

When Choosing Is Not Deciding:  
The Effect of Perceived Responsibility on Satisfaction

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Prior research has found differences in satisfaction for choosers and non-choosers of the same outcome. Two studies show that differentiability of the choice-set options moderates this effect. When options are more differentiated, choice enhances consumers' satisfaction with positive and dissatisfaction with negative outcomes; when options are less differentiated, choosers experience the same level of satisfaction as non-choosers regardless of the option valence. We test the hypothesis that the effect of outcome differentiability is due to differences in perceived responsibility and subsequent self-credit and self-blame for the decision outcome. A third study separates the effects of differentiability from random choice.

Modern marketing practices often rely on the provision of choice as a means to increase consumer satisfaction: Stores frequently offer shoppers the opportunity to customize products; educational institutions are progressively switching from fixed-requirement to elective-based curricula; and a growing number of companies let employees select the health care and pension plans in which to enroll instead of deciding on their behalf. Implicit in this strategy is the belief that consumers will be more satisfied with personally-chosen alternatives than with alternatives that are assigned to them. In some cases, however, consumers may not have the information needed to distinguish among the choice options and identify the preferred one. For example, employees may find it difficult to compare across health-care plans described as EPO, PPO, POS, and HMO when selecting the best medical coverage. In these cases, would the struggling, perplexed decision makers still experience higher satisfaction through the exercise of choice or would they be just as happy with an option that has been chosen for them? To answer this question, we explore the psychological process underlying the effect of personal versus other-made choice on satisfaction and in so doing identify conditions in which this effect is weakened.

## **CONCEPTUAL FRAMEWORK**

A common finding of research on control and freedom of choice is that personally-made choices, relative to choices imposed by others or by fate, lead to more positive consequences such as improved task enjoyment, affect, and outcome evaluation (Langer 1975; Langer and Rodin 1976; Taylor and Brown 1988). These results have been attributed to choosers' greater ability to match their preferences to the available alternatives and to subjective bolstering of personally-chosen outcomes (Bem 1967; Brehm 1966; Festinger 1957; Payne, Bettman, and

Johnson 1993). In addition, recent research has proposed that higher engagement causes choosers' evaluation of the outcome to be more extreme than that of non-choosers (Botti and Iyengar 2004). One implication of this explanation, contrary to previous theory and findings, is that it allows for choice to detrimentally influence outcome evaluations: When confronted by attractive options, choosers entertain more pleasant thoughts than non-choosers, resulting in greater liking of the outcome; however, when presented with undesirable options, choosers contemplate more unpleasant thoughts, aggravating their disliking of the aversive outcome.

This article explores a potentially important methodological limitation in prior research, specifically, that the act of choosing might have been confounded with the perception of personal responsibility—and in so doing, traces the differential effects of choice more to the latter than the former. Prior research has underscored the association between the act of choosing and feelings of responsibility, for example, research on control, which finds that the perception that a choice was self-made and not externally dictated increases feelings of personal causation (de Charms 1968); on cognitive dissonance, which posits that responsibility stems from the perception that an action was freely undertaken and not constrained by the environment (Festinger 1957); and on regret, which reveals higher responsibility to be associated with greater perceived agency (Ordóñez and Connolly 2000; Zeelenberg, van Dijk, and Manstead 2000). In the present research, however, we attempt to highlight the distinction between the act of choosing, that is, pointing out one alternative from a choice-set, from the sense that by having evaluated the relative merits and demerits of the alternatives, choosers become meaningful agents in what they will experience. Hence, we define responsibility as the extent to which decision makers feel a sense of ownership of the outcome and so may credit themselves for good and blame themselves for bad outcomes.

The attempt to separate the concept of choice from that of personal responsibility is theoretically important because it helps understand whether enhanced positive or negative outcome evaluations found in prior studies result from the act of choosing or whether they depend on the psychological correlates of responsibility. Indeed, greater perceived responsibility has been found to accentuate the emotional impact of events (Weiner 1980). For example, good outcomes are experienced more positively, and bad outcomes more negatively, following actions than inactions because of the stronger association between action and responsibility (Gilovich, Medvec, and Chen 1995; Kahneman and Tversky 1982; Landman 1987; Ritov and Baron 1992).

Building on these findings, we hypothesize that choosers' perception of themselves as responsible for a decision outcome magnifies their affective evaluation of that outcome, namely the extent to which it is liked and enjoyed. We refer to this affective evaluation as "outcome satisfaction" and propose that, relative to non-choosers, responsibility may enhance choosers' satisfaction with a desirable outcome, because it allows for self-crediting, and choosers' dissatisfaction with an undesirable outcome, because it exacerbates disliking by means of self-blame. However, if perceived responsibility were weakened, choosers would have less of a basis on which to congratulate or blame themselves, resulting in a smaller difference between their outcome satisfaction and that of non-choosers both with pleasant and unpleasant outcomes.

In this research we manipulate personal responsibility by varying the extent to which the available information allows decision makers to appreciate the different quality of the choice options and identify the more preferred one. Choosers might feel little responsibility if all the alternatives seem very much alike. In this case, the quality of the outcome is mostly derived from the choice set itself, with little value added in the act of choosing. By contrast, choosers may feel greatly responsible for what they ultimately experience if the alternatives are appreciably

different because the identification of a more preferred option leads them to feel as if they affected the outcome. Prior findings support this relationship between option differentiability and perceived responsibility. Research has in fact showed that choosers are less willing to commit to a choice in the absence of a dominating option or ideal point (Chernev 2003; Shafir, Simonson and Tversky 1993), or when the alternatives are similar (Dhar 1997). In addition, increased similarity across the alternatives has been found to reduce the amount of cognitive dissonance, lowering the tendency to change the relative desirability of the chosen option (Brehm 1956).

Hence, when the available information prevents decision makers from meaningfully distinguishing among the alternatives, the act of choosing contributes less to the ultimate experience than when differences among the alternatives are readily appreciated, influencing choosers' sense of responsibility for the outcome. As a result, when selecting from more differentiated alternatives choosers may experience the elation of self-crediting for a desirable outcome or the sorrow of self-blaming for an undesirable outcome leading to differences in outcome satisfaction between choosers and non-choosers. When confronted with less differentiated alternatives, however, both self-credit and self-blame may be weakened, resulting in a smaller difference between choosers and non choosers' outcome satisfaction:

- H1a:** In a positively-valenced context, when the options are more, as compared to less, differentiated, choosers' outcome satisfaction is greater than that of non-choosers.
- H1b:** In a negatively-valenced context, when the options are more, as compared to less, differentiated, choosers' outcome satisfaction is lower than that of non-choosers.

A related question is whether or not consumers still want to choose when the alternatives are less differentiated. Building on prior research showing that people's preference for personal choosing may not be sensitive to the same factors that influence outcome satisfaction (Botti and

Iyengar 2004), we hypothesize that responsibility does not affect the desire for choosing. Further, although research on mood maintenance indicates that people try to avoid negative tasks such as choosing among unpleasant alternatives (see Isen 1993 for discussion), participants in our studies are presented with an even more distressing prospect than just avoiding a choice, specifically relinquishing control to someone else. As giving up control has been associated with negative mood states (Langer and Rodin 1976; Seligman 1975; Taylor and Brown 1988), people may prefer to retain choice for themselves even when confronted with unattractive alternatives. We therefore predict that consumers' preference for making their own choices does not vary as a function of option differentiability both in positively- and in negatively-valenced choice contexts:

**H2:** People prefer making a personal choice than having this choice imposed regardless of whether the options are more or less differentiated.

Study 1 and 2 test these hypotheses in, respectively, a positive (coffee blends) and negative (foul odors) choice context. Study 3, which again involves a choice among desirable alternatives (chocolates), distinguishes between a choice from poorly differentiated options and a random choice. A discussion about theoretical and managerial implications concludes the article.

## STUDY 1

### Participants and Design

Participants in this 2 (choice condition: choice vs. no-choice) x 2 (option differentiability: high vs. low) between-subjects experiment were 96 paid students at a Midwestern university.

## Experimental Material, Procedures, and Dependent Variables

Eighty students at the same university were paid to participate in two pre-tests. The first pre-test identified one more diagnostic (smoothness) and three less diagnostic (floral, fruity, and fermented notes) attributes of coffee blend quality to describe the blends in the main experiment. The second pre-test ensured that the blend descriptions allowed for different levels of self-crediting. Participants were provided with a table in which four coffee blends were rated as “high,” “low,” or “medium” on each of the previously selected attributes. In the high-differentiability condition only one of the blends (blend 1) scored “high” on the more diagnostic attribute, while the other three scored “low.” In contrast, in the low-differentiability condition all the blends were rated as “medium smoothness” making it more difficult for participants to identify the better-tasting blend. The ratings for the less diagnostic attributes were in trade-off so that for each blend option “high” ratings in one attribute were compensated by “low” ratings in another attribute. In addition, these ratings for the less diagnostic attributes did not vary across the two differentiability conditions. Next, participants answered a questionnaire using nine-point scales (1 = *Not at all*, 9 = *Extremely*). Results show that, relative to low-differentiability participants, high-differentiability participants could form a clearer sense of what the chosen blend might taste like as compared to the other blends ( $M_{\text{high-differentiability}} = 5.16$ ,  $M_{\text{low-differentiability}} = 4.23$ ;  $F(1, 74) = 3.83$ ,  $p < .05$ ) and were more able to credit themselves for the decision outcome ( $M_{\text{high-differentiability}} = 5.49$ ,  $M_{\text{low-differentiability}} = 4.38$ ;  $F(1, 74) = 4.37$ ,  $p < .05$ ). As predicted, when choosing among highly distinguishable, pleasant options, choosers felt increased ownership of the choice and were more willing to credit themselves for its desirable consequences.

In the main study, participants sat at a table displaying four identical carafes labeled from one to four. After a brief explanation of the study procedures, participants were presented an information sheet showing the ratings for each blend on the four attributes in either the high- or low-differentiability condition. Next, choice participants were told to select a blend to drink, whereas no-choice participants were assigned a blend by the experimenter, allegedly at random. In reality, a yoking procedure ensured that each non-chooser was given a blend previously selected by a chooser (Iyengar and Lepper 2000). Finally, the experimenter poured half cup of coffee for participants to drink before answering a questionnaire. In spite of the different descriptions, all participants drank the same blend (Intelligentsia Columbia). Outcome satisfaction was measured by asking participants their level of enjoyment and satisfaction with the coffee. Preference for choosing was assessed by measuring participants' liking for their choice condition. Answers were given on nine-point scales (1 = *Not at all*, 9 = *Extremely*).

## Results

*Manipulation Check.* To test for option differentiability, a chi-square test was conducted on choosers' blend selection. In the high-differentiability condition, 61.9% of choosers selected blend 1, 28.57% blend 2, 9.52% blend 4, and none chose blend 3, indicating that preferences varied significantly across the alternatives ( $\chi^2(2) = 8.86, p < .01$ ) and that the majority selected the smoothest blend. In contrast, in the low-differentiability condition choosers' preferences did not vary significantly ( $\chi^2(3) = 5.24, NS$ ) as 16% selected blend 1, 24% blend 2, 16% blend 3, and 44% blend 4. These results confirm that differences in the more diagnostic attribute generate greater differentiation among the options and facilitate the selection of the better tasting blend.

*Outcome Satisfaction.* A composite measure labeled “outcome satisfaction” was created by averaging the two outcome satisfaction items ( $r = .86, p < .0001$ ). Means for this measure are shown in table 1 and figure 1. A 2 (choice condition: choice vs. no-choice) x 2 (option differentiability: high vs. low) ANOVA conducted on this measure yielded a significant main effect for choice ( $F(1, 92) = 8.45, p < .005$ ). Consistent with previous research, participants who chose the blend ( $M = 5.91$ ) experienced a higher outcome satisfaction than participants who did not choose ( $M = 4.91$ ). The main effect for differentiability, however, was not significant ( $M_{\text{high-differentiability}} = 5.56, M_{\text{low-differentiability}} = 5.23; F(1, 92) = 1.30, \text{NS}$ ). This analysis also yielded the expected Choice x Differentiability interaction ( $F(1, 92) = 3.87, p < .05$ ). Confirming hypothesis 1a, the difference in outcome satisfaction between participants in the high-differentiability condition who chose the blend and those who were assigned a blend was greater than that in the low-differentiability condition (high differentiability:  $M_{\text{choice}} = 6.52, M_{\text{no-choice}} = 4.76; F(1, 92) = 11.36, p < .001$ ; low differentiability:  $M_{\text{choice}} = 5.40, M_{\text{no-choice}} = 5.06; F(1, 92) = 0.46, \text{NS}$ ).

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 Table 1 and figure 1 about here  
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*Preference for Choosing.* To test people’s preference for choosing a 2 (choice condition: choice vs. no-choice) x 2 (option differentiability: high vs. low) ANOVA was conducted on participants’ liking of their experimental condition compared to the other condition. Consistent with hypothesis 2, participants who chose a blend liked their condition better than those who did not choose it ( $M_{\text{choice}} = 7.26, M_{\text{no-choice}} = 3.64; F(1, 92) = 78.02, p < .0001$ ) whereas the main effect for differentiability ( $M_{\text{high-differentiability}} = 5.30, M_{\text{low-differentiability}} = 5.44; F(1, 92) = 0.00, \text{NS}$ ) and the Choice x Differentiability interaction were not significant ( $F(1, 92) = 0.07, \text{NS}$ ).

## Discussion

Results of study 1 support the hypothesis that when the choice options are less, rather than more, differentiated choosers' affective response to the choice outcome becomes more similar to that of non-choosers. Indeed, when choosing among options that are all desirable but relatively undistinguishable, choosers may feel less compelled to take credit for the positive outcomes of their decisions, thereby failing to experience the magnifying effect of choice on satisfaction documented in previous research. Nevertheless, results show that participants preferred choosing to having a choice imposed across the two differentiability conditions, indicating that choice preference—unlike outcome satisfaction—was not sensitive to option differentiability. This result is consistent with prior research showing that people associate the act of choosing with greater control over the decision outcomes even though these outcomes are purely fortuitous (Langer 1975).

Study 2 extends the results of the first study to choices among all unattractive options. We again predict that outcome satisfaction but not preference for choosing will depend on option differentiability. Study 2 also includes measures of responsibility and self-blame to better assess the psychological process underlying the relationship between choice and satisfaction.

## **STUDY 2**

### Participants and Design

Participants in this 2 (choice condition: choice vs. no-choice) x 2 (option differentiability: high vs. low) between-subjects experiment were 124 paid students at a Midwestern university

#### Experimental Materials, Procedures, and Dependent Measures

Participants were seated at a table displaying four transparent plastic drums labeled from one to four. Each drum contained the same 3 in. tall plastic doll called The Master Blaster™, which releases a foul odor. The dolls were disguised by wrapping them in white gauze pads to make participants believe that the odors had been created by soaking the pads in four different chemical solutions. Participants were then given a sheet of paper describing the allegedly different odors along four attributes, one more diagnostic (rotten egg) and three less diagnostic (stale, bitter, and dirty), which were selected in a pre-test. In the high-differentiability condition odor 3 scored “low” on rotten egg, while the other three odors scored “high” on this attribute, making odor 3 the least unpleasant option. In contrast, in the low-differentiability condition all the odors scored “medium” on rotten egg, so that it was more difficult in this condition to judge the odors’ relative unpleasantness. As in study 1, the trade-offs between the ratings of the less diagnostic attributes did not vary across the high- and low-differentiability conditions. After going over the descriptions, participants were either asked to choose or were assigned an odor to smell following a yoking procedure. Next, participants inhaled the odor before filling out a questionnaire.

Participants rated level of outcome satisfaction on unpleasantness, disliking, and dissatisfaction scales. Preference for making a choice versus having a choice imposed was measured as in study 1. Levels of perceived responsibility and subsequent self-blame were

gauged, respectively, by asking participants how responsible, accountable, and in control they felt for the decision outcome, and the extent to which they felt disappointed with themselves for it. All these questions were answered on a nine-point scale (1 = *Not at all*, 9 = *Extremely*).

## Results

*Manipulation Check.* Option differentiability was again assessed by analyzing choosers' odor selection. In the high-differentiability condition, odor 3 was selected by 73.53% of choosers, while 5.88% selected odor 1, 8.82% odor 2, and 11.76% odor 4. A chi-square analysis revealed that, as expected, choosers' preferences varied across the options ( $\chi^2(3) = 42.94, p < .0001$ ) and that option 3 was the most preferred. Conversely, in the low-differentiability condition, 17.65% of choosers select odor 1, 26.47% odor 2, 23.53% odor 3, and 32.35% odor 4 ( $\chi^2(3) = 1.53, NS$ ), supporting the hypothesis that when the information is less diagnostic of the options' relative quality choosers' preferences are more uniformly distributed among the options.

*Outcome Satisfaction.* Scores for the three outcome satisfaction items ( $\alpha = .89$ ) were reversed and combined into an overall measure of outcome satisfaction (see figure 2). A 2 (choice condition: choice vs. no-choice) x 2 (option differentiability: high vs. low) ANOVA conducted on this measure yielded no effect for differentiability ( $M_{\text{high-differentiability}} = 5.16, M_{\text{low-differentiability}} = 5.67; F(1, 120) = 1.71, NS$ ), while the main effect for choice ( $F(1, 120) = 4.07, p < .05$ ) and the Choice x Differentiability interaction ( $F(1, 120) = 4.83, p < .05$ ) were significant. Choosing from among unattractive options generated lower satisfaction in choosers ( $M = 5.10$ ) than non-choosers ( $M = 5.78$ ). Consistent with hypothesis 1b, however, choosers were less

satisfied than non-choosers only in the high-differentiability condition ( $M_{\text{choice}} = 4.52$ ,  $M_{\text{no-choice}} = 5.93$ ;  $F(1, 120) = 8.88$ ,  $p < .005$ ), while choosers and non-choosers' satisfaction did not differ in the low-differentiability condition ( $M_{\text{choice}} = 5.69$ ,  $M_{\text{no-choice}} = 5.63$ ;  $F(1, 120) = 0.02$ , NS).

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 Figure 2 about here  
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*Personal Responsibility and Self-Blame.* The three items associated with participants' perceived responsibility for the outcome were combined into an overall measure of personal responsibility ( $\alpha = .93$ ). A 2 (choice condition: choice vs. no-choice) x 2 (option differentiability: high vs. low) ANOVA conducted on this measure yielded a main effect for choice ( $F(1, 120) = 224.25$ ,  $p < .0001$ ), while that for differentiability was not significant ( $M_{\text{high-differentiability}} = 4.56$ ,  $M_{\text{low-differentiability}} = 4.07$ ;  $F(1, 120) = 2.27$ , NS). As predicted, choosers ( $M = 6.28$ ) felt more responsible for the outcome than non-choosers ( $M = 1.94$ ). This main effect was qualified by a significant Choice x Differentiability interaction ( $F(1, 120) = 5.05$ ,  $p < .05$ ) revealing that, consistent with the theory presented in this article, choosers perceived higher responsibility in the high- than in the low-differentiability condition ( $M_{\text{high-differentiability}} = 6.82$ ,  $M_{\text{low-differentiability}} = 5.73$ ;  $F(1, 120) = 7.81$ ,  $p < .01$ ), while non-choosers did not perceive different levels of responsibility in the high- and low-differentiability conditions ( $M_{\text{high-differentiability}} = 1.83$ ,  $M_{\text{low-differentiability}} = 2.05$ ;  $F(1, 120) = 0.25$ , NS).

Similarly, a 2 (choice condition: choice vs. no-choice) x 2 (option differentiability: high vs. low) ANOVA conducted on the self-blame measure, specifically, how disappointed participants felt with themselves for the outcome, yielded a main effect for choice ( $F(1, 120) = 8.66$ ,  $p < .005$ ), a marginal main effect for differentiability ( $F(1, 120) = 2.88$ ,  $p < .1$ ), and a

Choice x Differentiability interaction ( $F(1, 120) = 4.19, p < .05$ ). Consistent with the findings that choosers felt greater responsibility than non-choosers for the decision consequences, they were also more disappointed with themselves ( $M_{\text{choice}} = 2.03, M_{\text{no-choice}} = 1.43$ ). In addition, high-differentiability participants felt marginally more disappointed than low-differentiability ones ( $M_{\text{high-differentiability}} = 1.95, M_{\text{low-differentiability}} = 1.56$ ). As predicted, choosers experienced greater disappointment than non-choosers when the choice options were more distinguishable ( $M_{\text{choice}} = 2.41, M_{\text{no-choice}} = 1.39; F(1, 120) = 12.45, p < .001$ ); when the options were less distinguishable, however, choosers and non-choosers felt the same level of self-disappointment ( $M_{\text{choice}} = 1.65, M_{\text{no-choice}} = 1.46; F(1, 120) = 0.40, \text{NS}$ ). In addition, choosers felt more self-disappointment in the high- than in the low-differentiability condition ( $M_{\text{high-differentiability}} = 2.41, M_{\text{low-differentiability}} = 1.65; F(1, 120) = 7.76, p < .01$ ), while there was no difference between non-choosers in these two conditions ( $M_{\text{high-differentiability}} = 1.39, M_{\text{low-differentiability}} = 1.46; F(1, 120) = 0.06, \text{NS}$ ).

*Preference for Choosing.* As in study 1, a 2 (choice condition: choice vs. no-choice) x 2 (option differentiability: high vs. low) ANOVA conducted on participants' liking of their choice condition revealed an effect for choice ( $M_{\text{choice}} = 6.72, M_{\text{no-choice}} = 4.32; F(1, 120) = 40.24, p < .0001$ ), but no effects for differentiability ( $M_{\text{high-differentiability}} = 5.56, M_{\text{low-differentiability}} = 5.71; F(1, 120) = 0.13, \text{NS}$ ) and Choice x Differentiability ( $F(1, 120) = 0.03, \text{NS}$ ).

## Discussion

Findings for study 1 were replicated in a negatively-valenced choice context by showing that option differentiability influenced outcome satisfaction but not participants' preference for

choosing. The difference in satisfaction for choosers and non-choosers was significant in the high- but not the low-differentiability condition; in this case, however, choosers were less satisfied than non-choosers. Study 2 also shows that high-differentiability choosers experienced a higher level of responsibility and subsequent self-blame than either choosers in the low- or non-choosers in the high-differentiability conditions. These results therefore support the hypothesis that when aversive options are more, as compared to less, differentiated choosers' dissatisfaction is aggravated by the idea that the unpleasant outcome was self-inflicted. Ironically, people appear to prefer personally- to other-made choices even when choice freedom causes discontent.

Although results of studies 1 and 2 support our contentions regarding the process by which outcome differentiability moderates the effects of choice on satisfaction, further support for our hypotheses would be to show a mediating effect of self-crediting and self-blame on outcome satisfaction. This test of mediation, however, requires recognition that choice is likely to produce feelings of both self-crediting and self-blaming regardless of outcome valence. Prior research has shown that choosing usually produces a mix of psychological advantages and disadvantages in comparing alternatives and deciding which ones should be forsaken, thus supporting a sense of conflicting self-attribution feelings induced by decisional responsibility (Brenner, Rottenstreich, and Sood 1999; Carmon, Wertenbroch, and Zeelenberg 2003; Hsee and Leclerc 1998; Kahneman and Tversky 1982; Luce 1998). For example, in positive choice, choosers may predominantly credit themselves for the positive outcome but also blame themselves for leaving behind the attractive characteristics of the forsaken items. Conversely, in negative choice, choosers may mostly blame themselves for the negative outcome but also credit themselves for avoiding the bad characteristics of the rejected alternatives. By measuring only self-credit or self-blame, we may have over-simplified participants' reaction. In study 3, we

therefore measure the amount of both self-credit and self-blame as an enriched measure of responsibility and investigate whether the interaction of these contradictory feelings mediates outcome satisfaction.

Study 3 also addresses a potential limitation in prior manipulations of option differentiability. We propose that in the low-, as compared to the high-, differentiability condition choosers feel less responsibility because of their inability to make a meaningful choice. It might be argued, however, that choosers confronted by a set of look-alike alternatives will ultimately make a random choice (Dhar 1997). If this is the case, then the lack of difference between choosers and non-choosers in the low-differentiability condition might be explained by the similarity between random choice and lack of choice. To investigate this possibility, study 3 involves a positively-valenced choice among chocolates in which low differentiability was manipulated separately from random choice: Whereas low-differentiability participants were given non-diagnostic information, random participants were provided with no information about the alternatives. If a low-differentiated choice context amounts to a random choice situation, then we should observe no difference between choosers and non-choosers across these two conditions. If they are conceptually dissimilar as we predict, however, then choosers and non-choosers in the random condition may differ in their satisfaction.

Specifically, we anticipate that random choosers will be less satisfied than their no-choice counterparts. This prediction is based on the previous assertion that choosers' responses are a mix of self-credit and self-blame. Choosers in the low-differentiability condition are likely to experience low levels of both self-credit and self-blame, which produces a level of satisfaction similar to that of non-choosers. In particular, the lack of differentiability provides scant basis on which to take credit for the positive outcome but the similarity of the alternatives also lessens

any feelings of self-blame for the rejected items. By contrast, random choosers may grant themselves little credit for a positive outcome, given the lack of information on which they could base a choice, but they may also harbor misgivings that however tasty their chosen chocolate, they may have inadvertently rejected a superior alternative. Hence, random choosers' self-blame may overcome self-credit, lowering their satisfaction with the chosen option relative to non-choosers.

### STUDY 3

#### Participants, Design, Experimental Procedures, and Dependent Measures

A 2 (choice condition: choice vs. no-choice) x 2 (option differentiability: low vs. random) between-subjects study was conducted on 77 paid students at a Midwestern university. Participants were seated across from four transparent plastic bins labeled from one to four, which contained same-size pieces of Rapulzen bittersweet chocolate wrapped in foil. As in the previous two studies, in the low-differentiability condition the chocolates were described as “average” on the more diagnostic attribute (flavor) whereas “average” “good” or “poor” rates for the less diagnostic attributes (undertones, mouth feel, and texture) were in trade-off. Random-choice participants were instead not given any information about the identical-looking chocolates in the set. Again, participants either chose or were given a chocolate at random. Next, using nine-point scales (1 = *Not at all*, 9 = *Extremely*), participants rated before tasting the extent to which the chocolates differ from one another and, after tasting, their liking and enjoyment with the selected chocolate, as well as how much they blamed and congratulated themselves for it.

## Results

*Manipulation Checks.* Choosers' preferences for the options did not vary across the two conditions: in low-differentiability, 10% of choosers selected chocolate 1, 30% chocolate 2, 20% chocolate 3, and 40% chocolate 4 ( $\chi^2(3) = 4.00$ , NS), whereas in the random condition 11.11% picked chocolate 1, 33.33% chocolate 2, 44.44% chocolate 3, and 11.11% chocolate 4 ( $\chi^2(3) = 6.00$ , NS).

Participants' perception of option differentiability varied, however. A 2 (choice condition: choice vs. no-choice) x 2 (option differentiability: low vs. random) ANOVA yielded no effect for choice ( $M_{\text{choice}} = 3.66$ ,  $M_{\text{no-choice}} = 4.02$ ;  $F(1, 72) = 0.88$ , NS) but a main effect for differentiability: Random-choice participants ( $M = 2.53$ ) rated the options as less distinguishable than low-differentiability participants ( $M = 5.03$ ;  $F(1, 72) = 28.11$ ,  $p < .0001$ ). A Choice x Differentiability interaction ( $F(1, 72) = 8.73$ ,  $p < .005$ ) revealed that random choosers considered the options to be less differentiable than random non-choosers ( $M_{\text{choice}} = 1.61$ ,  $M_{\text{no-choice}} = 3.45$ ;  $F(1, 72) = 7.20$ ,  $p < .01$ ), whereas no difference was found between low-differentiability choosers and non-choosers ( $M_{\text{choice}} = 5.50$ ,  $M_{\text{no-choice}} = 4.55$ ;  $F(1, 72) = 2.15$ , NS).

*Outcome Satisfaction.* A 2 (choice condition: choice vs. no-choice) x 2 (option differentiability: low vs. random) ANOVA conducted on the outcome satisfaction measure created by combining the two satisfaction items ( $r = .93$ ,  $p < .0001$ ) showed no effects for choice ( $M_{\text{choice}} = 4.99$ ,  $M_{\text{no-choice}} = 5.43$ ;  $F(1, 72) = 0.88$ , NS) and differentiability ( $M_{\text{low-differentiability}} = 5.27$ ,  $M_{\text{random}} = 5.15$ ;  $F(1, 72) = 0.07$ , NS), but an interaction of the two ( $F(1, 72) = 3.86$ ,  $p < .05$ )

(see figure 3): As in studies 1 and 2, low-differentiability choosers and non-choosers were equally satisfied, ( $M_{\text{choice}} = 5.52$ ,  $M_{\text{no-choice}} = 5.00$ ;  $F(1, 72) = 0.54$ , NS), but, as predicted, random choosers were less satisfied than random non-choosers ( $M_{\text{choice}} = 4.38$ ,  $M_{\text{no-choice}} = 5.87$ ;  $F(1, 72) = 4.10$ ,  $p < .05$ ).

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 Figure 3 about here  
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*Self-Credit and Self-Blame.* Self-blame and self-credit were positively correlated ( $r = 0.46$ ,  $p < .0001$ ) consistent with the notion that choice often involves a degree of conflict. Hence, we created a ratio by dividing self-blame by self-credit to capture their relative impact on satisfaction. A 2 (choice condition: choice vs. no-choice) x 2 (option differentiability: low vs. random) ANOVA conducted on this ratio revealed no main effects for choice ( $M_{\text{choice}} = 1.23$ ,  $M_{\text{no-choice}} = 1.25$ ;  $F(1, 73) = 0.00$ , NS) and differentiability ( $M_{\text{low-differentiability}} = 1.23$ ,  $M_{\text{random}} = 1.26$ ;  $F(1, 73) = 0.02$ , NS) but a significant interaction ( $F(1, 73) = 5.49$ ,  $p < .05$ ): Low-differentiability choosers' ratio was directionally lower than that of non-choosers ( $M_{\text{choice}} = 0.86$ ,  $M_{\text{no-choice}} = 1.59$ ;  $F(1, 73) = 2.77$ , NS), suggesting relative higher self-credit among choosers. In contrast, random choosers' ratio was directionally greater than that of non-choosers ( $M_{\text{choice}} = 1.64$ ,  $M_{\text{no-choice}} = 0.89$ ;  $F(1, 73) = 2.72$ , NS), indicating, as predicted, relative higher self-blame. These results do not entirely parallel results for satisfaction, where differences between choosers and non-choosers were significant in the low-differentiability but not the random condition.

A mediation analysis (Baron and Kenny 1986) revealed, however, that the blame-to-congratulate ratio explains satisfaction: (1) a regression for the ratio showed that the coefficients for choice ( $\beta = 0.01$ ;  $t(1, 73) = 0.03$ , NS), and differentiability ( $\beta = -0.02$ ;  $t(1, 73) = -0.13$ , NS)

were not significant while the Choice x Differentiability coefficient was significant ( $\beta = -0.37$ ;  $t(1, 73) = -2.34, p < .05$ ); (2) the coefficient for the ratio in the regression of satisfaction was significant ( $\beta = -0.57$ ;  $t(1, 74) = -3.29, p < .001$ ); and (3) a regression for satisfaction yielded non significant coefficients for choice ( $\beta = -0.24$ ;  $t(1, 72) = -0.94, NS$ ) and differentiability ( $\beta = 0.07$ ;  $t(1, 72) = 0.26, NS$ ) but a significant Choice x Differentiability interaction ( $\beta = 0.50$ ;  $t(1, 72) = 1.96, p < .05$ ). With the inclusion of the ratio in this regression, the coefficient for the interaction became not significant ( $\beta = 0.31$ ;  $t(1, 71) = 1.22, NS$ ), while that for the ratio remained significant ( $\beta = -0.51$ ;  $t(1, 71) = -2.83, p < .01$ ; Goodman test:  $t = 1.88, p < .06$ ). Thus, while the pattern of means for the blame-to-credit ratio is not entirely consistent with that of satisfaction, the relative impact of these feelings mediates satisfaction.

## Discussion

Results of study 3 show that outcome satisfaction following a choice among less differentiated options is not equivalent to that following a random choice. Consistent with studies 1 and 2, when the available information was non-diagnostic of the options' relative quality, choosers experienced the same satisfaction as non-choosers, but when no information about the options was provided, choosers were less satisfied than non-choosers. The mediation of relative blame and credit on satisfaction and the manipulation check on perceived differentiation support our explanation for random choosers' lower satisfaction: Having no information about the relative quality of the choice-set options, random choosers not only were unable to credit themselves for the decision outcome, but they were also greatly burdened by the thought of having made a completely wrong choice. Interestingly, the result that providing non-diagnostic

information may not lead to the same satisfaction as providing no information at all parallels differences in the use of base rate information depending on whether people are given worthless or no information (Kahneman and Tversky 1973).

At face value, choosers' lower satisfaction with a random choice is at odds with the illusion of control effect, which suggests that choosers' increased sense of control over chance outcomes raises the value assigned to these outcomes (Langer 1975). This effect, however, is enhanced by factors, such as stimulus familiarity or the ease with which the choice can be rationalized, that increase people's perception of their being skillful choosers. Hence, it might be argued that our experimental stimuli—numbers from one to four—were not able to trigger a perception of control, preventing participants from bolstering the value of the chosen outcome.

## **GENERAL DISCUSSION**

This article contributes to a growing body of literature challenging the assumption that choice is always beneficial to well-being by proposing that option differentiability moderates the effects of choice on satisfaction (e.g., Bernartzi and Thaler 2002; Botti and Iyengar 2004; Chernev 2003; Iyengar and Lepper 2000; Schwartz 2004). In studies 1 and 2, choosers and non-choosers' satisfaction differed only when the options were more differentiated, but when the options were less differentiated, choosers were as satisfied as non-choosers. Nonetheless, participants preferred a personally- over an externally-made choice regardless of the level of option differentiability consistent with people's beliefs that choosing leads to greater satisfaction. This belief, rather than the actual factors influencing satisfaction, appears to drive people's desire for choice.

We explain the results for satisfaction by proposing that the possibility to meaningfully differentiate among the alternatives caused choosers to perceive a greater sense of ownership of the decision consequences, leading to relatively greater self-crediting for an attractive outcome and self-blaming for an unattractive outcome. The inability to effectively tease apart the options, however, made choosers feel less responsible, preventing them from either indulging in self-congratulation or suffering from self-blame, resulting in no difference between choosers and non-choosers' satisfaction. Study 3 findings reveal that the effect of outcome differentiability does not result from a perceived equivalence of low-differentiability and random choice.

Interestingly, the greater dissatisfaction experienced by high-differentiability choosers confronted by unpleasant options does not result from their inability as decision makers in that most choosers correctly selected the dominating option. Hence, sometimes there may be a chasm between making the right choice and feeling good about it. This result also seemingly contradicts the findings that cognitive dissonance causes choosers to bolster the outcome attractiveness (Festinger 1957). However, an important element for experiencing dissonance is the perception that an unsatisfactory outcome was freely chosen, whereas in our study the aversive choice had to be made. Dissonance might therefore have been mitigated by the recognition that if they were truly free to decide, choosers would have probably not chosen at all (Dhar 1997; Luce 1998).

This research provides evidence for the process by which choice affects satisfaction: Choosers' greater tendency to self-credit and self-blame was supported by findings from, respectively, study 1 pretest and study 2. The mediation performed in study 3 suggests that it is the relationship between self-blame and self-credit, rather than credit or blame separately, that explains choosers and non-choosers' differences in satisfaction. The pattern of means for the blame-to-credit ratio, however, did not parallel the findings for satisfaction in the random choice

condition, which limits confidence in our conclusions about the intervening process. We note, however, that other research linking choice to satisfaction, notably research on regret, has yet to establish a clear mediational path (for discussion, see Ordoñez and Connolly 2000; Zeelenberg et al. 2000).

We examined two different psychological dimensions of choice by showing that the act of physically selecting an option and the perceived responsibility that it entails lead to different affective evaluations of the same outcome. Prior research has investigated additional dimensions of choice. For instance, research on learned helplessness (Seligman 1975) showed that choice leading to non-contingent outcomes may cause psychological withdrawal. In addition, it has been found that in some cases the effect for choice on well-being can be attributed to lower outcome uncertainty (Schulz 1976). Finally, behavioral decision research addressed the relationship between choice and accountability both towards others, which implies explaining the reasons for a decision, and oneself, which involves confidence in having made the right choice (Shafir et al. 1993). The degree to which these choice dimensions—action, responsibility, contingency, uncertainty, accountability—differ from and relate to each other needs to be investigated further.

This research is also of interest to marketing practitioners. As opportunities for personal choosing have been growing in modern societies, marketers seem to share with consumers the belief that choice necessarily leads to greater happiness (Schwartz 2004). However, if meaningful differences among the choice options are difficult to discern, because of competitive parity in mature markets, heightened product complexity, or consumers' inability to research the alternatives, the provision and exercise of choice may not result in greater consumer satisfaction. After all, being in control, responsible for our actions, and in charge of events, is definitely an appealing idea, but sometimes it can be just as good to sit back, relax, and enjoy the flight.

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TABLE 1  
STUDIES 1 TO 3: EFFECT OF CHOICE AND OPTION DIFFERENTIABILITY ON  
OUTCOME SATISFACTION, SELF-BLAME, AND SELF-CREDIT

Option differentiability	Choice		No-choice	
	Low	High	Low	High
Study 1 (coffee):				
Outcome satisfaction	5.40	6.52	5.06	4.76
Study 2 (odor):				
Outcome satisfaction	5.69	4.52	5.63	5.93
Self-blame	1.65	2.41	1.46	1.39
Option differentiability	Low	Random	Low	Random
Study 3 (chocolate):				
Outcome satisfaction	5.52	4.38	5.00	5.87
Blame/Credit	0.86	1.64	1.59	0.89

**FIGURE 1**

STUDY 1: INTERACTION BETWEEN CHOICE AND OPTION DIFFERENTIABILITY ON  
OUTCOME SATISFACTION WITH PLEASANT COFFEE BLENDS

**FIGURE 2**

STUDY 2: INTERACTION BETWEEN CHOICE AND OPTION DIFFERENTIABILITY ON  
OUTCOME SATISFACTION WITH UNPLEASANT ODORS

**FIGURE 3**

STUDY 3: INTERACTION BETWEEN CHOICE AND OPTION DIFFERENTIABILITY ON  
OUTCOME SATISFACTION WITH PLEASANT CHOCOLATES

FIGURE 1

STUDY 1: INTERACTION BETWEEN CHOICE AND OPTION DIFFERENTIABILITY ON  
OUTCOME SATISFACTION WITH PLEASANT COFFEE BLENDS

Outcome Satisfaction

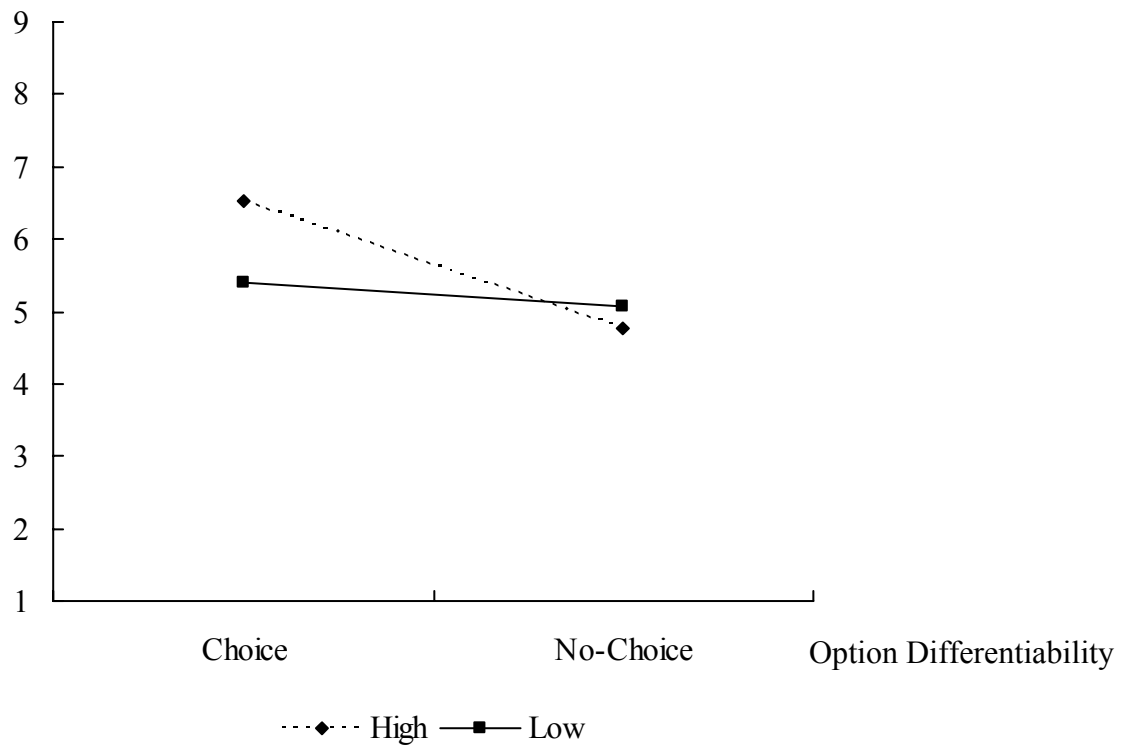


FIGURE 2

STUDY 2: INTERACTION BETWEEN CHOICE AND OPTION DIFFERENTIABILITY ON  
OUTCOME SATISFACTION WITH UNPLEASANT ODORS

Outcome Satisfaction

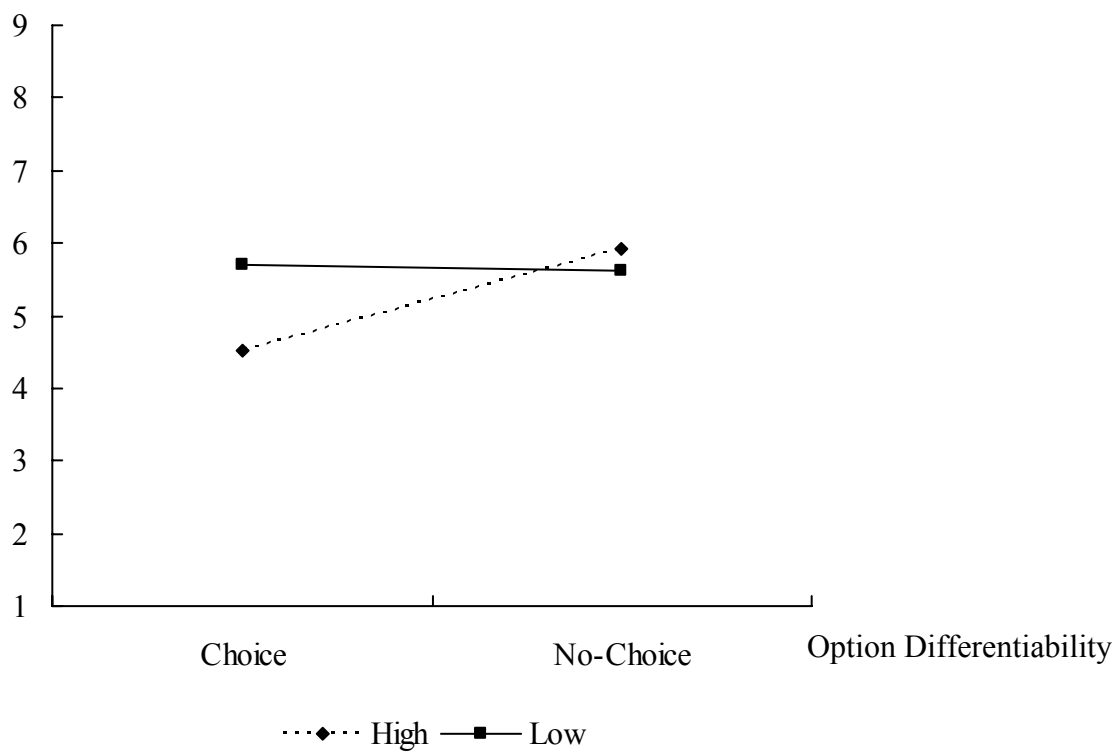
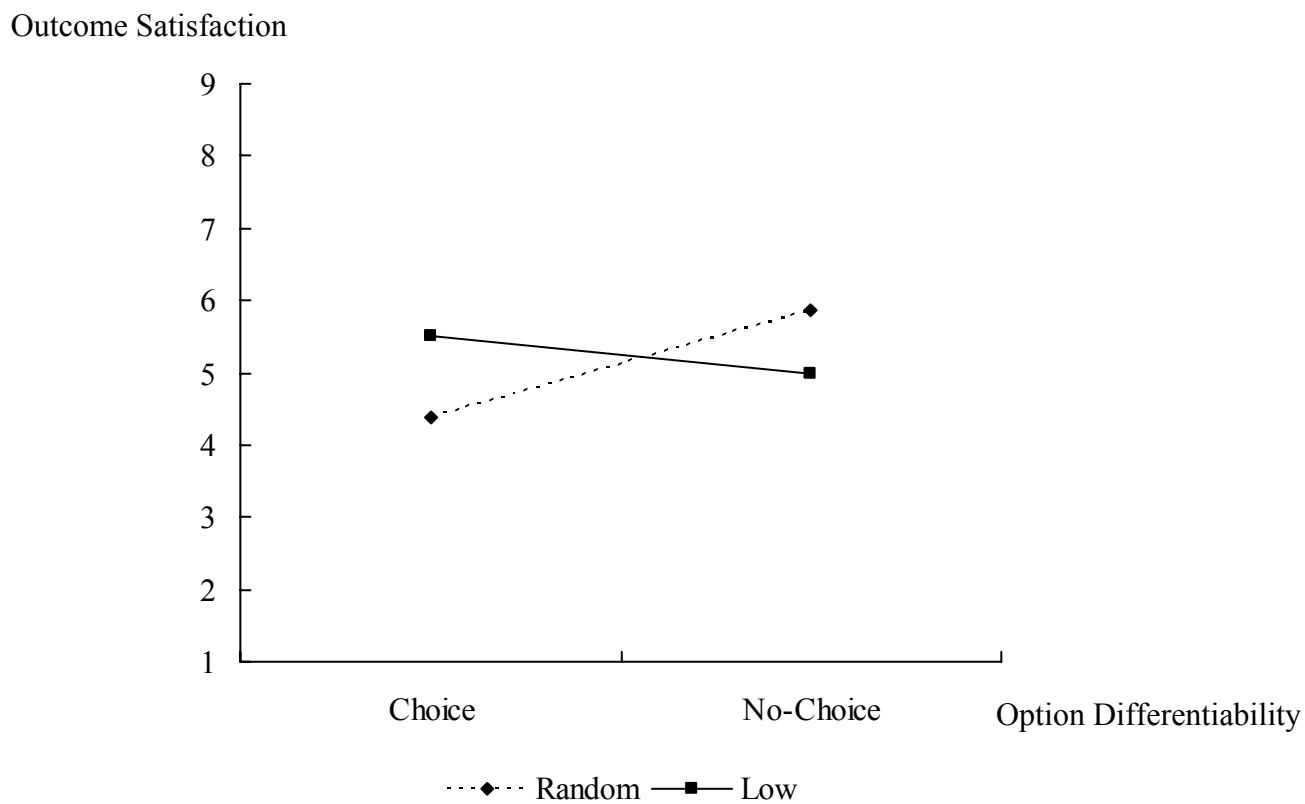


FIGURE 3

STUDY 3: INTERACTION BETWEEN CHOICE AND OPTION DIFFERENTIABILITY ON  
OUTCOME SATISFACTION WITH PLEASANT CHOCOLATES



**1) CONCEPTUAL FRAMEWORK****1) STUDY 1**

- 2) Participants and Design
- 2) Experimental Material, Procedures, and Dependent Variables
- 2) Results
  - 3) *Manipulation Check*
  - 3) *Outcome Satisfaction*
  - 3) *Preference for Choosing*
- 2) Discussion

**1) STUDY 2**

- 2) Participants and Design
- 2) Experimental Materials, Procedures, and Dependent Variables
- 2) Results
  - 3) *Manipulation Check*
  - 3) *Outcome Satisfaction*
  - 3) *Personal Responsibility and Self-Blame*
  - 3) *Preference for Choosing*
- 2) Discussion

**1) STUDY 3**

- 2) Participants, Design, Experimental Procedures, and Dependent Measures
- 2) Results
  - 3) *Manipulation Checks*
  - 3) *Outcome Satisfaction*

3) *Self-Credit and Self-Blame*

2) Discussion

1) **GENERAL DISCUSSION**

1) **REFERENCES**