

Design for the Mind: What the Hell is a Heuristic?

By Victor S. Yocco

People frequently use heuristics to make decisions; you should use them to your advantage in your design. Here are six common heuristics with examples of how to address them in digital design.

You might be familiar with the term *heuristic* from the UX research method of heuristic evaluation. Forget about that for now. In *psychology*, *heuristic* is simply a fancy word meaning mental shortcut. We have so many decisions to make; there is no way we could think about all of the pros and cons for each decision. Our minds would be overloaded and we would stop functioning. Some of our decisions become habitual and we make them without thinking. We use heuristics for other decisions that are routine or that we need to make quickly.

Anything can potentially be a heuristic. For example, if your favorite color is green, this might be your heuristic for choosing the shirt you wear. If it's green, you wear it. If you need a new shirt, you buy a green one. That's one less task taking up the precious resources of your decision making ability. The potential problem with this, or any heuristic, is that you are not accounting for other variables in your decision. If you have selected what you wear based solely on favorite color, you are not accounting for the weather, for what activities you might be engaging in that day, or for the level of attire whatever event you might be attending requires. An oversimplification for sure, but you get the point.

People frequently use heuristics to make decisions; you should use them to your advantage in your design. Here are six common heuristics with examples of how to address them in digital design:

Availability Heuristic

People determine the likelihood of something happening based on examples they can think of. You might influence potential users of your product if your product is what immediately comes to mind as an example of what will solve their problem. You can address this heuristic by providing users with relevant examples of how your product meets a need they have.

TurboTax provides an example of the availability heuristic. TurboTax is widely considered the leader in creating a guided tax filing experience in the US. They wrap you in their snugly

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safe TurboTax cocoon and ask questions a layperson understands. Before you know it, you have completed your taxes and moved on with your life. Often, TurboTax gets name-dropped when I am in meetings with clients who want to create an easy experience that guides users to the desired outcome. How can you make your product the TurboTax of your field?

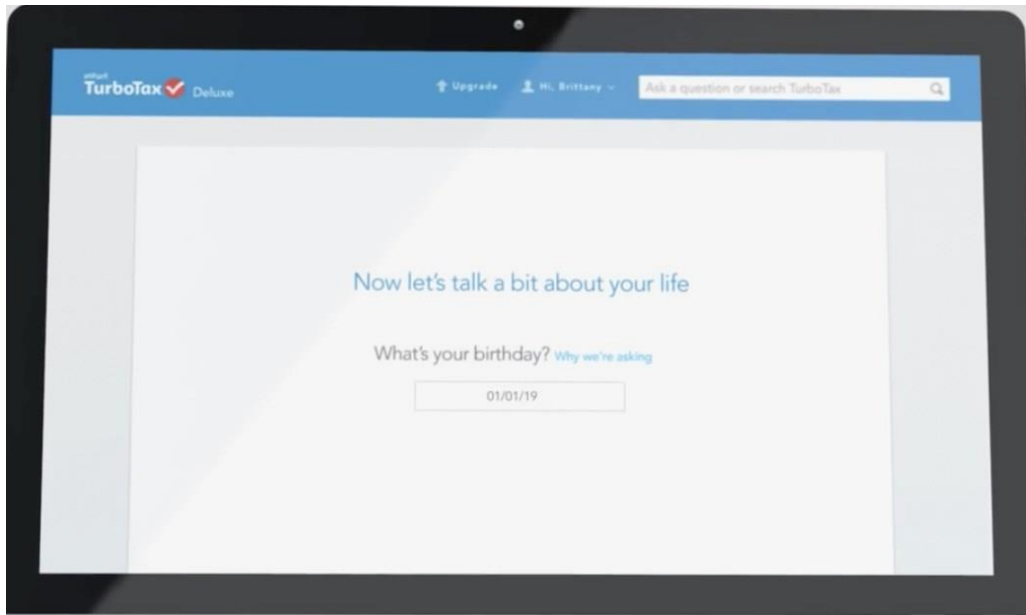


Figure 1 TurboTax: setting the standard for self-service experiences.

The availability heuristic can also serve to hurt your cause. Let's say you work closely with government agencies and their digital properties. You would likely have heard a number of references to the healthcare.gov debacle during the months following the launch of that product. The commonly held availability heuristic would have been that government websites and other digital products are unusable and poorly designed, thanks to a steady barrage of negative news related to healthcare.gov and how the design was handled.

You can effectively utilize the availability heuristic through your messaging and design. You should make it clear to your users how you want them to use your product. You should include examples or testimonials placed strategically for users to encounter shortly before given the option to engage in an activity. Amazon's surfacing of items you have viewed in the past is a concrete example of the availability heuristic in digital design. Users encountering this reminder have their behavior primed for completing the purchase or search they had previously engaged in. These previously searched for products are now actively available as they browse the site.

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Affect Heuristic

Affect is just another word for emotion. I'm sure I don't need to tell you, but emotions have an effect on decision making. I don't think it is possible to oversell the importance of emotion in decision making. Researchers think emotion happens just before thoughts, meaning the emotional tone you set will precede the thoughts that follow. You have to keep this in mind for any product you create.

If your product ticks your users off to use, they will not use it very long. If people experience great joy using your product, you are more likely to get them to engage with and use your product. If you require a certain mood for your product to be relevant, you need to make an effort to set that mood.

You also need to account for the emotions that surround use of your product. Let's say you are designing a website for the purchase of customized gravestones. You should not make the visual tone of the site obnoxiously happy. You should make sure your site is compatible with all browsers. Nobody wants to have to start over on another browser while shopping for the grave marker of a deceased loved one. Did you catch the underlying meaning of the example I just used? Your experience reflects your respect for users. If you provide them with a thoughtless experience, they will assume you don't respect them.

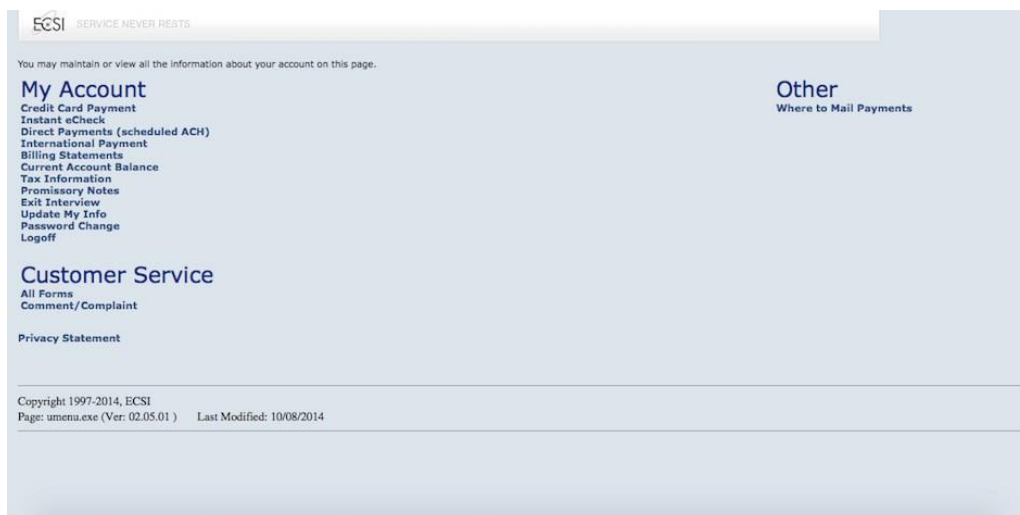


Figure 2 ECSI, provides an example of an experience that disrespects users. The lack of usability has a negative impact on users' affect.

Your design should elicit some type of emotion. Otherwise, you might be experiencing lower use than if it did. No one wants to feel ambivalent when doing something. If users do

feel ambivalent, they are not likely to be users for very long. HooplaHa understands the importance of matching the emotion of your site with the message you want to convey. Their mission is simple – to make people smile more. Of course, they highlight puppy dogs on one of their homepage articles. Beyond that, they have named their navigation categories in line happier sounding terminology: Life, Inspiration, Wellness, and Health.



Figure 3 HooplaHa, I get happy just saying the name.

Familiarity Heuristic

Individuals tend to form beliefs, judgments, and make decisions on the assumption that what has happened in the past will still hold true in the present. This can serve as a source of safety if past behavior has led to successful decisions, or as a source of hazard if previous behavior has led to unsafe situations. A real life example is that people tend to form relationships that are familiar with the ones they've experienced in the past. If you grow up in a situation where abusive relationships are the norm that is the type of relationship with which you are most

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familiar. That is the type of relationship that is likely to come to mind when you think of what a relationship looks like.

The Familiarity heuristic applies to where you locate important features on your product's design. Close your eyes and tell me where you would go to log in or out of an account on a webpage. Did you say upper right-hand corner? I sure did.

If people are used to looking at the top of the screen for their sign on information on the desktop version Facebook, LinkedIn, and Twitter they are probably going to expect to see alerts in the same area on your desktop product (assuming they are frequent users of these products). Your team can take advantage of this by not trying to reinvent the wheel for design in your field. People have grown to expect things to look a certain way. You will need to meet the expectations your users have. You should engage in user testing to validate placement of key features in your product's design.

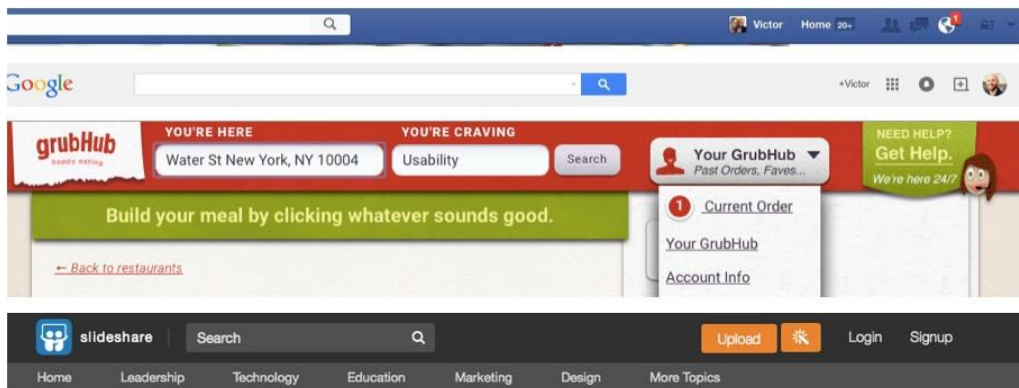


Figure 4 From Facebook to Slideshare, and everything in between, we are used to seeing our account sign on information in the upper right hand corner of the screen.

On a different note, your design team wants to create a product that is so easy to use that it becomes what people default to when they think of the leader in your field (remember the availability heuristic?). You can do this in a number of ways. First, be sure your product is functioning correctly and solving the problem that it is supposed to solve. Once users become familiar with your product as the solution to their needs, it increases the likelihood they will default to using your product to meet the same need in the future.

You also need to make sure your product works and is bug free *before* launching. The familiarity heuristic would suggest once a user has a negative impression of your product, they will carry this with them as what they expect the next time they consider using your product. I

know you already knew it was important to make a good first impression--now you know one way to describe why.

Escalation of commitment

No one likes to waste their time. The escalation of commitment heuristic speaks to this fact. Also known as the *sunk cost commitment*, this heuristic leads to individuals remaining committed to an action or decision based on the prior investment of time they have made.

I hate to harp on relationships as an example, but this heuristic speaks to why many people continue to engage in relationships that have long since turned sour. People tend to look at the investment of time they have made in something as a reflection of the need for future commitment. In other words, people hate to think that all the time they have spent nurturing a relationship will have been for nothing if the relationship ends. This can be true, even if from this day forth they will derive no more joy or utility from the relationship.

The escalation of commitment suggests the more time people feel like they have spent building a relationship with your product, or the greater financial commitment they make, the less likely they will be to stray to a competitor's product. This does not mean you can relax once you have gotten users to invest time or money into your product. This means you do need to focus on smart ways of having users invest time, money, or effort in your product in the beginning if you want them to stay users. Your competition will stand a better chance at luring your customers away if they don't feel there is any penalty in time or money for switching. You should address the escalation of commitment in your product's onboarding process.

You want users to invest time and resources in your product. You want them to feel worthwhile doing so. Your team can consider incentivizing longevity the way insurance companies often do, providing accident forgiveness every two years as a customer. Cell phone companies reward longevity as well, providing a discount on an upgrade after a customer spends a specified amount of time under a contract. You can entice users to spend more time on your product in many ways, leading to a stronger bond between users and your product.

Banking clients I have worked with seem especially aware of this critical heuristic. They have done a good job identifying what I've heard referred to as "sticky behaviors": signing up for direct deposit, enrolling in online bill pay, setting up online banking, etc. The more of these individual behaviors a user engages in within the first 90 days as a client, the more likely this user will still be a client a year later.

Your team needs to identify the sticky behaviors associated with your product. Users engaging in these behaviors are the ones demonstrating a likely future commitment to your product. You then need to highlight these behaviors as part of your onboarding process. For example, if your product had a social aspect, you'd want users to complete their profile, add a picture, and do other tasks that reflect an investment of time.

Scarcity Heuristic

You can drive people to use your product through creating a perception of scarcity. People are likely to engage in a behavior that makes them part of an exclusive group. You should consider some of the following techniques if they are in line with your product: limited edition(s) with exclusive features, invitation only, pre-sales for loyal customers, and special events.

As shown in the figures below, e-commerce sites like Amazon and Overstock inspire the scarcity heuristic when they display the quantity of stock an item has left.

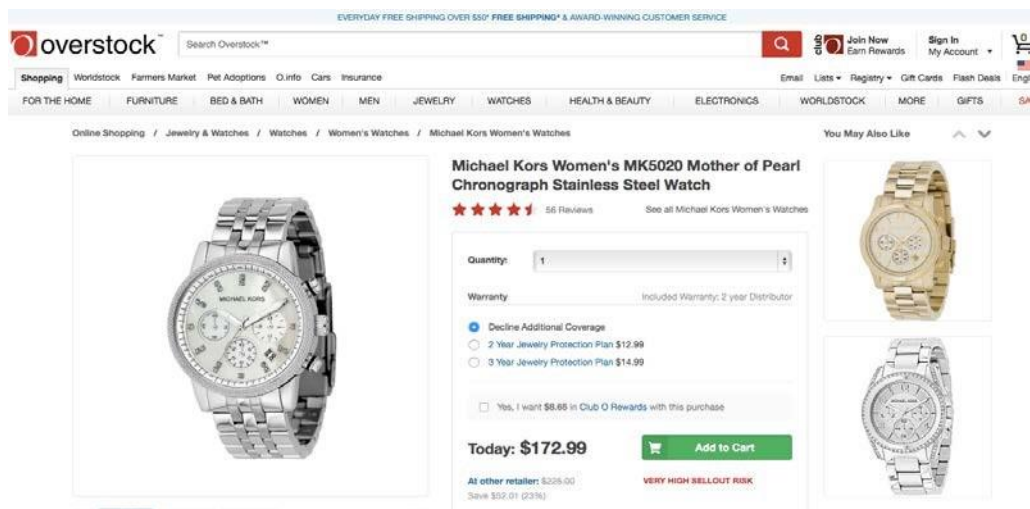


Figure 5 Would you hesitate to buy this delicious Michael Kors watch at such a bargain price if you know it is a “very high sellout risk?” Overstock.com provides a strategically located message suggesting product scarcity.

Saved for later (15 items)






	Jolly Jumper Pashmama Nursing Cover - Black by Jolly Jumper <small>This item is no longer available from the seller you selected.</small> Delete Move to Wish List	See other new offers from \$21.00
	Go the F**k to Sleep by Adam Mansbach Hardcover In Stock ✓ Prime Delete Move to Cart Move to Wish List	\$11.45 You save: \$3.50 (23%)
	Spectrum 37210 Seville Magazine Rack, Black by Spectrum <small>Only 11 left in stock (more on the way).</small> ✓ Prime Delete Move to Cart Move to Wish List	\$14.97 You save: \$3.02 (17%)
	Magazine/Newspaper Rack, Black by Spectrum In Stock ✓ Prime Delete Move to Cart Move to Wish List	\$16.21 You save: \$5.74 (26%)
	Green Tones / Llama Shaker by Green Tones <small>This item is no longer available from the seller you selected.</small> Delete Move to Wish List	See other new offers from \$9.00

Figure 6 This is my wife's saved Amazon cart; looks like our daughter is SOL on getting a Llama Shaker rattle.

Stereotypes

Stereotypes are heuristics. Why bother to get to know the teenager hanging out on the street corner? You already know he's up to no good. There is no sense in asking the pretty girl if she can help you with your coding assignment – she's probably too busy getting ready for her next date. You get the point. Stereotypes provide us with a shortcut to judge who we feel we will be like, and who we think is too different for us to associate with. I have already mentioned above that heuristics can be faulty, especially if you over-rely on them. I will never recommend incorporating stereotypes into your design. I would challenge you to identify the stereotypes you or others on your design team assume, and gather valid data to either back up these assertions or dispel them.

Client talk: Conversations about decisions under risk

Decisions under risk pave the way for us to discuss critical components of our design features and strategy with our clients. Clients should find elements of this principle very relatable. Use some of the following discussion points to start the conversation about heuristics with your clients or peers.

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Discussing Loss Aversion:

We know users hate paying fees. Our onboarding process guides users through learning about the different account options available, what the costs are, and how they can lower or avoid fees.

Discussing Escalation of Commitment

We know users value their time. This applies to the time it takes to become a customer and the time it would take to leave your business for a competitor. Our design accounts for both of these aspects of valuing time. We have created an express enrollment form to get users up and running in a matter of minutes. Over time, we engage users in a series of quick tasks that as a whole reflect a significant investment of time: entering and saving a credit card for future use, attaching the account to their social media feeds, and having them sign up a detailed profile for other users to view.

We know that users engaging in these options will make them feel invested in your product. These users will view the prospect of leaving for a competitor as a loss in the time they have spent building a deep profile with your product.

Discussing the Availability Heuristic

We know prospective users have mental shortcuts they take when deciding to use a product. We have added recommended products to the home page of your website. We expect this to lead to greater sales of these products based on making them available to users' memories. You will be able to alternate what users see when landing on your homepage based on an algorithm that keeps track of which products need a boost in sales, which ones have been selling the hottest over the past 24 hours, etc. You are also able to insert whatever product you feel needs highlighting.

Discussing Stereotypes

We have noticed your site uses pictures of seemingly heterosexual caucasian families whenever displaying a "family" focused product. You should consider that the term family has an ever shifting and diverse meaning to your potential users. Your use of images should reflect this. Potential users will view this as a sign of respect and that your company embraces diversity.

Case Study eBay

eBay has been making money off the principles I have covered in this article faster than an auctioneer can holler off the price of the next bid. I can't speak for eBay leaders' explicit decision to base their business on these principles; I can break down the success of the online auction house using what we have covered. You are likely familiar with eBay even if you don't use the site to buy or sell items. The brand has become part of the conversation when people discuss Internet business models and success stories. "eBaying" something has become synonymous with making an online sale or purchase, particularly of an obscure or pre-owned

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item. You will also see that many of the affordances of digital experiences allow eBay to succeed well beyond what traditional brick-and-mortar auction houses typically can.

RELATIVE POSITIONING

Have you ever gotten a great deal on eBay? It could be due to relative positioning. Sellers are often looking at value from when they acquired an item. This could range from free if they received the item as a gift, low cost if they found it at a yard sale, or very expensive if they paid top dollar and want to make a gain on their investment. For example, if a seller had a large stash of collectors' items given to them, they might set their relative position at zero dollars. That means anything above nothing is a gain. This seller is much more likely to set a low bid price, a low minimum acceptance price, and be happy making any money. Particularly if selling items on eBay is not his full-time job.

Conversely, someone that made a monetary investment, say in a concert ticket, knows exactly what she paid. If the seller paid \$40 per ticket, she's not going to feel happy about selling the ticket for \$35. Even more, if the seller realizes the concert is sold out, she has the opportunity to view what price others have been selling their tickets. Let's say the price is \$100--this becomes the new anchor point. The seller will view more than \$100 as a gain, and less than as a loss.

The ability to look at what price similar items are selling is an affordance given to eBay and other online auctions that is much less effective if you are attending an auction in person and unable to monitor the results of auctions taking place in other rooms or different auction sites.

CERTAINTY AND DISPOSITION EFFECTS

eBay takes advantage of Certainty for both buyers and sellers to influence sales. Many sales have a "Buy now" price that allows users to immediately purchase a product. These items allow buyers and sellers to experience the certainty of the value of the sale, as opposed to the risk involved in letting users bid on an item.

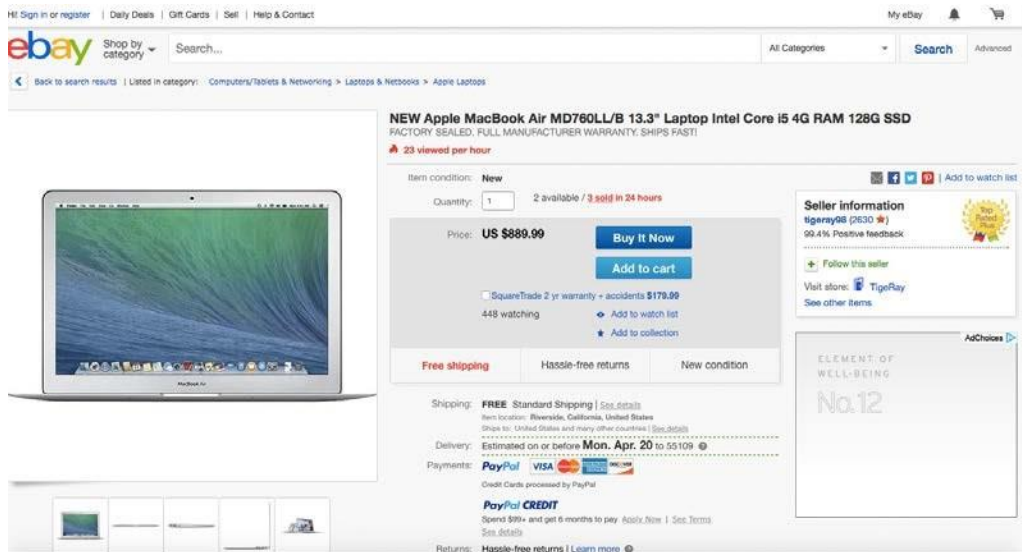


Figure 7

AVAILABILITY HEURISTIC

As eBay has grown, it has become synonymous with large online auctions. People say “sell that on eBay” as easily as they say “sell that online.” This is true, even though now there are dozens of online auction sites including quibids and beezid, and very specialized sites like govedeals.com and nonprofits like goodwill. You never hear someone say “sell that thing on shopgoodwill.com”! Today’s featured collections (figure 3.14) – again takes advantage of the availability heuristic. People see an item or a collection on the home page. They are more likely to view these items and consider purchasing if they did not come to eBay for a specific purchase. Many of these items are familiar brands, which takes advantage of availability when people see something familiar.

FAMILIARITY HEURISTIC

Someone that has saved money on an eBay purchase is likely to use eBay again in the future. So are folks who’ve found a rare item they needed to add to their collection of oddities. eBay is the default site that comes to mind when these people think of where their next savings or rarity will come from. A competitor would have a harder time convincing an eBay customer who experiences the familiarity heuristic than they would attempting to entice a new customer who has not used an other site.

ESCALATION OF COMMITMENT

eBay accounts for the escalation of commitment through the need to create an account for both buyers and sellers. Setting up an account is perhaps the most important thing for a user to do on eBay. Users with an account can track items and stores of interest, bid, sell items, save payment options, and save shipping information. Since eBay allows users who sell numerous items to create a store where all of these users' customers know to find them on eBay, there would be a drastic cost to moving to another platform. The time these users spend uploading photos, creating product descriptions, and soliciting customers on eBay's platform would be a huge consideration against changing to another platform.

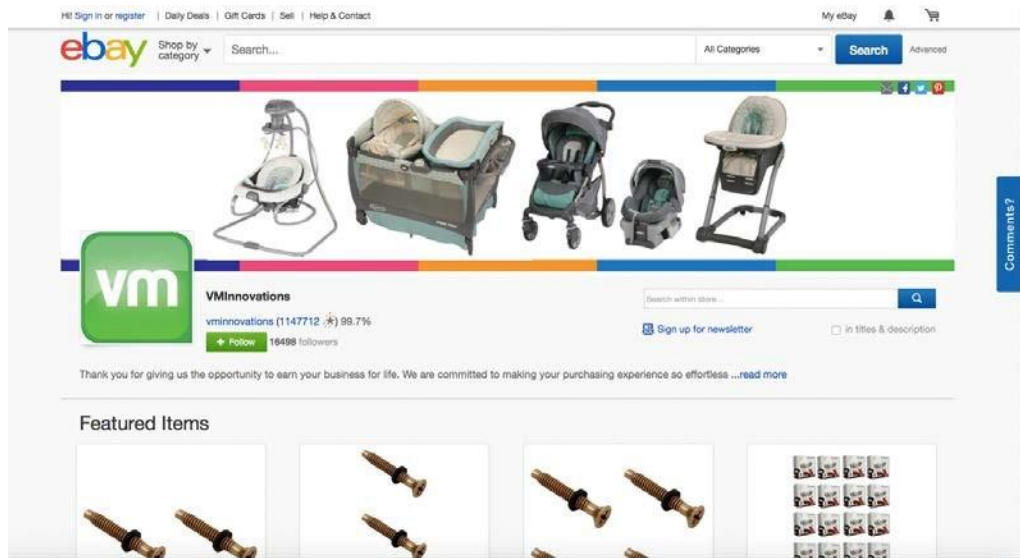


Figure 8

SCARCITY

eBay thrives on the concept of product scarcity. After all, an auction only has one winner. eBay didn't invent this concept. They moved it to a space that allowed many more people to view many more items considered scarce. eBay is scalable beyond what potential brick-and-mortar auctions can ever be – in both buyers, sellers, and profit for the auctioneer. eBay brings scarcity to another level by allowing for bidders worldwide to compete for an item.

Summary

You might have noticed that many of the strategies discussed in this article reflect things that many good designs already include. Perhaps you already do many of these things. So, what's the value to you? I believe you are stronger as a designer for knowing the "why" behind the "how." You also know when and where to include these elements of design when you understand them. Would you expect many of your colleagues to say the reason we should highlight specific products on a homepage is due to the availability heuristic? I've never heard it mentioned.

If you effectively use the principles of decisions under risk, you will create sticky users; ones that will come back to your product repeatedly, and don't consider competing products. You can design for decisions under risk and account for what reference point users have for your product, making them feel like they are gaining or avoiding a loss, and providing them with as much certainty as possible around your product.

I have identified a number of heuristics people use to make decisions. You might think heuristics oversimplify decisions, but that is the entire point. A person using a heuristic is only focusing on one aspect of the decision as a way to save mental capacity. Your design team can account for these heuristics and maximize the potential for your design to keep and maintain users. I have also given you examples of why you should be aware of how certain heuristics apply to you as a member of a design team. I recommend your design team look at incorporating one of the heuristics mentioned here in your design or re-design. As you get comfortable with this, see if you can find room to add another heuristic to your design thinking.

For more advice, check out my book [Design for the Mind, Seven Psychological Principles of Persuasive Design](#), available from Manning Publications.