Pick your poison: Attribute trade-offs in unattractive consideration sets

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ABSTRACT

Consumers often have to make trade-offs between desirable, "more is better", and undesirable, "less is better", attributes. What drives whether the desirable or the undesirable attributes will be weighed more heavily in decisions? We show that the extent to which consumers focus on desirable versus undesirable attributes depends on the overall attractiveness of their consideration sets. The less attractive the options under consideration are – the higher is the weight allocated to undesirable attributes, such as price. Three experiments set in the contexts of lottery ticket purchasing (study 1), hotel booking (study 2), elections (study 3), and a conjoint study of online course evaluations (study 4), demonstrate that unattractive sets increase the relative weight of "undesirable" attributes (e.g. price of a product, workload of a course); and lead to increased preference for options superior on these attributes.

Consumers often have to make trade-offs between desirable, "more is better", and undesirable, "less is better", attributes. For example, when choosing between phone chargers described by their quality (a desirable attribute), and price (an undesirable attribute), consumers are unlikely to find a charger that is superior to the others on both attributes. Thus, when making a choice, some consumers will put more weight on quality and pick the high quality—high price option, while others will put more weight on price and pick the low quality—low price alternative. But what determines whether consumers will put more weight on the desirable attribute (quality) or the undesirable attribute (price)? We show that the extent to which consumers focus on the desirable versus undesirable attributes depends on the overall attractiveness of their consideration sets. Specifically, the less attractive the options under consideration are, the greater will be the weight allocated to undesirable attributes.

While decisions among unattractive options seem less common than decisions among attractive options, people often have to face such decisions. Travelers who leave bookings till the last minute have to choose from unattractive hotels. Students with low SAT scores have to pick from unattractive colleges. Voters sometimes have to select from a list of disliked candidates, as was the case in the 2016 U.S. presidential elections where Hillary Clinton and Donald Trump held strongly unfavorable ratings (Enten, 2016); and might be the case again in the 2020 U.S. presidential elections. All these examples show that real-life decisions among unattractive options are neither rare nor trivial. More importantly, as the current paper shows, these decisions systematically differ from decisions among attractive options, in terms of the evoked attribute trade-offs. We find that unattractive sets increase the weight of undesirable attributes of the

available options, and increase the preference for options superior on these attributes[1]. As such, compared to consumers considering attractive options, consumers considering unattractive options become more likely to select a product based on price; or select a course based on its workload. This set-attractiveness effect is demonstrated across four studies, including a conjoint study capturing attribute weights, in the contexts of lottery ticket purchasing, hotel booking, elections, and online course evaluations.

This research contributes to the decision-making literature in two ways. First, it adds to research on attribute trade-offs which has shown that consideration set features, such as the presence of dominating or dominated options and option ordering (Evangelidis & Levav, 2013; Quaschning, Pandelaere, & Vermeir, 2014), affect attribute weights and choice. We add to this literature by showing that overall set attractiveness too affects the weighting of option attributes.

Our work also adds to a second, scant, but growing literature on decision-making in unattractive sets. This literature has examined the effect of set attractiveness on decision times (Chatterjee & Heath, 1996), decision difficulty (see e.g., Krishnamurthy & Nagpal, 2008; Perfecto et al., 2017), confidence (Meloy & Russo, 2004), vigilance (Malkoc, Hedgcock, & Hoeffler, 2013), and decision deferral (Bhatia & Mullett, 2016; Shafir, Simonson, & Tversky, 1993; Tversky and Shafir, 1992). We add to this literature by showing how unattractive sets affect attribute trade-offs and choice.

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[1] We apply the label "undesirable attributes" to attributes that consumers want to minimize when comparing two or more options (e.g. hotel A has a higher price; hotel B has a lower price; all else equal – A < B); and apply the label "desirable attributes" to attributes that consumers want to maximize when comparing two or more options (e.g. hotel A has a higher quality rating; hotel B has a lower quality rating; all else equal – A > B). Thus, even though a "low price" can be considered as desirable, in our terminology, price is considered as an undesirable attribute that consumers generally want to minimize.

Theoretical Background

We first summarize the extant literature on attribute trade-offs and then discuss the alternative theories for the effect of set attractiveness on attribute weighting and choice.

Attribute trade-off determinants

Focusing on attractive consideration sets, past work suggests that set features affect the relative weighting of option attributes and, consequently, the final decisions people make. For instance, Evangelidis and Levav (2013) show that when consumers choose from a set without dominated or dominating options, they focus on the more important, or prominent, attributes (e.g. quality) in their decisions. Yet, once dominated or dominating options are added, consumers become less likely to focus on prominent attributes, leading to lower preference for options superior on these attributes. Looking at quality tiers, Simonson and Tversky (1992) show that when sets include higher or intermediate quality tiers, consumers are more likely to select high quality—high price alternatives, suggesting that quality is given greater weight in such sets. Lastly, with a focus on set organization, Quaschning, Pandelaere, and Vermeir (2014) demonstrate that sets sorted on a given attribute boost the importance of that attribute.

Aside from set features, the characteristics of the decision-making process, also impact attribute trade-offs. Consumers weigh qualitative attributes with rich associations (e.g., brand) more heavily in purchase likelihood ratings than in choice; and weigh attributes on which options are easy to compare (e.g., price) more heavily in choice than in ratings (Nowlis & Simonson, 1997). Moreover, consumers value quality more in decisions for others, compared to decisions for themselves (Lu, Xie, & Xu, 2012); and value quality less if their decision-making is preceded by creation of a wish-list (Popovich & Hamilton, 2014).

Finally, attribute trade-offs can be affected by the type of decision strategy – choice versus rejection – used in the decision-making (Shafir, 1993; Meloy & Russo, 2004). Under instructions to "choose" (e.g. choose your most preferred option), people are more prone to select the option which scores high on both desirable and undesirable attributes (e.g. high quality—high price). In contrast, under instructions to "reject" (e.g. reject your least preferred option), they are more prone to select the option which scores low on both desirable and undesirable attributes (e.g. low quality—low price). While attribute weights in choice and rejection were not directly compared in Shafir's studies (1993), his data suggest that people give more weight to desirable attributes when choosing and to undesirable attributes when rejecting.

Set attractiveness and attribute trade-offs

We expect that attractive (unattractive) sets will increase the relative weight of desirable (undesirable) attributes and increase preference for options superior on these attributes. This set-attractiveness effect can be explained by two theoretic accounts emerging from the task compatibility literature and the regulatory focus literature. We discuss these accounts next.

Task compatibility. Research on task-compatibility effects suggests that attractive sets may be compatible with choice; and unattractive sets – with rejection decision strategies (Meloy & Russo, 2004, Nagpal & Krishnamurthy 2008, Perfecto, et al., 2017). For instance, Nagpal and Krishnamurthy (2008) and Perfecto et al. (2017) find that choice is easier than rejection when the consideration set is attractive (e.g. attractive cars or pleasant words); and that rejection is easier than choice when the consideration set is unattractive (e.g. unattractive cars or unpleasant words). Similarly, Meloy and Russo (2004) report that people are more confident in promotion decisions, when deciding among positively described employees; and more confident in firing

decisions, when deciding among negatively described employees – in line with the notion that attractive sets are compatible with choice, and unattractive sets – with rejection.

While in all of the papers above, choice and rejection strategies are externally imposed, the results suggest that set attractiveness may affect strategy selection when decision-makers are free to use either decision strategy. That is, attractive sets will prompt a choice strategy and unattractive sets will prompt a rejection strategy. Importantly, taken together with Shafir's (1993) findings on the different weights given to desirable and undesirable attributes in choice and rejection, task-compatibility research suggests that attractive (unattractive) sets will increase the relative weight of desirable (undesirable) attributes.

Regulatory focus. We can make similar predictions using the regulatory focus literature. Higgins, Shah, and Friedman (1997) find that framing outcomes in terms of losses/non-losses (vs. gains/non-gains) increases decision-makers' prevention focus. The increased prevention focus, in turn, should increase consumers' vigilance against negative outcomes and increase the weighting of undesirable attributes (Chernev, 2004). We suggest that consideration of unattractive options should have a similar effect on consumers' regulatory focus, as consideration of losses/non-losses does: namely, it should increase consumers' prevention focus and, consequently, increase the relative weight of undesirable attributes in choice.

Next, we present four studies testing this set-attractiveness effect.

Study 1: Lottery Ticket Selection with Phantom Options

In study 1, we manipulated consideration set attractiveness using dominated or dominating phantom options.

Method

  The study adopted a 2-cell (consideration set: attractive vs. unattractive) between-subjects design. Participants read that they were considering buying a lottery ticket. The tickets in this study were characterized by two attributes – a desirable attribute (probability of winning) and an undesirable attribute (price).

  In the "attractive set" condition, participants first saw a lottery A ticket which had a 4% probability of winning $150 and was priced at $20 (designed as a dominated phantom option). After indicating whether they would participate in lottery A, participants proceeded to the next screen. The second screen stated that lottery A was no longer available, and that instead they could participate in lottery B (9% probability of winning; $9 ticket price, i.e. low good—low bad option) or in lottery C (15% probability of winning; $15 ticket price, i.e. high good—high bad option). The lotteries were designed such that lotteries B and C were superior to option A in terms of probability of winning and price. Thus, the "B and C" set was expected to be perceived as relatively attractive.

  The "unattractive set" condition mimicked the attractive set condition except that the lottery A ticket had a 20% probability of winning $150 and was priced at $4, making it a dominating phantom option, and rendering the same set of available lotteries B and C to be relative unattractive (Table 1).

Table 1

  After participants selected one of the two lotteries – B or C, they rated lottery set attractiveness as a manipulation check[2] and reported their demographic information.

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[2] Manipulation checks for studies 1-4 are reported in the Methodological Details Appendix.

Results and Discussion

Ninety-nine M-Turk panelists took part in the study (57 male).

Lottery Selection: Binary logistic regression with manipulated set attractiveness as the independent variable (unattractive=0; attractive=1) and the selected lottery (high good—high bad lottery C = 1, otherwise = 0) as the dependent variable indicated that participants were more likely to select the high good—high bad option in the "attractive set" condition ($\Pi_{unattractive}$=48% vs. $\Pi_{attractive}$ =71%, b=0.96, SE=0.42, Wald χ^2 = 5.17, p=.023). Thus, study 1 supported the prediction that attractive (unattractive) sets increase preference for options superior on desirable (undesirable) attributes.

Study 2: Hotel Selection and Attribute Weights

Study 2 tested the effect of set attractiveness on attribute weighting and option selection in a hotel selection scenario.

Method

The study adopted a 2-cell (consideration set: attractive vs. unattractive) between-subjects design. First, participants read that they would have to choose between three hotels: A, B, and C. The hotels were characterized by two attributes – a desirable attribute (user rating) and an undesirable attribute (price). Similar to study 1, the set of hotels was constructed so that hotel A would be a phantom dominated by (dominating) hotels B and C on both user rating and price, rendering the set of hotels B and C relatively attractive (unattractive; Table 2).

Table 2

On the next screen, participants read that hotel A was sold out for the dates of their trip. Thus, the final set from which they had to select their hotel only included hotels B and C. Participants then selected one of two hotels – B or C. Next, they rated the importance of user

rating and price in their previous choice on 5-point scales (1="not at all important", 5="very important") and filled out their demographic information.

Results and Discussion

Ninety-eight M-Turk panelists completed the study (52 male).

Hotel Selection: First, we analyzed the effect of set attractiveness on participants' hotel selection decisions. We ran a binary logistic regression with set attractiveness as the independent variable (unattractive=0; attractive=1) and the selected hotel (high good—high bad hotel C = 1, otherwise = 0) as the dependent variable. Consistent with our predictions, participants were more likely to select the high good—high bad option in the "attractive set" condition ($\Pi_{unattractive}$ =18% vs. $\Pi_{attractive}$=37%, b=0.95, SE=0.47, Wald χ^2 = 4.01, p=.045), supporting our theorization.

Attribute Weights: Second, we analyzed the effect of set attractiveness on the weights assigned to desirable versus undesirable attributes in participants' decisions. To do that we computed a user-rating-versus-price index by subtracting the importance of price from the importance of user ratings. Set attractiveness had a significant effect on the importance assigned to user ratings versus price ($M_{unattractive}$=-0.57 vs. $M_{attractive}$=0.00, F(1,96)=4.17, p=.044).

Mediation Analysis: The mediation model indicated that set attractiveness significantly influenced the rating-versus-price index, which, in turn, affected the hotel selection. The mean indirect effect of set attractiveness on the selection of the high good—high bad option through the weight assigned to user rating versus price (based on 1,000 bootstrap samples) was significant, with a point estimate of 0.89 (SE=0.57; $CI_{95\%}$ [0.02; 2.13]), supporting mediation.

Study 2 demonstrates that people make decisions consistent with increased weighting of undesirable attributes in unattractive (vs. attractive) consideration sets and shows that set attractiveness alters the weights given to desirable (vs. undesirable) attributes.

Study 3: Voting Decisions and Decision Deferral

The setup of study 3 was similar to that of studies 1 and 2, except that we added a no-choice option[3].

Method

The study adopted a 2-cell (consideration set: attractive vs. unattractive) between-subjects design. Participants received information about two hypothetical presidential candidates A and B. The candidates were characterized by two attributes – "the likelihood that the economy will improve during his/her term" (i.e. desirable attribute) and "the likelihood that the economy will get worse during his/her term" (i.e. undesirable attribute) (Table 3).

Table 3

Both candidates had a relatively high likelihood of making the economy better and a relatively low likelihood of making the economy worse in the "attractive set" condition; the opposite was true in the "unattractive set" condition. Further, in both the attractive and unattractive conditions, candidate A was more likely to make the economy better, but also more likely to make it worse (high good—high bad candidate), compared to candidate B (low good—low bad candidate).

We predicted that when both candidates were perceived as attractive (vs. unattractive), participants would be more likely to select candidate A, the candidate more likely to make the economy better (i.e. superior on the desirable attribute).

Participants read that they were to decide between two hypothetical presidential candidates – A and B. They also read that they could choose not to vote at all in the upcoming

[3] The study predictions, sample size, procedure, and analysis plan were preregistered on Open Science Framework: https://osf.io/qzbae/?view_only=2b76d44d7ed94bc7aaf6a72e84e612be.

election ("not vote" option). After making their decisions, as a manipulation check, they rated the overall attractiveness of the two candidates. Finally, participants reported their party affiliation and their demographic information.

Results and Discussion

Four hundred and two M-Turk panelists completed the study (224 male).

Deferral. First, we tested whether set attractiveness affected participants' propensity to vote. A binary logistic regression with manipulated set attractiveness as the independent variable (unattractive = 0; attractive = 1) and voting (not vote = 0; vote for candidate A or B = 1) as the dependent variable indicated that participants were marginally more likely to vote, i.e. less likely to defer choice, when candidates were relatively attractive ($\Pi_{unattractive}$ = 84% vs. $\Pi_{attractive}$ = 90%, b = 0.60, SE = 0.31, Wald χ^2 = 3.72, p = .054).

Candidate Selection. Critically for our hypothesis testing, among those who voted, candidate selection was affected by overall attractiveness of the candidates. A binary logistic regression with set attractiveness as the independent variable (unattractive = 0; attractive = 1) and candidate selection (high good—high bad = 1, otherwise = 0) as the dependent variable on the sample of participants who decided to vote (n = 351) indicated that participants were more likely to select the high good—high bad candidate in the "attractive set" condition ($\Pi_{unattractive}$ = 46% vs. $\Pi_{attractive}$ = 68%, b = 0.91, SE = 0.22, Wald χ^2 = 17.01, p < .001). Thus, study 3 replicates the results of studies 1 and 2 allowing for a "no choice" option.

Study 4: Conjoint Part-Worths across Attractive and Unattractive Sets

Studies 1-3 tested the set-attractiveness effect on consumers' decisions in binary choice settings where options were described by two attributes. Study 4 aimed to conceptually replicate

our key finding using a conjoint design paradigm with multiple options described on multiple attributes[4].

Method

The study adopted a 2-cell (consideration set: attractive vs. unattractive) between-subjects design. Participants received information about nine hypothetical online courses. They read: "the courses offered have been rated by previous students in terms of how interesting (1=not at all; 5=very much), useful in job search (1=not at all; 5=very much), and high in workload (1=not at all; 5=very much) they are". Each course also had information on average failure rates from previous student intakes. The former two attributes were the desirable, "more is better", attributes and the latter two attributes were the undesirable, "less is better", attributes.

In the attractive set condition, the nine courses scored between 3 and 5 in terms of how interesting and useful they were (1=not at all; 5=very much); between 1 and 3 in terms of their workload (1=not at all high; 5=very much); and between 10% and 30% on failure rates. In the unattractive set condition, the courses scored between 1 and 3 in terms of how interesting and useful they were (1=not at all; 5=very much); between 3 and 5 in terms of their workload (1=not at all high; 5=very much); and between 30% and 50% on failure rates. All course profiles were presented on one page in random order (see MDA for course profiles).

In the main task, participants had to rank-order the nine courses from most (=1) to least preferred (=9). We expected that desirable attributes would have a positive effect on course rankings, i.e. have positive part-worths, and that undesirable attributes would have a negative effect on course rankings, i.e. have negative part-worths. Importantly, we expected that the

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[4] The study predictions, sample size, procedure, and analysis plan were preregistered on Open Science Framework: https://osf.io/gtpdf/?view_only=50781c8623b24217823df9887824b782.

positive effect of desirable attributes on course rankings would be weaker (i.e. lower and closer to zero) in the unattractive set, compared to the attractive set condition; and that the negative effect of undesirable attributes on course rankings would be stronger (i.e. lower and farther from zero) in the unattractive set, compared to the attractive set condition. Thus, we expected a main effect of set attractiveness on conjoint part-worths, wherein the part-worths for desirable and undesirable attributes would be lower in the unattractive set, than in the attractive set, condition.

Following the main task, as a manipulation check, participants rated the overall attractiveness of the nine courses and reported their demographic information.

Results and Discussion

Eight hundred and six M-Turk panelists completed the study. Two participants were removed due to repeat participation. The final sample included 804 participants (421 male).

We obtained the attribute part-worths for each participant using the "CONJOINT" command for rank-ordered data in SPSS. The analysis produced beta-coefficients for each of the four course attributes for each participant. Next, we analyzed the effect of set attractiveness on attribute part-worths using a mixed linear model. Consideration set (attractive vs. unattractive), attribute type (desirable vs. undesirable), attribute replicate (two per attribute type), and their two- and three-way interactions served as the independent variables. Participants' conjoint part-worths served as the dependent variable.

The analysis revealed a significant effect of attribute type ($F(1, 802) = 2592.60$, $p < .001$) and a significant effect of set attractiveness ($F(1, 802) = 6.56$, $p = .011$). None of the interactions were significant (two-way interactions: $p > .20$; three-way interaction: $p = .638$).

As predicted, desirable attributes affected course rankings positively ($M_{desirable} = 1.24$) and undesirable attributes affected course rankings negatively ($M_{undesirable} = -0.50$). Importantly,

the conjoint part-worths were lower in the unattractive set condition, compared to the attractive set condition ($M_{unattractive} = 0.32$ vs. $M_{attractive} = 0.42$, $p = .011$).

Further probing indicated that the negative effect of undesirable attributes was significantly stronger (i.e., more negative) in the unattractive set, compared to the attractive set condition ($M_{unattractive} = -0.58$ vs. $M_{attractive} = -0.43$, $p = .002$). The positive effect of desirable attributes was directionally weaker in the unattractive set condition compared to the attractive set condition ($M_{unattractive} = 1.21$ vs. $M_{attractive} = 1.27$, $p = .260$).

Option indifference as an alternative explanation. One could argue that unattractive sets make participants indifferent among the available options leading to a 50/50 split in preferences. Binary choice settings in studies 1-3 do not allow to conclusively rule out indifference as the alternative account (though study 2 results do run counter to this account). The conjoint design in this study allows us to directly test and rule out the indifference account. If unattractive sets increase option indifference, both desirable and undesirable attribute part-worths should become closer to zero in these sets. If unattractive sets increase the relative weight of undesirable attributes (as we predict), the undesirable attribute part-worths should become more negative, i.e. get farther from zero, in these sets. Study 4 supports the latter explanation and runs counter to the increased indifference account.

General Discussion

We suggest that the overall attractiveness of a consideration set affects the trade-offs between desirable and undesirable attributes; and, consequently, affects preference between different options. Four experiments in the contexts of lottery ticket purchasing (study 1), hotel booking (study 2), elections (study 3), and course evaluations (study 4), show that unattractive sets lead to increased preference for options superior on "undesirable" attributes (e.g. price of a

product, workload of a course). Studies 2 and 4 directly demonstrate that unattractive sets increase the relative weight of undesirable attributes. The predicted effect emerges both when we vary actual option descriptions (studies 3 and 4), and when we hold option descriptions constant but manipulate set attractiveness through decoys (studies 1 and 2). We also rule out option indifference as an explanation of our results. A second possible explanation is considered below.

Increased Deliberation

One could argue that changes in deliberation, another correlate of set attractiveness and an antecedent of shifts in attribute weights, could also explain our results. Across the studies we observe that participants took longer to make their decisions in the "unattractive set" condition (see MDA). However, we do not think that increased deliberation can parsimoniously explain our results.

Deliberation may prompt consumers to compare the advantages and disadvantages of each option, i.e. carefully weigh the desirable and undesirable attributes, instead of focusing on a single cue (Muthukrishnan & Chark, 2015; Nenkov & Gollwitzer, 2012). If this were the case, one would expect more equal desirable/undesirable attribute weights and 50/50 preference splits in unattractive sets across all studies. This, however, was not the case in studies 2 and 4. Alternatively, deliberation could make consumers more likely to bolster the advantages and deemphasize the disadvantages of their initially preferred options (Nenkov & Gollwitzer, 2012). In this case, one could expect 50/50 preference splits to be less likely in unattractive (vs. attractive) sets. Studies 1 and 3 show the opposite pattern, making increased deliberation an unlikely driver of our results.

Theoretical Implications

This work contributes to the attribute trade-off literature by outlining the implications of set attractiveness for trade-offs between desirable and undesirable attributes. While prior research has studied differences in decisions between unattractive stimuli and attractive stimuli (Barker, 1942; Houston, Sherman, & Baker, 1991; Chatterjee & Heath, 1996; Dijksterhuis & Aarts 2003; Malkoc, et al. 2013; Tversky & Kahneman, 1981), it provides limited insight into attribute trade-offs as a function of set attractiveness. We show that set attractiveness affects desirability—undesirability trade-offs across a range of contexts (e.g., hotel bookings and course selection). Future work could examine the implications of set attractiveness for other types of trade-offs, such as feasibility—desirability trade-offs (Liberman & Trope, 1998; Lu, Xie, and Xu, 2012), central—peripheral attribute trade-offs (Petty & Cacioppo, 1986), and prominent attribute weighting (Evangelidis & Levav, 2013).

Finally, we note that our paper does not follow the more typical hypothetico-deductive route (Lynch et al., 2012) but attempts to contribute via the non-deductive substantive contribution route – through the empirical results, demonstrating the hypothesized effect across multiple contexts. Nevertheless, we discuss four possible explanations for our set-attractiveness effect: option indifference, increased deliberation, a task-compatibility account, and an explanation based on regulatory focus. We rule out the first two explanations and leave it to future research to the test the other two competing accounts.

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Table 1. Study 1: Lottery tickets in the "attractive set" vs. "unattractive set" conditions.

	ATTRACTIVE CONSIDERATION SET*		
	LOTTERY A *(PHANTOM)***	LOTTERY B *(TARGET)*	LOTTERY C *(TARGET)*
Probability of winning	4%	9%	15%
Price	$20	$9	$15
	UNATTRACTIVE CONSIDERATION SET		
	LOTTERY A* *(PHANTOM)*	LOTTERY B *(TARGET)*	LOTTERY C *(TARGET)*
Probability of winning	20%	9%	15%
Price	$4	$9	$15

*Note that participants saw Lottery A on screen 1 and saw Lotteries B and C on screen 2.
** Italicized text was not provided in the stimuli

Table 2. Study 2: Hotel descriptions in the "attractive set" vs. "unattractive set" conditions.

	ATTRACTIVE CONSIDERATION SET*		
	HOTEL A *(PHANTOM)***	HOTEL B *(TARGET)***	HOTEL C *(TARGET)***
User rating	4.0 from 235 ratings	6.0 from 245 ratings	6.5 from 235 ratings
Price	$200 per night	$120 per night	$140 per night
	UNATTRACTIVE CONSIDERATION SET		
	HOTEL A *(PHANTOM)***	HOTEL B *(TARGET)***	HOTEL C *(TARGET)***
User rating	8.5 from 235 ratings	6.0 from 245 ratings	6.5 from 235 ratings
Price	$60 per night	$120 per night	$140 per night

* Italicized text was not provided in the stimuli

Table 3. Study 3: Candidate descriptions in the "attractive" vs. "unattractive" set conditions.

	ATTRACTIVE SET CONDITION	
	Candidate A *(high good—high bad)* (probability)	Candidate B *(low good—low bad)* (probability)
Economy will improve during his/her term	55%	40%
Economy will get worse during his/her term	35%	20%
	UNATTRACTIVE SET CONDITION	
	Candidate A *(high good—high bad)* (probability)	Candidate B *(low good—low bad)* (probability)
Economy will improve during his/her term	35%	20%
Economy will get worse during his/her term	55%	40%

* Italicized text was not provided in the stimuli