

Superfluous Choices and the Persistence of Preference

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Superfluous choices are unnecessary choice steps that could be removed without affecting the final choice context and outcome. They are introduced in this article in order to study the mere effects of consumer participation. Superfluous choices have no immediate impact on the chosen option but strongly increase consumers' propensity to persist with the same option on future choice occasions. Four experiments that isolate and investigate this indirect effect and its moderators highlight the impact of consumer participation that derives from a perception of greater deliberation and fluency in decision making.

Why consumers persist (or do not) with past choices in future situations is perhaps one of the most relevant issues in consumer research. Consumer persistence might sometimes reflect simply the functional superiority of the object at hand, but consumers often exhibit a preference for the status quo that wants deeper understanding (Muthukrishnan 1995; Samuelson and Zeckhauser 1988). This article introduces and isolates a new source of persistence of preference, one closely associated with the now ubiquitous interactivity that characterizes most real-life choice situations. The hypothesis is that the mere existence of preliminary choice steps preceding a decision increases the persistence attached to the decision outcome. Of course, additional choice steps might help consumers pick a more preferred option (Simonson 2005), but this article seeks to isolate a mere effect of consumer participation by focusing on *superfluous* choice steps, which by design have no material consequence on the set of alternatives considered in the final decision (or on which alternative consumers choose from that set).

Prior research has identified a variety of mechanisms that can cause persistence of preference (Muthukrishnan and Kardes 2001). These mechanisms differ primarily in terms of the locus of the cause of persistence: researchers have

studied consumer propensities such as loss aversion (Tversky and Kahneman 1991), choice set characteristics (Simonson and Tversky 1992), and brand characteristics (Carpenter, Glazer, and Nakamoto 1994). To our knowledge, save for rare suggestions (Wathieu et al. 2002), persistence that originates from the steps involved in the choice process has been overlooked.

We argue by means of a series of experiments that superfluous choices (even though they have no impact on the final option selected) induce a perception of greater deliberation and fluency in decision making such that consumers find the process more satisfactory and make, on future occasions, the naive (and often erroneous) inference that their earlier choice was a particularly good one. We show how, consistent with this theory, the effect of superfluous choice is moderated when the choice steps involve fluency-reducing trade-offs or when consumers have greater awareness of the steps' superfluous nature.

THE CONSEQUENCES OF SUPERFLUOUS CHOICES

Superfluous choices are decision steps that can be replaced by a task designer's (or marketer's in real-life situations) assignment without affecting the final choice context or the consumer's ultimate choice. Examples of superfluous choice include choosing the level of an unimportant attribute, screening out inferior alternatives in a totally predictable manner, and making predictable preliminary choices in a neighboring but unrelated domain before making a final choice. Superfluous choices added to a choice task constitute mere participation in the sense that the decision maker is invited to make intermediary choices that do not inform the target decision.

But superfluous choices extend a consumer's deliberation

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over a decision, and, when they are easy to make, they engender a sense of taking small steps in the right direction that might impart a subjective experience of fluency. After a delay, such experiences of deliberation and fluency (associated with objectively uninformative superfluous choices) can be expected to positively influence consumers when they retrospectively evaluate the quality of their decision making. This is consistent with Schwarz's (2004) metacognitive framework, which suggests that people rely on naive theories to draw inferences from experiences of fluency (i.e., effortless speed and accuracy) associated with accessing or processing information. The analysis of superfluous choice steps extends the metacognition framework to subjective experiences of deliberation and fluency in choice tasks.

Consumers might interpret the experience of deliberation afforded by superfluous choices in terms of any of several types of naive theories. They might infer, for example, that because careful decisions usually reflect greater deliberation, on the basis of the extent of their deliberations, their earlier decision was a careful one (Kruger et al. 2004). Multiple decision steps might be equated with the chosen alternative having passed multiple tests. The potential for such a heuristic is high after a time gap. Similarly, superfluous choices that imply unambiguous rejection of one or more options at early stages might be equated, in retrospect, with an unambiguous choice in the final stage of the decision. These two types of erroneous inference are both of the genre "if X implies Y, then the presence of Y implies the presence of X," a fallacy termed confusion of the inverse (Wyer and Srull 1989). We need not identify the precise heuristic used in any given instance (Schwarz notes that an individual might invoke different naive heuristics at different times) to assert the general implication that superfluous choice is likely to generate a perception of greater confidence in the decision that is made.

Moreover, the experience of fluency associated with superfluous choices might constitute a discrete source of satisfaction, consistent with the notion of transaction utility (Thaler 1985). The naive theory at work here is that the quality of a decision is implicit in the overall utility (combining satisfaction derived from the outcome with that derived from the stepwise process) associated with a choice occasion. A second discernible consequence of superfluous choice that might engender preference persistence is thus a consumer's satisfaction with the choice process.

We summarize the foregoing discussion in the following hypotheses.

- H1:** The presence of superfluous choices increases the likelihood that the chosen alternative will be chosen again in future choice situations.
- H2:** The presence of superfluous choices increases confidence in a choice and satisfaction with the choice process.

These hypotheses are tested in experiments 1 and 2 using different manipulations of superfluous choices.

Because, absent fluency, greater deliberation might engender confusion and hesitation and heighten uncertainty in beliefs and preferences (Schwarz 2004; Wilson and Schooler 1991), a superfluous choice step that requires a perplexing trade-off might add preference ambiguity (instead of insulate confidence) and dispel the preference persistence effect.

Another moderating factor is awareness that a choice is truly superfluous. Research on metacognitive experiences (Schwarz 2004) suggests that people do not draw on subjective experiences the informational value of which is questioned. Perceived deliberation associated with superfluous choice should thus cease to influence subsequent choices of consumers made aware of the irrelevance of the subjective experience.

The following additional hypotheses are consequently tested in experiments 3 and 4, respectively.

- H3:** The effect on persistence of preference is mitigated when superfluous choices involve trade-offs.
- H4:** The effect on persistence of preference is mitigated when consumers are sensitized to the irrelevance of superfluous choices.

Alternative explanations involving cognitive dissonance theory (Olson and Stone 2005) can be ruled out if we can show superfluous choice manipulations to have no impact on how much the chosen option is liked. The present project is also distinguished by its focus on the existence of preliminary choice steps, while holding the final choice context constant, from recent work on consumer response to flexibility and choice set enlargements (Bown, Read, and Summers 2003; Iyengar and Lepper 2000) that concentrates on the features of the choice context.

EXPERIMENT 1

This experiment investigated the effects of adding an irrelevant choice step before the selection of a preferred alternative. The only factor manipulated was whether participants were assigned or permitted to choose a choice set, the possible sets differing only in terms of a valueless attribute.

In the category of rewritable compact disks, the attribute described as "number of colors of CD boxes" (e.g., in a package of six CDs) was identified in a pretest as the least important (the most important attributes being disk capacity, price, and internal buffer). A separate pretest ($n = 30$) found no difference in the number of people who preferred four, five, or six colors of CD boxes. These attribute levels were consequently used to provide superfluous choice in the experiment.

Two days before the experiment, the respondents were asked (among other questions, as part of a class assignment) whether the number of different colors of CD boxes in a pack of CDs mattered. Two of the 93 participants responded

that the number of colors mattered. Data obtained from these two respondents were excluded from the final analysis of experiment 1, even though the results were not affected by including them.

Ninety-one respondents participated in the experiment in exchange for course credit. They were told that CD packages were classified into three sets, set A featuring four, set B five, and set C six different colors of CD boxes. Each set included a more expensive X brand (800 MB disk capacity and a 2 MB internal buffer) and less expensive Y brand (700 MB disk capacity and a 1.5 MB internal buffer). Dollar prices were provided.

Respondents in the Choice condition were asked to first choose a set from among A, B, and C. In the other (Assigned) condition, respondents were told which set was assigned to them. In the latter condition, each set (A, B, and C) was assigned to one-third of the respondents.

Participants in both conditions were then asked to choose between the more expensive (relatively higher quality) and less expensive (relatively lesser quality) brand. After a brand was chosen, participants were asked four questions (each answered using an 11-point scale) to assess (1) how confident they were in the brand choice (not at all confident—extremely confident), (2) how much deliberation went into the choice process (not at all considered/thought out—well considered/thought out), (3) how satisfied they were with the decision making process (not at all satisfied—highly satisfied), and (4) how much they liked the chosen alternative (dislike it a lot—like it a lot).

After attending a 2 hour class in an unrelated discipline, the participants were asked to assume that 3 days after they had bought it, they had lost their CD pack and, needing to work with CDs for their class assignments, had visited the local bookstore and discovered a new brand Z (750 MB disk capacity and a 1.75 MB internal buffer) priced between the more expensive X and less expensive Y brands. They were then asked to recall the label of the brand they had chosen earlier and to choose between the new brand and the previously chosen brand.

Results

As expected, neither the Assigned nor the Choice condition exhibited any difference in respondents' choice patterns across the A, B, or C set. The data were consequently aggregated across these sets for each experimental group and submitted to a binary logit analysis.

The likelihood of choosing the brand that had originally been chosen was the first dependent variable. The proportion of respondents who chose the previously chosen brand was higher in the Choice condition (34/46, or 73.9%) than in the Assigned condition (21/45, or 46.7%; Wald $\chi^2 = 6.83$, $p < .01$), indicating that, as hypothesized, superfluous choice engendered greater persistence with the chosen brand. Thus, we obtained support for hypothesis 1.

The conditions also differed in terms of confidence in choice (6.13 in the Assigned condition vs. 7.22 in the Choice condition; $F(1, 89) = 10.3$, $p < .01$) and perceived deliber-

ation (5.69 in the Assigned condition and 6.52 in the Choice condition; $F(1, 89) = 6.41$, $p < .02$). The superfluous choice manipulation also had a significant effect on degree of satisfaction with the choice process ($M_{asn} = 5.69$ and $M_{chc} = 6.83$; $F(1, 89) = 5.66$, $p < .02$). Together, these two results offer support for hypothesis 2. As predicted, these effects were not related to variations in the degree of liking the chosen brand, which was identical across conditions (7.42 in the Assigned condition and 7.23 in the Choice condition; $F < 1$). Further confirming the superfluous nature of the added choice step, the experimental manipulation had no significant impact on the proportion of respondents who chose the more expensive brand (initial share of X was 21/45 in the Assigned condition and 26/46 in the Choice condition). The initial selection (X vs. Y) had no significant impact on the likelihood of persisting with the previously chosen option.

Discussion

The results of the first experiment suggest that introducing superfluous choices along unimportant dimensions can lead consumers to perceive their choices to be well deliberated and to hold them with greater confidence. Superfluous choices also influence both the experience of satisfaction with the decision process (even in the absence of an impact on liking the chosen alternative) and the degree to which respondents persist in their initial choice. These effects emphasize the role of superfluous participation, which otherwise has no detectable impact on what consumers choose in the first period or on the degree of satisfaction with what they have chosen (as opposed to the process by which they have chosen it).

EXPERIMENT 2

This experiment demonstrates that confidence and brand persistence are enhanced when consumers are permitted to control, in a preliminary step, the size of the choice set they will face, even when their response is entirely predictable (and thus superfluous). The experiment generalizes the findings of experiment 1 to contexts in which (1) superfluous choice is logically unrelated to the characteristics of individual choice alternatives (not simply subjectively unrelated as in experiment 1) and (2) superfluous choice corresponds to a fully predictable response (not simply to a state of indifference across responses).

Ninety student participants at the Hong Kong University of Science and Technology were told that the approximately 200 different brands of general-purpose scissors available on the market could be classified into two broad categories—high-quality brands priced around US\$20 and ordinary-quality brands priced around US\$8—with little within-category variation in price or quality. Various brands might, however, vary product color. Participants were told that for the sake of simplicity the market had been segmented into 100 sets, each containing one high-quality and one ordinary pair of scissors.

Half of the participants (the Assigned condition) were told that they could access two sets (i.e., four scissors) before making their final choice. The other half (the Choice condition) were given the choice of examining one set (i.e., two scissors) or two sets (i.e., four scissors). As expected, all participants in the latter condition chose to examine two sets. A superfluous choice step was thus added in the sense that all participants had access to four scissors whether or not they had exercised their free will.

Participants in both conditions were subsequently asked whether they would choose a more expensive high-quality or a less expensive ordinary-quality scissors from among the brands offered, independent of the color they would ultimately select. Participants' confidence in their responses was obtained on an 11-point scale (not at all confident—extremely confident). Thirty minutes later (after performing a number of unrelated tasks) the respondents were asked to assume that they had visited a neighborhood stationery store that stocked 20 of the 200 brands and indicate the likelihood that they would find a brand that they would prefer over the brand chosen earlier from the four-scissors set. The rating was obtained on an 11-point scale (most likely—least likely), a higher rating signaling greater choice persistence.

Results

The conditions differed with respect to confidence (6.19 in the Assigned condition vs. 7.07 in the Choice condition; $F(1, 88) = 3.99, p < .05$) and in terms of the estimated likelihood of finding a better brand in the stationery store (5.43 in the Assigned condition vs. 6.50 in the Choice condition; $F(1, 88) = 5.94, p < .02$). These results offer additional support for hypothesis 2 and hypothesis 1, respectively. There was no significant impact of the experimental condition on the proportion of respondents who chose high-quality scissors, and the likelihood to persist with the initial choice appeared to be independent of the initially chosen quality.

Discussion

The experiment produced significant shifts in confidence and preference persistence based solely on having selected a four-scissors over a two-scissors choice set instead of simply being assigned a four-scissors choice set. Because the experiment included no product-relevant basis for choice in the superfluous choice step, the effects obtained can be attributed exclusively to superfluous determination of choice set size.

EXPERIMENT 3

Our theoretical framework suggests that if the additional choice step required a trade-off, the effect of superfluous choices on persistent preference would be affected. Indeed, greater perceived deliberation need not always result in greater persistence if the decision was not perceived to be a fluent one. This experiment identifies a situation in which greater perceived deliberation does not lead to persistent preference.

Ninety-three participants were assigned to one of the three experimental conditions. In all three conditions participants were asked to choose one of two brands, A and B, of MP3 player. They were told that they would receive a flashlight as a gift. In the Assigned condition all participants were given a flashlight that was described in terms of the following attributes: required four AAA batteries, produced a light output of 25 lumens, and required battery replacement after 40 hours. In the Superfluous choice condition, participants were given a choice between (1) brand A, which possessed these attributes, and (2) a competing (but dominated) brand B that required four AAA batteries, produced a light output of 20 lumens, and required battery replacement after 32 hours. In the Trade-off choice condition the competing brands possessed the attributes of number of batteries required and light output at the same levels as in the Superfluous choice condition, but the values of the third attribute of battery replacement time differed. Brand A (which had an output of 25 lumens) required battery replacement after 32 hours, brand B (which had an output of 20 lumens), after 40 hours. Thus, participants were required to make trade-offs between light output and battery replacement time. In the latter two conditions the enhanced brand and its labels (A or B) were counterbalanced.

Either after being assigned a flashlight as a gift or after making a choice between the two brands of flashlight, participants were asked to choose between two MP3 players. The two brands varied in terms of playing time, jukebox capacity, and price (but not in terms of recording capacity). The enhanced brand and its label (A or B) were counterbalanced, and its price was 20% greater than that of the other brand. The participants also, as in the previous experiments, responded to the scales that measured confidence in choice, perceived deliberation, and satisfaction with the decision.

After performing tasks unrelated to this research for 90 minutes, the participants were given the following story:

Assume that a month after you bought the MP3 player your uncle, aunt, and cousin visit your home. Your cousin likes the player very much. Generous person that you are, you give the MP3 player as a gift to your cousin. In return your uncle offers you a gift in the form of cash sufficient to buy a new player of the kind that you examined last time. Because you are used to spending hours listening to music, you would like to buy a player soon. On reaching the store you realize that the player you bought last time and another player, C, are the only ones available. Information for C is provided below. If you want, you can ask the experimenter for information about the attributes of the player you bought last time.

In terms of the attributes of playing time, jukebox capacity, and price, brand C was portrayed as being between brands A and B. Participants were asked to choose between brand C and the brand they had chosen earlier. The proportion of participants that chose the brand they had chosen earlier was the main dependent variable.

Results

There was no difference across conditions in terms of preference for the enhanced brand of MP3 player (63%, 59%, and 58% in the Assigned, Trade-off, and Superfluous choice conditions, respectively), but the effect of the gift-choice manipulation on preference persistence was significant (Wald $\chi^2(2 \text{ df}) = 6.26, p < .05$). Specifically, the contrast between the Assigned and Superfluous conditions (12/30 or 0.40 vs. 22/32 or 0.69; Wald $\chi^2 = 5.01, p < .03$) was significant, as was that between the Trade-off and Superfluous conditions (13/31 or 0.43 vs. 22/32 or 0.69; Wald $\chi^2 = 4.46, p < .04$).

The manipulation had an effect on choice confidence ($F(2, 90) = 8.75, p < .01$; $M_{\text{asn}} = 5.57, M_{\text{to}} = 5.81$, and $M_{\text{sup}} = 7.12$). The contrasts of the Superfluous condition with the Assigned condition ($F(1, 90) = 14.97, p < .001$) and Trade-off condition ($F(1, 90) = 10.98, p < .001$) were significant.¹ We obtained the same pattern of results for the dependent variable of satisfaction with the decision ($F(2, 90) = 5.58, p < .01$; $M_{\text{asn}} = 5.70, M_{\text{to}} = 6.00$, and $M_{\text{sup}} = 7.13$). The two relevant 1 degree of freedom contrasts were significant ($F_{\text{asn vs sup}} = 9.94, p < .01$, and $F_{\text{to vs sup}} = 6.41, p < .02$). The gift-choice manipulation also had the expected effect on perceived deliberation ($F(2, 90) = 10.79, p < .01$; $M_{\text{asn}} = 5.73, M_{\text{to}} = 7.03$, and $M_{\text{sup}} = 7.32$). The contrast between the Assigned and Superfluous conditions was significant ($F(1, 90) = 19.08, p < .001$); that between the Trade-off and Superfluous conditions was not ($F < 1$).

Discussion

The results of this experiment support the belief that greater deliberation and effort in choice need not result in greater persistence of preference (hypothesis 3). Specifically, if the intermediate decision requires a trade-off, despite greater perceived deliberation, preference persistence does not occur, indicating that fluency matters. We believe that the uncertainty in preference caused by the trade-off generalizes to the target decision and reduces the strength of preference.

EXPERIMENT 4

This experiment had two objectives. First, we investigated the effects of superfluous choice when such choice is implicit in the sense that it is not explicitly presented to consumers as a separate choice step. One limitation of the previous experiments is that participants who received explicit additional instructions to make a (superfluous) choice might have interpreted the stimulus as a signal of caring or respect for them as free-willed decision makers. Such an interpretation would leave the door open for an alternative explanation of the re-

sults in terms of interpersonal comfort or trust. The procedure employed for this experiment rules out this alternative explanation. In addition, we identified a boundary condition for the effect. Following Schwarz (2004), we propose that if participants are made aware of the irrelevance of the intermediate step the effect will be mitigated.

Superfluous choice in this experiment took the form of an editing stage. Consumers in the Superfluous choice condition were offered a choice set in which each alternative was coupled with a clearly dominated alternative. It is hypothesized that in the process of dismissing these alternatives, consumers experience fluency and build confidence in the process of choice making, which should translate into persistence of preference on later choice occasions. Whereas the effect of dominated alternatives on choice is well documented, this experiment attempts to create a situation in which, absent a direct effect, an effect in terms of persistence of preference can be isolated. Within the Superfluous choice condition we introduced an awareness manipulation as described below.

One hundred and forty-five participants were assigned to one of the following experimental conditions: three alternatives, six alternatives with superfluous options, and six alternatives with superfluous options and awareness. Participants in the first condition were exposed to three MP3 players described in terms of four attributes: playing time (hours), recording time (hours), jukebox space (gigabytes), and battery life (hours). The brands did not vary in terms of recording time. Brand A exceeded the other brands in terms of battery life, brand B, in terms of jukebox space, and brand C, in terms of playing time. The choice set thus contained three alternatives on the efficient frontier. The choice set in the second and third conditions included six brands. Brands A, B, and C were described in the same manner as in the first condition, and brands D, E, and F, as being dominated by brands A, B, and C, respectively. The only difference between the two conditions was that whereas participants in the second condition were asked to choose the most preferred option, those in the third condition were explicitly instructed to first screen out the inferior, irrelevant options, narrow down the final choice set to three, and only then choose the most preferred brand.

Participants in all three conditions first made their choices within the given choice sets. Confidence in having chosen the best alternative was measured on an 11-point scale (not at all confident—extremely confident). After 30 minutes of performing unrelated tasks, the participants were asked to assume that 3 days after they bought it they had lost their MP3 player and to decide whether they would buy the same player they had bought before or buy another (either from among the ones they had examined earlier or a new player from another store).

Results

Our manipulation had an effect on choice persistence (Wald $\chi^2(2 \text{ df}) = 6.05, p < .05$), and thus we obtained support for hypothesis 4. Choice persistence was greater in the

¹For all two-group comparisons, we also performed *t*-tests with Dunn-Bonferroni corrections, these comparisons being nonorthogonal. Because the results of these tests agreed with those of the planned contrasts, we report only the latter.

superfluous (six-alternatives, no-awareness) condition (30/47 or 0.64) than in the three-alternatives condition (20/49 or 0.41; Wald $\chi^2 = 5.00, p < .03$) and in the six-alternatives, awareness condition (21/49 or 0.43; Wald $\chi^2 = 4.17, p < .05$). Similarly, when the data were submitted to a three-group ANOVA, the manipulation of conditions had an effect on confidence in the initial choice ($F(2, 142) = 8.22, p < .001$). Confidence was greater (7.78) when the choice set contained six alternatives and participants were not aware of the irrelevance of the superfluous choice than when the choice set contained three alternatives (6.61, $F(1, 142) = 6.49, p < .02$) or when the choice set contained six alternatives but participants were sensitized to the irrelevance of the inferior options (6.43, $F(1, 142) = 6.21, p < .02$).

Discussion

The results of this experiment demonstrate that an opportunity to screen out dominated alternatives has the same general effect on persistence of preference as explicitly instructed superfluous choice steps. It should be noted that in contrast to the asymmetric-dominance-effect paradigm (Huber, Payne, and Puto 1982; Simonson and Tversky 1992), there was no difference between the three-alternative and six-alternative conditions in terms of the choice share of any single brand.

An opportunity to screen out alternatives in the six-alternative, no-awareness condition, however, enhances confidence in the decision and thus causes persistence with the previously chosen brand. This effect might be explained by the perception of greater deliberation that arises when consideration sets are self-generated instead of being provided by others (as in the three-alternative condition).

It is noteworthy that this tendency is weakened when participants are sensitized to the irrelevance to the final decision of the inferior options in the choice set. As Schwarz (2004, 343) suggests, any observed effect due to metacognitive experiences could be eliminated if a person is aware that processing fluency might result from a source that is irrelevant to the decision at hand.

GENERAL DISCUSSION

In four experiments we demonstrated that superfluous choices influence persistent preference for a previously chosen option. Superfluous choices are preliminary choice steps that have no material impact on the main choice context. These choice steps nevertheless impart enhanced confidence in and satisfaction with the decision process and increase the likelihood that a consumer will persist with the same choice on future choice occasions.

Our experiments introduced various types of superfluous choice: a preliminary choice between two levels of an unimportant attribute (experiment 1), a totally predictable choice between two choice set size levels (experiment 2), a totally predictable choice between two premiums obtained independently of the focal choice made by the consumer

(experiment 3), and a trivial task of editing out dominated alternatives (experiment 4).

The main dependent variable was in each case the propensity to persist with the previously chosen alternative in the context of a later choice occasion, usually in the presence of an attractive new opportunity. We also measured in several of the experiments the effect of superfluous choice on a number of consumer perceptions, namely, confidence in the choice, how deliberate the decision was, satisfaction with the decision process, and how much the consumer liked the chosen option. In addition, we suggested that conflict in the additional decision step and sensitivity to the irrelevance of the additional decision step moderated the effect.

The type of inferences consumers draw from their experience with the choice process might depend on the way superfluous choices are manipulated. The resulting strength of preference might also depend on these specific manipulations inasmuch as some of them might be perceived to be more informative than others. For example, screening out dominated alternatives might lead consumers to infer that the chosen brand has passed multiple tests and is therefore better than many other brands. This manipulation might therefore yield a particularly strong degree of preference persistence.

We also wondered whether mechanisms isolated by other research streams that compared experimental conditions in which an element of the choice situation was chosen versus assigned might be at work in our experiments. According to the cognitive-dissonance hypothesis, for example, the desirability of an option increases when it is freely chosen versus imposed. This mechanism might explain persistence of preference in some settings, but it is not applicable to our experiments because across all conditions the target option adopted was always chosen. Our manipulation of assigned versus chosen involved only an element of the decision context, not the selection of the preferred item from among other alternatives. As revealed by the target brands' desirability ratings obtained from participants, in none of the experiments did we find an effect of superfluous choice on the degree of liking or the desirability of the target brand.

Although experiment 4 might appear to be consistent with the asymmetric-dominance paradigm (Huber et al. 1982; Simonson and Tversky 1992), in our experiment the dominance was symmetric because there was a dominated brand for each of the three target brands. The manipulation in this experiment is quite different because it did not influence the option chosen initially but rather influenced the degree of preference persistence.

The research stream that advanced aversion of uncertainty resolution as a key explanation for the preference for choice in a choice versus no-choice task (Bastardi and Shafir 1998; Bown et al. 2003) does not explain our results because in all of our experiments choice was a common task across the different conditions.

Two paradigms of research are more closely related to our research and findings. First, the illusion-of-control phenomenon (Langer 1975) suggests that respondents who choose an option (compared to those who are assigned the

same option) might exhibit a stronger preference for that option. Our experiments do not test the difference between the conditions under which the target brand is chosen versus assigned. Another key difference is that the illusion-of-control phenomenon was proposed for situations in which chance and skill are equated. There is no shift of control when superfluous choice is offered because by definition the chosen alternative remains predictably unchanged, that is, the heightened activity or participation generated by superfluous choice in the selection of an alternative does not in any way determine the outcome.

Second, the literature on choice behavior and satisfaction has examined the impact of choice set size (Iyengar and Lepper 2000). In all but the last of our experiments the size of the choice set was common across experimental conditions. Moreover, we interpret "more choice" in terms of increasing the number of preliminary choice steps while maintaining everything else constant.

Ultimately, this research highlights a mere effect of consumer participation, whereby participation entails beliefs about deliberation in the choice process and confidence in the choice that leads to persistent preference for the chosen alternative. In other words, decision steps that can be easily substituted by assignments cause preference persistence. The ease of these substitutable decisions causes a subjective metacognitive experience of fluency (Schwarz 2004). This subjective experience leads, in turn, to diverse erroneous inferences. As these inferences are "largely automatic," the "inferential steps are unlikely to show-up in think-aloud protocols" (Schwarz 2004, 342). As our results reveal, however, these inferences can enhance confidence in and satisfaction with the decision process. The confidence or certainty obtained in a superfluous decision step might then generalize to the main decision.

We identified as moderators the presence of trade-offs in the intermediate decision step and awareness of the irrelevance of the intermediate decision step. Future research might identify additional moderators that can accentuate or dilute the effects of superfluous choice on persistence of preference. For instance, consumers' assumptions about the motives for superfluous choices or about the predictability of their own preferences relative to those of others might interfere with our effects. It might be useful as well to further investigate the origin of the superfluous choice effect, for example, whether it occurs at the point of encoding in the initial context or at the point of retrieval when a new choice opportunity arises.

Real-world implications should be far-reaching inasmuch as the superfluous choice effect calls into question the frequent assumption that suppliers should use what they already know about consumers to create finely targeted, conveniently channeled offers. If there is a mere effect of participation and if superfluous choice generates greater rates of repeat choice, then interactions that require more choice steps than necessary might prove unexpectedly useful.

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