

# The Offer Framing Effect: Choosing Single versus Bundled Offerings Affects Variety Seeking

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Choices of multiple items can be framed as a selection of single offerings (e.g., a choice of two individual candy bars) or of bundled offerings (e.g., a choice of a bundle of two candy bars). Four experiments provide strong evidence that consumers seek more variety when choosing from single than from bundled offerings. The *offer framing effect* shows that the mechanics of choosing—the ways consumers go about making choices of multiple items—affect variety seeking in a systematic manner. The data also suggest that the effect is largely due to the single offering frame. Theoretical and managerial implications are discussed.

There are two ways in which consumers can go about making choices of multiple items. They can either select each item individually or select all items at once from bundles. For example, two candy bars could be offered as two single items (hereafter, a *single offering frame*) or as a bundle of two (hereafter, a *bundled offering frame*). In this article, we examined whether the offering frame systematically influences consumers' preferences, and we found strong evidence that it does. The results of four experiments

consistently show that consumers are more likely to seek variety in the single offering frame than in the bundled offering frame. We call this the *offer framing effect*. That is, the “mechanics of choosing”—the ways consumers go about making choices of multiple items—affect variety seeking.

## MECHANICS OF CHOOSING AND VARIETY SEEKING

The key difference in choosing multiple items that are offered individually versus in bundles is the number of actions, or “choice acts,” that consumers have to perform. Consumers buying two candy bars perform two choice acts if they choose from single items, but only one choice act if they choose from bundled items. Likewise, consumers buying six bottles of beer perform six choice acts if the items are offered singly, but only one choice act if the items are offered in a six-pack. Naturally, consumers' preferences for variety in choices of candy bars or beers should not be affected by the number of choice acts they happen to be performing. The offer framing effect thus violates one of the tenets of the rational agent model, namely, the principle of procedure invariance (e.g., Rubinstein 1998).

Several reasons have been proposed to explain consumers' tendency to seek variety. Variety seeking increases, for example, when one is uncertain about one's future preferences (Kreps 1979; Pessemier 1978), when one anticipates

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Mary Frances Luce served as editor and Rebecca Ratner served as associate editor for this article.

Electronically published September 8, 2014

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satiation (Inman 2001; McAlister 1982), or when self-presentation or impression management concerns are at stake (Ariely and Levav 2000; Kim and Drolet 2003; Ratner and Kahn 2002). But the mechanics of choosing, or whether consumers choose multiple items by performing one or more choice acts, should be independent of these and other explanations (e.g., consumers who seek variety convey an open-minded image regardless of whether they choose single or bundled offerings).

There is some previous research that could be taken as similar to the research we present in this article; we need therefore to clarify how our work is different. Like us, Simonson (1990) investigated the impact of different ways to make choices of multiple items on variety seeking. He, however, focused on the impact of the time delay between choices (short vs. long), holding constant the number of choice acts, whereas we focus on the impact of the variation in the number of choice acts (multiple choice acts in the single offering frame vs. only one choice act in the bundled offering frame). Our research also differs from the work on choice bracketing—the extent to which consumers consider the consequences of their decisions as a whole (Read, Loewenstein, and Rabin 1999). When making multiple choices consumers bracket broadly when they consider the consequences of their decisions as a whole or bracket narrowly when they consider the consequences of each of their decisions in isolation. Importantly, they either way perform a multiple number of choice acts. For example, Halloween trick-or-treaters are more likely to bracket broadly when they choose two candies one after the other in a single house and to bracket narrowly when they choose one candy in one house and another candy in another house (Read and Loewenstein 1995). Likewise, students are more likely to bracket broadly when they make three choices of individual snacks in a row and to bracket narrowly when they make the same three choices of individual snacks 1 week apart (Simonson 1990). Choice bracketing therefore does not relate to whatever difference there may exist between choices of bundled and single offerings (i.e., between choices that entail only one or multiple choice acts).

It can still be argued that, when choosing multiple items, consumers who make only one choice act (bundled offering frame) are more likely to consider the consequences of their decisions as a whole—to bracket broadly—than consumers who make multiple choice acts (single offering frame). But choice bracketing predicts that variety seeking decreases as choices move from broader brackets (e.g., choices of Halloween treats made in a single house or choices of snacks made in a row) to narrower brackets (e.g., choices of Halloween treats made in different houses or choices of snacks made 1 week apart). However, as we will show, variety seeking actually increases as choices move from broader brackets (bundled offerings) to narrower brackets (single offerings). Hence, choice bracketing cannot explain the offer framing effect because it predicts a pattern opposite to the one we observed.

In a nutshell, the current research provides two main con-

tributions. First, most framing effects that have been reported in the literature occur when the same choice is described in different ways (Levin, Schneider, and Gaeth 1998; Tversky and Kahneman 1986). We, instead, report a novel framing effect that occurs when the same choice is performed in different ways. Second, this framing effect involves a causal antecedent of variety seeking, namely, the mechanics of choosing—the way consumers go about making choices of multiple items—that so far has not been discovered (for reviews of the literature on variety seeking, see Kahn [1995] and Kahn and Ratner [2005]). In particular, as we discussed above, existing explanations of variety seeking either are silent on, or even imply predictions that would be at odds with, the offer framing effect.

The offer framing effect suggests that the bare arrangement of products, and consequently, whether consumers have to perform one or multiple choice acts when choosing multiple items, impacts the decisions they make. This phenomenon is of theoretical and managerial importance. It offers, for instance, a simple reason for the intriguing finding documented by previous research: that consumers seem to have a penchant for variety, often to the point of choosing much more varied sets of items than what would be needed to make them happy (Kahn and Ratner 2005). We elaborate on this and other implications in the discussion section.

We next report four experiments that provide evidence for the offer framing effect. Experiment 1 shows that participants are more likely to seek variety when making choices of single than of bundled items, and importantly, it implies that the effect is to a large extent due to the single rather than to the bundled offering frame. Experiment 2 replicates the main results using a different product category. Also, by means of analyses of participants' verbal protocols, it further implicates the single offering frame as the driver of the effect. Experiment 3 assesses the robustness of the effect with yet another product category, where satiation is unlikely to matter and with a task that requires participants to make choices of three (instead of two) items. Finally, experiment 4 suggests that variety seeking is influenced not only by the choice outcome (i.e., the items the consumer ends up with) but also by the choice process (i.e., the mechanics of choosing).

## EXPERIMENT 1

In experiment 1, we asked participants to choose two soft drinks from two brands. We manipulated how the choice task was framed and asked participants to indicate their liking for the available options. We were thus able to test the offer framing effect and to examine whether participants' relative preferences for the products interact with it.

### Method

Two hundred and eighty-nine participants (104 females;  $M_{\text{age}} = 28.3$ ,  $SD_{\text{age}} = 10.0$ ) were recruited online at Amazon Mechanical Turk for a small monetary compensation and asked to participate in a web-based study. They were told

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**TABLE 1**  
 FREQUENCIES AND PREFERENCES FOR VARIETY FOR THE SINGLE AND BUNDLED OFFERING  
 CONDITIONS OF EXPERIMENTS 1, 2, AND 3

	Condition		Chi-square tests
	Single offering	Bundled offering	
Experiment 1:			
Choices of identical items	53	98	
Choices of different items	87	51	
Preference for variety	62.1%	34.2%	$\chi^2(1) = 22.54, p < .001$
Experiment 2:			
Choices of identical items	14	29	
Choices of different items	39	29	
Preference for variety	73.6%	50.0%	$\chi^2(1) = 6.49, p = .01$
Experiment 3:			
Choices of identical items	14	31	
Choices of different items	32	29	
Preference for variety	69.6%	48.3%	$\chi^2(1) = 4.81, p < .05$

NOTE.—The percentages (preference for variety) represent the proportions of participants who chose different items in the single or in the bundled offering conditions (e.g.,  $87/(53+87) = 62.1\%$ ).

the following: “Imagine that you have gone to a convenience store to buy two cans of soft drink for yourself. The store you went to sells only Coke and Sprite. What would you choose?” Participants were randomly assigned to one of two between-subjects conditions. In the single offering condition, the choice task was framed such that participants had to perform two choice acts. They were asked to indicate their first choice and then their second choice (both soft drinks were available at each decision). The display order of the two soft drinks in each choice was counterbalanced between-subjects. In the current and following experiments, this display order had no effect and will not be discussed further. In the bundled offering condition, the choice task was framed such that participants had to perform only one choice act. All four possible combinations of two soft drinks were offered (Coke/Sprite, Coke/Coke, Sprite/Coke, and Sprite/Sprite), and they were asked to indicate their choice (i.e., which bundle of two items they preferred). The display order of the four bundles was randomized. Note that we included the bundles Sprite/Coke and Coke/Sprite, even though they differ only in whether an item was displayed to the right or the left. This way the probability of selecting two different or two identical soft drinks for a participant making random choices was the same across both experimental conditions. The instructions used in this experiment are presented in appendix A.

Note also that participants in the single offering condition were fully aware of, and actually saw, the question about their second choice before making their first choice. In principle, they could reframe the choice task by mentally creating the four possible bundle combinations, which would render the two experimental conditions identical.

The main dependent variable is the proportion of participants who sought variety, that is, who chose two different soft drinks. After making the choices, we asked participants “How much do you like Coke (Sprite)?” (0 = not much, 6 = very much). This attitude measure allowed us to assess

whether the relative liking for the two available products impacted variety seeking and potentially interacted with the offer framing manipulation.

Participants were also asked about liking and consumption frequency for the product category: “Do you like soft drinks?” (0 = not much, 6 = very much) and “How often do you drink soft drinks?” (0 = not often, 6 = very often). Gender was recorded as well. In the current and following experiments, none of these three control variables interacted with the offer framing manipulation, and they will not be discussed further.

## Results

*Variety Seeking.* The mechanics of choosing clearly affected variety seeking. Participants were much more likely to seek variety (i.e., to choose two different soft drinks) in the single than in the bundled offering condition (62.1% vs. 34.2%, respectively;  $\chi^2(1) = 22.54, p < .001$ ; see table 1, experiment 1). These results thus provide evidence for the offer framing effect.

*Interaction between Liking Discrepancy and Offer Framing on Variety Seeking.* We can reasonably suppose that the more consumers prefer one item over the other, the less likely the offering frames will matter. In other words, if consumers like, say, Coke much more than Sprite, then regardless of how they go about choosing two soft drinks, they are expected to opt for two Cokes. We thus tested whether this straightforward prediction holds to the same extent for both offering conditions.

To do so, we checked whether there was an interaction between liking discrepancy—the difference between the participant’s attitudes toward the two available products—and the offer framing manipulation on variety seeking. Liking discrepancy was computed by first subtracting participants’ liking for Sprite from their liking for Coke and then

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taking the absolute value (liking discrepancy = |Coke rating - Sprite rating|). We then used a logit model to regress participants' choice (1 = different items, 0 = identical items) on liking discrepancy (which by construction varied from 0 to 6), offering condition (1 = single offering condition, 0 = bundled offering condition), and the interaction term. Not surprisingly, there was a main effect of liking discrepancy on variety seeking, such that larger discrepancies decreased the likelihood of choosing two different items ( $\beta = -1.52$ ;  $z = -5.85$ ,  $p < .001$ ). More interestingly, however, the interaction term was also significant ( $\beta = .89$ ;  $z = 3.00$ ,  $p < .01$ ). As liking discrepancy increased, variety seeking decreased significantly less in the single than in the bundled offering condition (see fig. 1). For example, out of the 45 participants in the bundled offering condition who reported a liking discrepancy of "3" or higher on the rating scale (i.e., who indicated quite a strong preference for one option over the other), none chose two different soft drinks. In contrast, 12 out of the 41 participants in the single offering condition who reported a liking discrepancy in this range did so.

## Discussion

Participants sought variety more often in the single than in the bundled offering frame. Furthermore, the expected effect of liking discrepancy on variety seeking—the larger the discrepancy, the lower the likelihood of seeking variety—was not uniform, but rather depended on the offering frame. The increase in liking discrepancy reduced variety seeking much less in the single than in the bundled offering condition. In fact, the impact of performing two choice acts on variety seeking was such that many participants in the single offering condition chose two different items despite acknowledging on the liking rating scale a much stronger preference for one soft drink over the other. Therefore, it seems that it is the single offering frame that pushes choosers to seek variety, a possibility that we further probe in the next experiment.

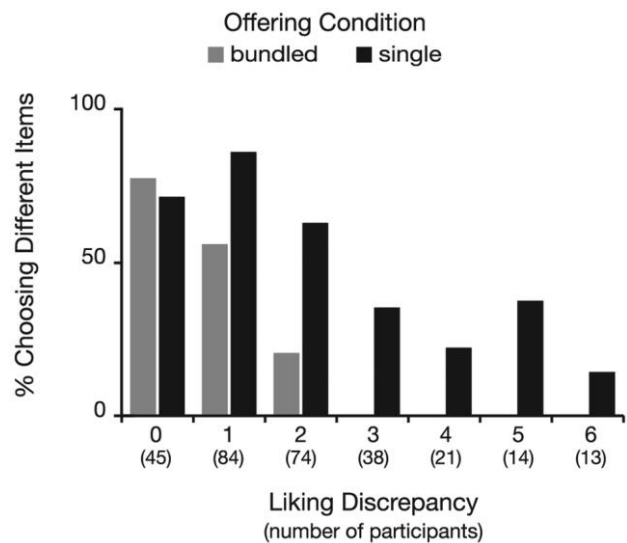
## EXPERIMENT 2

Experiment 2 had two objectives. The first was to replicate the previous findings with another product category. The second was to provide further evidence that the offer framing effect is largely due to the single offering frame pushing choosers to seek variety. We reasoned that if this assertion is correct, then for participants in the single offering condition it should be especially difficult to explain why they chose varied items.

To that effect, we asked participants to make choices similar to those of experiment 1 and then to indicate what crossed their minds during the choice process. In order to measure the ability to articulate the choice process in a simple and objective manner, we asked two independent coders to guess what participants had chosen (two different or two identical items) based exclusively on collected verbal protocols. Should participants have difficulty to articulate

FIGURE 1

EXPERIMENT 1: VARIETY SEEKING AS A FUNCTION OF OFFERING CONDITION AND LIKING DISCREPANCY



NOTE.—Percentages of participants who chose different items by offering condition and level of liking discrepancy. Liking discrepancy is computed by subtracting participants' liking for Sprite from their liking for Coke and then taking the absolute value. Figures in parentheses in the horizontal axis indicate the number of participants within each level of liking discrepancy.

their choice process when asked to do so, then an outsider's ability to infer their choices based on what they reported would be impaired.

## Method

One hundred and eleven participants (38 females;  $M_{age} = 28.1$ ,  $SD_{age} = 8.2$ ) were recruited online at Amazon Mechanical Turk for a small monetary compensation and asked to participate in a web-based study. The experimental design was identical to that of experiment 1, except that participants now chose two candy bars from brands Snickers and Twix. After the choice task in both the bundled and the single offering conditions, participants reported on a subsequent computer screen their thoughts during the choice process. More specifically, they were asked the following question: "Now please write down the things you were considering while making your choices." Two independent coders, blind to participants' assignment to the offering conditions and to their choices, were given general instructions about the experimental choice task and asked to guess, based on the participants' verbal protocols (i.e., the responses to the question), whether they had chosen two identical candy bars (two Snickers or two Twix) or two different candy bars (one Snickers

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and one Twix). Coders could also claim that there was not enough information to make a guess.

We did not subsequently collect liking measures because they would be contaminated by the open-ended questions asked immediately before. However, we conducted another experiment with the same stimuli in which we replaced the open-ended questions with the liking measures, and we obtained results virtually identical to those of experiment 1. (Details about this additional experiment's stimuli and results are available from the first author upon request.)

## Results

*Variety Seeking.* Consistent with the previous findings, participants in the single offering condition chose two different candy bars more often than participants in the bundled offering condition (73.6% vs. 50.0%, respectively;  $\chi^2(1) = 6.49, p = .01$ ; see table 1, experiment 2).

*Guessing Task.* As explained, two coders guessed, based on the verbal protocols, whether participants had chosen two different or two identical items. They agreed on 79.4% of the cases. The coders then met for the first time and resolved the inconsistencies by consensus.

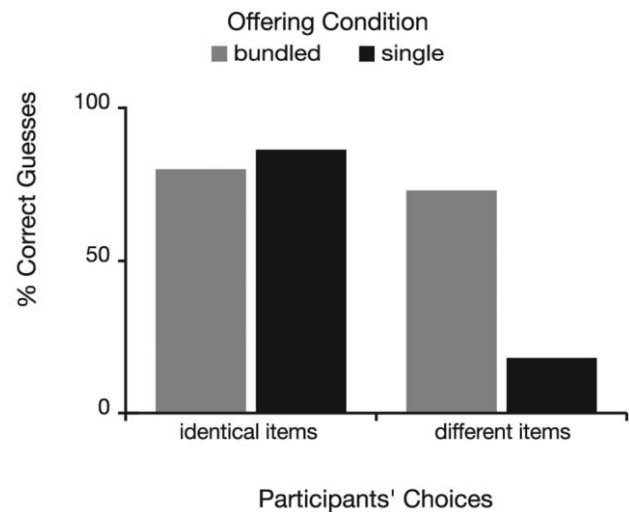
We used a logit model to regress the accuracy of coders' guesses (1 = correct, 0 = not correct) on offering condition (1 = single offering condition, 0 = bundled offering condition), participants' choice (1 = different items, 0 = identical items), and the interaction term. (By "correct" guess we mean that coders provided a guess and such a guess was correct, and by "not correct" guess we mean that coders either provided a guess and such a guess was incorrect or coders claimed there was not enough information to make a guess; conclusions from this experiment do not change if we break up the "not correct" guess as just described, but the analyses and reporting become more complex). There was no main effect of either independent variable (both  $z < 1, p > .50$ ). However, as expected, the interaction between offering condition and participants' choice was significant in the predicted direction ( $\beta = -2.93; z = -2.75, p < .01$ ). Figure 2 displays the pattern of results.

Among participants who chose two identical items (whether two Snickers or two Twix), the coders correctly guessed choices most of the time (81.4%), and their accuracy was not affected by the offer framing manipulation (85.7% and 79.3% in the single and in bundled offering conditions, respectively;  $\chi^2(1) = .26, p > .50$ ). A representative look at what these participants reported shows why it was so easy to guess that they had chosen two identical items (e.g., "I don't like Snickers candy bars . . . they have nuts and I don't like nuts" and "It was an easy decision especially when you consider that my favorite is Snickers").

In contrast, among participants who chose two different items, the proportion of correct guesses was much lower (41.2%). Of importance, coders' accuracy was contingent on the offer framing manipulation ( $\chi^2(1) = 20.37, p < .001$ ). The proportion of correct guesses was quite high for participants in the bundled offering condition (72.4%). Their

FIGURE 2

EXPERIMENT 2: ACCURACY OF CODERS' GUESSES AS A FUNCTION OF OFFERING CONDITION AND PARTICIPANTS' CHOICES



NOTE.—Percentages of coders' guesses that were correct by offering condition and participants' choices.

responses to the open-ended question reveal why it was so easy to guess that they had sought variety (e.g., "I really like both of them so I want one of each" and "I don't want two of the same"). However, the proportion of correct guesses dropped dramatically for participants in the single offering condition (17.9%). If one looks at what they reported, it becomes clear why it was so hard to guess that they had chosen two different items and, as a result, why coders made many systematic mistakes. Consider the following examples of verbal protocols: "I don't care for Snickers," "Just that I like Twix better than I like Snickers," and "I was considering past experiences with the candy bars, and I took into consideration my enjoyment of Snickers more than Twix." The three participants who wrote these statements actually chose one Snickers and one Twix! In short, many single offering choosers may have been pushed into seeking variety, and as a result they found it very difficult to explain their choices in hindsight. They instead just reported their preference for one candy bar over the other. Still another pattern of responses in this condition showed that some participants just focused on the product attributes that crossed their minds, which naturally would leave an outsider puzzled about what they had chosen. The following verbal protocols illustrate how difficult the coders' task was: "Peanuts and caramel," "Taste, feeling of becoming full, texture," and "Nothing."

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## Discussion

Experiment 2 replicated the main findings with a different product category. Further, it showed that a number of participants who chose two different items in the single offering condition had a significantly impaired ability to rationalize their choices, as captured by the coders' poorer performance in comparison to guesses they made about participants who also chose two different items in the bundled offering condition or about participants who chose identical items in either offering condition. These findings provide further evidence that the offer framing effect is largely due to the single offering frame, which seems to push choosers to seek variety even when they admit liking the item they refused much more than the item they chose.

The two experiments that we have discussed so far used product categories in which consumption was supposed to occur sequentially (the drinking of soft drinks and the eating of candy bars). One might wonder whether our findings might be limited to domains in which satiation is at stake. If the single offering frame somehow makes satiation more salient in consumers' mind, that could explain the results of experiments 1 and 2. To examine this possibility, in the next experiment, we used a consumption domain in which satiation is not relevant. Also, to further test the robustness of our findings, in experiment 3 participants chose three rather than two items. As a result, we also avoided the need to use two bundles that differed only in their presentation. Finally, we adopted a more realistic setup.

## EXPERIMENT 3

To test the offer framing effect in a domain where satiation is unlikely to matter, participants in this experiment were invited to a room where they were presented with several roses and asked to either choose or compose a bouquet. This approach accomplished two goals. First, it involved a choice for which anticipated satiation is not relevant. Unlike the food items used in the previous experiments, flowers are not consumed sequentially. A bouquet once formed is "consumed" as a whole in a single consumption episode. Second, as the method section will clarify, this approach also avoided the need for (conceivably) redundant bundles because each bouquet had a distinctive combination of roses.

## Method

One hundred and forty-seven passers-by (79 females) near a university in Paris were recruited for this experiment. They were told they would participate in a 5-minute study about "preferences for bouquets of flowers" and would receive a snack in exchange for their participation. The experimenter escorted participants to a room where they were left alone with written instructions. They were randomly assigned to one of two between-subjects conditions. In the single offering condition, participants were asked to compose a bouquet of three roses by choosing any of the six yellow roses and six orange roses that were available in a vase in front

of them. They placed the chosen flowers in another nearby vase. In the bundled offering condition, participants had all four possible combinations of bouquets of three roses already placed in four small vases in front of them (a bouquet of three yellow roses, a bouquet of two yellow roses and one orange rose, a bouquet of one yellow rose and two orange roses, and a bouquet of three orange roses), and they were asked to select the bouquet they liked the most. To make the two experimental choice tasks as similar as possible, the participants also placed the three roses of their most-liked three-rose bouquet in another nearby vase. The order in which these four bouquets of roses were displayed was counterbalanced using a Latin square design (Snodgrass, Levy-Berger, and Haydon 1985). Schematic descriptions of the display of the yellow and orange roses in these two experimental conditions are presented in appendix B.

Participants took as much time as they wanted to complete the choice task. After making their choices, they answered a few questions. They were asked how much they liked flowers, how often they bought roses, and how much they liked yellow roses and orange roses. All questions were answered using 7-point scales (1 = not at all, 7 = very much). Finally, they were compensated and dismissed. Preference for variety, the main dependent variable, was obtained by measuring the proportion of participants who preferred a mixed-color bouquet (a bouquet of two yellow and one orange roses or a bouquet of two orange and one yellow roses) over a same-color bouquet (a bouquet of three yellow roses or a bouquet of three orange roses).

## Results

*Variety Seeking.* As expected, participants in the single offering condition, who were asked to compose a bouquet, sought variety (i.e., chose a mixed-color bouquet) more often than participants in the bundled offering condition, who were asked to select a bouquet from prearranged ones (69.6% vs. 48.3%, respectively;  $\chi^2(1) = 4.81, p < .05$ ; see table 1, experiment 3). There were no order effects. Most important, we observed the offer framing effect even when satiation was unlikely to matter.

*Ruling Out Randomness.* Note that, in the single offering condition, the objective probability of composing a mixed-color bouquet was higher than that of composing a same-color bouquet because there was only one way to compose a same-color bouquet but there were three ways to compose a mixed-color bouquet (e.g., a bouquet of two yellow roses and one orange rose could be composed by picking the orange rose as the first, second, or third flower). Consequently, if all participants made completely random choices, then that could explain the differences in choices of mixed-color bouquets across the two experimental conditions. To rule out this alternative explanation, an *unbalanced single offering* condition was included in the experimental design. In the unbalanced single offering condition, participants performed the same choice task of the (balanced) single offering condition, but they had two additional yellow roses and one

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fewer orange roses available (see app. B for a schematic description of the display of the yellow and orange roses in this third condition). If participants indeed made random choices, then those in the unbalanced single offering condition should choose more yellow roses than those in the (balanced) single offering condition. The results show that this was not the case. In both conditions, they chose on average approximately the same number of yellow roses ( $M_{\text{balanced}} = 1.30$  vs.  $M_{\text{unbalanced}} = 1.37$ ;  $t < 1$ ).

## Discussion

Experiment 3 provided further evidence that the mechanics of choosing affect variety seeking. Participants preferred a greater variety of flowers when they composed a bouquet than when they chose a preassembled bouquet. Importantly, the results also showed that the offer framing effect holds in a domain in which all items are expected to be “consumed” simultaneously (i.e., a bouquet of flowers is “consumed” as a whole), that is, in which satiation is not relevant. Finally, unlike experiments 1 and 2, the bundles in experiment 3 were clearly distinct from one another (i.e., now there were no two bundles differing only in the display order of individual items, so that after a mental rearrangement they could be seen as the same).

## EXPERIMENT 4

The offer framing effect suggests that variety seeking is influenced not only by the outcome of choosing (i.e., the items the consumer ends up with) but also by the process of choosing (i.e., the mechanics of choosing). Naturally, when making multiple choices, if consumers in the single offering frame choose subsequent items that are different from previous ones, then they will generally end up with a more varied set of items than if they do otherwise (i.e., if they choose subsequent items that are identical to previous ones). In experiment 4, we thus sought to orthogonally separate the influences of the outcome and the process and to pit them against one another. To do so, we assessed the extent to which the tendency to make a subsequent choice different from a previous one exists even when it results in an overall choice with a less varied set of items. In the experimental condition in which this goal was accomplished, participants had to opt between (i) maximizing variety in the choice process (i.e., choose something different from what they have) at the cost of variety in the choice outcome (i.e., end up with less varied items) and (ii) maximizing variety in the choice outcome (i.e., end up with more varied items) at the cost of variety in the choice process (i.e., choose something identical to what they have). In addition, unlike those of the previous experiments, the choice task of this experiment was real and consequential.

## Method

Sixty students (27 females;  $M_{\text{age}} = 20.2$ ,  $SD_{\text{age}} = 1.7$ ) participated in this experiment. They were approached in

and around the cafeteria of a university in Buenos Aires and escorted to a desk in a quiet corner, where the experimenter conducted the study individually. All participants were asked to fill out a survey with four general knowledge questions unrelated to the main purpose of the experiment, and as a token of appreciation for their participation they were rewarded with six candies of flavors cherry (A), grape (B), and apricot (C) made by a local manufacturer. They were randomly assigned to one of two between-subjects conditions.

In the bundled offering condition, after answering the four-question survey, participants were asked to choose between two cards, which represented two bundles of six candies: a low-variety bundle AAAABC and a high-variety bundle AABBC (a pilot study was conducted to attest the difference in the degree of perceived variety between these two bundles). The right-left presentation order of the cards was counterbalanced between-subjects. Participants made their choices, answered a brief questionnaire with questions about their preferences for the three candy flavors, and received their candies.

In contrast, in the single offering condition, participants chose the six candies in two steps. In the first step, after answering the first two questions, they were asked to choose between two cards in a sealed envelope, each representing a subset of three candies: a low-variety subset AAA and a high-variety subset ABC. Participants knew what these subsets were but did not know which each card represented (i.e., the choice was blind). They made their choices and received their candies. Unbeknownst to participants, regardless of which card was chosen, they all received the high-variety subset ABC. In the second step, after answering the last two questions, they were again asked to choose between the same two cards (one representing the low-variety subset AAA and the other representing the high-variety subset ABC), but now the cards were disclosed to participants prior to the choice. The right-left presentation order of the cards was counterbalanced between-subjects. Participants made their choice, answered the same brief questionnaire mentioned above, and received their candies. Schematic descriptions of the procedure in these two experimental conditions are presented in appendix C.

In short, in the bundled offering condition, participants chose between the low-variety bundle AAAABC and the high-variety bundle AABBC, whereas in the single offering condition they were given the high-variety subset ABC and were then asked to choose between the low-variety subset AAA and the high-variety subset ABC. Note that choosing the high-variety subset ABC, which would lead to the high-variety bundle AABBC, meant choosing the subset *identical* to that the participant already owned (i.e., choosing the subset ABC after having just gotten the subset ABC). Likewise, choosing the low-variety subset AAA, which would lead to the low-variety bundle AAAABC, meant choosing a subset *different* from that the participant already owned (i.e., choosing the subset AAA after having just gotten the subset ABC). That is, preference for the most varied process, or choice act (i.e., choosing a candy subset

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different from that the participant already owned), was pitted against preference for the most varied outcome (i.e., leaving the experiment with a more varied bundle of candies).

## Results

As expected, participants in the single offering condition often avoided choosing a subset of items identical to that they already owned (ABC), and, as a result, they were much less likely to end up with high-variety bundles than participants in the bundled offering condition (36.7% vs. 66.7%, respectively;  $\chi^2(1) = 5.41, p < .05$ ). There were no order effects. Further analyses with a logit model that controlled for candy preferences using data collected with the brief questionnaire yielded the same pattern of results.

## Discussion

The results showed that participants in the single offering condition preferred choosing something different from what they already owned over ending up with more varied items. That is, they maximized process variety at the cost of outcome variety. Experiment 4 thus corroborates that the mechanics of choosing affect variety seeking. In fact, it shows that the desire to seek variety in the choice process can even override the desire to seek variety in the choice outcome.

## GENERAL DISCUSSION

Choices of multiple items (or offerings) can be framed in two ways. If presented with a *single offering frame*, consumers choose from single items; if presented with a *bundled offering frame*, consumers choose from bundled items. In this article, we show that the way choice of multiple items is framed influences consumers' preferences in a systematic manner. Specifically, we found that consumers are more likely to seek variety (i.e., to choose different items) if presented with a single than with a bundled offering frame. Further, our results suggest that the key driver of the effect is the single offering frame. But what psychological mechanism could possibly underlie the effect of the mechanics of choosing—the way consumers go about making choices of multiple items—on the propensity to seek variety?

Consumers are known to spontaneously pose themselves different questions when making choices (Johnson, Häubl, and Keinan 2007). We posit that the main question consumers ask themselves before the first, or the sole, choice differs from the main question they ask themselves before the second (or any subsequent) choice. In the bundled offering frame, before making the choice, they wonder: "How much do I like bundle X?" Likewise, in the single offering frame, before making the first choice, they wonder: "How much do I like item X?" Indeed, logistic regressions conducted with the data collected in experiment 1 confirmed that participants' relative liking for the available products, that is, the difference in the product liking ratings (Coke rating – Sprite rating), was a strong predictor of their choice

in the bundled offering condition as well as of their first choice in the single offering condition. In the bundled offering condition, preference for two Cokes or two Sprites increased along with participants' relative liking for, respectively, Coke ( $\beta = 2.23; z = 5.45, p < .001$ ) and Sprite ( $\beta = -1.47; z = -4.53, p < .001$ ; preference for the mixed bundle was set as the base outcome). Similarly, in the single offering condition, results showed that participants' relative liking had a clear impact in the predicted direction on their first choice ( $\beta = 3.93; z = 3.87, p < .001$ ).

However, for the second choice (or for that matter, any subsequent choice) in the single offering frame, consumers are unlikely to ask themselves the same liking question again. Rather, as consumers already "own" an item, they are more likely to wonder: "Should I choose the same or a different item?" Put simply, the mechanics of choosing end up increasing the likelihood that the consumer will consider, and as a result seek, variety in the single (vs. bundled) offering frame. If this rationale is correct, then product preferences should have little predictive power on consumers' choice of the second (or any subsequent) item. Indeed, in experiment 1, participants' relative liking, as defined above, did not predict their second choice in the single offering condition ( $\beta = .09; z = 1.35, p > .15$ ). Further research, however, is needed to provide more evidence for this psychological mechanism or to advance an alternative account.

Our results provide a new insight into one important finding reported in the literature. A reading of the research on variety seeking suggests that consumers have a strong tendency to seek variety, often indulging in more variety than will make them happy (for a review, see Kahn and Ratner [2005]). For instance, Read and Lowenstein (1995) reported that students who chose three snacks in advance that they would receive over the period of 2 weeks subsequently regretted having chosen different items instead of more of their most-liked item. Likewise, Ratner, Kahn, and Kahneman (1999) showed in several experiments that participants who made repeated choices of songs switched to less preferred songs even though they enjoyed listening to these songs less than they would have enjoyed listening to more preferred songs. Given that in most of the studies on variety seeking participants chose multiple items from single offerings, our results raise the possibility that the documented tendency to seek variety can be partially explained by the very manner they were asked to make their choices.

The question that emerges then is this: Will consumers still be incorrigible variety seekers if they are asked instead to choose multiple items from bundled offerings, as when they choose flower bouquets or package tourist trips? Of course the answer depends on which options are available to choose from, but if anything, the data reported in this article suggest that the magnitude of consumers' desire for outcome variety may have been overestimated in the current literature. The fact that many settings involve choices of single offerings suggests that the prevalence of variety seeking reported in the literature and in life might be in part the

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result of the offer framing effect rather than of an inherent preference for variety. That is, when consumers seek variety, perhaps they are driven by the choice process (i.e., the mechanics of choosing) as much as they are by the choice outcome (i.e., the items they end up with).

Finally, the offer framing effect also has important managerial implications. First, our findings provide a rationale for using bundles as a strategic tool. Retailers often discount the price of items when they are bundled, that is, they offer a lower unit price for consumers willing to purchase larger quantities. Our research suggests that bundling can increase purchase quantities independently of price incentives. Specifically, by reducing variety seeking, bundles can increase repeated purchases (i.e., induce consumers to buy larger quantities of the same item), regardless of any effect of pricing. Second, the offer framing effect suggests that consumers who patronize small grocery stores, which usually sell single offerings, are more likely to buy different products than consumers who patronize large supermarkets, which usually sell bundled offerings. If this conjecture is correct, then it should be easier, other things being equal, for new competitors to gain a foothold in small rather than in large retail outlets. And third, our findings also hint that the proportion of sales resulting from purchases of several items of the same kind in the same shopping occasion will be higher in online stores than in brick-and-mortar retail

outlets. Unlike brick-and-mortar retail outlets, online stores do not require that consumers make multiple choice acts when purchasing single offerings. Rather, consumers simply need to type in the corresponding digits in the designated spot on the screen. Hence, purchases of multiple identical items are expected to be more frequent online than otherwise. Future research could examine these three conjectures.

In conclusion, this research documents what we called the offer framing effect. It shows that for choices of multiple items the mechanics of choosing affect variety seeking—consumers are more likely to seek variety when making choices of single than of bundled offerings.

## DATA COLLECTION INFORMATION

The first author undertook the collection of data for experiments 1, 2, and 3 and supervised the collection of data by a research assistant for experiment 4. The data for experiments 1 and 2 were collected from Amazon Mechanical Turk in the summer of 2012 and in the spring of 2013, respectively. The data for experiment 3 were collected at the INSEAD Social Science Research Centre in Paris, France, in the spring of 2007. The data for experiment 4 were collected at Universidad Torcuato Di Tella, in Buenos Aires, Argentina, in the spring of 2009. The first author analyzed the data from all four experiments.

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**APPENDIX A**  
**FIGURE A1**

INSTRUCTIONS USED IN THE TWO CONDITIONS  
OF EXPERIMENT 1

Imagine that you have gone to a convenience store to buy two cans of soft drink for yourself. The store you went to sells only Coke and Sprite. What would you choose?

**BUNDLED OFFERING CONDITION**

My choice would be:



**SINGLE OFFERING CONDITION**

My first choice would be:



My second choice would be:

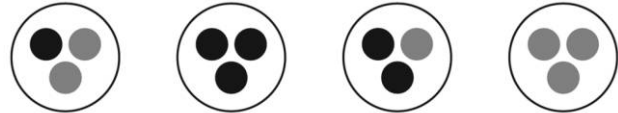


NOTE.—In the bundled offering condition, the display order was randomized. In the single offering condition, the display order was counterbalanced between subjects.

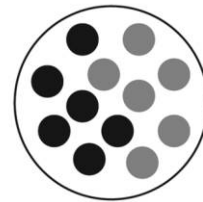
**APPENDIX B**  
**FIGURE B1**

SCHEMATIC DESCRIPTIONS OF THE DISPLAY OF THE  
YELLOW AND ORANGE ROSES IN THE THREE CONDITIONS  
OF EXPERIMENT 3

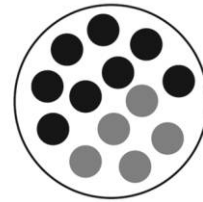
**BUNDLED OFFERING CONDITION**



**SINGLE OFFERING CONDITION**



**UNBALANCED SINGLE OFFERING CONDITION**



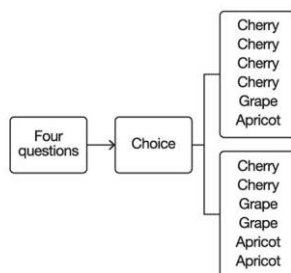
NOTE.—Black circles represent yellow roses and gray circles represent orange roses. In the bundled offering condition, the order in which the four bouquets of roses were displayed was counterbalanced using a Latin square design.

## APPENDIX C

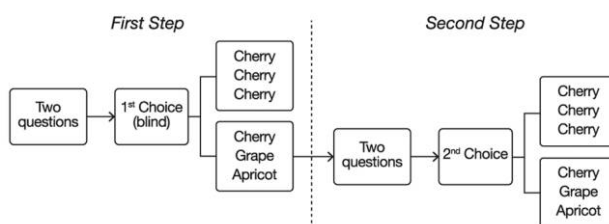
FIGURE C1

SCHEMATIC DESCRIPTIONS OF THE PROCEDURE IN THE TWO CONDITIONS OF EXPERIMENT 4

## BUNDLED OFFERING CONDITION



## SINGLE OFFERING CONDITION



NOTE.—In the single offering condition, the first choice was blind. That is, participants chose between two cards representing sets {cherry, cherry, cherry} and {cherry, grape, apricot}, but they did not know which set each card represented. Unbeknownst to them, regardless of which card was chosen, they all received the set {cherry, grape, apricot}.

## REFERENCES

- Ariely, Dan, and Jonathan Levav (2000), "Sequential Choice in Group Settings: Taking the Road Less Traveled and Less Enjoyed," *Journal of Consumer Research*, 27 (December), 279–90.
- Inman, J. Jeffrey (2001), "The Role of Sensory-Specific Satiation in Attribute-Level Variety Seeking," *Journal of Consumer Research*, 28 (June), 105–20.
- Johnson, Eric J., Gerald Häubl, and Anat Keinan (2007), "Aspects of Endowment: A Query Theory of Value Construction," *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 33 (3), 461–74.
- Kahn, Barbara E. (1995), "Consumer Variety-Seeking among Goods and Services: An Integrative Review," *Journal of Retailing and Consumer Services*, 2 (3), 139–48.
- Kahn, Barbara E., and Rebecca K. Ratner (2005), "Variety for the Sake of Variety? Diversification Motives in Consumer Choice," in *Inside Consumption: Consumer Motives, Goals, and Desires*, ed. S. Ratneshwar and David Glen Mick, London: Routledge, 102–21.
- Kim, Heejung S., and Aimee Drolet (2003), "Choice and Self-Expression: A Cultural Analysis of Variety-Seeking," *Journal of Personality and Social Psychology*, 85 (2), 373–82.
- Kreps, David M. (1979), "A Representation Theorem for 'Preference for Flexibility,'" *Econometrica*, 47 (3), 565–77.
- Levin, Irwin P., Sandra L. Schneider, and Gary J. Gaeth (1998), "All Frames Are Not Created Equal: A Typology and Critical Analysis of Framing Effects," *Organizational Behavior and Human Decision Processes*, 76 (2), 149–88.
- McAlister, Leigh (1982), "A Dynamic Attribute Satiation Model of Variety-Seeking Behavior," *Journal of Consumer Research*, 9 (September), 141–50.
- Pessemier, Edgar A. (1978), "Stochastic Properties of Changing Preferences," *American Economic Review*, 68 (2), 380–85.
- Ratner, Rebecca K., and Barbara E. Kahn (2002), "The Impact of Private versus Public Consumption on Variety-Seeking Behavior," *Journal of Consumer Research*, 29 (September), 246–57.
- Ratner, Rebecca K., Barbara E. Kahn, and Daniel Kahneman (1999), "Choosing Less-Preferred Experiences for the Sake of Variety," *Journal of Consumer Research*, 26 (June), 1–15.
- Read, Daniel, and George Loewenstein (1995), "Diversification Bias: Explaining the Discrepancy in Variety Seeking between Combined and Separated Choices," *Journal of Experimental Psychology: Applied*, 1 (1), 34–49.
- Read, Daniel, George Loewenstein, and Matthew Rabin (1999),

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- "Choice Bracketing," *Journal of Risk and Uncertainty*, 19 (1-3), 171-97.
- Rubinstein, Ariel (1998), *Modeling Bounded Rationality*, Cambridge, MA: MIT Press.
- Simonson, Itamar (1990), "The Effect of Purchase Quantity and Timing on Variety-Seeking Behavior," *Journal of Marketing Research*, 27 (May), 150-62.
- Snodgrass, Joan Gay, Gail Levy-Berger, and Martin Haydon (1985), *Human Experimental Psychology*, New York: Oxford University Press.
- Tversky, Amos, and Daniel Kahneman (1986), "Rational Choice and the Framing of Decisions," *Journal of Business*, 59 (4), S251-S278.

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