

Hope from Choosing among Sequentially (vs. Simultaneously) Presented Options Reduces
Choice Commitment and Satisfaction

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A series of laboratory and field experiments reveal a detrimental effect of presenting options sequentially (one at a time) versus simultaneously (all at once) on choosers' satisfaction with and commitment to their chosen option. When options are presented sequentially, choosers tend to develop an idealized option in their mind, hoping it will become available. However, when options are presented simultaneously, choosers tend to remain focused on the current set of options, thus being less likely to experience hope for an idealized option. This feeling of hope undermines how choosers experience their selected option, resulting in lower satisfaction and commitment levels. This effect persists regardless of which option individuals choose, whether sequentially passed-up options remain available, and whether sequential and simultaneous choosers have equivalent option information available—thus highlighting the role that a particular emotion can play in determining the impact of option presentation on the experience of one's selected option.

“A great source of calamity lies in regret and anticipation; therefore a person is wise who thinks of the present alone, regardless of the past or future.”

—Attributed to Oliver Goldsmith 1730-1774

In search of her fairytale wedding dress, an eager young bride-to-be enters a bridal boutique. She sees an assortment of beautiful white gowns displayed around the room. Thrilled, she starts comparing the cuts and styles of the various dresses, noticing the different fabrics and details. Once she has surveyed the assortment, she selects a handful of pretty gowns to try on. In seeing how they fit, one stands out as particularly gorgeous and becomes her clear favorite. If this young bride had instead entered the bridal boutique down the street, she would have been presented with the options in a different manner. Here, a saleswoman would have greeted her at the door and escorted her into a lavish dressing room. Then, the saleswoman would bring in the first gown. Trying it on, the bride finds that she loves the neckline and hopes the next one will be similar, but with a fuller skirt and in a different fabric. The next dress is in a nicer fabric, but the skirt is all wrong. As each gown is presented, the bride wonders what the next option will be and compares the current gown with the perfect wedding dress that she has begun constructing in her mind. Eventually she tries on a gown that is gorgeous. She likes it better than any that she has tried on so far, but she still hopes for her imagined perfect dress.

Like bridal salons, many retailers (online, as well as offline) must decide not only what assortment to present, but also *how* to present their assortment. Should they present their products simultaneously, like the first bridal boutique, or sequentially, like the second? Will consumers end up more satisfied with and committed to their choices having chosen from options presented all at once or one at a time?

This question is complementary to, yet distinct from, the considerable body of research spanning the fields of economics, operations, and marketing that has examined the search behavior of individuals presented with options sequentially (Gilbert and Mosteller 1966; Weitzman 1979). Researchers investigating what is often called the Secretary Problem (or the Marriage Problem) have developed formal rules for when choosers should select the current option versus continue searching in order to maximize their chance of selecting the top-ranked option (Ferguson 1989; Samuels 1991; Shu 2008; Zwick, et al. 2003). Perhaps not surprisingly, people do not naturally follow the objectively optimal strategy, but instead use heuristics in determining whether to continue their search (Seale and Rapoport 1997). Related work has examined which option in a sequence choosers tend to prefer, finding that individuals tend to choose and are willing to pay more for the first option presented (Mantonakis et al. 2009; Payne et al. 2000).

In contrast, the current studies control for search effects by presenting all participants with the same options, varying only their presentation style (simultaneous vs. sequential) in order to test how this affects how satisfied these individuals will feel with their chosen option and how committed they will be to it. The studies also control for positional effects by counterbalancing across participants the order in which options are presented. As a result, the current work departs from traditional marketing research that tends to focus on methods for influencing *which* option individuals will choose. Instead, our work builds on a growing body of research that focuses on how individuals subsequently experience and live with the decisions they make (Botti and Iyengar 2004; Carmon, Wertenbroch, and Zeelenberg 2003; Dijksterhuis and van Olden 2006; Mogilner, Rudnick, and Iyengar 2008; Wilson, Lisle, Schooler, Hodges, and LaFleur 1993). This approach benefits consumers and marketers alike, as higher levels of satisfaction with a product

reduce the number of product returns and help marketers cultivate ongoing relationships with their customers, motivating repeat purchases and positive word of mouth (Fournier 1998).

If presenting options sequentially does impact levels of satisfaction and commitment, what might drive these effects? Whereas previous work has examined the influence of memory, norms, and learning on individuals' evaluations of sequentially presented options (Carney and Banaji 2011; Mantonakis et al. 2009; Payne et al. 2000) here we examine the role that emotion, in particular hope, plays in driving choice commitment among sequential and simultaneous choosers.

To address these questions, we conducted a series of laboratory and field experiments in the choice domains of nail polish, wine, and gourmet chocolate. The results converge to reveal a detrimental effect of sequential (vs. simultaneous) option presentation on choosers' satisfaction and commitment to their chosen option. Our findings suggest that when options are presented sequentially, choosers are more likely to hope that an idealized option will become available. When options are presented simultaneously, however, choosers tend to remain focused on the current set of options, making simultaneous choosers less likely to hope for an idealized option. Our findings suggest that the hope induced from presenting options sequentially results in choosers being less satisfied with and committed to their chosen option, regardless of which option in a sequence individuals choose, whether sequentially passed-up options remain available, or whether sequential and simultaneous choosers have equivalent option information available,.

THE ROLE OF HOPE

The primary difference between sequentially and simultaneously presented choice sets is the presence of alternatives. In the case of sequentially presented options, one option is presented at a time, forcing choosers to evaluate that option relative to a reference in their mind. Prior research has shown that when individuals evaluate an option separately, they compare that option's set of attributes against those of a natural reference, perhaps derived from what their friend has or an average product in that category (Hsee and Leclerc 1998). In cases where options vary along an unspecified set of attributes and choosers know that a series of alternatives will become available in the future, the judgment becomes more complex. This complexity increases the likelihood that choosers will conjure an idealized reference option rather than a prototypical one (Griffin and Broniarczyk 2010). Thus, sequential choosers are likely to compare each option presented against the idealized option they have developed in their mind. In contrast, simultaneous choosers will remain focused on the fixed set of currently presented options, in line with the prominence effect, rather than expending the cognitive resources required to imagine other possible options (Fischer et al. 1999; Hsee, Dube, and Zhang 2008; Hsee and Leclerc 1998; Shiv and Huber 2000; Tversky and Kahneman 1973, 1974; Tversky, Sattah, and Slovic 1988).

The presence of alternatives thus makes the decision fairly certain when options are presented simultaneously: choosers can feel confident in selecting the best option from among those available. Sequentially presented choice sets, however, resign choosers to greater uncertainty. These choosers know that alternatives will become available in the future, but not what those alternatives will be. There is a possibility that an upcoming option will match the idealized option they are imagining, but it is also possible that the current option is the best they are going to get. Appraisal theory of emotions asserts that individuals experience emotions in response to their perception of a given situation, and certainty is a primary dimension that

determines which emotions will be evoked by a particular situation (Frijda, Kuipers, and Schure 1989; Roseman 1991; Smith and Ellsworth 1985). Because hope is the emotion elicited in situations that suggest a desirable but uncertain outcome (MacInnis and de Mello 2005), choosing from sequentially presented options is likely to evoke feelings of hope.

Hope is specifically defined as a "positive emotion that varies as a function of the degree of yearning for a goal congruent, future oriented outcome appraised as uncertain, yet possible" (MacInnis and Chun 2007). That is, hope is experienced as wanting (or yearning for) a potential outcome. Decades of research have shown that feeling hope has positive effects across domains of life, including academics, athletics, physical health, and overall happiness (Averill, Catlin, and Chon 1990; Lazarus 1999; Seligman 1975, 2002; Snyder 2000; Taylor et al. 2000). Even though uncertainty tends to be aversive, yearning for a particular outcome and the belief that the outcome is possible motivates individuals towards their desired outcome. More recently, hope has been distinguished from other closely related future-oriented emotions, such as hopefulness (Winterich and Haws 2011). Whereas hope relates to the degree to which one yearns for the possible outcome, hopefulness relates to how possible that outcome is believed to be (de Mello and MacInnis 2005; Nenkov, MacInnis, and Morrin 2009). Another closely related concept is optimism. However, whereas hope focuses on a particular desired outcome, optimism reflects a more generalized belief that all future outcomes are likely to be positive (MacInnis and Chun 2007; Norem and Chang 2001; Scheier and Carver 1985, 1987; Snyder et al. 1991). We specifically argue that it is hope that influences individuals choosing from sequentially presented options versus simultaneously presented options, because presenting options one at a time likely increases the extent to which individuals mentally elaborate on, and therefore desire, a potential idealized option as opposed to focusing on the currently available options. Notably, however,

hope and hopefulness are very closely tied, and we suspect that feeling hope (wanting an idealized option) will manifest in behaviors reflecting hopefulness (an expectation that this option will become available). For instance, if a chooser hopes for an idealized option she will also be more likely to pursue an action that allows for the possibility of obtaining that perfect option, such as switching to a yet-unknown option when given the opportunity.

Not only are sequential choosers more likely to feel hope than simultaneous choosers, but it is this yearning for an idealized option that we predict reduces sequential choosers' satisfaction with whatever option they select. This is because people's satisfaction with their chosen option depends less on the objective merits of that option, and more on how well that option fares against alternatives—real or imagined (Brehm 1956; Carmon, Wertenbroch, and Zeelenberg 2003). Indeed, prior research has demonstrated that when choosers remain focused on other possible options, they are less satisfied with the choices they make (Hafner, White, and Handley 2011; Markman, Gavanski, Sherman, and McMullen 1993). These choosers are also less likely to stick with their selected option when given the opportunity to switch (Hafner et al. 2011), suggesting that this dissatisfaction will further manifest in reduced commitment. Indeed, individuals' commitment to their romantic partners depends less on their partners' desirability than on the relative perceived desirability and focus on other potential partners (Gangé and Lydon 2001; Lydon et al. 1999; Johnson and Rusbult 1989; Rusbult, Martz, and Agnew 1998). We therefore predict that sequential choosers' hope for an idealized option will reduce their level of choice satisfaction, along with their level of commitment to their chosen option.

THE ROLE OF REGRET

Presenting options sequentially may not just pull choosers' attention toward an idealized option that could possibly become available in the future, but also towards better options that had been available in the past. In many sequential choice scenarios (such as a used car market or hiring an employee), options that are passed up tend not to remain available for long. Researchers investigating the Secretary Problem therefore structure sequential decision tasks so that an unselected option immediately becomes unavailable (Ferguson 1989; Gilbert and Mosteller 1966; Samuels 1991; Seale and Rapoport 1997; Shu 2008). With foregone options being particularly vivid, it is likely that sequential choosers will focus on these foregone options (in addition to their imagined ideal option) when assessing the quality of their ultimate choice. The emotion associated with this focus on the past is regret—a feeling of sorrow or disappointment that stems from focusing on alternatives that 'could have been' (Bell 1982; Kahneman and Miller 1986; Landman 1987; Miller, Turnbull, and McFarland 1990; Simonson 1992). Thus, in contexts where passed-up options become unavailable, regret (in addition to hope) may contribute to sequential choosers' reduced choice commitment (Abendroth and Diehl 2006).

Notably, however, there are also cases of sequentially presented options where unselected options remain available. For example, a house can sit on the market for a year or more during an economic downturn. Furthermore, in other cases, although choosers are presented with their options in sequence, there is no need for the chooser to communicate acceptance or rejection of each option as it is presented. A separate stream of research has examined these types of sequential choice tasks (Mantonakis et al. 2009; Payne et al. 2000). In these cases, regret poses little threat because the chooser can simply select a previously presented option when making his or her final decision. Hope, however, would still play a role. Therefore, whereas regret will only

be felt amongst sequential choosers for whom passed-up options become unavailable, hope will be felt by sequential choosers regardless of whether passed-up options remain available.

OVERVIEW

We hypothesize that choosing from sequentially presented options will lead to lower satisfaction and commitment levels than choosing from simultaneously presented options. We propose that this occurs because, unlike the simultaneous presentation of options where choosers remain focused on the known set of alternatives, the sequential presentation of options leads choosers to imagine and hope for an idealized option. Furthermore, this hope diminishes sequential choosers' satisfaction with and commitment to their choices. In sequential choice tasks where rejected options become unavailable, regret associated with foregone options should also contribute to choosers' reduced commitment and satisfaction.

We tested these predictions in the following series of studies. First, in a preliminary field experiment conducted at a nail salon, we tested the basic effect of presenting options (nail polish colors) either sequentially or simultaneously on participants' commitment to their chosen option. The effect's robustness was then tested in the lab (experiment 1), where participants were presented with gourmet chocolates to taste and their choice satisfaction and commitment measured. Experiment 1 also served as an initial examination into the role of hope, with the hope participants felt while choosing being manipulated between participants. In experiment 2, a field experiment conducted as a wine tasting event, we included two sequential conditions—one in which the passed-up options became unavailable and the other in which they remained available. This design enabled us to test for the role of hope, distinct from regret, in sequential choosers'

reduced commitment. In the final experiment (experiment 3), we varied only the method of presenting the options: when and how participants indicated their choice (and thus the option information available) was held constant between sequential and simultaneous choosers. This helped confirm that the previous studies' findings reflected an effect of option presentation, rather than method of indicating one's choice. In this lab experiment we also manipulated participants' cognitive load during the decision task. Because imagining another option requires cognitive resources (Hafner et al. 2011; Ward and Mann 2000), this served to provide additional insight into the role of hope in reducing sequential choosers' satisfaction and commitment.

PILOT STUDY: THE MANICURE STUDY

Testing for the basic effect of presenting options sequentially versus simultaneously on choice commitment, this pilot study was a field experiment conducted at a nail salon in the context of choosing a nail polish color for a manicure. Because manicures are conspicuous and last more than a week, women tend to view the task of choosing a nail polish color as a fairly consequential choice.

Method

At a nail salon, 39 women between the ages of 19 and 57 ($M = 25$) received a free manicure for participation in the study. Upon arriving at the salon, each participant was instructed to choose a nail polish color for her manicure from the following options: burgundy, red, pink, sheer pink, and sheer beige.

Participants were randomly assigned to either the simultaneous or the sequential condition. In the simultaneous condition, bottles of all five nail polish colors were presented at the same time on a tray and the participant was instructed to choose one for her manicure. In the sequential condition, participants were told that there were five color options but were presented with the options one at a time, with no knowledge of what colors would subsequently be presented, and were instructed to decide whether to choose or reject each option before being shown the next option. Although participants in the sequential condition who selected a color early in the sequence were shown the remaining options, their decisions were final—they could neither go back to a previous option nor switch to a subsequently presented color. In both conditions, the order in which the colors were presented was counterbalanced across participants.

Participants' choice commitment was measured and their satisfaction was inferred by whether they subsequently stuck with or switched away from their chosen option when given the opportunity (Wilson et al. 1993). Specifically, after receiving a manicure with her chosen color, each participant was offered a free bottle of nail polish. She could either stick with her previously chosen manicure color or she could switch to one of the other four colors for her free bottle of nail polish.

Results and Discussion

As predicted, participants who chose from sequentially presented options were less committed to their originally chosen option than participants who chose from simultaneously presented options. In the sequential condition, 57% switched from their chosen manicure colors when selecting their free bottles of nail polish; whereas only 17% in the simultaneous condition

switched ($\chi^2 = 6.71, p = .01$). Put differently, 83% of participants in the simultaneous condition demonstrated commitment by sticking to their original choices, compared to only 43% in the sequential condition.

These results provide preliminary evidence for the detrimental effect of presenting options sequentially. In the subsequent studies we examine why this effect occurs by testing for the role of hope through moderation (experiment 1), mediation (experiment 2), and limiting participants' ability to imagine an idealized option through cognitive load (experiment 3).

We also alter the decision task and switching measure to test for an alternative explanation: participants in the sequential condition may have simply gotten stuck with an objectively worse option, thus leading them to switch to one of the other alternatives given the opportunity. That is, in this pilot study, choosers in the sequential condition were only allowed to choose the currently presented option without knowing the subsequent options in the sequence and without the ability to select a previously rejected option. Furthermore, if a sequential chooser were to select an option presented early in the sequence, she was subsequently exposed to all remaining options, thus learning if a better option followed. Since commitment was measured by giving participants the opportunity to switch from her originally chosen option to another option in the original choice set, sequential choosers may have been more likely to switch to one of those other options because she learned that her chosen option was objectively worse than at least one of the alternatives. In the following experiments, we examine whether this alternative account explains sequential choosers' reduced commitment by allowing participants to either switch to one of the other known options in the original choice set or to a yet *unknown* option. If sequential choosers are more likely to switch to an unknown future option, this would suggest that their lack of commitment reflects them feeling hopeful for a

better option to become available in the future, and not merely having gotten stuck with an option that was objectively worse than the alternatives. Experiments 2 and 3 also include sequential conditions that are more flexible, such that passed-up options remain available so as to reduce the possibility that sequential choosers get stuck with an objectively worse option by not having equivalent knowledge of the available options as simultaneous choosers when making their selection.

EXPERIMENT 1: THE CHOCOLATE STUDY

Experiment 1 was conducted with three primary objectives: 1) to assess the robustness of the effect by examining choosers' commitment in another domain—gourmet chocolates, 2) to gain insight into why individuals choosing from sequentially presented options exhibit lower choice commitment, and 3) to explicitly measure the effect of option presentation on satisfaction.

We theorized that unlike simultaneously presented options, presenting options sequentially leads choosers to focus on the possibility that an idealized option may be out there, and this hope reduces sequential choosers' commitment to their chosen option. Experiment 1 tested for this theorized role of hope by manipulating whether participants felt hope during the decision process. If feeling hope does contribute to sequential choosers' reduced commitment, then simultaneous choosers who are also made to feel hope should exhibit similarly low levels of commitment as sequential choosers. This experiment thus followed a 2 (prime: hope vs. control) x 2 (option presentation: sequential vs. simultaneous) between-subjects design.

To assess whether these feelings of hope manifest in more hopeful behavior, this experiment involved a modified measure of commitment. After choosers had made their

selection from the original choice set, they were later given the opportunity to switch to either one of the other options in the original choice set (like in the Manicure Study) or to a new—albeit *unknown*—future option. In other words, participants were not given any information about the newly offered option before deciding whether to switch from or stick to their original choice. If sequentially presented choice sets induce hope, we would expect sequential choosers to be more likely to switch to the unknown future option than simultaneous choosers. Such a finding would also serve to rule out the alternative explanation that sequential choosers' reduced commitment in the Manicure Study merely reflected having gotten stuck with an objectively worse option, in which case they would be more likely to switch to one of the other known options.

In the pilot study, we inferred choice satisfaction from individuals' choice commitment. Although commitment is a strong behavioral indicator of how satisfied people are with their choices, in this next study we also explicitly measured participants' satisfaction with their chosen option. We predicted that reported satisfaction would show the same pattern as participants' tendencies to stick with their originally chosen option.

Method

Participants. One hundred ninety-eight individuals participated in a Chocolate Study conducted in a university behavioral lab to earn \$10. The participants were 60% female and ranged in age from 18-38 ($M = 20$).

Procedure. Prior to beginning the Chocolate Study, participants were presented with an ostensibly unrelated study that served to prime hope or a control condition. Participants were

randomly assigned to either reflect on and describe a time they felt full of hope (Bless et al. 1990) or to describe a neutral topic (the path they traveled leaving home that morning; Vohs and Heatherton 2001).

Next, in the Chocolate Study, participants were informed that they would be presented with an assortment of five gourmet chocolate options. Participants were randomly assigned to either the simultaneous condition or the sequential condition. Those in the simultaneous condition were instructed that they would be presented with the five options at the same time. Those in the sequential condition were instructed that the options would be presented one at a time, and they would only be able to choose the current option—not one previously passed up or one that was still to come. Participants were to choose one of these chocolates to taste. To make the choice more consequential, participants would also be entered to win a 25-piece box of their chosen chocolate. To eliminate the possibility that participants would deduce anything about each option's quality based on the order of presentation, the participants were explicitly told that the five options had been randomly selected from the extensive assortment offered at a local gourmet chocolate shop and would be presented in random order, which they were. Altering the order in which the chocolates were presented was important so as to ensure that any effect on choice commitment was caused by the sequential versus simultaneous manipulation and not the position of the chocolate in the sequence (Mantonakis et al. 2009; Payne et al. 2000).

The names and descriptions of the chocolate options were then presented on the computer either simultaneously or sequentially: “Figaro—half milk, half dark praline meltaway encased in a dark shell”; “Orinoco—creamy milk chocolate varietal ganache in a dark shell, hand-painted with colored cocoa butter”; “Bangkok—green tea based ganache with coconut, lemongrass, and ginger”; “Marquise—milk chocolate ganache with vanilla flavor”; and “Paris—dark chocolate

ganache made with our own black tea, with hints of citrus and vanilla.” After participants indicated their choice, the experimenter gave participants a piece of their chosen chocolate.

After eating the chocolate, participants completed a survey. They were asked to rate on a seven-point scale (1 = *not at all satisfied*, 7 = *very satisfied*) how satisfied they were with the chocolate they had chosen. Along with other ancillary measures, we also checked whether hope was activated in line with our conceptualization by asking participants to rate (1 = *not at all*, 7 = *very much*) the extent to which they experienced hope during the decision process.

After completing the survey, participants were reminded that they would be entered into a drawing for the chance to win a 25-piece box of the chocolate they had chosen. Akin to the previous study, as a behavioral measure of choice commitment, participants were given the opportunity to either stick to or switch away from their chosen chocolate for this drawing. Unlike in the previous study, however, they were given the additional option of switching to either one of the other options in the original choice set or to a new unknown option. Specifically, they could a) stick with a box of their originally chosen chocolate (which would reflect high commitment); b) switch to one of the other chocolates in the original choice set that were again listed along with their descriptions; or c) switch to a box of Mozarts—another chocolate with no description provided. Participants were explicitly told that this additional option had been randomly selected from the same chocolate shop to ensure that participants’ decisions to switch was not based on an assumption that Mozarts were offered separately because they were special in some way. To gain further insight into the role of hope, we included an additional measure that addressed the closely related feeling of hopefulness: once participants made their decision to stick or switch, they were asked to rate how they expected the unknown Mozart chocolate to taste compared to their originally chosen chocolate (-3 = *much worse than my chosen chocolate*,

0 = *the same as my chosen chocolate*, +3 = *much better than my chosen chocolate*). Upon completing the study, participants were thanked and paid. One randomly selected participant received a 25-piece box of the chocolate they ultimately chose.

Results and Discussion

To check whether the hope manipulation was effective, a 2 (prime) x 2 (option presentation) ANOVA was conducted on participants' reported feelings of hope during the decision task. The resulting interaction ($F(1, 194) = 3.73, p = .05$) suggests that the prime had the intended effect and is consistent with our theory that presenting options sequentially makes choosers feel hope. Specifically, contrasts showed that among participants in the control condition, sequential choosers ($M = 4.82$) felt more hope than simultaneous choosers ($M = 3.74$; $F(1, 194) = 9.04, p < .01$); however, among those primed to feel hope, simultaneous choosers ($M = 4.52$) experienced an equally high level of hope during the decision task as sequential choosers ($M = 4.62$; $F(1, 194) = .07, p = .79$).

Next, to test whether the prime and method of option presentation influenced chooser satisfaction, a 2 (prime) x 2 (option presentation) ANOVA was conducted on participants' reported satisfaction with their chosen chocolate. The results revealed the predicted interaction ($F(1, 194) = 4.23, p < .05$). Planned contrasts showed that among those in the control condition, participants presented with their options sequentially ($M = 5.63$) were less satisfied with their choice than those presented with their options simultaneously ($M = 6.18$; $F(1, 194) = 4.35, p < .05$). Notably however, among those primed to feel hope, simultaneous choosers ($M = 5.64$) reported equally low levels of satisfaction as sequential choosers ($M = 5.85$; $F(1, 194) = .68, p =$

.41). Indeed, among those in the simultaneous conditions, those primed with hope ($M = 5.64$) were less satisfied than those in the control condition ($M = 6.18$; $F(1, 194) = 4.45, p < .05$).

These results support our proposition that greater feelings of hope are responsible for sequential choosers' reduced satisfaction.

Insert Table 1 about here

Then, like in the Manicure Study, we tested whether the method of option presentation impacted individuals' commitment to their originally chosen option. See table 1 for participants' switching behavior. First, to assess participants' commitment, a logistic regression was conducted on participants' decision to stick with their original choice. The results revealed a main effect of decision task ($Wald(1) = 6.41, p = .01$), whereby sequential choosers were less likely to stick with their originally chosen option than simultaneous choosers. A closer examination revealed that in the control condition, sequential choosers (29%) were less likely to stick with their chosen option than were simultaneous choosers (54%; $\chi^2(1) = 6.60, p = .01$). However, among those primed to feel hope, there was not a significant difference between sequential choosers' (32%) and simultaneous choosers' (42%) likelihood to stick to their original choice ($\chi^2(1) = 1.14, p = .29$). These results are thus consistent with those of the previous study in a different choice domain: individuals presented with options sequentially tend to be less committed to their decision than individuals presented with options simultaneously. This was not the case, however, when simultaneous choosers were led to feel hope, implying that hope plays a role in sequential choosers' reduced commitment.

Next, we assessed the extent to which switching away from one's originally chosen option reflected merely having gotten stuck with a bad option in the assortment or hopefulness. We thus conducted a logistic regression on participants' decisions to switch to the unknown option. The results revealed a significant interaction ($Wald(1) = 5.99, p = .01$) and a main effect of decision task ($Wald(1) = 6.77, p < .01$), whereby sequential choosers were more likely to switch to the unknown option than simultaneous choosers. A closer examination showed that only among those in the control condition were sequential choosers (24%) more likely to switch to the unknown option than simultaneous choosers (2%; $\chi^2(1) = 10.97, p = .001$). Among those primed to feel hope, simultaneous choosers (29%) were as likely to switch to the unknown option as sequential choosers (28%; $\chi^2(1) = .02, p = .90$). We also examined the conditional probabilities, which similarly showed that of those who switched in the control condition, 34% of sequential choosers switched to the unknown option instead of to one of the known options, whereas only 4% of simultaneous choosers did. Among the switchers who were primed with hope, 41% of sequential choosers switched to the unknown option, and 50% of simultaneous choosers did. Together, these results support our theory that the low commitment exhibited among sequential choosers is driven by increased hope and manifests in feeling hopeful that the unknown option more closely matches their idealized option. Not only were simultaneous choosers as likely to switch as sequential choosers when they were primed to feel hope, but the switching exhibited among these choosers tended to be towards an unknown future option. These findings also suggest that sequential choosers' lower commitment exhibited both here and in the Manicure Study is not based on their merely having gotten stuck with an objectively bad option within the assortment, or else they would have been more likely than simultaneous choosers to switch to one of the other known options.

To further examine choosers' hopefulness, we conducted a 2 (prime) x 2 (option presentation) ANOVA on participants' reported beliefs that the unknown option (i.e., a Mozart chocolate) would be better than their originally chosen chocolate. The results revealed a marginal main effect of prime whereby those primed to feel hope ($M = .13$) believed that the unknown option would be better than their chosen chocolate, whereas those in the control condition ($M = -.15$) believed the unknown option would be worse ($F(1, 194) = 3.07, p = .08$). There was also a significant interaction effect ($F(1, 194) = 4.01, p < .05$) suggesting this was influenced by the presentation of options. Among those in the control condition, sequential choosers ($M = .08$) believed the unknown option would be more desirable than did the simultaneous choosers ($M = -.38; F(1, 194) = 4.30, p < .05$); however, among those primed to feel hope, sequential choosers ($M = .04$) and simultaneous choosers ($M = .21$) did not differ in their beliefs about the unknown option ($F(1, 194) = .57, p = .45$). These results further suggest that choosers' hope for an idealized option plays out in their hopefulness that it will become available. Compared to presenting options simultaneously, presenting options sequentially increases choosers' tendencies to believe that the unknown future option may in fact be closer to ideal.

EXPERIMENT 2: THE WINE TASTING STUDY

This next study was a field experiment conducted as a wine tasting, which allowed us to test for the effect of presenting options sequentially versus simultaneously in yet another choice domain. More importantly, experiment 2 builds on the previous two studies by further exploring the underlying role of feeling hope in two ways. First, in this experiment, we measured (rather than manipulated) the extent to which participants felt hope during the decision process, which

allowed us to test for mediation. Second, we honed in on the role of hope (vs. regret) by including a more “flexible” sequential condition in which passed-up options remained available throughout the decision task. In both of the previous two studies, the passed-up options became unavailable, making it possible that both regret from passing up a good option and hope for a better option contributed to sequential choosers’ reduced commitment. Adding a sequential choice condition in which choosers could go back and select a previously passed-up option allowed us to test whether sequential choosers would still be less committed than simultaneous choosers despite the absence of regret. Thus, this experiment followed a one factor (option presentation), three level (simultaneous vs. strict sequential vs. flexible sequential) between-subjects design.

Method

Participants. One hundred twenty-nine members of a business school community (83% students and 17% staff) participated in a wine tasting study in exchange for their choice of a free bottle of wine. The participants were 57% female, and ranged in age from 21-65 ($M = 29$).

Procedure. The experiment consisted of a 12 minute wine tasting event, during which participants tasted 2 oz. samples of four Italian red wines and chose their favorite for their free bottle. The four wines had been selected by a wine expert to be comparable in quality and price. The wine samples were poured from bottles that were covered with paper bags to remove any influence of the labels, and the order in which the options were presented was counterbalanced. Again, altering the order in which the wines were presented was important so as to ensure that any effect on choice commitment was caused by the sequential versus simultaneous

manipulation and not the position of the participants' preferred wine in the sequence (Mantonakis et al. 2009; Payne et al. 2000).

Participants were randomly assigned to one of three option presentation conditions: simultaneous, strict-sequential (i.e., could not go back to passed-up options), or flexible-sequential (i.e., could go back to passed-up options). In the simultaneous condition, the four wine samples were poured and presented at the same time, allowing participants to sample across the wine options as they pleased before making their choice. In the strict-sequential condition, participants were poured one sample of wine to taste at a time, and after each tasting, they were asked to irrevocably choose or reject that option. The flexible-sequential condition was similar to the strict sequential condition in that participants were poured one sample of wine to taste at a time, except that participants could pick a previously tasted wine when indicating their final choice. In fact, participants in this flexible-sequential condition could hold off on making their selection until they had tasted all four wines, so the difference between this and the simultaneous condition was simply the method of option presentation and not the method of choosing. In order to equalize the amount of available information about the alternatives across the three conditions before measuring commitment, participants were informed that regardless of which option in the sequence they chose, they would taste all four of the wines. Therefore, even if participants in either of the sequential conditions selected one of the first three wines presented, they would continue to taste the remaining wines.

After participants tasted all of the wines and chose that for their free bottle, they completed a brief survey about their feelings during the decision process. Embedded in a series of ancillary questions, participants were asked to rate on a seven-point scale (1 = *not at all*, 7 =

very much) the extent to which they had been “hoping for a better option” and the extent to which they “experienced regret.”

Choice commitment was measured at the very end of the study. Just as participants were about to leave, they were unexpectedly told that there was an additional wine that would not be available for tasting. Participants were then given three options: they could stick with their chosen wine, switch to any of the previously tasted wines, or switch to the unknown wine. Sticking with one’s initially chosen wine indicated commitment to one’s choice. Switching to the unknown option served both as a behavioral indicator of feeling hopeful and helped further rule out the alternative account for the Manicure Study whereby sequential choosers got stuck with an objectively bad option. At the end of the experiment, participants were thanked and given a bottle of the wine on which they had finally settled.

Results and Discussion

Commitment. Participants presented with options simultaneously were more committed to their chosen option than participants presented with options sequentially, irrespective of whether the sequential choosers could select a previously passed-up option. Specifically, choosers in the simultaneous condition were significantly more likely to stick to their chosen option (84%) than choosers in either the strict-sequential condition (40%; $\chi^2 = 16.93, p < .001$) or the flexible-sequential condition (65%; $\chi^2 = 3.97, p < .05$). Those in the strict sequential condition were even less likely to stick to their chosen option than those in the flexible-sequential condition ($\chi^2 = 5.07, p < .05$). See table 2 for participants’ switching behavior by condition.

Furthermore, sequential choosers' switching behavior did not appear to reflect having gotten stuck with an objectively worse option within the choice set. Those who switched away from their original choice tended to switch to the unknown future option rather than to one of the other three options in the original choice set. Compared to participants in the simultaneous condition (16%), both those in the strict-sequential condition (50%; $\chi^2 = 10.74, p = .001$) and those in the flexible-sequential condition (35%; $\chi^2 = 3.97, p < .05$) were more likely to switch to the unknown option. Participants in the two sequential conditions did not differ in their likelihood to switch to the unknown option ($\chi^2 = 2.04, p = .15$). In fact, 100% of the switchers in the flexible sequential condition switched to the unknown option, as did 83% of switchers in the strict sequential condition. These results support our proposal that sequential choosers' lower commitment level stems from hope for a better future option.

Insert Table 2 about here

Hope and Regret. To further explore the reason for sequential choosers' reduced commitment, we examined the emotions participants reported to have felt during the decision process. An ANOVA showed that the method of option presentation had a significant effect on participants' hope for a better option ($F(1, 128) = 18.03, p < .001$). Contrasts further showed that compared to participants in the simultaneous condition ($M = 3.60$), participants in both the strict sequential condition ($M = 5.50; t(126) = 5.68, p < .001$) and the flexible sequential condition ($M = 5.07; t(126) = 4.53, p < .001$) felt more hope. Participants in the two sequential conditions felt equally high levels of hope ($t(126) = 1.32, p = .19$).

Another ANOVA showed that method of option presentation also had a significant effect on participants' experienced regret during the decision process ($F(1, 128) = 10.20, p < .001$). Participants in the strict sequential condition ($M = 3.20$) experienced more regret than participants in either the flexible sequential condition ($M = 2.02; t(126) = 3.98, p < .001$) or the simultaneous condition ($M = 2.02; t(126) = 3.91, p < .001$). Participants in the flexible sequential and the simultaneous conditions did not differ in their levels of regret ($t(126) = .01, p = 1.00$). To summarize, whereas higher levels of hope were reported among participants in both sequential conditions, regret was only higher among those in the strict sequential condition (see table 3).

Insert Table 3 about here

To test whether the emotions of hope and regret caused sequential choosers' reduced commitment, we next conducted a mediation analysis (Preacher and Hayes 2008). In the model, we focused on the effect of presenting options simultaneously versus sequentially on participants' likelihood of switching away from their original choice, with hope and regret as mediators. The bootstrap results showed the mean indirect effects through each mediator to be significant: The coefficient of the indirect path through hope was .55 with a 95% confidence interval excluding zero (.14 to 1.30), and the coefficient of the indirect path through regret was .30 with a 95% confidence interval excluding zero (.02 to .75). The direct effect of option presentation on likelihood to switch was marginal ($p = .06$), suggestive of indirect-only mediation, which is the form of mediation that is consistent with full mediation in Baron and Kenny's (1986) procedure. Thus, hope and regret each appeared to play a role in sequential choosers' reduced commitment, with the driving role of hope being slightly stronger.

Together these results suggest that presenting options sequentially (irrespective of whether passed-up options remain available) leads to lower choice commitment than presenting options simultaneously. Furthermore, as evidenced by sequential choosers' tendency to switch to an option outside of the original choice set, their switching behavior reflected feeling hopeful that the future option would be better than the current ones, rather than having gotten stuck with an objectively worse option early in the sequence. Indeed, a mediation analysis provided additional support for the driving role of hope, distinct from regret, in reducing sequential choosers' reduced commitment. In the next experiment, we look to further understand how hope plays out to impact choosers' commitment.

EXPERIMENT 3: ELABORATION AND HOPE

The two previous experiments provide mounting evidence to suggest that hope underlies the detrimental effect of presenting options sequentially (vs. simultaneously) on choosers' commitment. In experiment 1, we manipulated hope and found that when simultaneous choosers felt hope, they exhibited equally low levels of commitment as sequential choosers. In experiment 2, we measured choosers' hope and found that presenting options sequentially resulted in greater feelings of hope than presenting options simultaneously, and (distinct from regret) this emotion mediated the effect on choosers' commitment. The results of these two studies are consistent with our theory: presenting options sequentially makes choosers more likely to imagine and hope for an idealized option, and this hope makes individuals less satisfied with and committed to their chosen option. In contrast, presenting options simultaneously keeps choosers' imaginations from wandering to an idealized option, restricting their attention to the options in front of them.

In this final experiment, we further tested this theory by influencing participants' ability to imagine an idealized option. That is, we manipulated the amount of elaboration participants could engage in during the choosing task. If the sequential presentation of options indeed encourages choosers to imagine an idealized option and to hope for it, increasing sequential choosers' cognitive load would reduce their ability to elaborate in this way, thus restricting their attention to the options in front of them. We, therefore, predict that sequential choosers in a high cognitive load condition will show equally high levels of commitment as simultaneous choosers, but that the difference between sequential and simultaneous choosers found in the previous studies will persist in a low cognitive load condition. This experiment thus followed a 2 (cognitive load: low vs. high) x 2 (option presentation: sequential vs. simultaneous) between-subjects design.

In this final experiment, we also modified the sequential condition to ensure that the effect is one of option presentation, rather than the choice task. We employed a similar paradigm as experiment 1, in which participants chose a gourmet chocolate to taste; however, in this experiment's sequential condition the options were presented one at a time and participants did not make their choice until all five options had been presented. Therefore, like in the flexible sequential condition in the Wine Tasting Study, choosers did not risk feeling regret from passing up a good option. Furthermore, choosers in the simultaneous and sequential conditions had the same amount of information available to them when making their selection, and there was no realistic hope for a better option to become available for choosers in either condition. This design thus offers a more subtle test of whether simply presenting options one at a time (vs. all at once) leads one to imagine and hope for an idealized option and thus reduce satisfaction and commitment.

Method

Participants. Eighty-seven individuals participated in this Chocolate Study, which was conducted in a university behavioral lab, to earn \$10. The participants were 62% female, and ranged in age from 18-38 ($M = 22$).

Procedure. To manipulate the cognitive resources participants had available to elaborate while choosing, participants were first presented with either a two digit number (low cognitive load) or a 10 digit number (high cognitive load) that they had to remember for the duration of the study (Shiv and Fedorikhin 1999; McFerran, Dahl, Fitzsimons, and Morales 2010). Participants were told that the study tested how making decisions influences memory. Then, following a similar procedure as experiment 2, participants began the Chocolate Study. They were presented with the names and descriptions of five chocolates from a local gourmet chocolate shop and were instructed to choose one to taste: “St. Malo—dark chocolate shell filled with gold caramel sugar, topped with fleur de sel”; “Waikiki—dark chocolate ganache with a blend of coconut, pineapple, and passion fruit”; “Queen Elizabeth—dark chocolate ganache infused with black current tea”; “Naranjito—milk chocolate with honey and orange flavor”; and “The Georgian—milk chocolate with a creamy peanut butter praline.” The options were explicitly presented in random order across participants.

In the simultaneous condition, the five options were presented at the same time. In the sequential condition, the five options were presented one at a time, and participants clicked “next” in order to be shown the next option in the sequence. That is, unlike the sequential conditions in the previous studies, participants in this condition were not given the option to

choose yes or no as each option was presented. Instead, participants did not report their choice until all five options had been presented. Thus, the simultaneous and sequential conditions only differed in the method by which the options were presented, not in the method by which participants made their choice. This design additionally helps to conclusively rule out the alternative explanation from the Manicure Study, in which it could be argued that the sequential choosers simply got stuck with objectively worse options than simultaneous choosers from not knowing what options were available when making their choice.

Participants tasted a piece of their chosen chocolate and, using the same measure as in experiment 1, reported their satisfaction with their choice. To check whether the elaboration manipulation influenced participants' ability to imagine an idealized chocolate option, hoping that it would become available, participants were asked to consider their experience while selecting their chocolate and to rate (1 = *not at all*, 7 = *very much*) the extent to which they had been "imagining the most perfect chocolate possible," "yearning for a more perfect chocolate," and "hoping for a more perfect chocolate option." Responses on these three items were averaged to create an index of hope ($\alpha = .76$). To test whether the method of option presentation influenced other emotions in addition to hope, participants also reported their mood using the PANAS scale (Watson, Clark, and Tellegen 1988) as well as the extent to which they experienced anticipated regret, fear, happiness, and excitement while selecting their chocolate (1 = *not at all*, 7 = *very much*).

After completing the survey, participants were reminded that they would be entered into a drawing with the chance to win a 25-piece box of their chosen chocolate. Like in the previous studies, as a measure of choice commitment, participants were then given the opportunity to change their choice of chocolate for this drawing. Specifically, they could stick with a box of

their originally chosen chocolate; they could switch to one of the other chocolates in the original choice set (the names and descriptions of the five options were again listed); or they could switch to a box of an unknown chocolate. Only the name of this chocolate was provided (Troubador), not its description. Participants were told that Troubador had been randomly selected from the same gourmet chocolate shop, so that participants' decisions to switch to the unknown option would not reflect an assumption that it was offered separately because it was special in some way. Once participants made their decision to stick to or switch away from their originally chosen chocolate, they were asked to rate how they expected a Troubador chocolate to taste compared to their originally chosen chocolate ($-3 = \textit{much worse than my chosen chocolate}$, $0 = \textit{the same as my chosen chocolate}$, $+3 = \textit{much better than my chosen chocolate}$). Upon completing the study, participants were thanked and paid. One randomly selected participant received a 25-piece box of the chocolate they ultimately chose.

Results and Discussion

To check whether the cognitive load manipulation influenced participants' ability to elaborate on an idealized option, a 2 (cognitive load) x 2 (option presentation) ANOVA was conducted on the hope index, reflecting participants' imagining, hope, and yearning for an idealized chocolate option. The resulting interaction ($F(1, 83) = 6.19, p = .02$) suggests that the elaboration manipulation had the predicted effect. Indeed, contrasts revealed that among participants in the low cognitive load condition, sequential choosers ($M = 5.23$) reported greater hope than simultaneous choosers ($M = 3.88; F(1, 83) = 7.47, p = .008$); however, among those under high cognitive load, sequential choosers ($M = 4.14$) reported equally low levels of hope as

simultaneous choosers ($M = 4.44$; $F(1, 83) = .48, p = .49$). These results suggest that the sequential presentation of options tends to lead choosers to imagine and hope for an idealized option, but this process is contingent on having cognitive resources available. Without sufficient resources, their experience choosing is comparable to that of individuals presented with their options simultaneously. Notably, an examination of participants' overall mood, as well as their happiness, excitement, fear, and anticipated regret during the selection process revealed no main effects ($ps > .10$) and no interaction effects ($ps > .10$). This suggests that it is indeed hope, and not other emotions, that is elicited by the sequential (vs. simultaneous) presentation of options.

We next examined the effect on satisfaction using a 2 (cognitive load) x 2 (option presentation) ANOVA. The results revealed a main effect of presentation method, whereby those presented with the options sequentially ($M = 5.65$) were less satisfied with their chosen chocolate than those presented with the options simultaneously ($M = 6.22$; $F(1, 83) = 6.32, p = .01$). There was also a marginal interaction effect ($F(1, 83) = 2.93, p = .09$) indicating that the main effect was moderated by cognitive load. A closer look reveals that among those under low cognitive load, sequential choosers ($M = 5.37$) choosers were indeed less satisfied than simultaneous choosers ($M = 6.40$; $F(1, 83) = 8.15, p = .005$); however, among those under high cognitive load, sequential chooser ($M = 5.85$) and simultaneous choosers ($M = 6.05$) were equally satisfied ($F(1, 83) = .356, p = .55$). This suggests that sequential choosers' tendencies to elaborate on an idealized option may contribute to their lower satisfaction with the options they choose.

Insert Table 4 about here

We then tested whether the method of option presentation (and cognitive load) impacted individuals' commitment to their originally chosen option. See table 4 for participants' switching behavior. First, to assess participants' commitment, a logistic regression was conducted on participants' decision to stick with their original choice. The results revealed a main effect of option presentation ($Wald(1) = 8.42, p = .004$), whereby sequential choosers were less likely to stick with their original choice than simultaneous choosers. There was also a main effect of cognitive load ($Wald(1) = 7.99, p = .005$), whereby those under low load were less likely to stick with their choice than those under high load. Finally, the results also revealed the predicted interaction effect ($Wald(1) = 4.54, p = .03$). A closer examination into this effect showed that among those under low cognitive load, sequential choosers (26%) were less likely to stick with their choice than were simultaneous choosers (75%; $\chi^2(1) = 9.24, p = .002$); however, among those under high cognitive load, sequential choosers' (70%) were as likely to stick to their choice as simultaneous choosers' (71%; $\chi^2(1) = .01, p = .94$). These results are consistent with those of the previous studies, showing that individuals presented with options sequentially tend to be less committed to their chosen option than individuals presented with their options simultaneously; however, when sequential choosers do not have the cognitive resources necessary to elaborate on an idealized option, they become equally as committed as simultaneous choosers. This, therefore, implies that this type of elaboration (imagining an idealized option) is detrimental to choice commitment.

To assess whether participants' decisions to switch away from their originally chosen option reflects hopefulness for an idealized option, we next conducted a logistic regression on their decisions to switch to the unknown option. The results revealed a main effect of cognitive load ($Wald(1) = 5.85, p = .02$), whereby those under low cognitive load were more likely to

switch to the unknown option than those under high cognitive load. There was also a marginal effect of option presentation ($Wald(1) = 3.52, p = .06$) whereby sequential choosers were more likely to switch to the unknown option than simultaneous choosers. A closer examination showed that among those under low cognitive load, sequential choosers (37%) were more likely to switch to the unknown option than simultaneous choosers (10%; $\chi^2(1) = 3.96, p = .047$); however, among those under high cognitive load, neither sequential choosers (4%) nor simultaneous choosers (5%) were likely to switch to the unknown option ($\chi^2(1) = .03, p = .86$). An examination of conditional probabilities reveals a similar pattern of results. Of those who switched in the low cognitive load condition, 50% of sequential choosers switched to the unknown option instead of to one of the other known options, and this was slightly more than the 40% of simultaneous choosers who switched to the unknown option. Additionally, among those under high cognitive load who switched, only 13% of sequential choosers and 17% of simultaneous choosers switched to the unknown option. These results suggest that when sequential choosers have the cognitive resources available to imagine an idealized option, they will, and they are more likely to switch to an unknown option with the possibility that it might match their idealized option.

A 2 (cognitive load) x 2 (option presentation) ANOVA conducted on participants' reported beliefs that the unknown option would be better than their originally chosen chocolate supports this. The results revealed a main effect of option presentation: those who were presented with the options sequentially believed the unknown option would be better than their chosen chocolate ($M = .13$), whereas those who were presented with their options simultaneously believed the unknown option would be worse than their chosen chocolate ($M = -.44; F(1, 83) = 7.40, p = .008$). Furthermore, a marginal interaction effect ($F(1, 83) = 3.06, p =$

.08) indicates that among those under low cognitive load, sequential choosers ($M = .47$) believed the unknown option would be more desirable than did the simultaneous choosers ($M = -.55$; $F(1, 83) = 9.11, p = .003$); however, among those under high cognitive load, both sequential choosers ($M = -.11$) and simultaneous choosers ($M = -.33$) believed the unknown option would be worse than their chosen option ($F(1, 83) = .52, p = .47$). These results are consistent with our proposition that sequential choosers tend to be less committed to their choice than simultaneous choosers because they hope for an idealized option, and they feel hopeful that it may become available in the future.

GENERAL DISCUSSION

Presenting options sequentially, rather than simultaneously, can detrimentally impact how consumers experience the products they choose. The results of two field experiments and two laboratory experiments reveal that whether choosing a nail polish color, a bottle of Italian red wine, or a piece of gourmet chocolate, individuals presented with their options one at a time end up less satisfied with, and ultimately less committed to, their chosen option than individuals presented with their options all at once. This negative impact persists regardless of whether passed-up options remain available, and even when sequential and simultaneous choosers have the same option information available to them when making their selection. Feeling hope is a key driver of this effect. That is, presenting options one at a time leads choosers to imagine an idealized option in their mind, hoping for it to become available. In contrast, when options are presented all at once, choosers compare the presented options against each other, neither

imagining nor hoping for an idealized option. In sum, it is hope associated with the “birds in the bush,” so to speak, which decreases choosers’ satisfaction with and commitment to that which they have in their hand.

We found that presenting options sequentially hurts how choosers subjectively experience the options they select, but do sequential choosers also end up with different (and objectively worse) options than simultaneous choosers? The finding that, when given the opportunity, sequential choosers were not more likely than simultaneous choosers to switch to one of the other options in the original choice set indicates that sequential choosers did not *think* they got stuck with objectively worse options from that assortment. And perhaps this is the appropriate test given our primary research question and the fact that we offered participants experiential items, such that each option’s quality was ambiguous and subjectively determined. Still, to assess whether sequential choosers ended up with different (or worse) options than simultaneous choosers, we looked across the studies at whether the method of option presentation influenced which options participants selected. Table 5 delineates for each study how frequently the various options were chosen within each condition. The non-significant Chi-square results ($ps > .10$) suggest that the method of option presentation did not influence the objective outcome of participants’ choices. That is, sequential choosers did not end up with objectively different outcomes than simultaneous choosers; they just experienced them as less desirable—presumably because sequential choosers were comparing their chosen option to an idealized option rather than to the other options available. Future research should examine contexts where the options do vary in objective quality. For instance, would hope for an idealized option still resign sequential choosers to lower satisfaction when choosing among utilitarian items?

Insert Table 5 about here

Feelings of hope keep choosers from settling into the decisions they have made, as they continue to want an idealized option. This mechanism is related to one identified by Gilbert and Ebert (2002) which was also shown to diminish choosers' satisfaction. They found that among photography students who were instructed to choose which of their two personally meaningful photographs to donate, those who were told that they would later be able to change their minds ended up less satisfied with the photograph they decided to keep than those who were told that their decisions were irreversible. The researchers argued that when choosers do not perceive their decisions to be complete, the processes that typically help choosers subjectively optimize their outcomes do not kick in, thus leaving them less satisfied with that outcome (Gilbert and Ebert 2002). Even though none of the participants in our studies knew they would subsequently be allowed to switch away from their chosen option, merely presenting options sequentially seems to have led participants to wonder and idealistically imagine what still might be out there, similarly keeping them from mentally concluding the decision process upon selecting an option. Future research should examine whether there are individual difference variables (e.g., being a maximizer or satisficer) that, like the sequential versus simultaneous presentation of options, would influence choosers' tendencies to wonder about future possibilities, hoping for an idealized option to become available (Schwartz et al. 2002). Our findings thus suggest that even though hope has been shown to be highly motivating with many beneficial consequences in people's lives (Averill et al. 1990; Curry et al. 1997; Lazarus 1999; Mogilner, Aaker, and Pennington 2008; Rossiter and Percy 1991; Seligman 1975, 2003; Snyder 2000; Taylor et al.

2000), in the context of decision making, hope can have a deleterious effect. Interestingly, it seems that swamping choosers' cognitive resources so as to keep their minds and hearts from wandering to more ideal possibilities allows choosers to enjoy more satisfaction from the decisions they make.

Although we demonstrated the potentially detrimental impact of choosing among options presented sequentially, rather than simultaneously, in the rather minor decision contexts of manicure colors, wines, and chocolates, these findings have cautionary implications for individuals as they navigate through more major life decisions, such as choice of job, house, and spouse. Unfortunately, it is for these critical decisions that options tend to be presented sequentially. Indeed, although retailers can determine how to present their assortments so as to maximize customers' satisfaction and commitment levels, the individuals choosing typically cannot dictate whether they are going to encounter their options one after the other or all at once. Thus, when faced with sequentially presented options, individuals must remember that hoping for the perfect option will keep them from fully enjoying whatever option they choose.

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TABLE 1

EXPERIMENT 1: CHOCOLATE SWITCHING DECISIONS BY CONDITION

	Control Condition		Hope Condition	
	Simultaneous	Sequential	Simultaneous	Sequential
Stick	54% _a	29% _b	42% _c	32% _c
Switch to Known	44% _a	47% _a	29% _a	40% _a
Switch to Unknown	2% _a	24% _b	29% _b	28% _b

note. Within each row, percentages with different subscripts are significantly different, $p \leq .05$.

TABLE 2

EXPERIMENT 2: WINE SWITCHING BEHAVIOR

Decision	Simultaneous	Strict Sequential	Flexible Sequential
Stick	84% _a	40% _b	65% _c
Switch to Known	0% _a	10% _b	0% _a
Switch to Unknown	16% _a	50% _b	35% _b

note. Within each row, percentages with different subscripts are significantly different, $p \leq .05$.

TABLE 3

EXPERIMENT 2: EMOTIONS FELT DURING THE CHOOSING PROCESS

Emotion	Simultaneous	Strict Sequential	Flexible Sequential
Hope	3.60 _a (1.84)	5.50 _b (1.24)	5.07 _b (1.40)
Regret	2.02 _a (1.21)	3.20 _b (1.88)	2.02 _a (.91)

note. Numbers in parentheses represent standard deviations. Within each row, means with different subscripts are significantly different, $p \leq .05$.

TABLE 4

EXPERIMENT 3: CHOCOLATE SWITCHING DECISIONS BY CONDITION

	Low Cognitive Load		High Cognitive Load	
	Simultaneous	Sequential	Simultaneous	Sequential
Stick	75% _a	26% _b	71% _a	70% _a
Switch to Known	15% _a	37% _a	24% _a	26% _a
Switch to Unknown	10% _a	37% _b	5% _a	4% _a

note. Within each row, percentages with different subscripts are significantly different, $p \leq .05$.

TABLE 5
OPTIONS CHOSEN ACROSS EXPERIMENTS

	Manicure Study		Chocolate Study				Wine Tasting Study		Elaboration Chocolate Study						
	Sim.	Seq.	Control		Hope		Sim.	Seq.	Low Cog Load		High Cog Load				
			Sim.	Seq.	Sim.	Seq.			Sim.	Seq.	Sim.	Seq.			
Red	0%	14%	Orinoco	20%	16%	21%	32%	#1	19%	22%	St. Malo	20%	26%	33%	19%
Burgundy	33%	14%	Figaro	18%	25%	25%	11%	#2	21%	17%	Waikiki	25%	16%	19%	19%
Pink	6%	10%	Bangkok	14%	10%	15%	13%	#3	21%	33%	Qn. Elizabeth	25%	11%	5%	22%
Sheer Pink	22%	33%	Marquise	24%	33%	15%	28%	#4	39%	28%	Naranjito	10%	26%	10%	15%
Sheer Beige	39%	29%	Paris	24%	16%	23%	17%				The Georgian	20%	21%	33%	26%
	$\chi^2(4) = 5.03, p = .28$			$\chi^2(4) = 2.35, p = .67$		$\chi^2(4) = 6.20, p = .18$		$\chi^2(3) = 2.93, p = .40$			$\chi^2(4) = 3.16, p = .53$		$\chi^2(4) = 4.00, p = .41$		