Journal of the Academy of Marketing Science (2026) 54:948–967
https://doi.org/10.1007/s11747-026-01150-8

ORIGINAL EMPIRICAL RESEARCH

Converting preference to actual commitment: The role of option presentation order

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Received: 10 May 2024 / Accepted: 2 February 2026 / Published online: 15 April 2026

Abstract

Marketers often struggle to convert consumer preferences into commitment. Our research identifies a novel factor—option-presentation order—that marketers can leverage to optimize choice sets and increase consumers' commitment to their chosen option. Across incentive-compatible studies and real-behavior contexts spanning digital and traditional retail, consumers exhibit stronger commitment to their chosen option when they encounter it at the end of, rather than earlier in, a choice set. This effect is driven by perceived effort payoff—the belief that effort spent searching was worthwhile. As such, the effect is attenuated when the effort payoff experience is constrained, such as when all options are presented simultaneously (vs. sequentially) or when consumers rely on secondhand (vs. firsthand) searches. These findings contribute to research on choice architecture, commitment, and curated choice sets by identifying option-presentation order as a lever for bridging the intention–action gap and designing choice environments that strengthen post-choice commitment.

Keywords Post-choice commitment · Perceived effort payoff · Curated search · Product recommendation · Decision making

A major challenge facing marketers is how to convert consumer preference into commitment. Despite initial interest, consumers often fail to follow through on their preferences. They build online shopping carts only to abandon them (Kukar-Kinney et al., 2022), view mobile apps without downloading them (Kurzweg, 2024), or test drive cars and go on real estate tours without making a purchase or signing a lease (Langan, 2023; Rigby, 2023). These patterns underscore an intention–action gap: Despite identifying a preferred option, consumers do not always act on their preferences. To solve this issue, marketers often curate choice sets for consumers (Harris & Blair, 2006; Tsekouras et al., 2020). A wine shop may highlight a seasonal selection on its website for shoppers to scroll one by one, or a realtor may take a prospective buyer on a tour of five homes. The arrangement of options in a choice set can influence how consumers evaluate the options within it (Dellaert et al., 2024; Thaler & Sunstein, 2009). This raises a critical question: Beyond the options included, how does the presentation order of options in a choice set influence consumers' choice commitment?

Prior research has examined how option-presentation order influences *what* consumers choose (Table 2). Presenting an option last (vs. first) in a sampling sequence increases the likelihood of its being chosen (Biswas et al., 2010), as does listing a food item at the top or bottom of a menu (Dayan & Bar-Hillel, 2011). However, preference formation is only part of a consumer's decision journey, and an emerging body of research has begun to recognize the importance of choice

OSF Link to data, materials, and preregistrations for all studies: https://osf.io/qn83w

This article is based on the first author's doctoral dissertation.

Dipayan Biswas served as Area Editor for this article.

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commitment (McCoy, 2022). In one study, consumers who were nudged toward a particular choice option were more likely to select it, but less likely to remain engaged with it over time, compared to those not nudged toward a particular choice (Polman & Maglio, 2024). This finding highlights a potential disconnect between factors driving initial selection and those driving post-choice commitment.

Understanding antecedents of post-choice commitment is important for influencing outcomes such as customer retention and product use (e.g., Belli et al., 2022; Bhattacharya, 1998). Yet research identifying the drivers of commitment remains limited (Table 2). Existing research has focused on how option-display features (e.g., larger vs. smaller set size; sequential vs. simultaneous presentation) or the presence of decision aids (e.g., formatting options as active choice) influence commitment (Cioffi & Garner, 1996; Putnam-Farr & Riis, 2016). For example, presenting options sequentially (vs. simultaneously) can reduce commitment by fostering hope of finding a better option later (Mogilner et al., 2013).

We examine a different question: Does the presentation order of a chosen option within a choice set influence consumers' level of commitment to it? We predict that consumers will be more committed to their chosen option when it is presented later—rather than earlier—in a choice set. We focus on commitment to a chosen option due to its critical role in closing sales, generating revenue, and reducing choice deferral (Dhar, 1997; Iyengar & Lepper, 2000).

How do marketers know what option consumers prefer? Although preferences are often constructed (Lichtenstein & Slovic, 2006), technological advancements allow marketers to better predict what consumers may want (Agarwal et al., 2020; Fisher & Woolley, 2024; Kukar-Kinney et al., 2022). Marketers can track consumers' search history and mouse movements to gauge their interest and engagement, while also leveraging insights from consumers' social circles or AI to better estimate their preferences (McKinsey & Company 2025). In offline settings, this analysis can occur through pre-visit intake forms or conversations with buyers.

To illustrate this point, we conducted interviews with 20 experienced real estate agents (see Web Appendix A). 80% were confident they could identify a potential buyer's preferred option, but did not anticipate that *when* it was presented would matter. 50% believed that presentation order would *not* influence buyers' commitment. As one agent shared, "As long as the criteria are met, you don't have any preferences for ordering what to show first or last." 37.5% preferred to show the potentially preferred option first, while only 12.5% placed it last.

We develop a theoretical framework to explain the relationship between the presentation order of a preferred option in a choice set and consumer choice commitment. We propose that consumers are more committed when their preferred option is displayed at the end (vs. beginning) of a choice set. We theorize that this effect occurs because people feel their effort in search of options pays off more when they find their preferred option at the end (vs. beginning) of a choice set, and that this heightened effort payoff increases commitment to that option.

This research makes several theoretical contributions. First, at a broad level, we contribute to literature on choice architecture (e.g., Johnson, 2021; Thaler & Sunstein, 2009). Much of the prior research has examined how the arrangement of options, including their presentation order, influences what consumers choose (Table 2). We advance this research by showing that option-presentation order also shapes a different and previously unexamined outcome: post-choice commitment. In this way, we broaden choice architecture research beyond initial selection to include what happens after a choice is made.

Second, we contribute to emerging literature on post-choice commitment (Table 3). Prior work has shown how structural elements of a choice set, such as choice-set size or decision aids, influence commitment but has not considered whether the sequencing of options within a curated set affects commitment. This is an important question given the role post-commitment plays in customer retention, product use, and purchase satisfaction. We fill this gap by identifying option-presentation order as a novel antecedent of post-choice commitment.

Third, in understanding the mechanism by which option-presentation order influences commitment, we identify a new psychological driver of commitment: effort payoff, defined as the feeling that the effort spent searching was worthwhile. Effort payoff reflects the positive utility derived from the search process. We propose and find that when consumers feel their effort "paid off," they are more committed to the choice that results from that effort. Therefore, we shift focus from how much effort individuals expend to how they interpret that effort. As a distinct evaluative process, effort payoff broadens existing theories by revealing that the utility consumers derive from the same expenditure of effort can drive commitment.

Beyond these contributions, we offer practical insight across industries and channels for closing the intention–action gap. Post-choice commitment is crucial in closing sales, generating revenue, and reducing choice deferral. We find that how marketers sequence options in a limited choice set shapes consumers' post-choice commitment through perceptions of effort payoff.

Conceptual framework

During the search process, consumers not only want to find their preferred option (Dellaert & Häubl, 2012; Mathwick & Rigdon, 2004), but they also want to feel that the search

process was worthwhile. This is the essence of effort payoff, the feeling that the time and effort invested in a search meaningfully contributed to achieving the desired outcome (Feather et al., 2011; Higgins, 2000).

We propose that when finding their preferred option last in a limited choice set, consumers credit the whole process in reaching that outcome. Each option along the way helped them identify their preferred option, making the final choice feel more informed and the effort more worthwhile. In contrast, when finding their preferred option first, people may tentatively choose early, viewing later options to confirm their decision rather than seriously considering alternatives. Consumers prefer exploring multiple options before deciding what to buy (Mochon, 2013) and hesitate to stop searching before reviewing the full set (Bastardi & Shafir, 1998).[1] As a result, ending a search where the preferred option is last (vs. first) makes the whole process feel more worthwhile and the effort better spent. This idea parallels the concept of "transaction utility" (Thaler, 1985), wherein consumers derive utility from how favorable a process feels. We propose that consumers derive utility from how rewarding their search effort feels (i.e., utility from the same amount of effort; Buechel & Janiszewski, 2014). Finding a preferred option at the end (vs. beginning) of a choice set increases the perception that the effort was worthwhile.

As an illustration, consider a consumer browsing a curated selection of wines at an online wine shop, with one labeled as the "staff pick." If the staff pick appears *first*, the consumer likely continues browsing the full set before deciding. If it appears *last*, the consumer browses the full set and ends the search on the staff pick. In both cases, the set of options viewed and the final choice (i.e., "staff pick") are the same. However, we predict that encountering the staff pick at the end of the set will lead to a greater sense of effort payoff, as the search then feels more rewarding. People hold beliefs about when things should happen, such as when effort should pay off or when good outcomes should occur, and they derive meaning from experiences that align with those expectations (Klein & Fishbach, 2014). Finding the staff pick option at the end of a curated set may feel more appropriate, reinforcing the sense that the effort was worthwhile.

We theorize that the increase in perceived effort payoff when choosing an option presented at the end (vs. beginning) of a choice set leads to greater commitment to the chosen option. We define choice commitment as the decision to follow through on a chosen option and to resist changing that decision over time (Cioffi & Garner, 1996; Gerard, 1965). A greater sense of payoff occurs because the effort invested feels more meaningful. When people feel that the effort they exerted meaningfully contributed to an outcome, they are more likely to remain committed to it (Inzlicht & Campbell, 2022). Conversely, when effort lacks meaning, people do not derive value from it. Beliefs about effort investment can influence commitment; in one study, people were more committed to a reward congruent with their expended effort (e.g., music CD vs. DVD reward for reviewing songs; Kivetz, 2005). Building on prior research, we propose that when consumers perceive their effort as paying off—that is, when they see it as having been spent more meaningfully—they are more committed to the choice that results from the effort they invested. In summary, we predict:

H1 Consumers are more committed to a chosen option when they find it at the end of (vs. earlier in) a choice set.

H2 Consumers perceive their effort to have paid off more when they find a chosen option at the end of (vs. earlier in) a choice set; this drives the effect of presentation order on commitment.

We investigate the effort payoff mechanism using mediation and moderation approaches. We predict that the effect of presentation order on commitment is mediated by perceived effort payoff, and that the inability to experience effort payoff moderates the effect of presentation order on commitment. We manipulate the ability to experience effort payoff in two ways.

First, we theorize that consumers are less likely to experience effort payoff when viewing options simultaneously rather than sequentially. When options are presented sequentially, one by one, consumers can track and monitor their search process and reflect on how their effort was spent. In contrast, when options are presented simultaneously, consumers can easily identify the option they prefer and are not prompted to reflect on whether their effort was worthwhile (Basu & Savani, 2017; Mogilner et al., 2013). For this reason, we expect the effect of chosen-option presentation order on commitment to be attenuated when options are presented simultaneously.

Second, we theorize that consumers are less likely to experience effort payoff when learning about options secondhand (i.e., through a third party), relative to when they actively lead the search themselves. When consumers search for options firsthand, they can directly track their effort expenditure and assess whether it paid off (Bhattacharjee et al., 2014). However, when a third party conducts the search, consumers are more detached from the search

[1] Indeed, in a follow-up survey we conducted (N=331), we asked participants how many recommended options they would like to see when buying a product or service where they do not already have a preferred option. Only 2% of participants preferred to see a single recommendation; most (59%) preferred to view four or more options.

process, making them less likely to monitor their effort investment and appraise whether it paid off. As such, we expect the effect of order on commitment to be attenuated when consumers learn about options secondhand. Figure 1 depicts our conceptual model. We formalize our predictions below:

H3a Presenting choice options simultaneously (vs. sequentially) attenuates the effect of presentation order on commitment.

H3b Attributing effort to others' (vs. one's own) search attenuates the effect of presentation order on commitment.

Alternative accounts

In addition to bringing evidence for our proposed mechanism, perceived effort payoff, we also address other potential explanations for the effect. One possibility is that presentation order influences commitment because people prefer options they discover later. Given the constructive nature of preference (Lichtenstein & Slovic, 2006), preferences may be influenced by contrast or carryover effects (Bickart, 1993; Unnava & Aravindakshan, 2021). For example, adjacent options in the choice set could color people's commitment to those options. To address this account, we measure how much people liked their choice, predicting that chosen option order influences post-choice commitment but not choice liking, and that the effect on commitment holds when controlling for liking. We also expect our effect to hold when consumers first engage in a search and then later learn that their chosen option appeared later (vs. earlier) in the set, preventing options viewed earlier from influencing liking of the chosen option. Thus, we bring evidence against the possibility that contrast or carryover effects fully explain our findings.

Another possibility is that the option-presentation order effect is due to differences in memory, as people may better remember options viewed later (e.g., recency effect; Carney & Banaji, 2012; Li & Epley, 2009). To ensure our effect is independent of memory effects, we remind all participants of the full set of options before they make a choice. Our moderation studies also help address a memory account. If the effect occurs because people better remember the most recently viewed option, chosen option-presentation order should influence commitment regardless of whether consumers invest their own effort into the search. Instead, we predict that option-presentation order only influences post-choice commitment when consumers are able to experience effort payoff by processing the search firsthand.

In further support of our underlying mechanism, we also distinguish effort payoff from related constructs such as effort justification, escalation of commitment, and cognitive dissonance. Effort justification refers to the tendency to value an outcome more positively when obtaining it required more (vs. less) effort. In the classic paradigm, people evaluated a boring club as more appealing when the initiation was more (vs. less) difficult (Aronson & Mills, 1959; Wu et al., 2023). People justify the greater effort expended for a seemingly unworthy outcome by inflating their evaluation of the outcome. In contrast, we hold the level of effort invested constant and ensure everyone chooses an option of similar value.

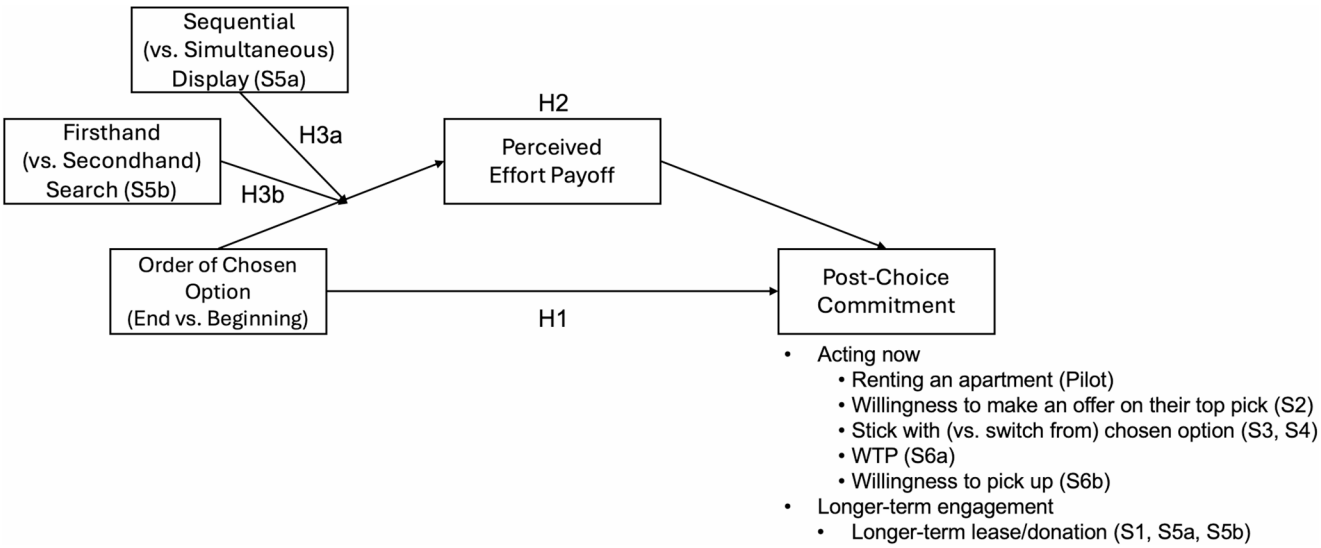

Fig. 1 Conceptual model. *Note.* For most studies (Studies 1, 3, 4, 5a, and 5b), the independent variable (IV) reflected whether the chosen option was presented at the beginning versus the end of the choice set. In Study 2, the IV reflected whether the chosen option was presented in the middle versus the end of the choice set. Pilot Study and Studies 6a-6b relied on chosen-option stage as the predictor variable

Effort payoff is also distinct from escalation of commitment, the "continuation in a failing course of action" (Mayberry et al., 2018; Schmidt & Calantone, 2002; Staw, 1976). Our proposed process does not involve the experience of failure. If anything, rationalization theories might predict the opposite pattern: that consumers would commit *more* to a preferred option presented *first*, if finding it earlier makes the subsequent search feel like wasted effort that they need to justify (Bolton & Alba, 2012). Against this account, however, we propose and find that effort payoff is greater when the chosen option is presented last. Finally, effort payoff is distinct from cognitive dissonance (Festinger, 1957), which arises from the conflict between attitudes and behavior, often prompting attitude change to resolve discomfort. In our context, there is no such conflict; people choose an option they genuinely prefer.

Research overview

We predict that the order in which marketers arrange options within a curated choice set influences consumers' post-choice commitment. We draw on two established approaches to operationalize post-choice commitment: (1) immediate follow-through behaviors, such as visiting a store to make a purchase, picking up a product, or sticking with a chosen option rather than switching (e.g., Iyengar & Lepper, 2000; Janakiraman et al., 2011; Mogilner et al., 2013) and (2) longer-term behaviors, such as opting into a longer contract (Consiglio & van Osselaer, 2019; Shah et al., 2016). We test our predictions in one pilot study and eight main studies (see Table 1). We report three supplemental studies in the Web Appendix.

We predetermined all sample sizes to ensure sufficient power. For studies testing a main effect (Studies 1–4), we recruited at least 50 participants per cell prior to applying preregistered exclusions based on pilot tests of our manipulation. For moderation studies, we increased the sample size to detect interactions (Study 5a: 200 per cell; Study 5b: 375 per cell). We recruited a larger sample for Study 5b than for Study 5a because we anticipated a smaller effect size given the more conservative design. Study 6a targeted a sample of 500 participants to obtain precise estimates of willingness-to-pay (Schönbrodt & Perugini, 2013); Study 6b and the Pilot Study each targeted 200 participants, in line with minimum sample size recommendations (De Winter et al., 2016). Data, materials, and preregistrations are available at OSF: https://osf.io/qn83w.

Table 1 Summary of studies

Study	Domain	Design	Main Finding
Pilot*	Real Estate	Correlational	Documents a positive relationship between chosen-option stage and commitment in an actual apartment search.
1*		2 (beginning vs. end) between-subjects	Choosing an option at the end (vs. beginning) of a choice set increases commitment (H1), which is mediated by perceived effort payoff (H2).
2*	Car Dealership	2 (middle vs. end) within-subject	Tests H1 and H2 when choosing an option at the end (vs. middle) of a choice set; rules out carryover effects.
3*	Wine Retailer	2 (beginning vs. end) between-subjects	Tests H1 and H2 in an incentive-compatible design by manipulating the preferred option as the "staff pick."
4	Meditation App	2 (beginning vs. end) between-subjects	Tests H1 and H2 in an incentive-compatible design; enhances realism with a two-phase preference-assessment procedure; validates findings with a higher-priced chosen option.
5a*	Real Estate	2 (sequential vs. simultaneous) × 2 (beginning vs. end) between-subjects	Provides causal evidence for the effort payoff mechanism via moderation by manipulating whether participants can experience effort payoff through a sequential (vs. simultaneous) option display (H3a).
5b*	Charity	2 (firsthand vs. secondhand search) × 2 (beginning vs. end) between-subjects	Provides causal evidence for the effort payoff mechanism via moderation by manipulating whether participants can experience effort payoff through firsthand (vs. secondhand) search (H3b).
6a*	Home Goods (Pillowcase)	Correlational	Documents a positive relationship between chosen-option stage and commitment in an incentive-compatible BDM auction.
6b*	Home Goods (Pillowcase)	Correlational	Documents a positive relationship between chosen-option stage and commitment in a real behavioral choice; also examines consequential word of mouth behavior.

Note. * indicates preregistered.

Pilot study: Real-world demonstration and longitudinal consequences

We first examined our prediction in the real world. We recruited participants who had recently completed a real estate tour. We measured the total number of options they viewed during the week of their tour and determined where the property they chose appeared in the choice set. We then assessed participants' commitment to their choice. In addition, to rule out alternative accounts, we assessed how much they liked their chosen option. We predicted a positive relationship between the discovery of a chosen option later in the choice set and commitment, with no such effect on liking. To complement these results, we followed up with participants one year later to explore potential post-consumption consequences of commitment.

Method

We preregistered this study (aspredicted.org/K1X_QTJ) and recruited 192 US participants from MTurk who, within the past year, had gone on a real estate tour culminating in a property purchase or rental. To enter the survey, participants were required to have viewed more than one option during their tour.[2] As preregistered, we included all respondents who passed an attention check in the analysis ($n = 187$, $M_{age} = 38.18$, $SD = 12.31$; 58.8% male).

In addition to asking participants how many options they viewed during their tour, we asked them at which point in their tour (first, second, third, fourth, or fifth+) they saw the option they ultimately chose to rent or buy. Since the total number of options viewed varied across participants, we calculated "chosen-option stage" by dividing the order in which the chosen option was viewed by the total number of options viewed during the tour. For example, a participant who toured four properties and selected the third one would have a chosen-option stage of 75%, whereas a participant who toured five properties and selected the third one would have a chosen-option stage of 60%. A higher value on this measure indicates that the chosen option was found relatively later in the choice set.

Our dependent variable was post-choice commitment (2-item scale; $r = .70$; Janakiraman et al., 2011): "How quickly did you submit an application to [rent/buy] the place you currently live in?" and "How committed were you to submit an application to [rent/buy] the place you eventually chose?" (from 1 to 100; higher scores indicate greater commitment). As a control variable, we measured how much participants liked their chosen option: "How much do you like the place you eventually chose among all options you saw that week?" (1 = Not at all; 100 = Very much). Additional items preregistered as exploratory are reported in Web Appendix D.

Longitudinal follow-up We followed up with participants 12 months later to explore post-consumption consequences of their commitment to the option they selected. We asked: "How long do you plan to stay in this house/apartment?" (1 = Not very long, 7 = A long time). We also assessed their intended upkeep of the property (2-item scale; $r = .90$): "While in front of my house/apartment, if I saw some plastic garbage, I would pick it up," and "I would make an effort to clear the front of my house/apartment of debris" (1 = Not at all, 7 = Very much). This measure reflects the finding that people take better care of their possessions when they feel more committed to them (Bellezza et al., 2017) and captures their desire to preserve and maintain their property for longer-term use (Polman & Maglio, 2024).

Results

We regressed commitment on chosen-option stage, which revealed a positive relationship (we report standardized coefficients; $\beta = 0.19$, $t(185) = 2.58$, $p = .011$). Participants who viewed their chosen option later during their real estate tour reported being more committed to it.

To address an alternative account, we regressed liking on chosen-option stage, which revealed no significant effect ($\beta = 0.04$, $t(185) = 0.56$, $p = .578$). Further, the relationship between chosen-option stage and commitment held when controlling for liking ($\beta = 0.16$, $t(184) = 2.73$, $p = .007$). This result suggests that the effect is not due to differences in liking or a carryover effect – specifically, that viewing a less attractive option earlier in the set increases commitment to an option viewed later.

Analyzing the 12-month follow-up measures revealed a positive effect of commitment on post-consumption intentions. Participants' initial commitment predicted how long, one year later, they intended to remain in their home ($\beta = 0.25$, $t(82) = 2.27$, $p = .026$) and predicted their property maintenance intentions one year later ($\beta = 0.27$, $t(82) = 2.48$, $p = .015$).

Discussion

This Pilot Study supports our prediction in a real-world setting: the later consumers found their chosen home during an actual real estate tour, the more committed they became to it. Real estate agents often have a strong sense of buyer

[2] We preregistered a target of 200 participants who had viewed more than one option during their real estate tour. A total of 241 participants began the survey; 41 reported viewing only one option and were screened out before answering the dependent variable. An additional eight participants submitted invalid completion codes, leaving a final sample of 192 participants.

preferences but may overlook the role of presentation order—that presenting a well-matched property later in the tour can increase clients' commitment and potentially facilitate sales (see Web Appendix A). We do not suggest delaying the showing of a client's dream home; rather, strategically presenting it at the end of a curated set of properties viewed over a day or weekend tour may help close the sale faster.

These findings also address alternative explanations, such as the idea that later options are seen as more attractive, possibly due to a carryover effect (Bickart, 1993; Unnava & Aravindakshan, 2021). Chosen option stage did not affect how much people liked the chosen option, and even after controlling for liking, the effect on commitment remained significant.

Study 1: Greater commitment in a simulated real estate tour

Study 1 had three objectives: to test Hypothesis 1 in a controlled experimental design; to assess our proposed mediator, perceived effort payoff; and to address choice liking and effort investment as alternative accounts. We developed a simulated real estate website modeled after Apartments.com. Participants viewed a map of real estate listings and considered spending a day touring five apartments. We manipulated whether the preferred (highest-rated) apartment was presented first or last. Participants made their choice and indicated their desired lease length, our measure of commitment (Shah et al., 2016). We expected that participants who found their chosen apartment at the end (vs. beginning) of the choice set would be more committed to it, and that this would be mediated by perceived effort payoff.

Method

We preregistered this study (aspredicted.org/LR9_6QR) and recruited 503 US participants from MTurk. After applying preregistered exclusion criteria, we had a final sample of 476 participants (M_{age} = 42.37, SD = 12.03; 45% male).[3]

We randomly assigned participants to a condition in a 2-cell (chosen option: beginning vs. end) between-subjects design. Participants imagined visiting each apartment with a real estate agent. To simulate this, participants viewed a map of a city with different apartments. Similar to rental websites like Apartments.com, each apartment was rated one to five stars on dimensions such as noise level and residents' satisfaction with upkeep (see Web Appendix E for stimuli). Participants assigned to the *Chosen-Option-Beginning* condition viewed the target (i.e., highest-rated) apartment at the beginning; those assigned to the *Chosen-Option-End* condition viewed the same set of apartments, but the highest-rated one was at the end. Participants then chose the apartment they would like to rent (Fig. 2); we presented the full set of options at the time of choice in this and subsequent studies to rule out a memory-based account.

We measured commitment by asking participants, "How long would you plan to lease the apartment for?" (7-point scale in 6-month increments from 1 = 0 months to 7 = 36 months; adapted from Shah et al., 2016). Next, we assessed our mediator, perceived effort payoff, by asking, "To what extent do you feel that the effort you put into your apartment search paid off?" (1 = Not at all, 7 = Very much). To address alternative explanations, we also measured perceived effort investment and liking of the chosen apartment from 1 to 7.

Results

In our main preregistered analysis, we included only participants who selected the target (i.e., highest-rated) option. This ensured that all participants in the analysis chose the same option across conditions, allowing us to isolate the effect of chosen-option order on commitment independent of choice; indeed, most participants chose the preferred option (see Web Appendix B). This criterion removed confounds related to perceived desirability of the chosen option. For robustness, we also report a conservative intent-to-treat analysis including all participants regardless of choice (Hollis & Campbell, 1999; Lachin, 2000). Results do not change when controlling for demographics (age, gender) in this and subsequent studies (Web Appendix C).

Participants who chose the highest-rated apartment were more committed to it when it was presented at the end (vs. beginning) of the choice set (M_{end} = 4.36, SD = 1.28; $M_{beginning}$ = 4.11, SD = 1.14; $t(474) = 2.26$, $p = .024$, $d = 0.21$). They also reported greater perceived effort payoff (M_{end} = 6.34, SD = 0.92; $M_{beginning}$ = 5.66, SD = 1.39; $t(474) = 6.31$, $p < .001$, $d = 0.58$), which mediated the effect of chosen-option order on commitment ($B_{indirect} = 0.11$, SE = 0.03, 95% CI = [0.05, 0.17]; all mediation analyses used 10,000 bootstrap resamples; Hayes, 2015; Fig. 3).[4]

[3] To ensure participants' choices aligned with their assigned condition in Studies 1 and 3–5b, we designed the choice set such that the option most likely to be chosen was presented either first or last, depending on condition (based on ratings [Studies 1, 5a], staff pick label [Study 3], effectiveness match score [Study 4], or attribute importance [Study 5b]). In these studies, most participants chose the preferred option consistent with their assigned condition, with no systematic differences across conditions (see Web Appendix B). As preregistered, we excluded participants whose choice did not match their assigned condition. For robustness, we also report the results of a conservative intent-to-treat analysis that included all participants regardless of their choice (Hollis & Campbell, 1999; Lachin, 2000), which finds the same pattern of results.

[4] The results held when including all participants in the analysis (commitment: M_{end} = 4.35, SD = 1.28; $M_{beginning}$ = 4.13, SD = 1.13; $t(501) = 2.04$, $p = .042$, $d = 0.18$; perceived effort payoff: M_{end} = 6.29,

Fig. 2 Manipulation of option-presentation order in Study 1 at the time of choice

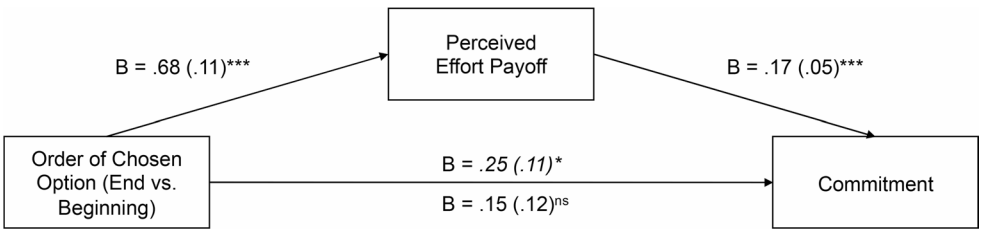

Fig. 3 Mediation through perceived effort payoff (Study 1). *Note*. Parentheses indicate *SE*. *p <.05; *** p <.001. Mediation analysis conducted among participants who chose the highest-rated (preferred) option

Addressing alternative accounts, there was no significant effect of the manipulation on perceived effort investment (M_{end} = 5.83, SD=1.22; $M_{beginning}$ = 5.74, SD=1.23; t(474) = 0.79, p =.430) or liking (M_{end} = 6.64, SD = 0.61; $M_{beginning}$ = 6.54, SD = 0.80; t(474)=1.63, p =.103). We continue to find mediation through perceived effort payoff when controlling for liking ($B_{indirect}$=0.08, SE = 0.03, 95% CI = [0.03, 0.14]).

Discussion

Study 1 provides causal support for our predictions: Participants who found their chosen option at the end (vs. beginning) of the choice set indicated greater commitment to it, desiring a longer lease (H1). This effect was mediated by perceived effort payoff (H2). We further find that this effect cannot be explained by differences in effort investment or in liking.

These results suggest practical implications for marketers. To increase post-choice commitment, marketers can present—at the end of a recommended set—the option clients are most likely to choose. Strategically placing a desirable option at the end of a recommendation list can benefit not only sales agents aiming to extend contract durations but also streaming services, news platforms, and e-learning providers seeking to boost subscription commitments.

Although Study 1 provides initial evidence for H1, a few questions remain. First, might consumers exit a real search if the preferred option is first? Two studies suggest this is unlikely. In a follow-up survey (N=331), fewer than 2% (n=6) of participants indicated a preference for viewing only a single option. In Supplemental Study 1, where participants could stop the search at any time, 75% viewed the

SD = 0.96; $M_{beginning}$ = 5.63, SD=1.37; t(501)=6.32, p <.001, d = 0.56), including mediation through perceived effort payoff ($B_{indirect}$ = 0.11, SE = 0.03, 95% CI = [0.06, 0.18]).

entire choice set (see Web Appendix F). Second, do these findings hold when the preferred option is more expensive? Using a design matched to Study 1, we varied apartment prices within the set in Supplemental Study 2 and found that the effect persisted even when the chosen apartment was the highest priced (see Web Appendix G).

Study 2: Isolating order effects from exposure to other choice options

Study 2 generalized the effect to commitment toward an option presented at the end (vs. in the middle) of a choice set and to a new domain: searching for a car. Participants imagined visiting a car dealership where a dealer chose seven cars for them to test drive. To address the possibility that options viewed earlier—rather than the perception of effort payoff, as we propose—might influence the effect, participants were asked to consider choosing the car presented last (vs. in the middle) without seeing information about the other options during the search process. That is, after simulated test drives for each car, participants were told they had chosen the last (vs. fourth) car. We expected that participants' commitment would increase when they learned their chosen car was last (vs. fourth), and that this would be mediated by perceived effort payoff.

Method

We preregistered this study (aspredicted.org/648s-gjr4.pdf) and recruited 150 US participants from Connect (M_{age} = 39.88, SD = 14.08; 56.7% male). Participants completed both conditions (middle vs. end) in a within-subject design with order counterbalanced.[5]

Participants imagined visiting a car dealership and completing an intake form to indicate their preferences (e.g., budget, preferred vehicle size, driving history). They then learned that the car dealer shortlisted seven cars for them to test drive based on the intake form. All participants had seven simulated test drives and imagined taking notes after each drive (see Web Appendix E for stimuli). After the test drives, participants learned that their favorite car was either the fourth or the last one they had driven (order counterbalanced). In this way, we manipulated the order of the chosen option independent of information about other options in the choice set.

We measured perceived effort payoff by asking: "To what extent do you feel that the effort you put into your car search paid off?" (1 = Not at all, 7 = Very much). We measured commitment using a 2-item scale (Janakiraman et al., 2011; r = .80): "Would you like to get back to the dealer to make an offer for your top pick?" and "How soon would you like to go back to the car dealer to make an offer for your top pick?" (from 1 to 7; higher values indicate more immediate follow-through). Exploratory measures are reported in Web Appendix D.

Results

Participants in the *Chosen-Option-End* (vs. *Middle*) condition were more committed to their choice (M_{end} = 6.05, SD = 1.07; M_{middle} = 5.89, SD = 1.09; $t(149) = 3.18$, p = .002, d = 0.26). In line with commitment, participants reported greater effort payoff in the *End* (vs. *Middle*) condition (M_{end} = 6.29, SD = 1.10; M_{middle} = 5.85, SD = 1.21; $t(149) = 5.35$, p < .001, d = 0.44). Perceived effort payoff mediated the effect of condition on commitment ($B_{indirect}$ = 0.12, SE = 0.03, 95% CI = [0.05, 0.19]) (MEMORE Model 1; Montoya & Hayes, 2017).

Discussion

Study 2 generalized the effect to options presented at the end (vs. middle) of the choice set and separated preference (intention) from commitment (action). Instead of making their own choice, participants were told that the option they had chosen was at the end (vs. middle) of the set. Simply learning where their chosen option fell in the presentation order influenced commitment and perceived effort payoff, suggesting that marketers can strategically strengthen commitment by emphasizing that the option consumers chose was last in the choice set.

Study 3: Incentive-compatible wine selection

Study 3 used an incentive-compatible design where participants searched for wine from an online retailer. One wine, labeled the "staff pick," was presented at the beginning or end of the choice set. We predicted that choosing the staff pick when it was at the end (vs. beginning) would increase commitment to it and that this would be mediated by perceived effort payoff.

Method

We preregistered this study (aspredicted.org/nj9k-v4tm.pdf) and recruited 450 US participants, ages 21 years or older, from Connect. After applying preregistered exclusions, our final sample size was 324 (M_{age} = 39.07, SD = 11.76; 53.4% male).

[5] Study 2 used a within-subject design; we report a conceptual replication using a (non-preregistered) between-subjects design in Supplemental Study 3 (Web Appendix H).

We randomly assigned participants to a condition in a 2-cell (chosen option: beginning vs. end) between-subjects design. Participants viewed the details of five wines in a "treasure-hunt" paradigm adapted from prior research (Winet et al., 2022). Each wine was accompanied by basic information (e.g., grape variety, wine making, food pairing) and staff reviews. One option was labeled the "staff pick." In the *Chosen-Option-Beginning* condition, the staff pick was first; in the *Chosen-Option-End* condition, the staff pick was last. After viewing each wine, participants saw the set of five options and selected a wine.

We measured perceived effort payoff (3-item scale; $\alpha = 0.95$) by asking: "Did the effort you put into finding a wine pay off?"; "Was the time spent finding a wine well spent?"; and "Was the energy invested in finding a wine put into good use?" (1 = Not at all, 7 = Very much). We also included an incentivized lottery in which participants chose between receiving their selected bottle of wine ($30 value) or an Amazon gift card ($20 value). Choosing the wine allowed us to assess commitment, as it reflects a willingness to stick with their chosen option (Mogilner et al., 2013). For exploratory items, see Web Appendix D.

Results

We report two analyses as in Study 1: a preregistered analysis of those choosing the staff pick ($n = 324$) and a non-preregistered intent-to-treat analysis of all participants. Among those choosing the staff pick, chosen-option order influenced commitment: a greater proportion opted to receive their chosen wine in the *Chosen-Option-End* condition (30.5%) than in the *Chosen-Option-Beginning* condition (16.7%; $\chi^2(1, N = 324) = 8.38$, $p = .004$, $\varphi = 0.16$). This effect also emerged in the full sample (32.6% vs. 18.3%; $\chi^2(1, N = 450) = 12.05$, $p < .001$, $\varphi = 0.16$).

Among participants who chose the staff pick wine, there was also an effect of condition on perceived effort payoff ($M_{end} = 5.24$, $SD = 1.46$; $M_{beginning} = 4.99$, $SD = 1.55$; $t(322) = 1.47$, $p = .142$, $d = 0.16$), although this difference was not statistically significant. This result became significant when including all participants in the analysis ($M_{end} = 5.16$, $SD = 1.49$; $M_{beginning} = 4.85$, $SD = 1.55$; $t(448) = 2.11$, $p = .035$, $d = 0.20$). In the full sample, perceived effort payoff mediated the effect of condition on lottery choice ($B_{indirect} = 0.11$, $SE = 0.06$, 95% CI = [0.01, 0.25]).

Discussion

In an incentive-compatible design, strategically presenting a wine labeled the staff pick at the end (vs. beginning) of the choice set increased participants' commitment to that option. These findings broaden managerial implications by demonstrating that the effect of chosen-option order on commitment holds both for naturally preferred options (Study 1) and for options marketers aim to promote (Study 3). Presenting a newly launched product or item labeled as a "staff pick" at the end of a recommendation list may enhance trial rates and commitment.

Study 4: Incentive-compatible AI-driven app recommendation

Study 4 used an incentive-compatible two-phase design in the context of an AI-driven recommendation system for a meditation app. Participants first reported their mental wellness goals and received a personalized set of recommended apps. Each app included an AI-generated "effectiveness match score" based on participants' pre-survey responses. We manipulated whether the app best matched to the user was presented first or last in the choice set. To examine potential price-commitment trade-offs, this highest-matching app was more expensive. We expected greater commitment to this option when it was presented at the end (vs. beginning) of the choice set, even at a higher price, and that this would be mediated by perceived effort payoff.

Method

We recruited 148 US participants from Connect. After carrying out exclusions as in previous studies, our final sample was 104 participants ($M_{age} = 41.40$, $SD = 15.16$; 54.8% male).

We randomly assigned participants to a condition in a 2-cell (chosen option: beginning vs. end) between-subjects design. In Phase 1, participants reported their meditation goals and overall mental well-being. They learned that an AI system would generate five personalized app recommendations based on their responses, each with an "effectiveness match score." In Phase 2, participants in the *Chosen-Option-Beginning* condition viewed the highest-matching app at the beginning of the set; those in the *Chosen-Option-End* condition viewed the same set of apps with the highest-matching app presented last. We varied the monthly subscription fee such that the app with the highest effectiveness score was the most expensive. After viewing all five apps, participants saw the set of options and selected one.

We measured perceived effort payoff as in Study 3 (3-item scale; $\alpha = 0.96$). We assessed commitment using an incentive-compatible choice between two lotteries: one to win a one-month-free subscription to their chosen meditation app versus one for a gift card redeemable for alternative apps (valued at one dollar less than the subscription fee of their chosen app).

Results

As in Studies 1 and 3, our main analyses focused on participants who chose the option with the highest match score. More participants chose the lottery for the app (vs. the gift card) when their chosen app was presented at the end of the choice set (58.5%) rather than at the beginning (37.3%; $\chi^2(1, N=104)=4.70$, $p=.030$, $\varphi=0.21$). Perceived effort payoff was also greater when this option appeared at the end (vs. beginning) of the choice set ($M_{end}=5.02$, $SD=1.60$; $M_{beginning}=4.38$, $SD=1.53$; $t(102)=2.08$, $p=.040$, $d=0.41$). Perceived effort payoff mediated the effect of condition on commitment ($B_{indirect}=0.28$, $SE=0.21$, 95% CI = [0.01, 0.82]).[6]

Discussion

Using a two-phase approach, the effect held when consumers' preferences were measured in a survey and subsequently used to generate an AI-curated choice set. Participants who saw the highest-matching app last (vs. first) were more committed to it in an incentive-compatible design, even though it was the most expensive option (H1). In practice, options that better match a consumer's preferences are often priced higher than lower-matching alternatives. Although some consumers may be price sensitive, Study 4, in line with Supplemental Study 2 (Web Appendix G), indicates that the effect of chosen-option order on commitment and on perceived effort payoff holds even when the chosen option is more expensive (H2).

In Study 4, presenting the highest-matching app at the end increased consumers' commitment to follow through on their selection by 57% relative to when it was presented first. Given that the average conversion rate for app installation is 30% (Kurzweg, 2024), even a small shift in presentation order could significantly affect downloads. Success in driving consumer engagement requires not only offering the right product but also displaying it in the right order.

Studies 5a and 5b: Moderation by ability to experience effort payoff

We next tested the process via moderation. We reasoned that if consumers are unable to experience their effort as paying off, they should not show any greater commitment to the option as a function of presentation order. One way to manipulate perceived effort payoff is to change how people view options in a choice set. When options are presented sequentially, one at a time as in Studies 1–4, consumers can track their search process and reflect on how their effort was spent. In contrast, when options are presented simultaneously, consumers may choose one option without carefully engaging in the search process in a way that would prompt reflection on whether their effort was worthwhile (H3a).[7] Study 5a accordingly tested the interaction between chosen-option order and option display in predicting post-choice commitment.

Study 5a

Method

We preregistered this study (aspredicted.org/ZS9_CWT) and recruited 799 US participants from MTurk. After applying preregistered exclusions, the final sample contained 700 participants ($M_{age}=42.23$, $SD=12.38$; 54.4% male).

We randomly assigned participants to one of four conditions in a 2 (chosen option: beginning vs. end) × 2 (option display: sequential [effort payoff present] vs. simultaneous [effort payoff absent]) between-subjects design. Participants searched for an apartment to rent as in Study 1. Those in the *Sequential Display* conditions viewed apartments sequentially and selected an option; we manipulated whether the chosen option was presented at the beginning (*Chosen-Option-Beginning*) or at the end (*Chosen-Option-End*) of the sequence. Those in the *Simultaneous Display* conditions viewed all apartments at once; we manipulated whether the highest-rated apartment was presented on the left or right side in the display. Participants in this condition viewed all options in the set simultaneously, thus easily learning which option was rated highest. We instructed participants to click the options in order from left to right to learn additional information about each (see Web Appendix E for stimuli). After viewing the apartments, participants viewed the full set of options and chose the one they preferred to rent. As in Study 1, we measured commitment as desired lease duration.

[6] We find a similar pattern when including all participants in the analysis (commitment: End: 50.0% vs. Beginning: 37.8%; $\chi^2(1, N=148)=2.22$, $p=.136$, $\varphi=0.12$; perceived effort payoff: $M_{end}=4.80$, $SD=1.62$; $M_{beginning}=4.32$, $SD=1.52$; $t(145)=1.85$, $p=.067$, $d=0.31$).

[7] A pretest to Study 5a confirmed that a sequential (vs. simultaneous) option display affects perceptions of effort payoff (see Web Appendix I). Finding one's chosen option at the end (vs. beginning) of a choice set increased perceived effort payoff for a sequential display ($M_{end}=6.11$, $SD=1.30$; $M_{beginning}=5.41$, $SD=1.61$; $F(1, 560)=18.04$, $p<.001$, $\eta_p^2=0.03$), with no such effect for a simultaneous display ($F(1, 560)=0.44$, $p=.506$, $\eta_p^2<0.01$).

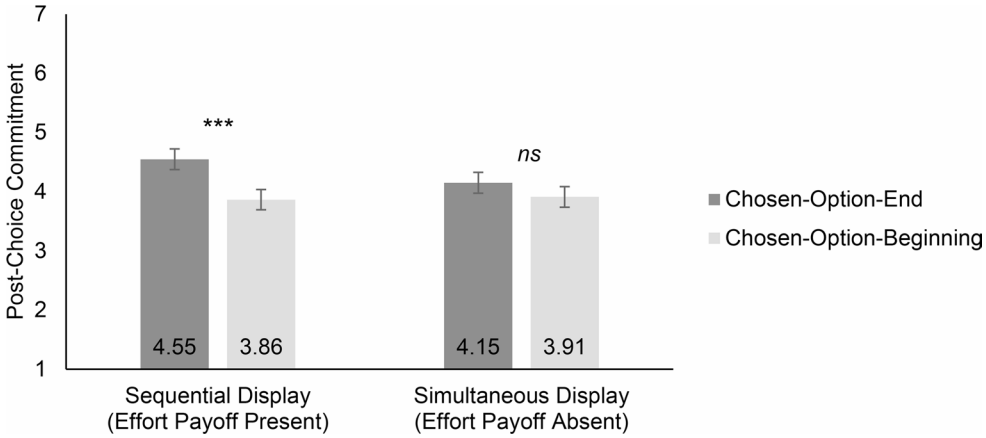

Fig. 4 Interaction between chosen-option order and search display on commitment (Study 5a). *Note*. *** $p < .001$; *ns* refers to not significant; error bars denote 95% confidence intervals

Results

Our main preregistered analysis included participants who chose the highest-rated option. An ANOVA of chosen-option order (beginning vs. end) × option display (sequential vs. simultaneous) on post-choice commitment revealed a significant effect of order ($F(1, 696) = 26.97$, $p < .001$, $\eta_p^2 = 0.04$) and a significant effect of display ($F(1, 696) = 3.93$, $p = .048$, $\eta_p^2 = 0.01$), qualified by a significant interaction ($F(1, 696) = 6.25$, $p = .013$, $\eta_p^2 = 0.01$) (Fig. 4). Under *Sequential Display* conditions, conceptually replicating prior studies, commitment was stronger among participants whose chosen option was at the end (vs. beginning) of the choice set ($M_{end} = 4.55$, $SD = 1.31$; $M_{beginning} = 3.86$, $SD = 1.11$; $F(1, 696) = 30.10$, $p < .001$, $\eta_p^2 = 0.04$). As predicted, this effect was significantly attenuated in the *Simultaneous Display* conditions ($M_{end} = 4.15$, $SD = 1.20$; $M_{beginning} = 3.91$, $SD = 1.06$; $F(1, 696) = 3.57$, $p = .059$, $\eta_p^2 = 0.01$).[8]

Study 5b

Study 5b tested the effort payoff mechanism using a different moderator. When people search firsthand, they monitor the effort they expend and can judge whether it paid off (Bhattacharjee et al., 2014). However, learning about options secondhand removes consumers from the search process. We expected the effect of chosen-option order on commitment to attenuate when people learned about options secondhand (H3b). We tested this in the context of non-profits. To help consumers find charitable causes to contribute to, companies such as Fidelity Charitable and Givewell curate lists of charities to match individuals' interests (Wasik, 2013). We presented participants with a curated set of real charities and assessed the duration of monthly donations as a measure of commitment. We expected participants who searched themselves to commit to donate to a charity for a longer period when they found that charity at the end (vs. beginning) of a choice set, with no such effect when the search was secondhand.

Method

We preregistered this study (aspredicted.org/2SC_1BH) and recruited 1,501 US participants from Prolific. After applying preregistered exclusions, our final sample size was 1,202 ($M_{age} = 43.33$, $SD = 12.93$; 49.1% male).

We randomly assigned participants to one of four conditions in a 2 (chosen option: beginning vs. end) × 2 (search: firsthand [effort payoff present] vs. secondhand [effort payoff absent]) between-subjects design. Participants engaged with an online platform to find a charity to donate to. Participants assigned to the *Chosen-Option-Beginning* condition viewed charities in the following order: Doctors Without Borders, Restless Legs Syndrome Foundation, Kentucky Theater Company, Preserve *Victura* at the JFK Library, Be a Dear and Donate a Brassiere.[9] Participants assigned to the *Chosen-Option-End* condition viewed charities in the following order: Restless Legs Syndrome Foundation, Kentucky Theater Company, Preserve *Victura* at the JFK

[8] We complement this with a conservative intent-to-treat analysis of all participants (interaction: $F(1, 795) = 7.54$, $p = .006$, $\eta_p^2 = 0.01$; *Sequential Display*: $M_{end} = 4.47$, $SD = 1.32$; $M_{beginning} = 3.87$, $SD = 1.10$), $F(1, 795) = 25.08$, $p < .001$, $\eta_p^2 = 0.03$; *Simultaneous Display*: $M_{end} = 4.11$, $SD = 1.20$; $M_{beginning} = 3.97$, $SD = 1.09$), $F(1, 795) = 1.57$, $p = .210$, $\eta_p^2 < 0.01$).

[9] In a separate pretest using a 7-point scale, we confirmed that people felt more sympathetic toward Doctors Without Borders ($M = 5.59$, $SD = 1.83$) than toward the other four charities (Restless Legs Syndrome Foundation: $M = 4.19$, $SD = 1.90$; Kentucky Theater Company: $M = 4.12$, $SD = 2.03$; Preserve *Victura* at the JFK Library: $M = 3.06$, $SD = 1.93$; Be a Dear and Donate a Brassiere: $M = 4.37$, $SD = 2.03$).

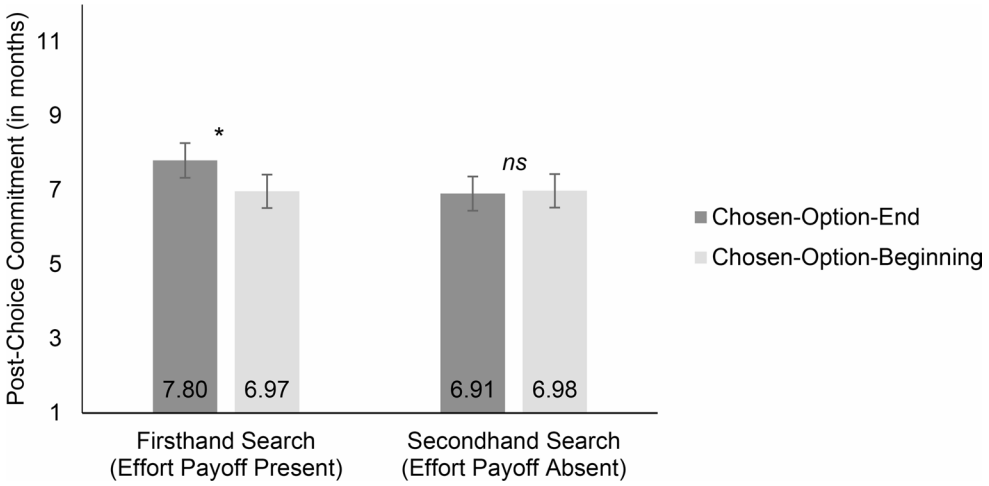

Fig. 5 Interaction between chosen-option order and search on commitment (Study 5b). *Note*. *p <.05; *ns* refers to not significant; error bars denote 95% confidence intervals

Library, Be a Dear and Donate a Brassiere, Doctors Without Borders.

In the *Firsthand Search* conditions, participants invested their own effort into finding a charity, as in prior studies. In the *Secondhand Search* conditions, participants learned about the charities by viewing another participant's screen as that person navigated the online platform. This type of search may happen when consumers watch a friend or influencer browse online. In this way, we held the charity information and option display constant and manipulated the presence of effort payoff by having people engage in the search firsthand or secondhand.

After viewing all options, all participants saw the choice set and selected one charity to support. We asked: "Suppose this year, you decided to be a donor and give $5 each month to a charity. How long would you plan to donate to this charity before you looked for a new charity to donate to?" on a 12-point scale (1 to 12 months). Similar to our measure in Study 1, this item captures commitment in terms of a longer-term financial contract (Shah et al., 2016).

Results

An ANOVA of chosen-option order × search on post-choice commitment revealed a non-significant effect of presentation order ($F(1, 1198)=2.63$, $p=.105$), and a marginally significant effect of search ($F(1, 1198)=3.57$, $p=.059$), qualified by the predicted interaction effect ($F(1, 1198)=3.78$, $p=.052$, $\eta_p^2<0.01$) (Fig. 5). In the *Firsthand Search* conditions, participants who found their chosen charity at the end (vs. beginning) were more committed to it, choosing to donate to this charity for more months ($M_{end}=7.80$, $SD=3.88$; $M_{beginning}=6.97$, $SD=4.17$; $F(1, 1198)=6.32$, $p=.012$, $\eta_p^2=0.01$). However, this effect was attenuated in the *Secondhand Search* conditions ($M_{end}=6.91$, $SD=4.06$; $M_{beginning}=6.98$, $SD=4.03$; $F(1, 1198)=0.05$, $p=.820$).[10]

Discussion

Studies 5a and 5b provide evidence for the underlying mechanism through moderation. In Study 5a, the effect was attenuated when participants viewed options simultaneously (H3a). In Study 5b, the effect was attenuated when people did not engage directly in the search process (H3b). Thus, in both studies the effect was attenuated when the ability to experience effort payoff was removed.

Study 5b further suggests that the effect is unlikely to be driven by recency (Carney & Banaji, 2012; Li & Epley, 2009). If recency explained the results, option order should influence commitment regardless of whether the search was conducted firsthand or secondhand. Instead, the order effect emerged only when participants searched firsthand. Study 5b also rules out carryover effects (Bickart, 1993; Unnava & Aravindakshan, 2021). If carryover drove the effect, later options should attract greater commitment even during secondhand search. Instead, the order effect appeared only when participants searched themselves, not when they experienced the search secondhand and were therefore less likely to experience effort payoff.

These results also offer managerial insights. For example, Study 5a suggests that when there is a desirable option in the choice set, marketers should avoid presenting all options at once and instead should display them sequentially with the desirable option at the end. At the same time, if marketers are unsure of

[10] Results hold when including all participants in the analysis (interaction: $F(1, 1497)=2.74$, $p=.098$, $\eta_p^2=0.002$; *Firsthand Search*: $M_{end}=7.37$, $SD=3.95$; $M_{beginning}=6.84$, $SD=4.14$), $F(1, 1497)=3.17$, $p=.075$, $\eta_p^2=0.002$; *Secondhand Search*: $M_{end}=6.58$, $SD=4.00$; $M_{beginning}=6.73$, $SD=3.98$), $F(1, 1497)=0.29$, $p=.589$).

which option may be good for the consumer (i.e., marketers lack insight into which option will be preferred), they could consider displaying options simultaneously, as presenting the desirable option earlier is unlikely to reduce commitment.

Study 6a: Willingness to pay

Study 6a explored the generalizability of our effect. Participants viewed up to six items pretested as similarly attractive and could stop searching at any point. We tested whether presentation order of the chosen option predicted willingness to pay (WTP). Because greater WTP reflects greater financial commitment to a choice (Albert et al., 2013; Shah et al., 2016), we expected a positive relationship between chosen-option order and WTP.

Method

We preregistered this study (aspredicted.org/ZTH_K8L) and recruited 495 US participants on Prolific. As preregistered, we included participants who viewed more than one option and reported no issues viewing images during the survey, resulting in a final sample of 463 (M_{age} = 42.82, SD = 14.89; 49.7% male).[11]

To measure willingness to pay, we used a Becker-DeGroot-Marschak (BDM) auction (Becker et al., 1964). After reading detailed instructions and completing a practice round involving a hypothetical auction (Ding, 2007) (see Web Appendix K), participants learned they would be entered into a lottery to win $20, which could be used to purchase a pillowcase. A price would be randomly drawn at the end; if their bid was equal to or higher than the drawn price, they would buy the pillowcase; otherwise they would not. This setup encouraged participants to carefully consider their willingness to pay for their chosen pillowcase.

Participants viewed up to six pillowcases pretested as similarly attractive (pretest in Web Appendix J). After viewing each option, they indicated whether they wanted to stop or continue searching. When they stopped searching or viewed all options, they selected one from a display of options viewed (see Web Appendix E). As in the Pilot Study, we computed "chosen-option stage" by dividing when the chosen option was viewed by the total number of options viewed. We measured WTP by asking: "What is the most amount of money you would pay for the pillowcase design you chose?" (range: $0–20). One participant was randomly selected to play out the auction and purchase the item if their stated WTP exceeded a randomly drawn price.

[11] We preregistered 500 participants; due to technical issues, however, five participants who did not provide data were counted as "completed" on Prolific.

Results

Mirroring the analysis from the Pilot Study, which used a similar design, we regressed WTP on chosen-option stage among participants who viewed more than one option (n = 463), which revealed a significant effect (β = 0.17, $t(461) = 3.66$, $p < .001$). We find a similar pattern when including all 495 participants in the analysis (β = 0.13, $t(493) = 2.86$, $p = .004$).

Study 6b: Pick-up intentions and word of mouth

Building on Study 6a, Study 6b recruited undergraduates through an online listserv and measured their intention to pick up their chosen pillowcase later that week. This design mirrors retail contexts in which consumers make a purchase online and receive their item a few days later. We expected a positive relationship between chosen-option stage and commitment, operationalized as willingness to come to the lab to claim their chosen option. We also explored downstream consequences of chosen-option stage and commitment on word-of-mouth (WOM) about the offering (De Matos & Rossi, 2008).

Method

We preregistered the survey (aspredicted.org/xyvp-xwv8.pdf) and recruited 204 US undergraduates living on campus through a subject-pool listserv. As preregistered, we included participants who viewed more than one option and reported no issues viewing images during the survey, leaving a final sample of 194 (M_{age} = 27.02, SD = 10.83; 28.9% male).

This study proceeded similarly to Study 6a. Participants viewed up to six pillowcases and could stop searching at any point. They chose one item from the set of options viewed. We computed "chosen-option stage" as in Study 6a. To assess commitment, we asked participants if they would pick up their chosen pillowcase from the lab a week later (yes/no). As a behavioral measure of WOM, we asked participants to provide up to seven email addresses of friends to whom they would like us to send the survey. For exploratory items, see Web Appendix D.

Results

Among participants who viewed more than one option (n = 194), we regressed intention to pick up the chosen pillowcase (yes/no) on chosen-option stage, revealing a significant positive relationship (B = 1.45, SE = 0.55, Wald $\chi^2(1) = 6.98$, $p = .008$). A Poisson regression predicting the

number of email addresses listed from chosen-option stage revealed a similar positive effect, such that selecting an option later in the sequence predicted greater WOM, as reflected in listing more email addresses ($B = 1.00$, $SE = 0.32$, Wald $\chi^2(1) = 9.76$, $p = .002$). A Poisson regression predicting the number of email addresses from intention to pick up the chosen pillowcase also revealed a significant effect ($B = 2.34$, $SE = 0.41$, Wald $\chi^2(1) = 31.90$, $p < .001$), indicating that lower intention to pick up the chosen item was associated with lower WOM.[12]

Discussion

Studies 6a and 6b generalize the effect and demonstrate consequences for real behavior. Participants who discovered their chosen option later in the choice set reported higher WTP, greater intention to visit a campus lab to pick up their option, and greater desire to share the product with friends (WOM). Even though the length of the choice set was self-determined, most viewed all options. Notably, Studies 6a and 6b capture our effect when options are horizontally differentiated. When presenting all attractive options and allowing participants to self-determine their choice, we continue to find increased commitment to an option found at a later stage.

General discussion

Eight studies testing various product categories (e.g., apartments, meditation apps, charities) in digital and traditional retail contexts find that choosing an option presented later in a choice set increases post-choice commitment. This effect occurs because finding an option at the end of a curated choice set increases perceived effort payoff, which we document via mediation (Studies 1–4, Supplemental Studies 2–3) and moderation (Studies 5a and 5b). In addition to bringing evidence for the proposed mechanism, we also rule out the possibility that this effect is due to differences in liking of the chosen option, carryover effects, or recency effects.

Theoretical implications

This research offers several contributions. First, we advance the literature on choice architecture (Johnson, 2021). While existing research has focused on how option-presentation order affects *what* people choose (Table 2), it is also important to understand how choice architecture shapes consumers' commitment to their chosen option (McCoy, 2022; Polman & Maglio, 2024). We are the first to examine how presentation order influences post-choice commitment. In doing so, we broaden the scope of the choice architecture literature from guiding initial selection to influencing consumers' commitment independently of the choice itself.

Second, we deepen theoretical understanding of commitment. Prior work has documented how features such as choice set size and the presence of decision aids affect commitment, but has not examined whether—and in what ways—the sequence of options in a curated choice set affects commitment (Table 3). We address this gap by demonstrating that option-presentation order serves as a novel antecedent of post-choice commitment. We therefore expand the theoretical lens on commitment to include not just the static structure of features but also the dynamic way in which options unfold during the search process.

Third, we contribute to research on effort utility (Buechel & Janiszewski, 2014; Dellaert & Häubl, 2012) by identifying a novel construct in explaining our mechanism: effort payoff. Rather than varying the *amount* of effort invested (e.g., Aronson & Mills, 1959), we held invested effort constant and examined how option-presentation order influences beliefs about how well the effort was spent. We find that perceptions of effort payoff matter for choice commitment; when effort feels more meaningful, people are more committed to their chosen outcome (Inzlicht & Campbell, 2022). We therefore establish a new pathway through which equal effort shapes commitment, shifting the focus from cost-benefit framework to how subjective meaning of effort can influence commitment.

Managerial implications

Our research offers practical insights for converting consumers' preferences into actual commitment by strategically presenting options in a limited choice set. Rather than relying solely on content-based personalization, marketers can increase choice commitment by placing preferred options later in the sequence. With the help of AI and digital platforms to understand consumers' preferences (e.g., Study 4) this strategy can be applied where options are presented one at a time, such as curated product discovery feeds (e.g., wine or home decor apps), subscription customization flows (e.g., meal kits or styling services), streaming recommendation interfaces, and conversational or voice-based commerce systems (King et al., 2022).

[12] We find similar results when analyzing the full sample. First, chosen-option stage predicted intention to pick up the chosen pillowcase ($B = 1.25$, $SE = 0.53$, Wald $\chi^2(1) = 5.46$, $p = .019$). Second, chosen-option stage predicted the number of email addresses listed ($B = 0.88$, $SE = 0.31$, Wald $\chi^2(1) = 8.15$, $p = .004$). Third, intention to pick up the chosen pillowcase predicted the number of email addresses ($B = 2.29$, $SE = 0.38$, Wald $\chi^2(1) = 35.31$, $p < .001$).

We also highlight the role of perceived effort payoff in driving commitment. As shown in Studies 5a and 5b, the effect emerges only when consumers feel their effort has paid off. Thus, when marketers can anticipate which option a consumer will prefer, they should avoid presenting all options simultaneously and instead present the preferred option later in a sequential display (Study 5a). Alternatively, marketers can ensure that consumers engage in a search firsthand, rather than experiencing it secondhand (e.g., guided by AI or influencers). Study 5b suggests that this approach can also enhance effort payoff and thus strengthen commitment.

This presentation strategy may also be beneficial for consumer well-being. For one, it can reduce regret or encourage follow-through on beneficial decisions (e.g., meditation apps, long-term leases) (Botti & McGill, 2011). At the same time, however, ethical and safety concerns must be considered. In situations where decision speed is critical, such as emergency medical services, financial crisis response, or disaster relief operations, prioritizing choice commitment through option-presentation order may be inappropriate or even harmful. In these cases, information should be delivered as efficiently and directly as possible. Further, potential regulations should be considered when retailers consistently present high-cost or high-margin items last to nudge consumers toward those options. Implementation should prioritize transparency and fairness to ensure that product presentation strategies are not manipulative.

Avenues for future research

This research offers an initial step toward understanding the benefits of presenting a chosen option at the end (vs. beginning) of a choice set for fostering commitment. Future work is needed to understand moderators and boundaries of this effect. For example, whether factors such as domain expertise interact with option-presentation order to influence commitment remains an open question. Additionally, while we examined several incentive-compatible decisions, future research could investigate additional action-oriented commitment measures, such as actual retention rates in a subscription context. Moreover, although we identified a novel construct of effort payoff in the search context, this construct may have broader relevance beyond search. For instance, might marketers leverage perceptions of effort payoff in loyalty programs to encourage repeat purchase behavior?

Further, Supplemental Study 3 explored whether decision confidence might explain the effect of option-presentation order on commitment. We found that option order significantly influenced decision confidence; however, this did not fully account for the effect. Even after controlling for decision confidence, effort payoff remained a significant mediator of the relationship between option-presentation order and commitment. Future research can examine how perceived effort payoff reinforces or compensates for varying levels of decision confidence. Lastly, although we explored downstream outcomes such as property upkeep and word of mouth, future research could extend this work to other post-consumption behaviors, including whether discovering options later in the set strengthens commitment over time.

Conclusion

We set out to answer the following question: How can marketers bridge the gap between consumers' preference and commitment? Ultimately, the answer depends on whether consumers can experience effort payoff. If they can, finding their chosen option at the end is often best, as people feel their effort was well spent in searching for their desired outcome, leading to greater commitment to their choice. Given recent advancements in our understanding of consumer preferences and the proliferation of curated choice sets, these results have important implications for increasing consumers' post-choice commitment.

Appendix

Table 2 Examples of research on how option-presentation order influences choice and post-choice commitment in limited choice sets

Authors	Option Presentation (IV)	Post-Choice Commitment (DV)	Choice (DV)	Key Findings and Mechanism (if Tested)
The current research	Presentation of chosen option (beginning vs. end)	✓		Presenting a chosen (i.e., preferred) option at the end (vs. beginning) of a limited choice set increases commitment to the chosen option, due to the perception that one's effort paid off.
Basu and Savani (2017)	Option display (sequential vs. simultaneous)		✓	Presenting options sequentially (vs. simultaneously) increases choice of a dominating option in the choice set due to deeper cognitive processing.
Biswas et al. (2010)	Presentation of experiential products (first vs. last)		✓	For equally desirable experiential products (e.g., beverages), presenting an option last (vs. first) in a sampling sequence increases its likelihood of being chosen, due to better recall of latter sampled products.
Dayan and Bar-Hillel (2011)	Presentation of food item on a menu (top or bottom vs. middle of category)		✓	On a menu, presenting a food item at the top or bottom of a category, rather than in the middle, increases its likelihood of being chosen.
Dellaert et al. (2024)	Presentation order of options (best-to-worst vs. random)		✓	Presenting options from highest- to lowest-quality (vs. random) increases the likelihood of a higher quality option being chosen when a large set of options (i.e., 40) is partitioned into a smaller subset (e.g., 3 or 10).
Li and Epley (2009)	Presentation of options (earlier vs. end)		✓	For equally desirable items in a limited choice set, presenting an item at the end (vs. beginning) increases its likelihood of being chosen, with the opposite occurring for equally undesirable items.
Mantonakis et al. (2009)	Presentation of options to sample (earlier vs. later)		✓	Sampling a wine earlier (vs. later) in a sequence increases its likelihood of being chosen.
Reich et al. (2021)	Option display (sequential [two stages] vs. simultaneous)		✓	Presenting options in two stages (vs. simultaneously) shifts preference toward the option that excels on a focal attribute, but only when the 2nd stage option introduces greater variation on that attribute. If the 2nd stage option does not vary on the focal attribution, preference shifts toward an earlier option that performs better on a non-focal attribute.
Romero and Biswas (2016)	Presentation of healthy food (to the left vs. right of unhealthy food)		✓	Presenting healthy items to the left (vs. right) of unhealthy ones increases their choice share because a healthy-left, unhealthy-right display pattern is congruent with people's mental organization, which enhances ease of processing and self-control capabilities.
Valenzuela and Raghubir (2009)	Presentation of options in a horizontal display (center vs. side)		✓	In a horizontal display, presenting an item in the center (vs. on the side) increases its likelihood of being chosen because people believe that centrally positioned options are more popular.

Table 3 Examples of research examining how choice set design influences commitment to a chosen option

Authors	Presentation Order	Choice Display	Decision Aid	Operationalization of Commitment (DV)	Key Findings and Mechanism (if Tested)
The current research	✓ (preferred option beginning vs. end)			1. Decision to act immediately (vs. delay) 2. Sustained behavioral commitment over time	People show greater commitment to their chosen option when it is presented at the end (vs. beginning) of the choice set due to an increase in perceived effort payoff.
Cioffi and Garner (1996)			✓ (actively opt in vs. default)	Willingness to follow their choice	People were more willing to participate in a program when they needed to actively opt in, compared to when the option was pre-selected by default.
Iyengar and Lepper (2000)		✓ (small vs. large choice set size)		Decision to act immediately (vs. delay)	People are more willing to make a choice, rather than defer the decision, when choosing from a smaller (vs. larger) choice set.
Mogilner et al. (2013)		✓ (sequential vs. simultaneous display)		Willingness to stick with (vs. change) one's choice	People are less likely to commit to a choice when options are presented sequentially (vs. simultaneously) due to their hope that better options appear later.
Polman and Maglio (2024)			✓ (decoy, default)	Longer-term engagement	People who are "nudged" (via a decoy or default option) to make a choice (vs. those not nudged) use the product less in the long term.
Putnam-Farr and Riis (2016)			✓ (yes/no format vs. opt in)	Decision to act immediately (vs. delay)	People are more willing to click through a health program to participate when presented with a choice (yes/no) compared to traditional opt in.
Schrift and Parker (2014)			✓ (presence vs. absence of a "no" option)	Longer-term engagement	People persist longer in a chosen task selected from a set that includes a "no" option (e.g., Option A, B, neither) compared to a set without it (e.g., Option A, B), because they perceive their choice as more worthwhile.

NOTE. We focus on features of choice-set design that influence post-choice commitment and therefore do not include studies examining antecedents of post-choice commitment outside of choice features (e.g., individual differences in self-esteem, Consiglio & van Osselaer, 2019; transaction method—cash vs. credit card, Shah et al., 2016).

Supplementary Information The online version contains supplementary material available at https://doi.org/10.1007/s11747-026-01150-8.

Declarations

Competing interest The authors declare no conflict of interest regarding the submission and publication of this paper at the Journal of the Academy of Marketing Science. There are no known financial interests or personal relationships that could have appeared to influence work reported in this paper. All studies were approved by Cornell University's Institutional Review Board, and all participants provided their informed consent before participating. Data, materials, and preregistrations are available at OSF: https://osf.io/qn83w/?view_only=d8046fc7756041138622f38982515d79

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