The loosest interpretation of Fitts's Law is to make your key elements larger so that it's easier for your users to click them. But this is mostly an oversimplification.

There are at least two universal truths an interaction designer can take from this:

- **Make top-priority buttons larger** – Whether relatively larger in comparison to the rest of the page, or just plain large, an increase in size will attract attention, show significance, and make it physically easier for your user to choose the target.

- **Make the clickable area of a button as large as possible** – In other words, make the whole button clickable, not just the text within the button. You can see the example from [Mailchimp](#) below that the entire region is clickable, not just the text.



*Photo credits: [Mailchimp.com](#)*

These guidelines are especially applicable to call-to-action buttons, which presumably are a design priority for any business. But size can be a double-edged sword, so exercise some caution.

The drawbacks to relying on excessive size are:

- Taking up too much screen real estate
- Throwing off the balance of the entire page
- Creating clutter

When determining size, it's important to remember that increasing a button's size does not increase its usability linearly.

This means that if you increase the size of a small button, you'll give it more impact; but if you increase the size of an already large button, the impact will be minimal. All that will happen is you'll end up with an obnoxiously large button.

## Minimize Physical Exertion

Fitts's Law originated as a way to analyze physical exertion, and it wasn't until later that his principles were reinterpreted to apply to web design. However, with their physical gesturing, mobile devices are actually more attuned to what Fitts was actually studying. Whether you interpret his studies loosely for web design or literally for mobile design, in both cases, Fitts's Law states that less exertion leads to a better UX.



*Photo credits: "Smartphone". Pixabay. Creative Commons 1.0*

Mobile design has a lot more muscle and fatigue concerns than web design, so it's important to keep them in mind to completely optimize your UX. Justin Smith, UX Architect for Cartoon Network, explains that the problem is further complicated by [the different screen sizes each having their own different issues](#). But if you've

been paying attention to the points of Fitts's Law, you'll have no problem applying them to the muscle movements of mobile devices.

Smaller screens tend to put more strain on the hand muscles, but 7" devices, while bigger and heavier, are easier to manipulate. One point to keep in mind with 7" screens is that, in the vertical orientation, most people will hold it at the top. This makes the top two corners the best places for actionable targets.

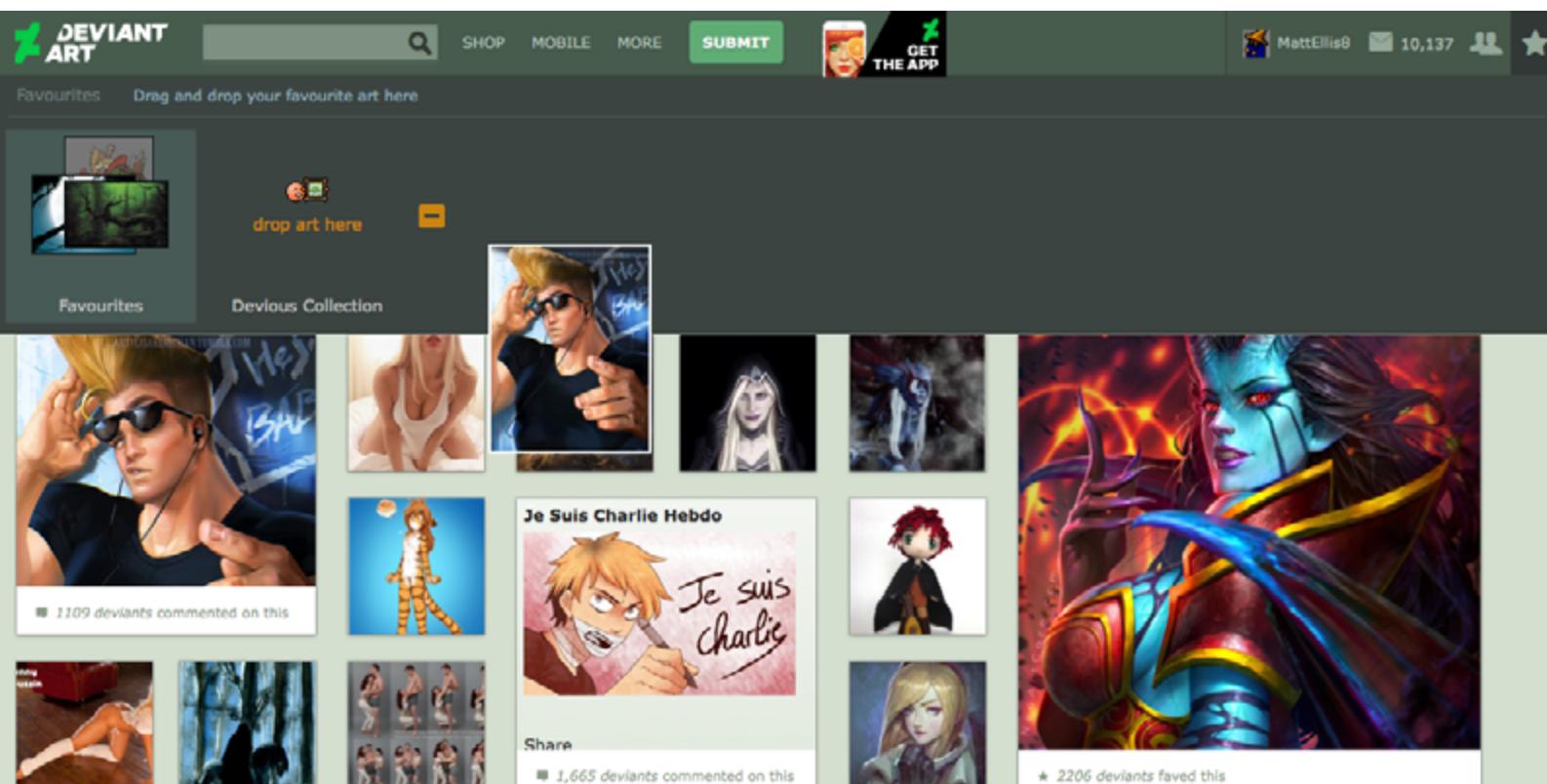
But some functions like deleting items should be harder to perform to ensure that they are not executed accidentally.

For example, when you want to remove a field in the relationship management tool **RelateIQ**, the modal window actually prompts you to type in "DELETE THIS FIELD". From our experience with the tool, this dramatically decreases the likelihood of deleting due to the effort required.

Compare that to the Cancel function, a low-consequence function that's easily clickable.

Second, complicated gestures and input methods can actually improve UX in some cases, when used properly.

Take **DeviantArt**'s favoriting method: if a user clicks on a picture and drags slightly, the Favorite toolbar drops down on screen, allowing the user to simply "drop" the picture in. While most other



Source: [DeviantArt](#)

sites have clickable options for their Favoriting system, the advantage to this one is that it hides the controls interface until needed, saving valuable screen real estate on a site that relies heavily on displaying as many graphics as possible.

## Optimize for Proximity

Have you ever wanted to go to a cool event, but then bailed when you found out how far away it was? Your users do this every day with your website or app, though on a much smaller scale.

If Fitts's Law teaches us nothing else, it's that you want to reduce the cursor movement as much as possible. Jason Gross, Designer

for Healthx, reminds us that [grouping items with similar functions together](#) is standard design practice, but this idea can be taken a step further.

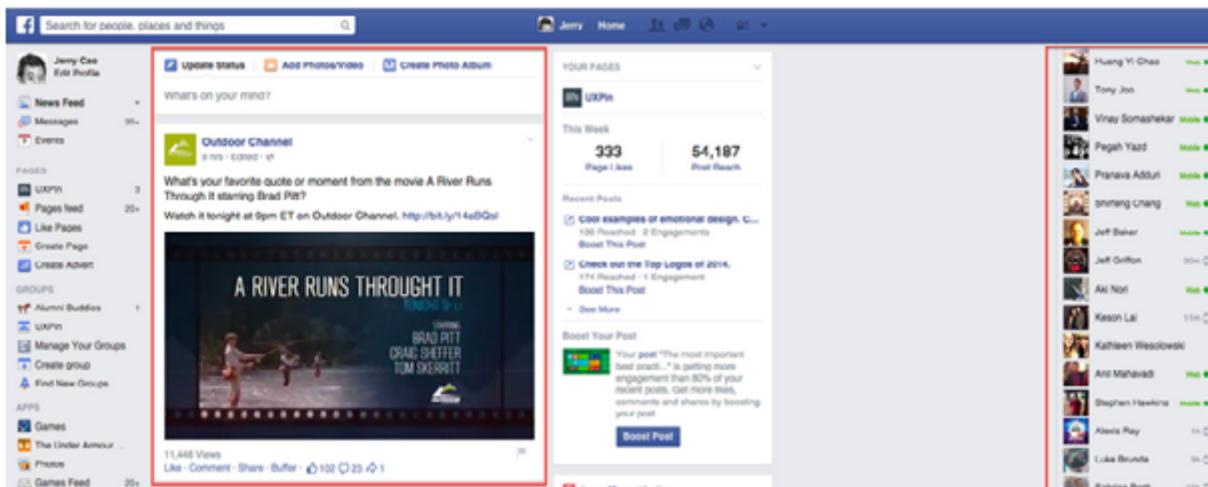
By anticipating functions used sequentially, an interaction designer can further minimize the distance the cursor must travel. In addition, the placement on the screen can play a large role in cursor movement, as we can assume the cursor usually starts near the top of the screen. Look at [this example](#) from Freshbooks.

The most used button, New Invoice, is located at the very top (and is larger than the others, reiterating the point about size from the last section). Reinforcing the [Gestalt Principle](#) that closely grouped items are perceived as similar, you can also see how related functions (sometimes done sequentially) like *Copy*, *Print*, and *Send* are tightly grouped.

Of course, you don't want to sacrifice your product's overall structure and cohesiveness just to save your user a centimeter or two of cursor movement. More important than a quick cursor movement is an interface with a logical and consistent structure.

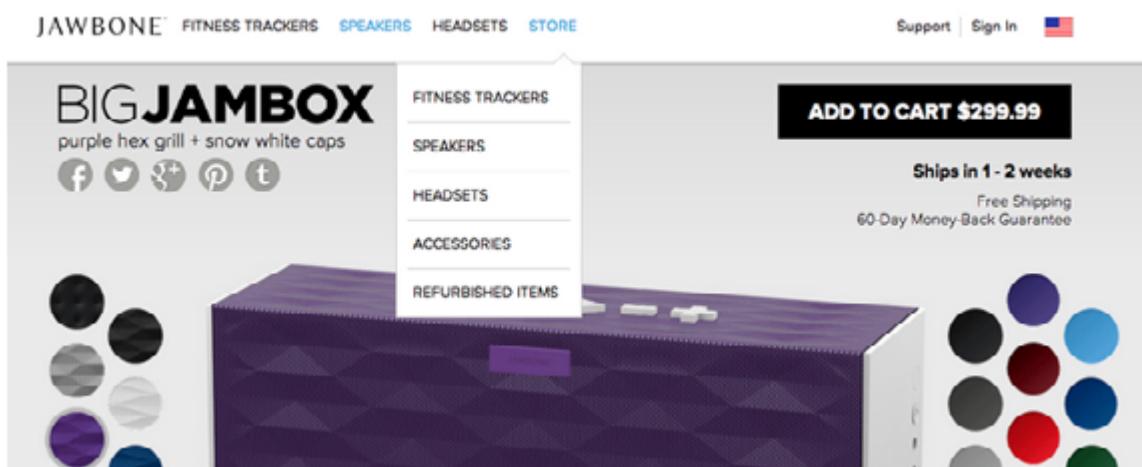
**Facebook** is a perfect example of a design that does not fear space. As you can see below, there's plenty of space located between the chat sidebar and activity stream. If we were designing based on frequency of use, we could place the chat and activity stream next to each other. But that would disrupt the functional consistency –

adding space between unrelated groups helps users create a mental map of information and tools. That's why it's more important that similar actions within a group (like *Comment* or *Like*) are placed closer together.



*Photo credits: facebook.com*

To clean up the interface, many sites use the familiar dropdown menu. By the standards of Fitts's Law, the dropdown menu is inefficient since it only increases cursor movement; but from an organizational perspective, dropdowns make sense as they consolidate and organize information in a way that users can easily understand.



*Photo credits: jawbone.com*

That's why most sites, like **Jawbone** (below), still use them. Notice how they've also grouped similar actions together, but created distance between unrelated groups like browsing products and signing into your account.

## Takeaway

Tiny distances on a small screen may seem like a minor concern, but they add up fast – especially with actions that are performed repeatedly. Part of good interaction design is being able to identify these “micromoments” that fall under everyone else’s radar, even the users. Your users may not know the extra time you spent optimizing the position and size of the high-priority items (without completely neglecting the lesser-used ones), but they will appreciate the product, as a whole, much more.



# Embracing Space in Interaction Design

## *How to Position Common Elements for Successful IxD*

Effective use of space in interaction design requires an understanding of aesthetics, functionality, and human behavior. In fact, spatial design is the link between the more stylistic dimensions of language and visuals, and the more practical ones of responsiveness, time, and user behavior. Space exists somewhere in the middle, dealing with issues on both sides of the spectrum.

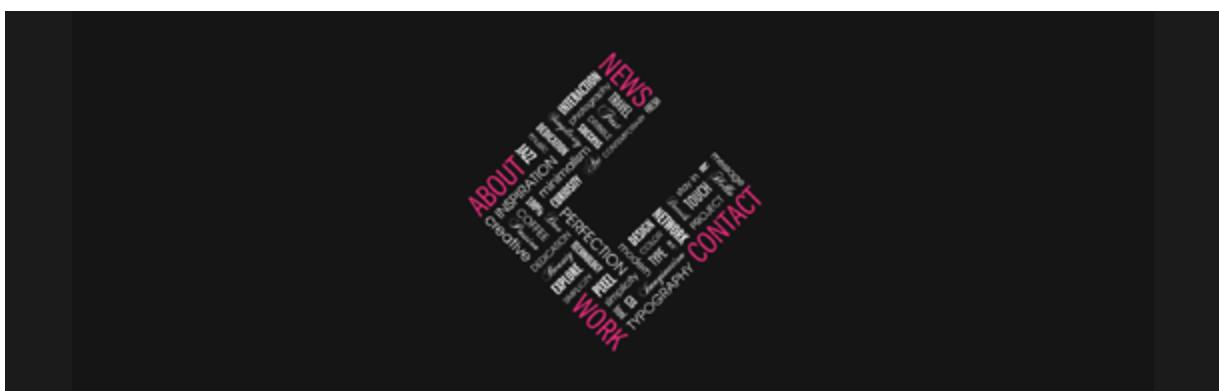
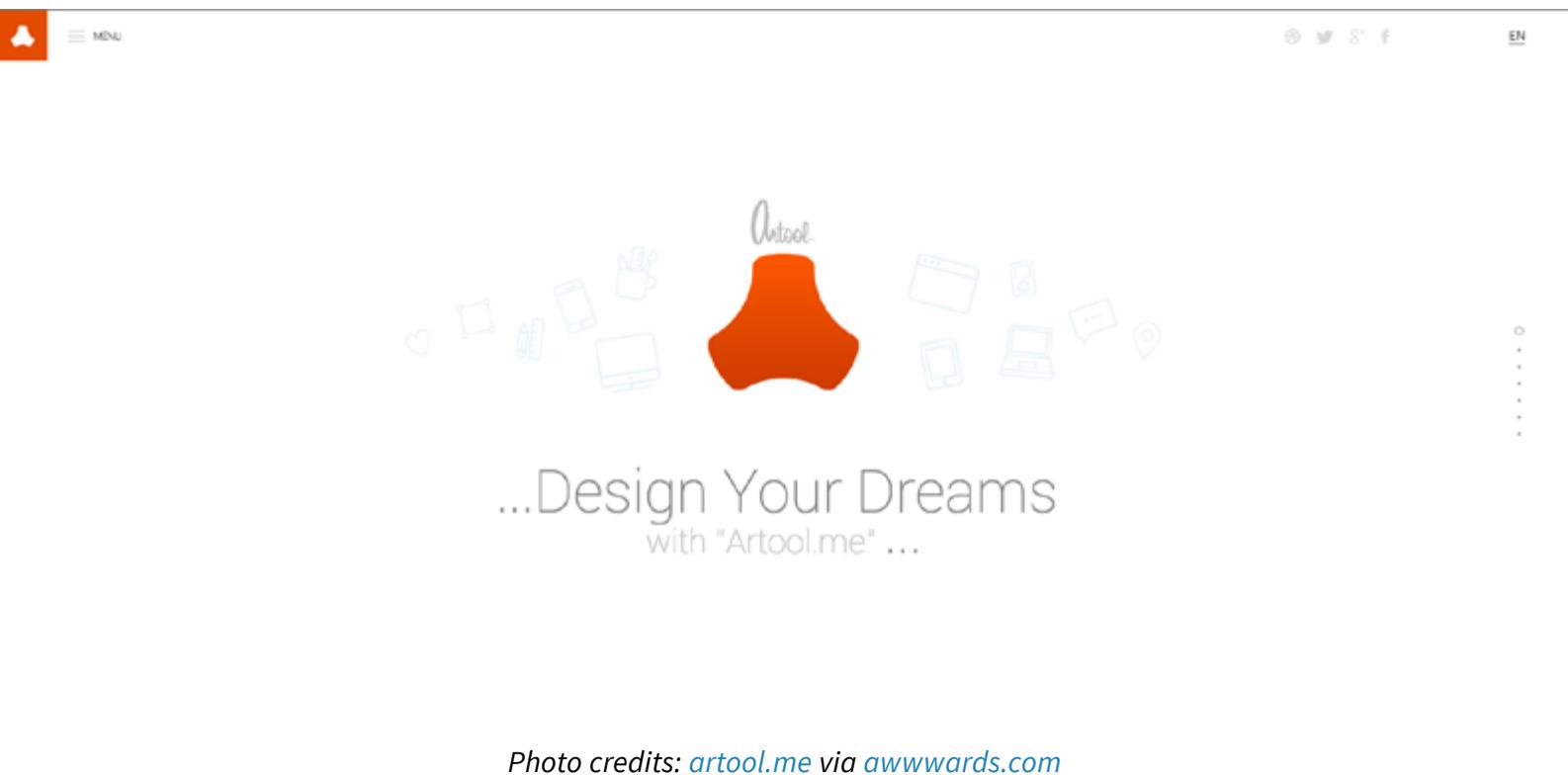


Photo credits: [wearec2.com](http://wearec2.com) via [awwwards.com](http://awwwards.com)

We'll start our discussion on space by talking about it in its purest form – white space – and why you shouldn't fear it. Then we'll get into more practical tips on how to treat space in interaction design so that your interface doesn't feel cluttered or isolated.

## Don't Fear Blank Space

White space can be daunting. As we discussed in [Web UI Best Practices](#), white space can feel like an empty canvas – something that you must replace with your brilliance, otherwise you're not doing your job. But the truth is something completely different: the designer's job is to create the best interface and experience possible, and that means using white space as just another design tool.



*Photo credits: [artool.me](#) via [awwwards.com](#)*

All good visual artists understand the importance of [negative space](#), the empty area that draws attention to, and accents, the actual subject. Negative space (the artistic equivalent of a designer's white space) is like the supporting cast whose duty is to make the star of the show stand out more by not standing out so much themselves. If you don't think any part of your design should be intentionally

blank, take a look at the [World's Worst Website Ever](#) for an extreme example of the damage caused by too many objects competing for attention.

Don't treat white space as an empty canvas. Think of it as just another design tool.



In interaction design, white space serves three main functions: improving comprehension, clarifying relationships, and drawing attention.

## 1. Improving Comprehension

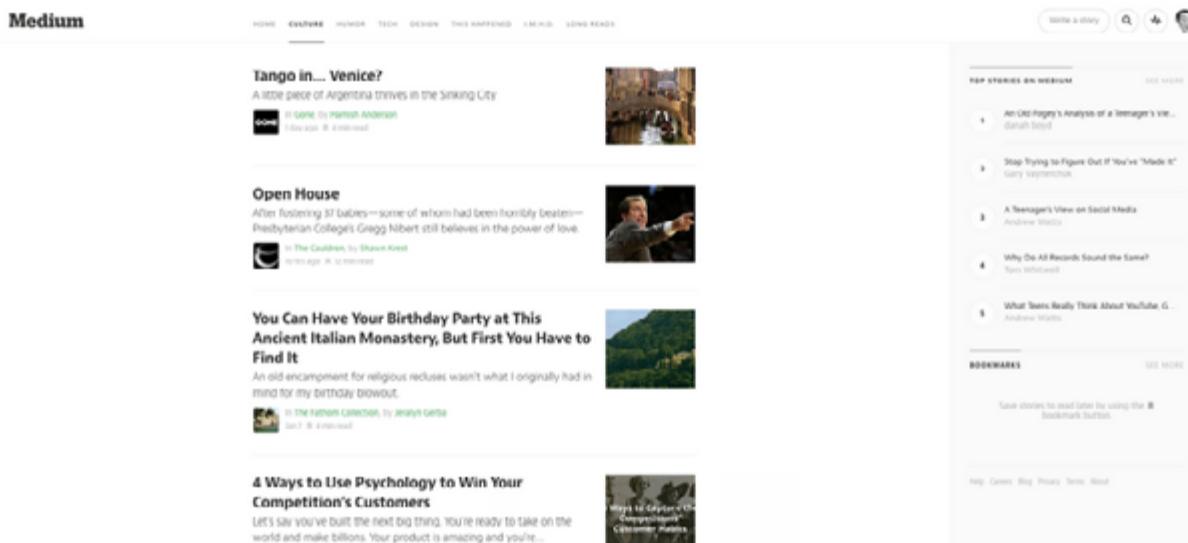
If cluttering your interface overloads your user with too much information, then reducing the clutter will improve comprehension. In fact, properly using white space between paragraphs and in the left and right margins [has been proven to increase comprehension up to 20%](#), as pointed out by Dmitry Fadeyev, Creator of Usaura. The skill of using white space lies in providing your users with a digestible amount of content, then stripping away extraneous details.

White space can be broken down into four elements :

- **Visual White Space** – Space surrounding graphics, icons, and images.
- **Layout White Space** – Margins, paddings, and gutters.

- **Text White Space** – Spacing between lines and spacing between letters.
- **Content White Space** – Space separating columns of text.

Let's take a look at how these four elements create a sense of harmony and fluidity.



*Photo credits: [medium.com](#)*

**Medium** is a great example of striking a nice balance with all 4 elements of white space. First, let's think about the goal of the user from an interaction standpoint: they want to access interesting content as quickly as possible. The homepage immediately facilitates that goal by placing content front and center, with plenty of white space on either side to add emphasis. There is ample space around visuals and between lines of copy, although the padding around images could be more uniform (notice how the space to the left of each image is not consistent with space below).

Beyond improving comprehension, white space also helps create mental maps. Minimal white space is used between the top navigation and content stream since both serve similar functions in driving the user deeper into content (and similar functions should be grouped together). Because the right-side navigation focuses more on creating and saving content, more white space separates it from the content stream. In this case, white space helps users assign different functionalities to different parts of the interface.



Once you click through to an article, white space helps focus the user on what they care about most: the content. Notice how the extra spacing between each line of text improves readability. On a subtler note, the space around the JW Marriott logo calls attention to the brand without feeling intrusive (a perfect counter-argument against the “Make the logo bigger!” remarks).

Just like the homepage, you can see that plenty of white space once again creates distance between groups of objects that serve

different functions. For example, notice the amount of space between the primary content and the commenting/favoriting/share features on the bottom right.

Ultimately, proper use of white space eliminates waste in your interface. Each interaction with the user, therefore, feels necessary in helping them accomplish their goal.

To learn more about white space, check out **Smashing Magazine's** listing of [22 expert pieces](#) and take a peek at these [21 inspiring examples](#).

White space is subtractive sculpture. As you simplify your design, you emphasize the beauty of what remains.



## 2. Clarifying Relationships

When observing how individuals organize visual information, Gestalt psychologists stumbled on what they call the **Law of Proximity**, which states that images near to each other appear similar. For example, take a look at the below picture:



Photo credits: [uxpin.com](#)

Almost everyone sees 2 groups of dots, rather than simply 20 dots. The dots are all identical and the only thing differentiating them is the white space that separates them. This behavioral observation has [several important applications](#) to interaction design, especially with regards to input forms:

1. **Place labels closest to the relevant fields** – As you can see in the below example, information is communicated far more clearly when labels are placed closer to the fields they relate to.

The image shows a screenshot of a Google account creation form. It includes fields for Name (First and Last), Choose your username (@gmail.com), I prefer to use my current email address, Create a password, Confirm your password, and Birthday (Month, Day, Year). The labels are positioned directly above their corresponding input fields, demonstrating good labeling practices.

Photo credits: <accounts.google.com>

As described in [Web UI Best Practices](#), research has shown that even the slightest hesitation can hurt form completion. In this case, merely adjusting the spacing increases the user's confidence in filling out the form, which of course improves completion rate.

2. **Group related topics together** – When dealing with long forms, the task of filling them out can seem so overwhelming, some users will quit before even trying. Breaking the information up into appropriate groups can help make it feel more manageable.

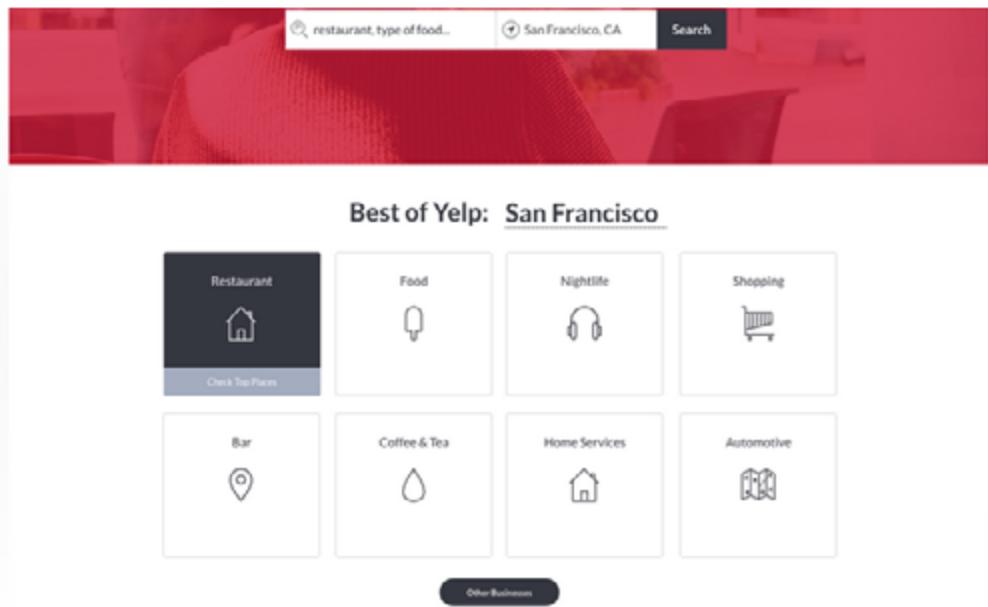
The image displays three versions of a user profile sign-up form from Skype, illustrating how categorizing fields can improve user experience:

- Top Version:** A flat grid of fields: First name\*, Last name\*, Your email address\*, Repeat email\*. Below them is a note: "Note: no-one can see your email address."
- Middle Version:**
  - Profile information:** Includes fields for Birthday (Day, Month, Year), Gender, Country/Region\* (United States), City, Language\* (English).
  - Usage:** A dropdown menu asking "How do you intend to use Skype?" with options like "Select".
  - Account Details:** Fields for Skype Name\*, Password\*, and Repeat password\*. Notes below say "Note: only choose a name you have a right to use" and "Between 6-20 characters, include Latin letters and numbers. Note: no-one else can see your password!"
- Bottom Version:** A single horizontal row of fields: First name\*, Last name\*, Your email address\*, Repeat email\*, Birthday, Month, Year, Gender, Country/Region\*, City, Language\*, Mobile phone number, and Skype Name\*.

Photo credits: [login.skype.com/account/signup-form](https://login.skype.com/account/signup-form)

In the form on the right, just categorizing the 15 fields into 3 groups makes the process feel easier. The amount of content is the same, but the impression on users is much different. Form fields usually present the most friction to users, but the same principles can also apply to navigation and site content. Instead of a top navigation menu with 20 items, you can create a dropdown menu with 4-7 top-level items and the rest categorized under submenus.

**3. Attracting Attention** – As we've mentioned before, the lack of other elements will only make existing elements stand out more. Let's take a look at our redesign of **Yelp** below (pulled from our free ebook *User Testing & Design*).



Source: [User Testing & Design](#)

In the above [high-fidelity prototype](#), we added plenty of white space to separate the categories from the search function. In doing so, the category icons are much more noticeable (and less cluttered than their current vertical format). Combined with an animation-like color fill that's triggered on hover, the category section now attracts even more attention while providing better feedback to the user.

But because humans have [a selective attention that leads to tunnel vision](#) – like tuning out banner ads (known as [banner blindness](#)) – you also need to know when spacing between content should be reduced and altered.

For example, in the [first image](#) from [Jakob Nielsen's work on Westfield London](#), the retailer wanted to show a timeline of events via lightbox popups. But the design on the left fails be-

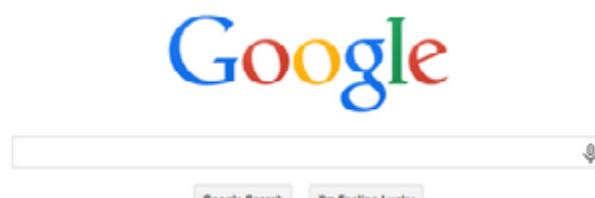
cause the year “2000” went unnoticed. Users are instead drawn immediately to the image and body copy. Luckily, in the [new image](#), a quick and simple adjustment to the placement of “2000” solves the problem.

Ultimately, you need to understand that the power of white space comes from the limits of human attention and memory.

Just look at the comparison between **Yahoo** and **Google** below. Yahoo tries to get the user to consider too many actions at once. Google understands the bottom line that people just want to use search engines to find stuff. By being realistic about the user goal, Google’s design encourages more effective interaction.



*Photo credits: yahoo.com*



*Photo credits: google.com*

## Understand the Limits of Human Memory

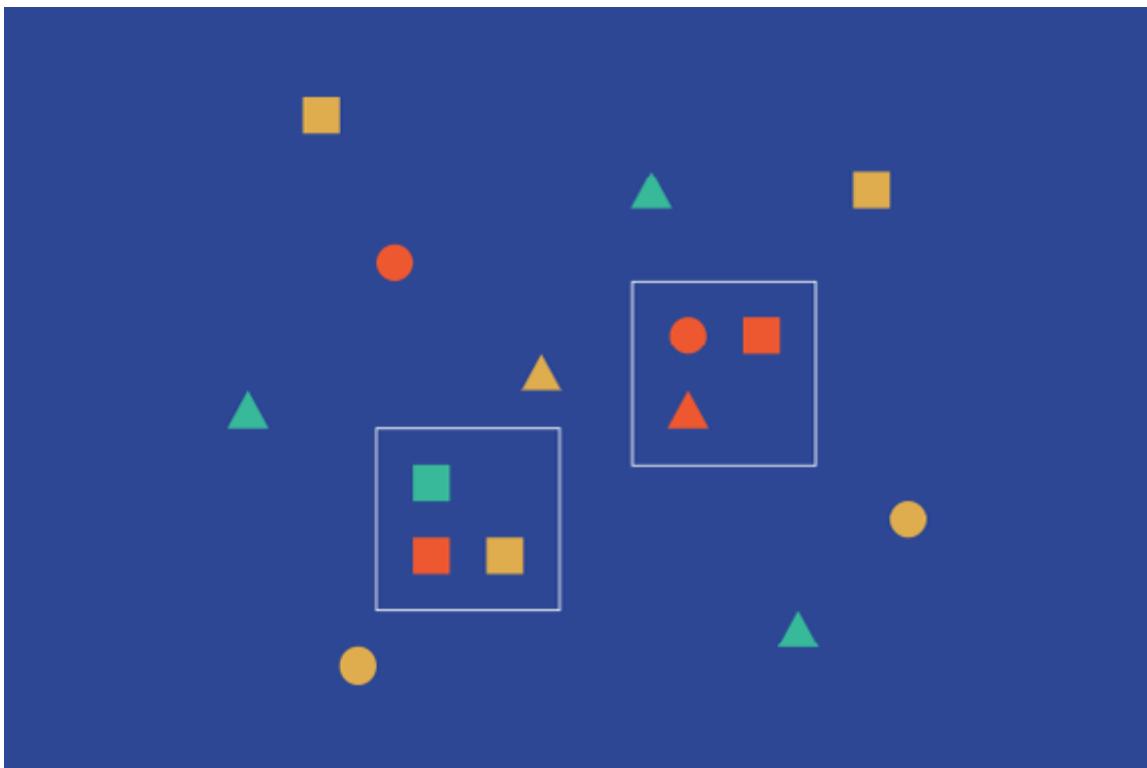
Most designers subscribe to the “don’t make the user think” school of thought.

It’s not that users are just lazy, it’s that they already have a lot on their mind, and cramming extra information just makes it harder to complete their tasks. The amount of strain an interface design creates is called “[cognitive load](#),” and a usable and enjoyable UI will reduce this as much as possible.

Over the years, designers have developed strategies for minimizing cognitive load without sacrificing features. We’ll explain how chunking content helps reduce cognitive strain, then look at four additional memory-saving tips.

### 1. Chunking Content

As complicated as the human brain is, its shortcomings are surprisingly predictable. Take the studies of George Miller, for example – in 1956, the scientist released his findings that our [short-term memory can usually retain data of between 5-9 items](#) – an average of 7 – before forgetfulness sinks in. While the exact number has been contested (3-6 is the current ideal), Miller’s findings have proven effective and led to important IxD methods, including “chunking.”



*Photo credits: [uxpin.com](#)*

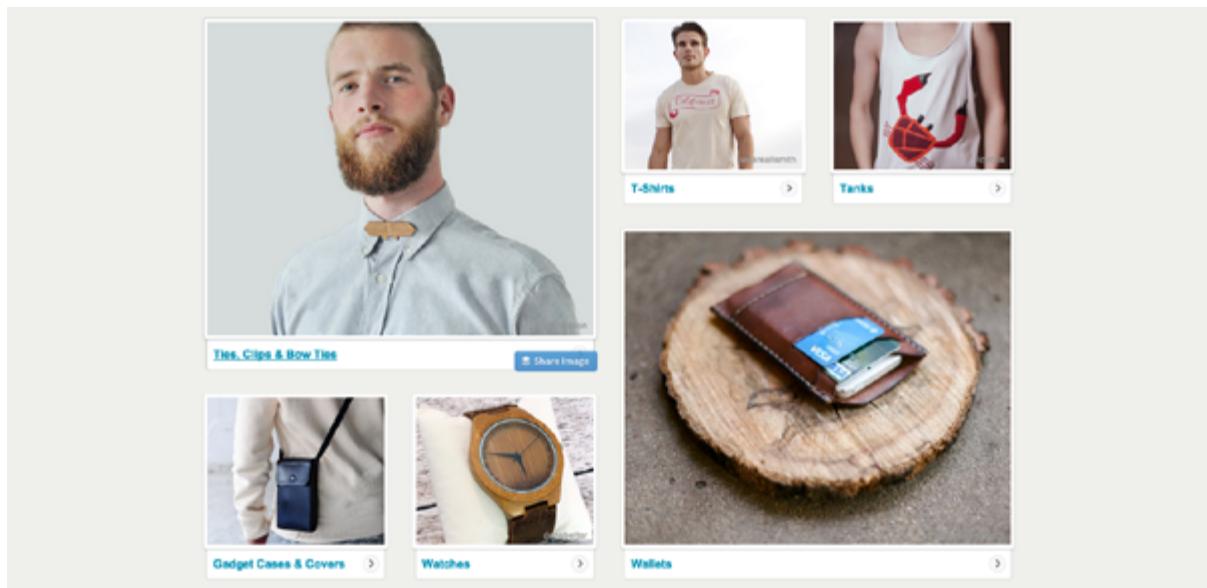
**Chunking** is the practice of grouping relevant information together to make it easier to process and remember. In the above image, it's easier to remember the first group of shapes because they're chunked out.

However, chunking has since been overanalyzed and misinterpreted, looking nowadays as something more like a superstition than a best practice. For example, some designers insist that menus, dropdowns, or bullet lists should never contain more than 6 items – but this is not recommended use of the practice.

Chunking is not a hard-and-fast rule, but one that depends upon the context. As UX architect [Martin Harrod recommends](#), chunking is ideal for the following situations:

- When your product naturally has a great deal of information that must be memorized for later use.
- The UI must compete against external stimuli for your user's attention (car navigation systems, certain mobile apps).
- E-learning applications (since users must later recall the information).

On the other hand, you don't need to chunk your content if it's meant to be searched or browsed. There are exceptions, of course, as you can see below with **Etsy**.



*Photo credit: [etsy.com](https://www.etsy.com)*

While users don't need to memorize the categories, chunking out the content on the category-level adds visual hierarchy. Once you click into the category, the chunking disappears and the items are listed. It wouldn't make sense to apply chunking at the item-level

since you can understand the frustration from browsing only 5-6 items per page.

Etsy's treatment allows users enjoy the best of both worlds. A large amount of products are presented, but users don't feel over-stimulated. In the example above, there are 32 different products on the screen. Using any other design, the user could feel lost or distracted. Thanks to chunking, users can process all the information while honing in on the "chunks" that most interest them.

## 2. Additional Memory-Saving Tips

Here are some best practices designers find helpful in easing the strain on their users' memories:

- Change the color of links already visited – [This UI pattern is so popular](#), it's come to be expected. This improves orientation and navigation since users can visually reference where they have and haven't been. No memory is required.
- **Facilitate comparing product pages** – If you're an ecommerce site, make it easy for users to compare different products so that they don't need to switch back-and-forth between pages. Highlighting the product differences in a comparison view and/or on the category page will eliminate a lot of frustration.
- **Use coupon links, not codes** – Encode offers in special links that automatically transfer the coupon to the user's shopping

cart. By embedding such links in promotions like email newsletters, it puts the duty of remembering an obscure code on the computer, plus circumvents having an “enter coupon code” field at checkout (which frustrates buyers who don’t have access to the code).

Long navigation menus are okay if needed – Because they rely on recognition and not recall, lengthy menus are the lesser of two evils for organizing complex navigation systems. As we mentioned before, this is why submenus are preferred over too many top-level navigation items.

No one wants a product experience to feel like a calculus test. Reduce the cognitive load and the experience naturally improves.

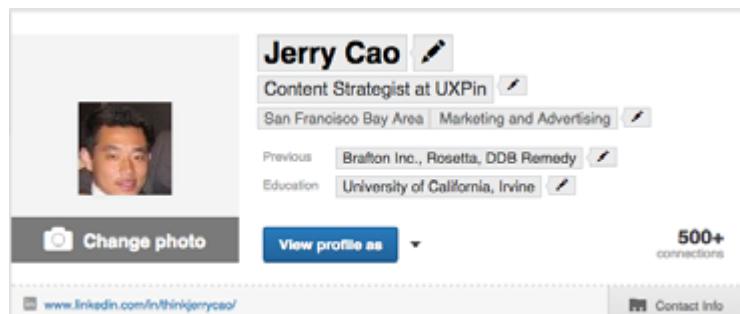
## Apply the Law of Context to Alterable Objects

Simply put, the Law of Context states that you must place controls next to the relevant interface object, just like a label goes next to the blank form field. This reduces cognitive load because as soon as users want to modify something, they can already see the actions available.

To illustrate this point, Designer and Blogger Peter Vukovic [shows us a real-life comparison](#) between two popular sites on how to change a user’s profile name. On **Facebook**, the user must traverse several

different menus and pages, going from *Settings* to *Account Settings* to *Name* to *Edit*, a process that is not readily available and must be first searched in the *Help* section.

On **LinkedIn**, however, all you do is click the pencil icon next to your profile name.



*Photo credit: [Linkedin.com](#)*

Which process is simpler? Which do users prefer?

By putting the controls next to the relevant item, the designer spares the user from the hassle of researching, memorizing, and diving into complex user paths. This also relates to the point about [making clicks easy](#) because you want to minimize the path between the user and the goal. The simplification of the system allows basic common sense to triumph over lengthy and involved explanations.

Now, let's take this principle a step further to create a hierarchy of control. As you can see below in a mockup of an online map service, controls that affect an object should be grouped with the object (like the zoom controls). Controls that affect a whole group of objects should be associated with the whole group (like the categories).

Let's deconstruct [this image](#) from UX designer Paul Trenchard-Sey's excellent piece on the [principles of interaction design](#):

- **Broadest level of control** – Because changing the categories will affect the entire map image, the category interface wraps around all lower levels of control.
- **Middle level of control** – In this case, typing in the zip code or address is more specific than selecting a category. Since this affects where the map zooms, it's placed right above the map (but inside the category interface).
- **Precise level of control** – The map zoom represents the most specific level of control. It sits inside the map image since that's all it controls.

Of course, the above example is just one visual treatment. Make sure that your interface has a hierarchy that makes it easy to understand how each control may affect the others.

## Takeaway

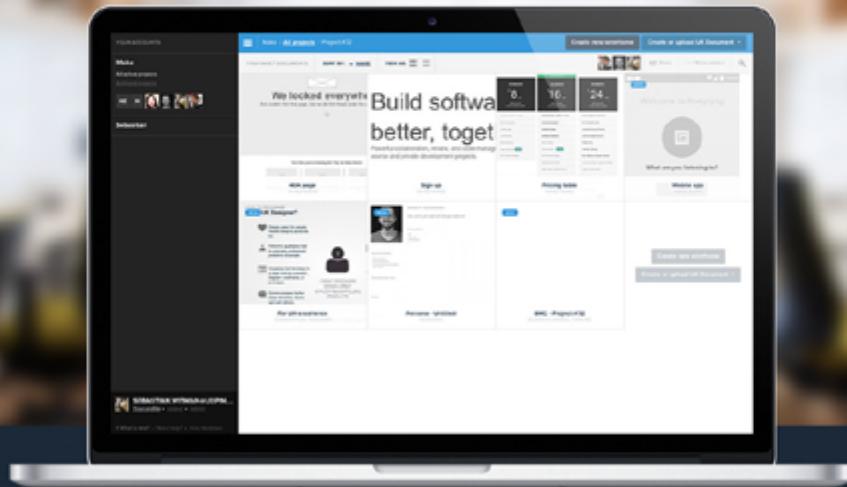
Space can either take away or add value to your content – it all depends on how you use it.

Create too much space between related interface objects and your design becomes frustrating. Cram too many objects together, and your design becomes too cluttered. Pay attention to space when creating your layouts, particularly its relationship to user memory and how proximity can convey meaning better than a wordy explanation. Space holds a lot of weight in interaction design – which is saying a lot for something that is technically nothing.

Now, feel free to practice what you've learned by creating your own interfaces and interactions in UXPin. If you use Photoshop or Sketch, check out our tutorials below for bringing static designs to life without losing your layers.

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