Redesigning the Purchasing Process: Preventing Choice Overload to Maximize Satisfaction

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Rational decision-making is about maximizing benefits and minimizing losses. When it comes to purchasing, customers want to make the best choice without experiencing high cognitive load. But there is a tradeoff between finding the best option and expending the least amount of effort. This creates two types of people: satisficers and maximizers; while satisficers sacrifice finding the best option for a simpler search, maximizers commit to an extensive search to find the best option (Shiner, 2015). According to the expected-utility theory, people should be maximizers: choose the option with the highest utility, the best choice amongst the alternatives. As more options and alternatives become available, customers should be more likely to find the option that best fits their needs, and that should lead to more satisfaction. Instead, however, having more choices leads to choice overload.

Choice overload, or the paradox of choice, is when having more options increases the difficulty of making a decision, causing less satisfaction. This is because having more tasks increases cognitive workload, and too much cognitive workload decreases motivation, slows responses, and, most importantly, increases error, leading to poor choices. Choice overload turns maximizers into satisficers. But the word "satisficer" is a little misleading, because what people are actually doing is *settling*, and settling does not ensure satisfaction. So how can people make better choices and be more satisfied? The solution is simple: prevent choice overload.

In order to prevent choice overload, one must first identify the factors that contribute to choice overload. Some of these factors are time constraints, set similarity, and preference uncertainty. Luckily, these factors have simple solutions such as

efficiency, difference emphasis, and guidance. Therefore, with a couple changes, choice overload can be prevented and satisfaction can be maximized.

Time constraints increase task difficulty, which increases choice overload (Chernev, Böckenholt, & Goodman, 2016). In a study that varied the number of options and the time allotted to make a decision amongst those options, Haynes (2009) found that the most difficult and frustrating task was that in which participants were given more options and less time to make a decision. Chernev, Böckenholt, and Goodman (2016) supported this result in their meta-analysis of prior research, which included 99 observations and 7202 participants. Unfortunately, time is a variable that cannot always be controlled. As a result, a redesign of the purchasing process should be as efficient as possible to account for time constraints.

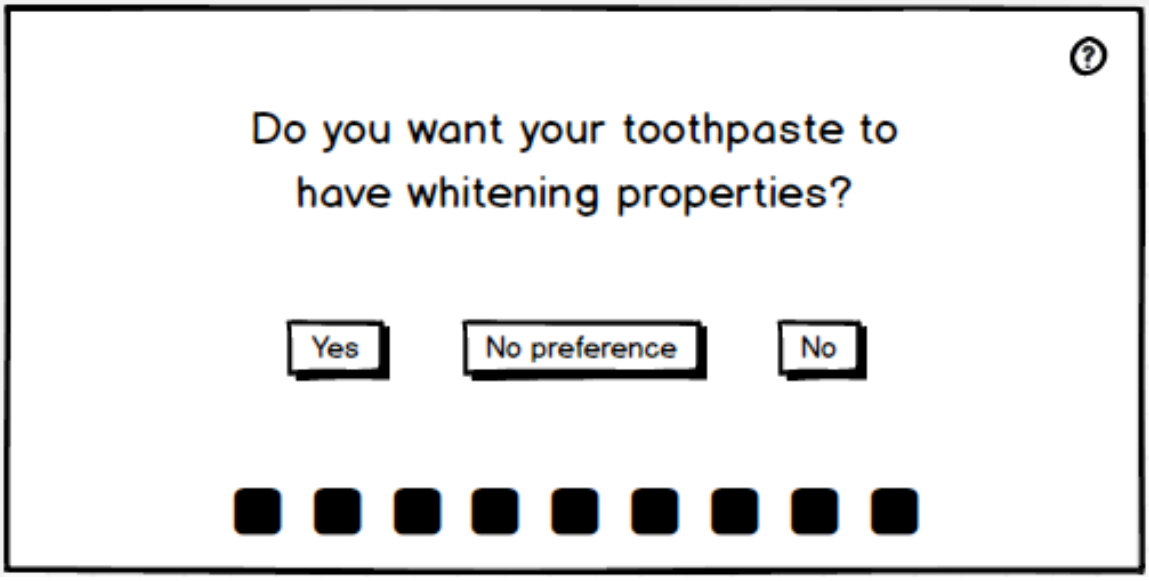
A similarity amongst the choices in a set may also be the cause of choice overload (Willemsen, Graus, & Knijnenburg, 2016). Willemsen, Graus, and Knijnenburg (2016) found that increasing the diversification of a set of movies increased the attractiveness of the set, participants' ease in making a decision amongst the set, and participants' satisfaction with their decision. One way to reduce similarity is to offer fewer choices so there is less overlap between them. This solution has support from Diehl and Poynor (2010) who postulated that the same item would be more satisfying coming from a smaller rather than a larger set because of an expectation-disconfirmation mechanism. In other words, a smaller set lowers the customer's expectations about being able to find what they want, so they are not as disappointed if they do not find what they want. But offering a smaller set to lower expectations is not a great solution for three reasons. First, although a smaller set allows the customer to easily find the best option amongst those

presented, it prevents the customer from finding the best possible option for them. Second, lowering expectations means customers will have to *settle*, which does not always lead to satisfaction. Third, not every customer will be willing to settle and will prefer to go elsewhere. This is inconvenient for the customer and unfortunate for the salesperson. A better solution would be to maintain a large assortment of items but make it clear that those items are not too similar. Therefore, a redesign of the purchasing process should emphasize how items in the set are different from each other to prevent choice overload as a result of perceived set similarity.

Finally, preference uncertainty, or not knowing what you want within a set, increases choice overload (Chernev, Böckenholt, & Goodman, 2016). The simplest solution is to just eliminate the person's ability to choose altogether. This solution is not without support. In their study at outpatient clinics, Wiseman, Chappell, Toerien, Shaw, Duncan, and Reuber (2016) interacted with 14 neurologists and 223 patients and found that patient satisfaction was greatest when patients were not given any choice for treatment. Patients preferred the decision to be made for them, influenced greatly by the diagnosis and symptoms of the medical condition. However, it is not always clear what the best choice for someone else is, and eliminating all choice threatens free will. A better solution would be for customers to receive recommendations from experts. In fact, many clothing store employees are hired to make suggestions and offer input to help shoppers make choices and be satisfied with their decisions. But this is not always an option. There is not a nutritionist waiting in the grocery store to help you make healthy choices, a foot therapist recommending a shoe for your particular arch, or a dentist waiting to tell you, "I think that toothpaste will work great on your teeth". Instead, the best solution seems to be

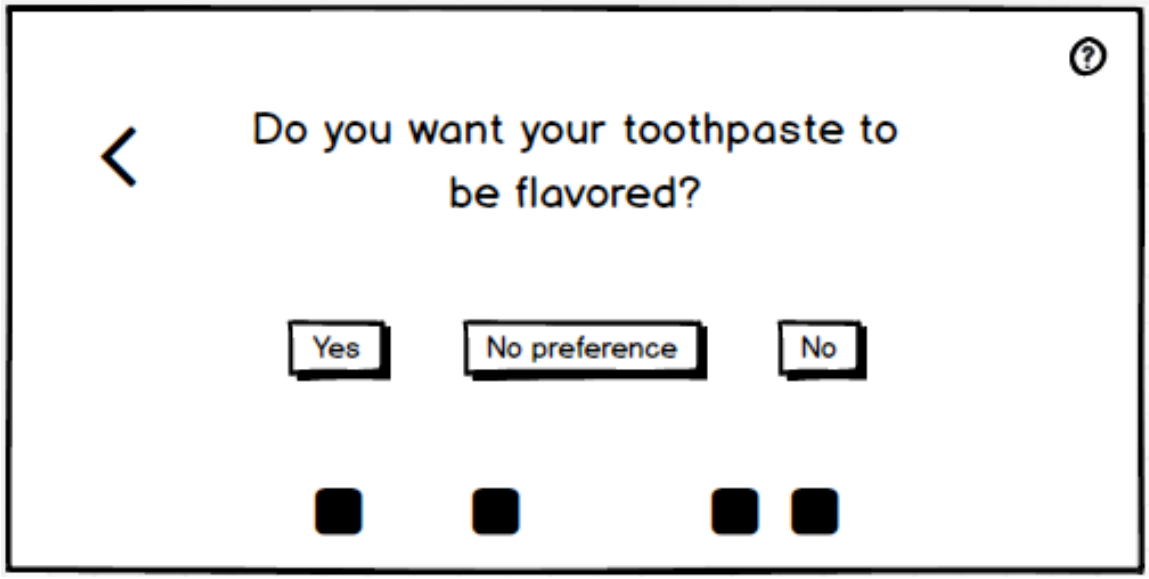
a system that offers guidance to help the customer establish what they want. Even though a customer may not know exactly what they want, they probably have ideas about certain aspects they prefer. Consequently, a redesign of the purchasing process should use those small preferences to find the best option.

Having established factors increasing choice overload and some possible solutions, it is time to redesign the purchasing process! The design must allow a user to go from many options to one distinct option, efficiently, without knowing for what the user is looking from the start. In order to do that, the system could ask the customer's preferences and filter the available options by their different aspects accordingly. For example, if the customer is buying toothpaste, the system might ask, "Do you want your toothpaste to have whitening properties?" with options for the user to respond, "Yes", "No", or "No Preference".

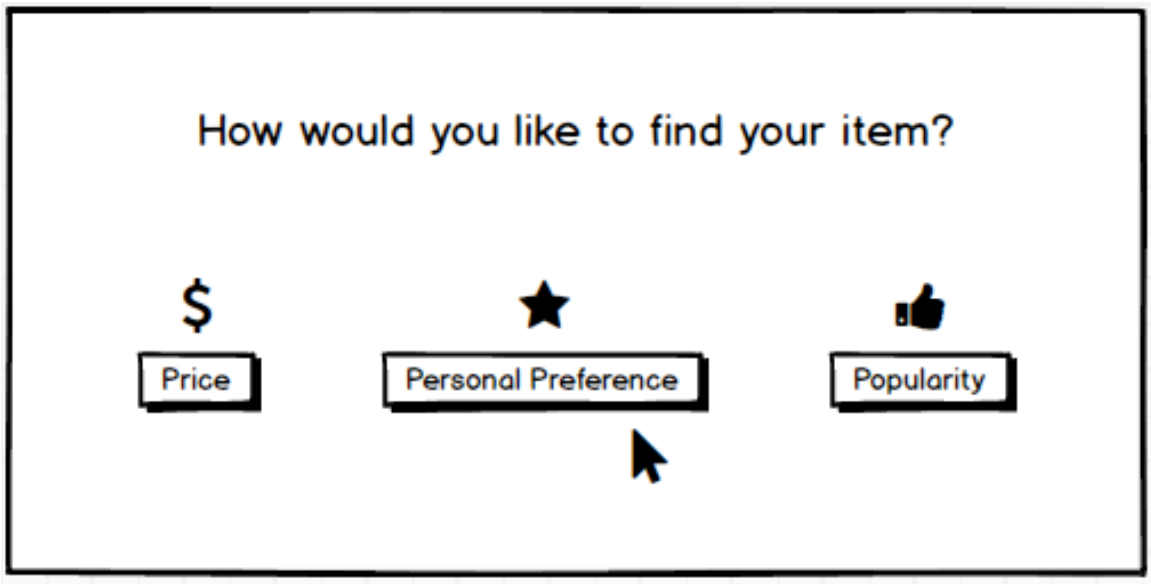


Then, based on that response, the system will narrow down the choices (displayed at the bottom of the screen) and ask another question, such as, "Do you want your toothpaste to

be flavored?" with the same response options.



Depending on the product, different criteria will be used. For example, clothes can be narrowed down by size, color, brand, and material. And if that is too overwhelming for the customer, there can also be an option to sort items by price or popularity.



These options would be especially useful if the user were under time constraints or struggling with chronic indecisiveness.

This design would handle the problems of time constraints, set similarity, and preference uncertainty by being efficient, emphasizing differences, and offering guidance. First, it would be efficient because the questions would be ordered in a way that would narrow down the options as quickly as possible. For instance, the system would filter pairs of shoes by size and then color because perhaps some colors are only available for shoes of a certain size, and the customer probably prefers a shoe that fits to a shoe in a specific color. Second, the design would emphasize how the options are different from each other because each question would eliminate options that do not meet the criteria. Third, the design would help guide the customer to the best option by asking relevant questions that are easy to answer. With these simple changes, choice overload is prevented and satisfaction can be maximized!

In designing this system, it is also important to consider the usability of the interface. First, the sequence of steps in the refining process should be clear—it would not make sense to ask the user if they preferred a mint or bubblegum flavor before asking if they wanted a flavored toothpaste. Second, the system should allow for user error. For example, if the user accidentally clicked “Yes” instead of “No”, or clicked “No Preference” and then changed their mind, they should be allowed to go back and remedy that error. Third, the system should allow the user to see the options change as they answer questions, so they know that they are making progress towards their goal. And, of course, the system should not rely on images, colors, or sounds—to accommodate users who are blind, colorblind, or deaf—and should include a help button to explain how to use the system or to clarify what each question is asking.

Engineering psychology and human factors are about discovering *why* people are unsatisfied with a system and *how* to use design to improve that interaction. In this case, I found out why choice overload decreases satisfaction and how to prevent it by redesigning the purchasing process. In the end, the goal of the redesign is not efficiency or usability; the goal is satisfaction. And that satisfaction is not only for the customer but for the user.

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