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The authors propose that consumer choices are often systematically influenced by preference fluency (i.e., the subjective feeling that forming a preference for a specific option is easy or difficult). Four studies manipulate the fluency of preference formation by presenting descriptions in an easy- or difficult-to-read font (Study 1) or by asking participants to think of few versus many reasons for their choice (Studies 2–4). As the authors predict, subjective experiences of difficulty increase choice deferral (Studies 1 and 2) and the selection of a compromise option (Studies 3 and 4), unless consumers are induced to attribute the experience to an unrelated cause. Unlike studies of decision conflict, these effects are obtained without changing the attributes of the alternatives, the composition of the choice sets, or the reference points. The authors discuss the theoretical and practical implications of the results.

Preference Fluency in Choice

Understanding the factors that determine which options consumers choose and whether they make rather than defer purchase decisions is critical for the development of marketing strategies. A major contribution of behavioral decision research has been to establish the notion of constructed preferences, the idea that consumer preferences are not well defined but rather are constructed in the process of making a choice. This constructive viewpoint suggests that different tasks and contexts highlight different aspects of the options, focusing consumers on different considerations that lead to seemingly inconsistent decisions (Bettman, Luce, and Payne 1998). Research on preference construction has implicated choice difficulty as a source of the failure of preferences to be invariant across tasks and contexts (Dhar and Simonson 2003; Payne, Bettman, and Johnson 1992). Although decision difficulty has been manipulated in vari-

ous ways, such as by changing the choice options, the content that is the focus of attention, and the reference points used in choice (e.g., Luce, Bettman, and Payne 1999), in general, these manipulations are associated with changes in the content of decision makers' thoughts. Recent judgment research indicates that there is more to thinking than thought content. As we discuss subsequently, the impact of thought content can be qualified by a person's metacognitive experiences during the processing of information (for a review, see Schwarz 2004).

In this research, we focus on metacognitive experiences that occur during the construction of preferences. We define preference fluency as the subjective feeling of ease or difficulty experienced while making a decision, and we examine how this fluency affects two well-known choice phenomena: deferral and compromise (Dhar and Simonson 2003). Prior research has demonstrated that both purchase deferral and choice of the compromise option are consequences of difficulty associated with making trade-offs among specific aspects of the provided options (Dhar 1997; Kivetz, Netzer, and Srinivasan 2004; Simonson 1989; Tversky and Shafir 1992). An important difference between our work and previous work on choice effects is that by manipulating directly the subjective experience of difficulty, we show that the fluency accompanying preference formation bears on the size of the deferral and the compromise effect, even when the choice and reference alternatives are held constant.

Next, we review key findings bearing on the role of experiential information in judgment. Then, we introduce the concept of preference fluency and report four studies in

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which we manipulate preference fluency through variables extraneous to the choice alternatives. These variables influence the subjective experience of the difficulty while holding constant the variables that have historically been shown to influence preference construction. In Study 1, we use the readability of the print font to affect preference fluency, and in Studies 2, 3, and 4, we use the number of reasons requested for a choice as the fluency manipulation. Throughout, we observe that variables that increase the difficulty of preference construction increase indecision (i.e., deferral and compromise) in ways that parallel the effects of trade-off difficulty. We discuss the implications of this research for the role of preference fluency in consumer decision making and for managerial tactics that might promote preference fluency to influence purchase decisions.

FLUENCY EXPERIENCES IN JUDGMENT

A great deal of behavioral decision research has focused on decision difficulty arising from the amount of information presented and from attribute trade-offs involved in making a choice (e.g., Lurie 2004). This cognitive orientation has recently been complemented by increased attention to experiential information in the form of moods and emotions (e.g., Luce, Bettman, and Payne 1997). As research in social cognition indicates, however, experiential information is not limited to ambient affective states, such as moods and emotions, but rather includes metacognitive experiences that accompany the reasoning process (Clore 1992; Schwarz 2004). The effects of these fluency experiences have been studied in many judgment contexts (see Schwarz 1998), but their effects on context effects in choice have not yet been examined. A potential link between previous research on context effects in choice and the current research is that in situations in which choice difficulty arises from trading off competing characteristics of the choice alternatives, its influence on decision behavior is potentially mediated by consumers' subjective experiences of indecision and conflict (e.g., Dhar 1997; Luce 1998). Therefore, it may be possible to moderate the effects found in prior work by using the tools of subjective experience, including changing the subjective experience through extraneous variables and through the use of attribution manipulations, which we describe subsequently.

Fluency experiences arise from the ease of generating thoughts and accessing memories, as well as from the ease of processing externally presented stimuli. Next, we review prior research on these two types of fluency experiences.

Challenging the traditional notion that judgments are based solely on what comes to mind, Schwarz and colleagues (1991, Experiment 1) observe that the implications of accessible thought content are qualified by the ease or difficulty (i.e., fluency) with which a given thought can be brought to mind. In their studies, participants rated themselves as less assertive after trying to recall 12 examples of their own assertive behavior (experienced as difficult) than after recalling only 6 examples (experienced as easy). Apparently, they concluded from the difficulty of recalling 12 examples that they could not be very assertive, because if they were, recalling 12 examples would not have been so difficult. In support of this interpretation, the observed pattern reversed when the informational value of the subjective

experience was undermined through a misattribution manipulation. That is, when participants could attribute the experienced difficulty to the distracting effect of background music, they reported higher assertiveness after recalling 12 examples than after recalling 6 examples (Schwarz et al. 1991, Experiment 3). Subsequent research replicated this basic pattern across many content domains (for reviews, see Schwarz 1998, 2004).

The inferences people draw from fluency experiences depend on the naive theory of the mind they bring to bear on them, which is context dependent. One set of naive theories pertains to the relationship between external variables, such as the frequency of events in the world, and the accessibility of thought content. For example, people assume that it is easier to generate arguments for a proposition when there are many rather than few good reasons that support it. Accordingly, they are persuaded more when they must generate few arguments rather than many, even though more arguments were brought to mind in the latter case (e.g., Wänke, Bless, and Biller 1996). Moreover, they report higher attitude strength on measures such as attitude importance and certainty after generating a few rather than many arguments (e.g., Haddock et al. 1999).

A second source of fluency experiences arises from the ease with which externally presented stimuli are processed. The premise behind this processing fluency is that any stimulus may be processed with differing degrees of speed, effort, and accuracy. An effect of processing fluency that is particularly relevant to decision making is its influence on judgments of truth. People associate familiarity with truth, and high fluency can lead to an inference that a statement is familiar. Accordingly, variables that facilitate fluent processing, such as exposure frequency (e.g., Begg, Anas, and Farinacci 1992) or figure-ground contrast (Reber and Schwarz 1999), reliably increase the likelihood that a given statement is accepted as true.

The fluency of processing can also affect evaluative judgments. The more easily a given target can be processed, the more positively it is evaluated. Thus, any variable that facilitates fluent perception is likely to increase liking, from figure-ground contrast and presentation time (Reber, Winkielman, and Schwarz 1998) to previous exposure (as known since Zajonc's [1968] demonstration of the mere exposure effect). For example, Reber, Winkielman, and Schwarz (1998) observe that participants liked a given picture more when it was preceded by a subliminally presented matching contour rather than a mismatching contour. Winkielman and Fazendeiro (as reported in Winkielman et al. 2003) obtain parallel findings with another fluency manipulation. In their studies, participants saw unambiguous pictures of common objects (e.g., a picture of a lock) preceded by a word. Participants reported liking the pictures more when they were preceded by conceptually related primes (e.g., "lock" or "key") than when they were preceded by unrelated primes (e.g., "snow"). Liking of the picture was a function of the processing fluency resulting from the primes.

In summary, the reviewed findings illustrate that judgments are not necessarily based on evaluations of the descriptive content of the target. Instead, the fluency with which information about the target can be processed or the

ease of thought generation or recall is informative in its own right and feeds into various judgments. Next, we turn to the implications of these phenomena for the construction of preferences.

CHOICE DIFFICULTY AND PREFERENCE FLUENCY

Prior research has examined the consequences of decision difficulty and conflict (for a review, see Bettman, Luce, and Payne 1998). This research typically accounts for seemingly irrational or inconsistent choices in terms of the characteristics of the options or in terms of reasons that are used to justify the choice (e.g., Shafir, Simonson, and Tversky 1993; Simonson 1989; Simonson and Nowlis 2000). For example, deferral and compromise are enhanced when option sets are modified to make the choice more difficult (Dhar and Simonson 2003). Luce, Bettman, and Payne (1999, Experiment 2) provide an example of decision difficulty being manipulated without changing the characteristics of the choice options but rather by presenting participants with a high or low reference point. They find that trade-offs among losses tend to be more difficult than trade-offs among gains, leading to greater preference for the high-quality alternative.

Another factor that can influence the perceived difficulty of forming a preference is the subjective metacognitive experience during the decision process. Although this subjective experience of difficulty can be a direct outcome of the choice process, it can also be influenced by extraneous variables that do not pertain to the content of the choice. Regardless of the source, prior research suggests that people presume that their experiences while thinking about a judgment are related to that judgment, and they incorporate those experiences into their judgments. This process is consistent with research on the “aboutness” principle (Higgins 1998), which indicates that when thoughts or feelings come to mind while a particular target is being considered, those thoughts or feelings are assumed to be relevant to the target or they would not come to mind at that moment. In a similar vein, the subjective experience of difficulty that accompanies the process of choosing can induce an inference that the choice itself is difficult. As a result, the decrease in preference fluency should be sufficient to produce effects similar to those found in previous research that manipulated the content of thoughts about the choice. Subsequently, we discuss two effects that have been closely linked to choice difficulty and are prime candidates for studying the effects of preference fluency on choice: deferral and compromise.

Prior research has shown that the consumer decision to defer choice can be influenced by manipulating the difficulty of choosing among a set of provided options. Specifically, offering several attractive alternatives such that none can easily be judged to be the best increases the tendency to not choose, compared with a choice set in which one of the options dominates (Dhar 1997; Tversky and Shafir 1992). Although these findings have been explained in terms of the difficulty arising from trade-offs among the choice options, it may be that inducing a subjective feeling of difficulty is sufficient to affect deferral. Thus, increasing the subjective feeling of difficulty arising from an extraneous source should correspondingly increase deferral for the same alternatives. Drawing on fluency research in the judgment litera-

ture (e.g., Schwarz et al. 1991), we expect that fluency should affect deferral only when this feeling is attributed to the choice at hand. When a person’s attention is drawn to the fluency arising from a source that is irrelevant to the current choice, any effect of fluency should be extinguished. Therefore, we propose that the likelihood of deferral will increase if people experience low preference fluency when making a choice and if they attribute this subjective feeling about preference formation to the difficulty of the decision.

Choice difficulty can also influence the relative preference among options in a choice set. In particular, some options are selected not because they are more preferred but rather as a way to resolve a difficult decision (e.g., Dhar and Simonson 2003). The compromise effect occurs if the choice share of one option, b, relative to another alternative, c, is enhanced when a third option, a, is added to the choice set, making b a “compromise” (middle) option. Consistent with previous process data (Simonson 1989), many consumers who end up selecting a compromise option find the decision difficult and view the middle option as a way to resolve this difficulty. Although these studies focus on the effects of difficulty arising from the content of the choice set, inducing a feeling of difficulty through a direct manipulation of the subjective experience may be sufficient to enhance the compromise effect. In the current studies, we manipulate fluency with variables irrelevant to the content of the choice and examine how this influences the compromise effect. As with deferral, we propose that compromise increases when preference fluency decreases and when the fluency is attributed to the choice.

As this discussion indicates, we propose that fluency of preference formation can account for the effects of choice difficulty resulting from features of the choice alternatives and difficulty resulting from extraneous variables. That is, whereas previous studies of choice difficulty have focused on the trade-offs or other antecedents of difficulty, we believe that the subjective experience of difficulty, arising from either those antecedents or extraneous variables, is sufficient to generate the effects observed in prior research. Accordingly, the current studies focus on direct manipulations of the subjective experience to isolate the role of fluency in choice difficulty effects. We test our proposition that increased preference fluency decreases choice deferral in two ways. In Study 1, we manipulate fluency by presenting the same choice alternatives in either an easy- or a difficult-to-read font. In Study 2, we ask participants to think of either a few reasons (easy) or many reasons (difficult) for their choice. Extending the exploration of preference fluency from deferral of choice to the alternative chosen, Studies 3 and 4 address the influence of preference fluency on the size of the compromise effect. In these studies, we again manipulate fluency by asking for a few versus many reasons for the choice. Throughout, the results indicate that the experienced fluency of preference formation has a profound impact on choice behavior, unless the informational value of the experience is drawn into question. Importantly, we obtain these effects in the absence of any changes in the attributes of the individual choice alternatives, the composition of the choice sets, the response options, or the salient reference points.

STUDY 1: PRINT FONTS, CHOICE DEFERRAL, AND ATTRIBUTION

Study 1 tests the assumption that fluency experiences derived from extraneous variables can affect preference fluency and, in turn, deferral. All participants received identical descriptions of a set of choice objects (cordless telephones), except that the descriptions were printed in a font that was either easy or difficult to read. We predicted that participants would attribute the low fluency of processing information about the alternatives to the difficulty of the decision rather than to the difficulty of reading the information. Accordingly, respondents should be more likely to defer choice when the information is presented in a difficult-to-read font than in a standard font.

We expected that the impact of print font on choice deferral would be reduced or eliminated when participants correctly attributed the experienced processing difficulty to the font. That is, this attribution should undermine (or explain away) the informational value of their difficulty experience (Schwarz et al. 1991), resulting in lower deferral rates that are similar to the standard font condition. Accordingly, some of the participants were presented with a choice in a difficult-to-read font and had their attention drawn to the unclear font.

Method

As part of a larger Web-based questionnaire, 205 participants were presented with a hypothetical choice problem, including descriptions of two cordless telephones. As with many real consumer purchase situations, participants could either choose one of the two options presented or defer choice and continue looking at other unspecified Web sites. This study used a 2 (subjective difficulty: standard versus difficult font) \times 2 (attribution manipulation: present versus absent) between-subjects design. We manipulated subjective difficulty by presenting the choices to half of the participants with the descriptions presented in embossed italicized gray font (see Figure 1). This font has been shown to be fairly difficult to read, though it can be read accurately with some effort (Epley and Norwick 2004; Simmons and Nelson 2006). In a pretest, 34 undergraduate students rated the fonts used in this study on a nine-point scale ranging from "very easy to read" to "very difficult to read." As we expected, the pretest confirmed that participants rated the

font shown in Figure 1 as significantly more difficult to read than the same materials presented in a standard font ($M_s = 3.53$ and 4.88 ; $t(32) = 2.75$, $p < .01$). We crossed the font manipulation with a manipulation aimed at redirecting the attribution of difficulty arising from the font. Half of the participants in each font condition received an additional sentence following the instructions that stated, "This information may be difficult to read because of the font."

Results and Discussion

We predicted that in the absence of an instruction that mentions the font, participants would misinterpret the processing difficulty caused by the font as reflecting choice difficulty and that this would result in an increased incidence of choice deferral. The results supported this prediction. Whereas 17% of the participants who received the standard font deferred choice, 41% of those who received the difficult-to-read font did so ($\chi^2(1) = 6.45$, $p < .05$). In contrast, when the instructions mentioned that the font may be difficult to read, there was no difference in deferral rates among those receiving the standard font (16%) and those receiving the difficult font (16%), and these two cells had a similar rate of deferral to the standard font—no instruction condition (17%).

These results support the idea that, when the choice alternatives and the response modes are held constant, the outcome of preference construction can be affected by the subjective fluency experience that occurs during choice. An alternative explanation for the difference between the difficult and the standard font conditions could have been an inference about low quality when the options were described in a difficult-to-read font. Furthermore, this explanation would predict that the instruction that drew attention to the font should not eliminate (and possibly enhance) the difference in deferral rates between the two fonts.

As we stated previously, a necessary condition for fluency to affect choice is that the decision itself, not the manipulated extraneous source of fluency (i.e., the font), must be viewed by participants as the cause of the fluency experience. Consistent with this explanation, the effect of the font on deferral was eliminated when participants' attention was drawn to the font. As shown in the judgment literature, in the absence of an attentional manipulation, people are likely to draw on their experiences as information that is relevant to the task at hand (Higgins 1998), even when its source is fairly obvious (for reviews, see Schwarz 2004; Schwarz and Clore 1996).

STUDY 2: EASE OF THOUGHT GENERATION AND DEFERRAL

Study 1 manipulated preference fluency by changing the ease with which provided information about choice alternatives could be processed. As we predicted, decreased preference fluency increased choice deferral. Study 2 extends this work by turning to the preference fluency associated with participants' own thought generation. Previous research into judgment formation has shown that subjective experiences related to a person's own thought generation process, not just the fluency of processing externally perceived stimuli, can affect subsequent cognitions (e.g., Schwarz et al. 1991). In the remaining studies, we manipulate preference fluency

Figure 1

SAMPLE MATERIALS: DIFFICULT-TO-READ FONT

BRAND A
PRODUCT FEATURES
<ul style="list-style-type: none"> • 2.4 GHz Technology for extended range • Call-waiting Caller ID with 99 number storage • 40 name and number directory • 30 Channel Operation • 1 year warranty on parts and labor • Display dial • Available in 8 colors • Headset compatible
Price: \$34.99

by affecting the experience of thought generation during preference construction and examine its effects on choice.

Studies have shown that reason generation is an integral part of decision making in many situations (Shafir, Simonson, and Tversky 1993). Therefore, reason generation might be a common source of fluency during preference construction. In the next three studies, we examine the effect of fluency of reason generation on context effects. We asked participants in Study 2 how easy it would be to list either two or ten reasons for their choice before they made the choice. On the basis of a pretest showing that most people could generate two reasons and few people could generate ten reasons (most people generated four or five), we chose two reasons as an easy thought generation task that would lead to high fluency and ten reasons as a difficult task that would lead to low fluency. This fluency experience is likely to be attributed to the decision, thus increasing the likelihood of choice deferral.

Method

Undergraduate students from a northeastern university and a western university participated in this study. Some participants were paid to complete a large questionnaire that included the current study, and others were recruited in their dorms to complete a brief questionnaire without compensation. In both cases, all participants were asked to make two choices, one among digital cameras and another among microwave ovens ($N = 289$). They were shown descriptions and pictures of two options in each choice problem. Before they made their choices, half of the participants were asked to rate how easy or difficult it would be to come up with two reasons for choosing a specific option on a seven-point scale ranging from "very difficult" (1) to "very easy" (7). The other half were asked to rate the difficulty of generating ten reasons. Participants were not required to list their reasons but merely rated how difficult they thought it would be to generate them. We indicated that we might ask them to list their reasons later. Prior research by Wänke, Bohner, and Jurkowitsch (1997) indicates that drawing attention to the likely difficulty in this way is sufficient to elicit the effects usually observed with actual thought generation. Debriefing conversations with participants in previous fluency studies showed that they attempt to recall a few reasons and use this experience to estimate how difficult it would be to come up with the requested number. After rating the difficulty of generating reasons, participants were asked to either choose one of the two options or choose to continue looking for other options.

Results and Discussion

In the choice among digital cameras, participants rated generating ten reasons as being more difficult than generating two reasons ($M_s = 3.55$ and 4.62 ; $t(280) = 5.50$, $p < .001$). As we hypothesized, 61% of the participants asked about ten reasons chose to defer the choice, whereas only 49% of the participants asked about two reasons chose to defer the choice ($\chi^2(1) = 4.10$, $p < .05$). Across conditions, those who chose to defer the choice rated coming up with reasons as more difficult than those who did not defer the choice (3.64 for deferral versus 4.63 for no deferral; $t(280) = 4.99$, $p < .001$). Our theory predicts that the effect of number of reasons on the rate of deferral should be medi-

ated by the subjective feeling of difficulty. To examine this idea directly, we conducted a mediation analysis, testing whether ratings of difficulty mediate the effect of reasons on choice deferral. A Sobel test confirmed that difficulty ratings mediated the effect of the number of reasons on choice deferral ($z = 3.39$, $p < .001$). When we included difficulty ratings in a model that predicted deferral, the number of reasons was no longer significant ($p > .5$), suggesting complete mediation. We observed a similar pattern in participants' choices of microwave ovens. Participants rated generating ten reasons as being more difficult than generating two reasons ($M_s = 3.64$ and 5.08 ; $t(287) = 8.38$, $p < .001$). Those who rated the difficulty of generating ten reasons chose to defer the choice more than those asked about generating two reasons (32% versus 22%; $\chi^2(1) = 3.50$, $p = .061$). Finally, those who chose to defer the choice rated generating reasons as being more difficult than those who did not defer the choice (3.71 for deferral versus 4.60 for no deferral; $t(287) = 4.23$, $p < .001$). Again, mediation analysis confirmed that difficulty mediated the effect of number of reasons on deferral (Sobel $z = 3.29$, $p < .001$), and again, reasons became nonsignificant when difficulty was included in the model ($p > .9$), suggesting complete mediation.

In summary, Study 2 extended our findings in two ways. First, we found that the subjective experience resulting from thought generation can influence choice. As we expected, lower preference fluency led to increased choice deferral. Together with Study 1, this result provides evidence that fluency experiences extraneous to the content of the choice options can influence choice. Second, in Study 2, we measured the subjective experience of difficulty directly and observed that it fully mediated the effect of the fluency manipulation on choice.

STUDY 3: EASE OF THOUGHT GENERATION AND THE COMPROMISE EFFECT

Studies 1 and 2 examined one consequence of subjective difficulty: choice deferral. However, choice difficulty associated with attribute trade-offs has also been shown to influence which option is chosen within a choice set. For example, research has shown that difficulty in a choice situation underlies the preference for the middle or compromise option (Simonson 1989). The compromise effect has typically been demonstrated with three-item choice sets, in which the options require a trade-off between two attributes (e.g., price and quality). This effect arises from the tendency to choose an option more often when that option lies between two (or more) other options on the relevant attributes, as opposed to being an "extreme" option in the set. Thus, an option can be chosen more or less depending on its relative position in a particular choice set. Recent research has shown that the choice of the compromise option is not associated with a strong preference for that option but rather is chosen to resolve the conflict arising from the attribute trade-offs (Dhar and Simonson 2003). Just as fluency experiences were sufficient to produce effects on choice deferral that parallel the effects of difficulty arising from manipulations of the choice options, we propose that preference fluency can also influence the compromise effect (Simonson 1989). In the next two studies, we manipulate the fluency of the choice without changing the choice alternatives. Study 3

uses the same fluency manipulation as Study 2 and examines its effect on the tendency to choose the middle option in a forced-choice situation.

Method

Undergraduate business students were asked to make a hypothetical choice among three digital cameras ($N = 178$) as part of a large questionnaire completed for course credit. The choice sets included a common core set of two cameras, in which one was more expensive and of higher quality (Option B) than the other (Option C). Half of the participants saw a choice set that included these two cameras in addition to an even higher-quality, higher-priced camera (Option A). The other half saw a choice set that included the two core cameras in addition to a lower-priced, lower-quality camera (Option D). A sample choice set appears in the Appendix. Before participants indicated their choice, half were asked to rate how easy or difficult it would be to generate two reasons for their choice. The remaining participants were asked to rate the difficulty of generating ten reasons before indicating their choice.

Results and Discussion

The ratings of difficulty showed that the manipulation based on the number of reasons was successful. As we expected, participants rated generating two reasons as being significantly less difficult than generating ten reasons ($M_s = 4.73$ and 3.50 ; $t(178) = 4.93$, $p < .001$). To test for the compromise effect, we computed the choice share of Option B relative to Option C (see Simonson and Tversky 1992). The compromise effect is revealed if the relative share of Option B is higher in the choice set that includes Option A (i.e., when Option B is the compromise) than in the set with Option D (in which Option B is an "extreme"). The choice shares appear in Table 1. There was a marginally significant compromise effect in the two-reasons condition. The choice share of Option B among respondents who chose Option B or C was 69% when the choice set contained Option A and only 47% when the choice set contained Option D, for a compromise effect of 22% ($\chi^2(1) = 3.00$, $p = .083$). The magnitude of the compromise effect doubled to 44% in the ten-reasons condition (76% versus 32%; $\chi^2(1) = 12.8$, $p < .001$). A Sobel test confirmed that the effect of number of reasons on choice of the middle option was mediated by the rated difficulty of generating the reasons ($z = 2.09$, $p < .05$).

In summary, as we expected, enhancing the subjective feeling of difficulty (i.e., reducing the sense of preference fluency) during the choice task increased the tendency to choose the middle option. Participants apparently (mis)attributed the difficulty associated with the task of generating ten reasons to the difficulty of the choice task.

Table 1
PERCENTAGE OF PARTICIPANTS CHOOSING EACH
ALTERNATIVE (STUDY 3)

Option	Two-Reasons Condition (%)		Ten-Reasons Condition (%)	
	{A, B, C}	{B, C, D}	{A, B, C}	{B, C, D}
A	39		26	
B	42	40	57	23
C	19	44	17	48
D		16		29

This difficulty then induced them to choose the compromise option. Although our focus is on the subjective experience that accompanies thinking about ten reasons for the choice, participants may have brought to mind different reasons when they were asked to think about ten versus two reasons. To confirm that the content of the reasons is not driving the increase in compromise, Study 4 again asks participants to generate many versus few reasons, while manipulating whether the subjective experience is relevant to the difficulty of the choice. If generating ten reasons no longer increases choice of the middle option when the informational value of the subjective experience is undermined, we can be confident that the content brought to mind when thinking about ten reasons is not driving the effect. In Study 4, we try to shift the attribution for the feeling of difficulty away from the process of choosing, thus attenuating the effect of asking about ten reasons on the tendency to choose the compromise option.

STUDY 4: THOUGHT GENERATION, ATTRIBUTION, AND COMPROMISE

In Study 4, we use the setup from Study 3 and ask participants to rate the difficulty of generating two or ten reasons for their choice. In addition, we used a manipulation that would lead participants to believe that the difficulty they were having generating reasons was not due to a difficult choice but rather to a difficult reason generation task. By attributing their difficulty to the task and away from the choice, the effect of the difficulty on preference for the middle option should be eliminated.

To induce participants to attribute the difficulty to the reasons task and away from the choice task, we informed them about how many reasons others could generate (Schwarz et al. 1991, Experiment 2). Specifically, we informed participants that we ran a previous study in which others were able to generate either 2.4 or 9.6 reasons, on average. As we observed in Study 3, participants found it difficult to generate 10 reasons. Learning that others could generate 9.6 reasons on average suggests that this difficulty is not a result of an unreasonable task but rather is related to the difficulty participants have with the choice. Thus, these participants should interpret their own difficulty as a reflection of their own preference fluency, resulting in a pronounced compromise effect. Conversely, learning that others could generate only 2.4 reasons suggests that the difficulty of generating 10 reasons is a common experience and probably due to an unreasonably difficult task rather than to the difficulty of the choice. This attribution should attenuate the compromise effect.

Study 3 also indicated that participants find it easy to generate 2 reasons. When these participants learn that others could generate 2.4 reasons on average, they may infer that the task is appropriate. Therefore their high fluency will be related to the choice task. In contrast, learning that others could generate 9.6 reasons on average is potentially more informative, but its specific impact is difficult to predict. On the one hand, participants who are asked to rate the difficulty of generating 2 reasons may simply infer that the task they are given is fairly easy compared with the 9.6 reasons that others could generate, and their high fluency may not be particularly informative. This would lead to less compromise than the 10/9.6 condition, in which the task is

considered appropriate and the low fluency is attributed to the choice. On the other hand, participants may imagine how much difficulty they would experience if they were asked to generate the 9.6 reasons listed by others; thus, they might realize that they would find such a task difficult, resulting in low fluency. This low fluency would be attributed to their idiosyncratic preference because generating 9.6 reasons cannot be a particularly difficult task if others can do it. Note that the ambiguity regarding the direction of the effect in this cell depends on whether participants stick with the reason generation task they were given or go further and try to generate the average number of reasons that others could generate (9.6). In any case, this more involved distinction does not appear to be central to the present analysis of the impact of preference fluency.

Method

As part of a large questionnaire completed for course credit, undergraduate business students at a northeastern university were asked to choose from among three microwave ovens ($N = 218$). The materials described three microwave ovens that varied in price and quality, in line with the typical design of a compromise choice set. Participants were asked to rate the difficulty of generating 2 or 10 reasons before making a choice. One question was added after the rating of difficulty of generating reasons and before making a choice. This question first informed participants that in a previous study, the average number of reasons students could generate for this choice was 2.4 or 9.6 (manipulated between subjects) and then asked them how many reasons they believed they could generate. To summarize our predictions, the condition in which we asked about 2 reasons and others generated 2.4 (2/2.4) should produce little compromise compared with the 10/9.6 condition because the former has high fluency and the latter has low fluency and both are attributed to the choice task. The 10/2.4 condition should produce similar compromise to the 2/2.4 condition because the low fluency in the former should be attributed to the reasons task and not to the choice. We did not make specific predictions about whether the 2/9.6 condition would be similar to the 2/2.4 or the 10/9.6 condition.

Results and Discussion

As we expected, the share of the middle option was highest (70%) when participants were asked to generate 10 reasons and told that other students averaged 9.6 reasons, rendering the experienced difficulty particularly diagnostic. However, this share dropped significantly to 48% ($\chi^2(1) = 6.92, p < .01$) when participants were told that others could generate only 2.4 reasons. In this case, the experienced difficulty was likely to be attributed to the unreasonably difficult task, not to a participant's own difficulty in forming a preference. Participants in the 2/2.4 condition chose the middle option with the same frequency (48%) as those in the 10/2.4 condition. The difference between the 10/9.6 condition and the 2/2.4 condition is statistically significant ($\chi^2(1) = 6.87, p < .01$).

The results for the 2/9.6 condition suggest that participants attended to the information that others could generate 9.6 reasons and realized that they would find this difficult. In this condition, 66% of participants chose the middle option. This percentage is not reliably different from the

condition in which participants evaluated the difficulty of generating 10 reasons before being told that others could generate 9.6, much as would be expected if they considered whether they could generate as many reasons as others. As a result, a logistic regression predicting choice of the middle option revealed only a significant main effect of number of others' reasons ($B = .87, p < .01$).

In summary, this study replicates the influence of preference fluency on the compromise effect observed in Study 3. It further demonstrates that this influence is due to information provided by the subjective experience and thus attenuated when the informational value of the experience is called into question, paralleling the attributional effect of Study 1.

GENERAL DISCUSSION

Choice difficulty has been an important factor in the study of preference construction. Studies of choice difficulty and decision conflict have typically varied the choice alternatives, the choice set and reference points, the preference elicitation task, and the response options. Thus, previous research into choice difficulty has usually manipulated how people process the content of the choice. In contrast, the current research proposes that a subjective experience of difficulty in the absence of any variation in the factors manipulated in prior studies is sufficient to produce two important effects of difficulty. We found evidence for this proposition by manipulating preference fluency through extraneous variables, holding all content-related aspects of the choice task constant.

Summary and Theoretical Implications

The findings of this research support the notion that preference fluency (i.e., the consumer's subjective feeling regarding the ease or difficulty of forming a preference) is an important determinant of whether a purchase decision will be made and which option will be chosen. The results of Study 1 demonstrate this principle using a manipulation of font clarity. When participants had difficulty reading the description of the options (i.e., low preference fluency) and their attention was not drawn to the true source of the experience (i.e., the difficult font), they were more likely than the control group to defer the purchase decision. However, when their attention was drawn to the difficult font, the influence of low fluency was eliminated.

Studies 2, 3, and 4 employed a different manipulation of preference fluency, focusing on the ease of thought generation rather than on the ease of processing new information. In these studies, participants were asked to consider how difficult it would be to generate either two or ten reasons for choosing a particular option. We showed that the difficulty of generating many reasons, which decreases preference fluency, increases the likelihood of choice deferral (Study 2) and of choosing a compromise option (Studies 3 and 4). Mediation analyses confirmed that choice difficulty mediated the impact of the number of reasons on choice deferral and compromise. Study 4 further showed that the effect of subjective difficulty on the compromise effect is moderated by the interpretation of that feeling. When participants attribute difficulty to the high demands of the reason generation task rather than to the decision, the effect on choice is eliminated.

In the studies, when attention was drawn to the source of fluency (i.e., print font or number of reasons), the effect of fluency was eliminated. However, not all fluency experiences will lose their potency when attention is drawn to their source. We chose to manipulate fluency using two variables that would be judged to be irrelevant to the preference construction process so that when the source of fluency was made salient, decision makers would attribute their feelings to something they deemed to be irrelevant to the choice at hand and would no longer be influenced by their fluency experience. If the source of fluency had been viewed as relevant to the choice (e.g., similarity of choice options), decision makers would likely continue to be affected by their fluency experience, even when the source of fluency was made salient. Further research could fruitfully explore which sources of fluency decision makers deem to be relevant to their preference construction process and, therefore, which fluency experiences have an impact even when their source is salient.

It is useful to consider the relationship between preference fluency and preference stability. A key finding from research on preference construction is that preferences vary across time and situations, depending on the framing of options, the preference elicitation task, and the choice context. However, the degree to which preferences are susceptible to such influences depends on various factors, such as whether the decision represents a new task or a repeated choice. In addition, differences in preference fluency are likely to contribute to the level of (in)stability of consumer preferences. To the extent that choices vary in their mode of presentation and consumers vary across time and situations in their ability to generate thoughts about a particular choice, the preference fluency experienced during choice will also vary, resulting in variations in expressed preferences.

Preference fluency may also affect preference stability through its influence on the reconstruction of memories of prior choices and inferences drawn from those memories. For example, is the difficulty experienced at the time of choice stored as part of the memory of that choice? If not, options chosen in part because of high or low fluency may be misremembered as being more preferred than they really were. Alternatively, if fluency is well remembered, inferences about the choice options may be based on the recalled fluency. For example, a memory of high fluency (i.e., an easy choice) may cause consumers to make biased inferences, such that chosen options are distorted to have more positive attribute values and forgone options are distorted to have less positive attribute values (for a related discussion, see Liberman and Förster 2006). Conversely, memory of low fluency may lead to inferences about choice options being more similar than they really are.

Further research could examine the processes underlying the impact of preference fluency on choice and the boundaries of preference fluency effects. Regarding process, it would be worthwhile to examine whether processing fluency directly affects choice or is mediated by choice confidence, risk perception, and/or a decrease in the perceived attractiveness of options. Furthermore, the current research focused on two particular contributors to preference fluency—font clarity and number of reasons—and on two behavioral consequences—choice deferral and compro-

mise. Further research could extend the range of both independent and dependent variables, which would provide insights into the boundaries of preference fluency effects. For example, preference fluency might affect risk attitudes and price-quality trade-offs. Further research could also examine the conditions that moderate the degree of impact of a given level of preference fluency on choice. For example, it might be conjectured that preference fluency plays a greater role under conditions of low involvement and low task importance.

Finally, we assume that preference fluency mediates some of the influences of objective characteristics of the choice set on decisions. Studies have shown that many variables present in the consumer environment, such as assortment size (i.e., the number of available options), distraction (e.g., loud music), and cognitive load (e.g., needing to perform a secondary task), can affect choices. Further research could test whether these effects operate, at least in part, through their effects on preference fluency.

Note that our results do not imply that preference fluency is detrimental to effective consumer decision making. In natural settings, truly difficult decisions have low preference fluency. Deferring these decisions or selecting a compromise option may be an adaptive response under these conditions. To isolate the role of preference fluency, however, we needed to use manipulations that did not confound fluency with characteristics of the choice set. The resulting “effect” (e.g., consumer choice is influenced by print font), however, should not distract from the usually adaptive value of the underlying process.

Practical Implications

Marketers want consumers to buy their products and, accordingly, try to offer the target customers the most attractive set of options. Much of the academic and applied marketing research has focused on ways to achieve this goal and present products so as to maximize sales (e.g., the right assortment, persuasive advertisements). The current research highlights the potential promise of a new class of tactics designed to increase the likelihood that a customer will make a purchase rather than go elsewhere or procrastinate. Specifically, our findings indicate that conditions that promote preference fluency often play a key role in determining whether a purchase will be made. This is particularly important because consumers perceive many marketplace decisions as being difficult. Importantly, marketers should not assume that preference fluency is an uncontrollable factor that merely reflects the characteristics of the choice. Instead, they should proactively create conditions that are conducive to preference fluency.

This principle highlights the importance of making it as easy as possible for the consumer to form a preference. In particular, attribute information needs to be easy to read and process and presented in a way that facilitates preference formation. For example, information displays that help consumers compare options along relevant attributes are likely to promote preference fluency. Similarly, using the same units across options will make it easier for shoppers to compare options and form a preference. Note that facilitating comparisons that were going to be made anyway will promote preference fluency. However, in situations in which fewer spontaneous comparisons are made, these displays

may increase the number of comparisons, which some research has shown reduces the attractiveness of the choice options (Brenner, Rottenstreich, and Sood 1999). Further research could determine which effect dominates in particular situations.

Marketers could redirect attributions from choice difficulty by offering consumers reasons for any difficulty in making up their minds. For example, a salesperson might

inform debating (prospective) purchasers that the information provided by the manufacturers makes comparing products difficult. If consumers attribute their experienced difficulty to an incidental aspect of the choice environment, they may be less inclined to use their subjective experience as a basis to defer the choice. In summary, preference fluency is a key determinant of consumer choice, and marketers should make every effort to manage this important variable.

Appendix

SAMPLE DIGITAL CAMERA MATERIALS (STUDIES 3 AND 4)

Canon PowerShot

Product Features

- 2.31-megapixel resolution
- 2× digital zoom
- 1.75" LCD screen with magnification for previewing photos
- 8MB internal flash memory; CompactFlash memory card expansion slot for additional memory
- Automatic focus, exposure and image controls
- USB connection directly to PC or Mac

Price: \$199



Minolta DiMAGE S304

Product Features

- 3.34-megapixel CCD for high-resolution images
- 3× optical/2× digital zoom
- 1.8" color TFT LCD monitor and real-image zoom viewfinder
- High-performance autofocus and autoexposure
- Simple menus displayed on LCD monitor
- USB interface for easy connection to PC or Mac
- 16MB CompactFlash card included

Price: \$499



Hewlett-Packard PhotoSmart

Product Features

- 4.0-megapixel CCD for high-resolution images
- 3× optical/3.6× digital zoom lens
- 1.8" color LCD monitor
- Take stills or record AVI movies
- Through-the-lens (TTL) autofocus, autofocus lock and manual focus
- Shooting modes: pan focus, portrait, landscape, night scene, and auto, in addition to these photo effects: sepia, vivid, neutral, and black-and-white
- Built-in flash with red-eye reduction
- Store images on CompactFlash memory cards
- USB connection directly to PC or Mac

Price: \$799



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