Heuristic Evaluation

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In this heuristic evaluation, I mention the main three different types of customers (which I will refer to throughout the paper) that enter any given shopping site which are as follows:

1. Customers who know what they want to buy

2. Customers who do not know what they want to buy

3. Customers who have considered buying something, yet have not yet purchased said item

In terms of the five usability metrics, I define *learnability* as the time to learn, *efficiency* as speed of performance, *errors* as rate of errors, *memorability* as retention over time, and *satisfaction* as subjective satisfaction.

1 Amazon

1.1 Mental model

Amazon's mental mondel is quite clear from the moment you land on their homepage. In order to illustrate the designer's mental models, I will focus on just the homepage. Amazon's designers carry a few mental model for the types of customers that they are serving. Each of the types of customers can also be logged in or not, and Amazon accounted for these types in their design.

The **search bar** is there if the customer has a specific product in mind to buy. This allows the customer for a very refined search of what they are purchasing. This works extremely well because they designer has the mental model that they customer can simply type exactly what they are searching for, and this allows the customer to do so. There even is a drop-down on the left of the input field to search within a specific category. The search terms also tries to autocomplete the search so the customer can type less. A customer does not need to be logged in for this to work as Amazon has designed it.

The *Shop by **Department*** drop-down is there for the customers who want to shop but do not know what they want to buy. Their main cateogies are listed here with the most popular subcategories for those given categories. Yet, at the bottom of this drop-down, one can see a link to the *Full Store Directory*. Thanks to both of these options, a customer who does not know what they want to buy has no problem figuring this out. Similarly to the search bar, a customer does not need to be logged in for this to be functional.

The **horizontal lists** have slightly different functionality depending on if a customer is logged in or not. In either case, many horizontally lists show up below the drop-down on the left which are mainly geared towards a customer who does not have a clear idea of what they exactly want to buy. If the customer is not logged in, the lists can be *Included with Prime Membership at No Additional Cost*, *What Other Customers Are Looking At Right Now*, etc. If a customer is logged in the lists change to *More Items to Consider*, *Related to Items You've Viewed*, *New For You*, and *Inspired by Your Shopping Trends*. They usually also include a list that begins with the words *Reccomendations for You in* which is followed by a category of products that you might have been looking at recently. The horizontal lists can help a customer make a choice for any occasion, regardless if they are looged in or not.

The **search bar**, *Shop by **Department*** drop-down, and **horizontal lists** account for all the types of customers that enter Amazon's site. The mental models of the designers work incrdibly well because they have figured out a way to approach every customer.

1.2 Five key usability metrics

1.2.1 Learnability

In terms of the shopping process, Amazon's site is designed well because it takes little to no time at all to learn how to navigate it. The layout remains consistent throughout the every step of the way. As I mentioned previously, their website appeals to all types of customers which makes it very learnable. Through out every step of the way, the action required to get to the next step of the process is always on the right of the web page. The shopping process is very learnable.

Yet, Amazon's account page takes some more time to learn. They inlcude many links of just text and options that most common shoppers do not use like *Manage Bulk Gift Card Orders* and *Manage Textbook Rentals*. It takes time to simply get familar with the layout.

All in all, their interface is fairly learnable and takes not too much time to learn.

1.2.2 Efficiency

Amazon's checkout process is quite error-less. In order to buy a product, Amazon offers a few options for completeing a purchase for its customers.

First, they allow the customer to add their product to their shopping cart. This process is efficient because, as mentioned previously, each subsequent step is always located in the same area.

Second, they also allow customers to buy with 1-Click® (I didn't want them to get mad). This is quite incredibly efficient. It holds true to its name and really allows for a single click to purchase a product. Before clicking buy, it allows for the user to choose which address they ship to from that are of the screen.

Overall, the whole process of using their website is efficient.

1.2.3 Errors

A potential error that may arise during shopping using the 1-Click® method, is that each location saved in a user's account can have a default payment method. If a user forgets which payment method they have chosen for a given location to ship to, this can charge a different payment method than they might have expected. Besides this, their website is error-free.

1.2.4 Memorability

In terms of memorability, Amazon's site utilizes the idea of keeping the link or button that completes an action on the right side of the page. This make it memorable because any user can expect to see similar actions on that side fo the page. Overall, Amazon's site is memorable.

1.2.5 Satisfaction

Amazon approaches satisfaction in an incredibly reasonable fashion. Since their interface is learnable, efficient (for the most part), error free, and memorable. It is no suprise that Amazon's satisfaction is high.

1.3 Interaction Style

Amazon has chosen to mainly use the overall interaction style of Menus, Forms, and Dialogs. Form this style, Amazon employs Pull-Down Menus and.

2 eBay

2.1 Mental model

eBay's mental models have many similarities to Amazon. Just like Amazon, their goal is to approach every type of customer that can navigate their website.

The **search bar** is there if the customer has a specific agenda on their mind when they arrive at eBay. An autocompleting search bar allows the site to guess what the user wants to buy. Its purpose is clear and it fulfills its purpose quite nicely.

eBay utilizes a similar concept as Amazon's horizontal lists. They also have lists as one navigates their main site further down, but these lists are created by users of the website. Examples include *Namaste*, a list including all types of yoga products, *Mellow Yellow*, a list geared towards yellow products, and *Je T'aime... Moi Non Plus*, a Jane Birkin inspired list. These are geared for the people on eBay's site that are simply browsing with no clear intention of what they might want to buy. eBay also includes *My Feed* for personal reccomendations for new products. These options clearly interact well with user's whose mental models are geared towards having eBay help them decide what they want to purchase.

eBay realizes the power of simple interfaces. At the bottom of the page, they include a link to *Legal & More*. This section pops up with a ton of options that they deem to be less used, like *Security center*, *Business sellers*, etc. They are keeping more content that the user is inclinded to use in their experence right where they need it.. Most of the clicks that a user can take keeo them on the same page. For example, whenever you click on your name at the top of the page, a drop-down comes down with some options like *Purchases* and *Recently Viewed*. Amazon accomplishes the same with more dropdowns and more options for each drop-down. They include many options that the user simply wouldn't use. This simplification of what the user needs to access their account option is a move that really faciliates communication between the designer's mental model and the user's mental model.

Overall, eBay's site approacches all types of mental models well and does so in a simplistic fashion.

2.2 Five key usability metrics

2.2.1 Learnability

eBay's learnability is fairly high looking at our test results. It does not take a long time for a customer to learn how to navigate and utilize their site. Shopping for products is straightfoward enough. It might be less straightforward than Amazon. But in contrast, their account modofication and viewing pages are laid out in a way that allows for a much more learnable experience than Amazon, per say.

2.2.2 Efficiency

eBay is quite efficient. In terms of the checkout process, they include a way to purchase items called *Buy it now*, something a la Amazon's 1-Click®.

2.2.3 Errors

eBay's rate of errors is

2.2.4 Memorability

2.2.5 Satisfaction

eBay trades off satisfaction for efficiency. Although they are more efficient when it comes to adding a credit card to an account, overall, users were less thrilled with the experience.

2.3 Interaction Style

3 Shopzilla

3.1 Mental model

Looking at Shopzilla's main site, you can see that in their mental model users are inclined to type out what they are searching for. Like the previous two, this search bar is geared towards the users that have a specific agenda in mind when they are shopping. Although it serves the same purpose as Amazon's and eBay's search does, Shopzilla's search does not auto-complete like the others.

For the customers that are looking to browse for a product, they are presented with a table of categories under the search bar. These simply show what the top categories are for any given time. This feature is awesome because it can show what the most popular items are at a specific time, yet it does fall short in some sense. As opposed to Amazon and eBay, a shopper can't really have a history for Shopzilla to work with. So the idea of keeping track of what users might like doesn't really play out like it would for Amazon or eBay. There is no *my* Shopzilla.

Bewtween the search bar and main categories that Shopzilla has on their page, they adequately bridge the gap between the designer's mental model and the user's model. For the purpose of their site, they have completed the bridge between the two in a relatively strong fashion. If Shopzilla was keeping data of specific users in order to personalize a shopping experience, then their current site would not adress the gap between mental models well. But since they do not, the connection they have created fares well for how simple it is.

Shopzilla does not really address the third type of user is the same way that the other two do. Yes, shoppers can re-seach for a product they were thinking about. But, they do not provide options for remembering what they were exactly looking for earlier. This is where Amazon's *Wish lists* and eBay's *Lists* come into play.

3.2 Five key usability metrics

3.2.1 Learnability

In terms of learnability, Shopzilla's interface is quite simple and doesn't require much time to learn how to use their site. This is where Shopzilla excels compared to the other two shopping sites. Since they are a site that simply aggregates products, all they have to focus on is content presentation.

3.2.2 Efficiency

Shopzilla's efficiency is also quite high due to their site's simplicity. Once a user familiarizes themselves with Shopzilla's website, the act of being inefficient and the probability of inefficiency is quite low. When it came to list filtering, Shopzilla tore the competition down because they

3.2.3   Errors

Shozilla's site offers no room for real errors. The rate of errors is quite low. For example, in the test of narrowing down a product simply by using list filtering, Shopzilla dominated the test.

3.2.4   Memorability

Shopzilla's memorability is fairly high due to the sites simplicity. Is a user were to come back to Shopzilla's site and use it again after uite some time, there is nothing on their site to cause any issues with memorability.

3.2.5   Satisfaction

In terms of subjective satisfaction, Shopzilla fares slighlt less than the other two. Since we still live in a world where *flashy* and *glamourus* products prevail, it is not surprigsing that Shopzilla's relative satisfaction is less than our other two competitors.

3.3   Interaction Style

4   Summary

4.1   Mental models

4.2   Five key usability metrics

As an overall theme, a site's simplicity was very related to the way each performed in the usability metrics and how the designer and user communicated through their respective mental models.

Shopzilla's site's simplicity is very important for all of its usuability metrics and the way in which it utilizes its mental models. Shopzilla has a clear want for efficiency when their users use their site.

4.3   Interaction Style