Expectation-Based Effects of Common Attributes on Choice

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We investigate how consumers make tradeoffs in the presence versus absence of non-differentiating attributes. We propose that non-differentiating attributes can favor a particular alternative in the set because consumers judge performance on that attribute not based on face value, but based on the difference between face and expected value instead.

[to cite]:

[url]:
http://www.acrwebsite.org/volumes/1021921/volumes/v44/NA-44

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How and When Consumers Make Tradeoffs

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Paper #1: Expectation-Based Effects of Common Attributes on Choice
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Paper #3: How Tradeoff Elasticity Affects Consumer Choice
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Paper #4: Acquisition Mode Effect on Consumer Product Evaluation and Tradeoff Making
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SESSION OVERVIEW

Consumers need to make tradeoffs: Price is weighed against quality, risk against reward, the present against the future. And while previous research has examined many of these specific tradeoffs, in particular, less work has focused on how consumers make tradeoffs, more broadly. To that end, the objective of this session is to highlight recent advances in research examining how and when consumers make tradeoffs. Specifically, the papers in this session address the following questions: What factors systematically affect how consumers make tradeoffs? And when are consumers willing to make tradeoffs in the first place?

The first two papers examine how consumers make tradeoffs. Specifically, Evangelidis and van Osselaer study how people make tradeoffs in the presence versus absence of non-differentiating attributes (i.e., attributes along which all alternatives perform the same). While different streams of research make competing predictions about the effect of such attributes on choice, Evangelidis and van Osselaer show, across 10 studies, that a non-differentiating attribute can favor a particular alternative because consumers judge performance not based on face value (according to which all alternatives perform the same), but based on the difference between face and expected value.

In the second paper, Zwebner and Schrift examine another important, yet understudied factor that affects how people make tradeoffs: How does being observed impact process, preferences, and ultimate choice? In a series of seven studies, Zwebner and Schrift demonstrate that consumers have a strong preference to avoid being observed by others during deliberation (especially when deliberations involve tradeoffs). Moreover, once observed, decision-makers distort their preferences and choice in a manner that will enable them to resolve the decision quickly and with as little conflict as possible.

The second two papers examine when and the extent to which consumers are willing to make tradeoffs. In particular, Shaddy, Fishbach, and Simonson argue that a number of seemingly distinct phenomena (e.g., variety seeking, licensing/balancing, the compromise effect) fundamentally implicate the degree to which people are willing to make tradeoffs, suggesting a common theoretical denominator. To that end, across nine studies, the authors propose and test variables that affect tradeoff elasticity (i.e., willingness to make tradeoffs), which depends on the fungibility (i.e., exchangeability) of relevant attributes and can potentially account for a wide variety of otherwise unrelated phenomena.

In the fourth paper, Pocheptsova, Kivetz, and Dhar study another factor that affects whether consumers make tradeoffs: the distinction between renting and buying. Although the literature treats these choice processes as interchangeable, the authors, in a series of four studies, demonstrate that consumers actually adopt different mindsets when the decision task involves renting versus buying. These different mindsets, in turn, affect consumers’ willingness to consider and make tradeoffs when renting, compared to buying.

Together, these papers describe recent advances in our understanding of how and when consumers make tradeoffs. We expect this session to have broad appeal, given that the theoretical contributions and practical applications of these findings provide significant new insights and speak to a wide range of domains.

Expectation-Based Effects of Common Attributes on Choice

EXTENDED ABSTRACT

Consumers often choose between alternatives that differ with respect to some attributes while performing equally well on others. For instance, consumers may be choosing between two camera brands that differ in price and optical zoom but have the same video capture resolution. Different streams of research make competing predictions about the effect of non-differentiating attributes on choice. First, choice theories such as the elimination by aspects model (Tversky 1972) predict that introducing a non-differentiating attribute should have no effect on choice because such attributes are edited out prior to choice. Second, cognitive psychologists (Nisbett, Zukier, and Lemley 1981) and information integration theorists (Anderson 1971; Troutman and Shanteau 1976) would predict that introducing a non-differentiating attribute should decrease the difference in utility between all alternatives because the impact of the differentiating attributes on choice lessens in the presence of information about a non-differentiating attribute. Third, some decision-making research (Mellers and Biagini 1994) inspires the prediction that introducing a non-differentiating attribute should increase the difference in utility between alternatives because in the presence of information about the non-differentiating attribute, differences in performance on the differentiating attributes are enhanced. Important work in consumer research has found evidence for both increases and decreases in the difference in utility between alternatives by considering attribute importance (Chernev 1997) as a key moderator.

In this paper we argue that earlier research has ignored the role of decision-makers’ expectations when examining the effect of non-differentiating attributes on choice. We propose that, before choosing, consumers evaluate an alternative’s performance on an attribute not only based on its face value (i.e., stated performance), but also based on the difference between face and expected value. Therefore, we argue that preference for an option can be contingent on one’s own expectations about how that alternative should perform on the non-differentiating attribute, and further on the extent to which those expectations are confirmed or disconfirmed. In our studies, we find
that an alternative that was expected to perform worse than the competitor on the non-differentiating attribute is chosen more frequently when information about the non-differentiating attribute is added to the set. Conversely, we find that an alternative that was expected to perform better than the competitor on the non-differentiating attribute is chosen less frequently when information about the non-information attribute is included.

Our empirical section comprises ten studies. All problems are pre-tested to ensure that consumers carry prior expectations that the two alternatives should perform differently on the non-differentiating attribute. Studies 1a-1d document the predicted effects of adding a non-differentiating attribute on choice in the context of various decision problems using actual and hypothetical products. In Studies 1a-1b, we randomly assign participants to one of two experimental conditions (two vs. three attributes). In the two attributes condition participants choose between two options in a tradeoff problem where each option scores higher than the other on one of two dimensions. In the three attributes condition participants solve the same tradeoff problem as their counterparts in the two attributes condition, with the only difference being the addition of information about a third non-differentiating attribute. We find that the option that was expected to perform better than the competitor on the non-differentiating attribute is chosen less frequently when information about the non-information attribute is included. In Study 1c we replicate our finding in a choice problem with a large number of attributes (i.e., choice of a laptop), while in Study 1d we replicate our result when we add a non-differentiating review instead of a non-differentiating attribute.

Studies 2-7 provide evidence for the proposed account. In Study 2, we test whether the observed effect can be explained by an attribute importance account (Chernev 1997) rather than by an expectations account. We test our predictions in the context of a tradeoff problem where one attribute is more important than another. An attribute importance account would predict that in this choice situation, introducing a non-differentiating attribute should lead to further choice share polarization. In contrast, we find that introducing a non-differentiating attribute leads to significant choice share convergence, a result that is in line with our expectation-based account.

In Study 3, we provide direct evidence for the proposed account. When asked “how good” each alternative is on the non-differentiating attribute, we find a difference in perceived performance between the two alternatives even if actual scores are the same. In turn, perceived difference in performance on the non-differentiating attribute drives choice by favoring the alternative that performs better than expected.

In Study 4, we replicate our basic effect using a within-rather than between-participants design and provide additional evidence to our theoretical account by showing that the effect is moderated by the direction of expectancy disconfirmation. When the alternative that is expected to perform better than the other on the additional attribute has the same or worse score on that dimension (i.e., when the expectation is violated), preference for the alternative that is expected to perform better decreases. However, when the alternative that is expected to perform better than the competitor on the additional attribute scores higher on that dimension, preference for the former alternative does not decrease.

Finally, in Studies 5-7 we demonstrate boundary conditions to our effect. In Study 5 we show that the extent to which consumers, as a group, expect a difference in relative performance on the non-differentiating attribute moderates our result. We find that introducing a non-differentiating attribute influences choice only when our participant group holds a clear prior expectation about differences in relative performance between the two alternatives on that dimension.

In Study 6, we find that introducing a non-differentiating attribute influences choice only when the non-differentiating attribute is relatively important. In Study 7, we replicate our effect in joint but not in separate evaluation, presumably, because consumers cannot assess whether one alternative performs better than expected relative to another when they have information about only one of the two options. Our work contributes to work on context-effects, multi-attribute utility theory, and choice architecture.

**Scopophobia in Decision-Making: the Aversion to Being Observed During Decisions and its Impact on Consumers’ Tradeoffs and Choice**

**EXTENDED ABSTRACT**

The conflict associated with trading off between different attributes is often a central and important component of many decisions that we make throughout our lives. The current paper explores a straightforward yet important and understudied question: how does being observed by others while making tradeoffs impact consumers’ choice processes, preferences, and ultimate choice? First, we find that consumers have a strong preference to avoid being observed by others during the deliberation phase especially when such deliberations involve tradeoffs and conflict. Second, we find that once observed, decision-makers distort their preferences and choice in a manner that will enable them to resolve the decision quickly and with as little conflict as possible.

We argue that this research question is important from both theoretical and applied perspectives. First, contributing to a vast body of literature, this paper explores a relatively understudied aspect of social influence. In particular, when examining social influence (in the context of decision-making) one facet, which had been extensively studied, is how observing others shapes the observer’s preferences (see Cialdini and Goldstein 2004 for a review). However, an equally important and understudied question is to understand how being observed by others changes one’s preferences and choice.

Second, understanding consumers’ reactions to being monitored and observed while making decisions is an increasingly important topic in the marketplace today. Companies nowadays invest growing amount of resources in tracking, monitoring, and analyzing consumers’ marketplace activities, which leads to an increase in consumer privacy concerns (Malhotra et al. 2004; Peltier et al. 2009). By better understanding the source for these concerns and how consumers react in the face of being observed, companies and policy makers can address these issues to the benefit of consumers.

In a series of seven studies, we first find that decision-makers are averse to being observed while experiencing conflict in choice. In addition, we find that once observed, decision-makers find ways to avoid having and portraying conflict. In particular, we find that decision-makers reduce the conflict they experience and therefore, the conflict that others may detect, by (i) preferring default options, (ii) constructing more polarized preferences (which decreases tradeoffs in choice), and (iii) by altering their pre-decision activities (such as information search and consideration time). It is important to note that research relating to accountability and justification had examined several aspects relating to the impact of being observed by others. In the current paper we control for such motives, and demonstrate that the aversion to being observed during deliberation as well as consumers’ reactions to being observed go beyond the heightened motivation for being accountable.

The goal of Study 1 was to examine whether being observed while making an online decision will lead to uncomfortable feelings and privacy concerns. Further, we examined concerns that may
arise when one's decision-process is being monitored (i.e., observing decision-process but not ultimate choice) and compared these with concerns when one's choice is being monitored (i.e., observing ultimate choice but not decision-process). In a two-cell between-subject design, we found that being monitored during the deliberation phase triggered significantly greater privacy concerns \( (p = .001) \) and feelings of intrusion \( (p = .001) \) compared to when only the outcome is being monitored. In several additional studies we replicated this effect across different contexts (Studies 2-4) and found that, indeed, people that were being observed had a strong preference to being observed while announcing a decision as opposed to deliberating it, compared to when observing others (Study 2; \( p = .018 \)). Further, this aversion to being observed during a deliberation phase was found to be more pronounced when one faced a difficult and conflicting decision as opposed to an easy decision (Study 4; \( p = .005 \)).

In Study 5, participants were offered a new online book-commerce portal. We manipulated (between-subjects) the portal’s phase of monitoring (decision-process vs. decision-outcome vs. no-monitoring). We measured interest in using the book-commerce portal using six items (Cronbach’s alpha = .87). Again, being monitored during the decision-process reduced individuals’ interest in the online commerce portal. Participants were significantly less interested when their decision-process was monitored compared to when their decision-outcome was monitored \( (p = .008) \), or not monitored at all \( (p < .001) \).

After validating across different domains and contexts that consumers prefer environments in which their decision-processes are not observed or monitored, we turned our attention to examine how consumers actually react to being observed. That is, if consumers indeed dislike being observed while experiencing conflict, one would expect to see them behave in a way that reduces experienced conflict when being observed. In Study 6, participants were engaged in a real lottery for a T-Shirt. They were offered a choice between a “Default-T-shirt” and a “Create-Your-Own-T-shirt.” If participants chose to create their own T-shirt, they would have to engage in a deliberation process which included choosing their preferred color, collar type, brand, logo and style. In one condition participants were informed that their decision-process would be observed by a research assistant. In another condition, participants were informed that they would be observed while stating their choice. As expected, participants assigned to the process condition where much more likely to choose the default option compared to those in the outcome condition \( (M_{\text{process}} = 51\% \) vs. \( M_{\text{outcome}} = 30\% \) vs. \( p = .001 \)). That is, decision-makers reduced the experience conflict and shortened their deliberation phase by shifting their choice to a default option.

Study 7 examined whether being observed during the deliberation phase changed decision-makers’ attribute importance-weights. Consistent with our predictions, we find that decision-makers reduce their experienced conflict by constructing more polarized preferences (which decreases tradeoffs in choice).

To summarize, consumers are often observed or monitored during their consumption activities. In this paper we argue that being observed by others, especially while making tradeoffs, impacts consumers’ choice processes, preferences, and ultimate choice. Seven studies validate the impact that being observed has on consumers and demonstrate that consumers prefer to avoid being observed during the deliberation phase, and that once observed, they have predictable ways in which they reduce experienced conflict by distorting preferences and choice.

How Tradeoff Elasticity Affects Consumer Choice

EXTENDED ABSTRACT

Decisions require tradeoffs. Consumers consider price and quality, employees weigh money against free time, dieters balance health and taste, and most everyone faces ethical dilemmas (e.g., honesty vs. self-interest). Various phenomena examining these tradeoffs have been studied. Variety seeking (Simonson 1990), licensing (Monin and Miller 2001), balancing (Fishbach and Dhar 2005), and the compromise effect (Simonson 1989) are several well-known examples.

In this research, we argue that these and other seemingly distinct phenomena fundamentally implicate the degree to which people are willing to make tradeoffs, suggesting a common theoretical denominator. As such, we propose that willingness to make tradeoffs, or tradeoff elasticity, can potentially account for many otherwise unrelated phenomena.

We further hypothesize that tradeoff elasticity depends on the fungibility of relevant attributes. For example, price and quality are likely to be more exchangeable than honesty and self-interest. You might be willing buy a smaller television to save a few bucks, but lying to get a discount would be more questionable. In other words, sometimes consumers are willing to make tradeoffs, and sometimes they aren’t.

So, when do people make tradeoffs?

We identify two factors that affect the extent to which attributes can be “traded off” and, hence, affect willingness to make tradeoffs:

1. Core values. When attributes are construed as reflecting core values or meaningful principles, prioritization occurs, and willingness to make tradeoffs decreases (i.e., tradeoff elasticity falls).

2. Quantifiability. When attribute levels are quantified, comparisons become easier, and willingness to make tradeoffs increases (i.e., tradeoff elasticity rises).

We tested this account across nine studies, systematically manipulating core values and quantifiability across three phenomena: variety seeking, licensing/balancing, and the compromise effect.

Studies 1a–1c examined the core values moderator. We used a scenario in which participants decided whether to skip work to meet a friend.

Study 1a tested the compromise effect. Participants read that their friend would be in town for a week. In the baseline two-option set, participants chose between: “don’t skip” or “skip a day.” In the baseline three-option set, we also included the option to “skip a week.” Moreover, in the core values conditions, we added meaning to each option: “be honest—don’t skip, be carefree—skip a day,” or “be crazy—skip a week.” The compromise effect (i.e., the increase in choice share of the second option, relative to the first, in the three-option set) was larger in the baseline condition (23.9%) than in the core values condition (5.4%; \( t(181) = 3.67, p < .001 \)).

Study 1b tested licensing/balancing. We manipulated participants’ beliefs about whether they had made progress at work. Participants then chose between “don’t skip” and “skip a day,” and in the core values condition, we labeled the options (e.g., “be honest” vs. “be carefree”). We observed more balancing (i.e., choosing to skip work after making progress) in the baseline condition (36.2% increase from the no progress to progress condition) than in the core values condition (2.8% decrease; \( z = 2.46, p = .014 \)).

Finally, study 1c tested variety seeking. We told participants that their friend would be in town twice. Participants made two choices, and we again manipulated core values by labeling the options. Those in the baseline condition chose more variety (69.7%...
chose one of each option) than those in the core values condition (31.3%; $\chi^2 = 9.61, p = .002$).

Studies 2–4 examined the quantifiability moderator. Specifically, we provided either the relative position of options on attributes (baseline condition) or the relative position of options on attributes and added absolute values (quantities condition).

Specifically, study 2a tested the compromise effect for choices of a baseball ticket. Those in the baseline condition saw relative values (e.g., “lower row number, higher price”), while those in the quantities condition saw the same relative values in addition to absolute values (e.g., “row 5, $28”). The compromise effect was larger in the quantities condition (15.8%) than in the baseline condition (12.9%; $t(185) = 3.19, p = .002$). Study 2b, meanwhile, tested licensing/balancing. We manipulated participants’ beliefs about whether they had made progress toward a savings goal before they chose a ticket, and we observed more balancing (i.e., choosing the expensive ticket after making progress) in the quantities condition (17.3% increase from the no progress to progress condition) than in the baseline condition (15.0% decrease; $z = 2.78, p = .005$).

Study 3a tested the compromise effect in a dictator game scenario. Those in the baseline condition saw relative values (e.g., “give a below-average amount”), while those in the quantities condition also saw absolute values (e.g., “$4”). The compromise effect was larger in the quantities condition (34.0%) than in the baseline condition (3.6%; $t(191) = 5.59, p < .001$). Study 3b, meanwhile, tested variety seeking for two allocation choices, and we observed more variety seeking (i.e., choosing one of each option) in the quantities condition (22.9%) than in the baseline condition (7.7%; $\chi^2 = 4.54, p = .033$).

Finally, study 4a examined licensing/balancing in choice of a grocery store. Those in the baseline condition saw relative values (e.g., “below-average environmental rating, below-average prices”), while those in the quantities condition also saw absolute values (e.g., “2/5 stars for environmental policies, 4/5 stars for affordability”). We manipulated participants’ beliefs about whether they had made progress toward an environmental goal before they chose a store, and we observed more balancing (i.e., choosing the less environmentally friendly store after making progress) in the quantities condition (26.6% increase from the no progress to progress condition) than in the baseline condition (1.6% decrease; $z = 2.02, p = .044$). Study 4b, meanwhile, tested variety seeking for two choices, and we observed more variety seeking (i.e., selecting one of each store) in the quantities condition (43.8%) than in the baseline condition (32.1%; $\chi^2 = 3.76, p = .052$).

In short, we propose that tradeoff elasticity can account for a wide variety of otherwise unrelated phenomena. Thus, these findings not only provide a new theoretical insight regarding how consumers make tradeoffs, but also create significant implications for marketers.

**Acquisition Mode Effect on Consumer Product Evaluation and Tradeoff Making**

**EXTENDED ABSTRACT**

In a growing number of product categories, consumers have the opportunity to buy or to rent the same product. This new way of consuming has received substantial attention in the business community and in the popular press. Surprisingly, almost no research to date has examined how consumer decision processes for renting and buying might differ systematically. In fact, most research on consumer decision-making has treated various ways of acquiring a product interchangeably. We propose that consumers adopt different cognitive procedures or mindsets when the decision task is seen as renting in comparison to buying a product. Several related findings in the literature suggest why decision processes for renting and buying may differ systematically. Compared with outcomes of buying decisions, outcomes of renting decisions are perceived by consumers to be less permanent. The relative permanence of a decision heightens anticipated feeling of decision regret (Tsiros and Mittal 2000) because permanent decisions are associated with higher costs if the decision turns out to be suboptimal. For instance, when decision is permanent, consumers forfeit the opportunity to acquire a superior product or a lower priced item in the future. By contrast, when the decision appears to have lower long-term consequences such as a rental decision, consumers experience a lower level of regret (Wood 2001).

Therefore, we expect that consumers facing a buying decision are more motivated to find the best possible alternative during the decision process as compared to consumers who are making a renting decision. As a consequence, we propose that consumers facing a renting as opposed to a buying decision (with regard to the same product offered at the same price) would: (1) inspect fewer alternatives and less information about each alternative, and (2) place lower weight on negative product information. These distinct decision processes should lead to differences in acquisition decisions, such that consumers are more likely to accept the same product for renting but not for buying.

In study 1a, we used a sequential choice paradigm to investigate information acquisition in buying versus renting decisions. Respondents were presented one alternative at a time in a predetermined order and had to decide when to stop inspecting additional alternatives. This design reflects a tradeoff between selecting a current alternative or continuing to search for more alternatives that may become available. We find that the participants in the buying condition reviewed on average two additional alternatives than did participants in the renting condition before making their decision ($M_{buy} = 5.82$ movies vs. $M_{rent} = 7.45$ movies, $t(102) = 2.02, p < .05$). In study 1b, adapting a process-tracing technique (Payne et al. 1988), we allowed participants to examine additional information about each choice alternative (a movie) by clicking on a link to a webpage with reviews and trailers. We measured the total time participants spent on this webpage. We find that participants in the buying condition spent, on average, almost 15 seconds examining information about each of the five movie titles ($M_{total time} = 74.23$ seconds). In contrast, participants in the renting condition spent on average about only 9 seconds per movie title ($M_{total time} = 45.81$ seconds; $F(1, 264) = 4.95, p = .03$).

Study 2 examines differences between renting and buying decisions in evaluation of alternatives, namely the extent to which consumers weigh negative attributes of the choice options. To test the hypothesis that consumers assign relatively more weight to negative product features in buying than in renting decisions, we presented consumers with two options and varied the extent to which one of the product attributes (focal attribute) was negative. We measured the relative weight assigned to the focal attribute. A 2x2 ANOVA revealed the predicted interaction between acquisition decision and valence of attribute information ($F(1,340) = 6.80, p = .01$). When the focal attribute was negative, participants in the buying condition assigned significantly more weight to this attribute ($M = 15.89$) than did participants in the renting condition ($M = 10.62$; $F(1,340) = 9.38, p = .002$). In contrast, when the focal attribute was positive, there was no significant difference between participants assigned to the renting and buying conditions in the weight they allocated to this attribute ($M_{buy} = 12.40$ vs. $M_{rent} = 13.18; F < 1$). These results demonstrate how
acquisition mode can affect tradeoffs between product attributes in the decision process.

Study 3 tests our hypothesis that consumers would be more likely to acquire the same product for rental than for purchase. Participants were asked to express their interest in participating in a deal of paying one dollar for a movie regularly listed at $4.99 for purchase or for rental. 41% of participants in the rent condition accepted the deal, whereas only 26% of participants in the buying condition accepted the deal ($2 = 4.32, p < .05). Study 4 introduces an experimental condition in which a buying decision is seen as more transient and thus more similar to a renting decision by drawing attention to the retailer’s free return policy. A one-way ANOVA revealed a significant effect of condition ($F(2, 502) = 5.71, p = .004). Planned contrasts demonstrated that participants were more likely to acquire the minifridge in the renting condition ($M_{\text{rent}} = 5.04$) than in the buying condition without a return policy ($M_{\text{buy without return}} = 4.66; t(500) = 1.92, p = .056$). Further, participants in the buying condition with an explicit return policy were significantly more likely to acquire the minifridge than were participants in the buying condition without the return policy ($M_{\text{buy with return}} = 5.32; t(500) = 3.36, p = .001$).

A series of studies demonstrate that consumers adopt different mindsets when the decision task involved renting as opposed to buying; this finding held even when the price of acquisition and the length of consumption were the same for the renting and buying conditions. Considering growing consumer demand for temporary ownership options (e.g., renting, leasing, and sharing options), both marketing practitioners and researchers will benefit from a better understanding of how consumers make such choices.

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