Complicating Decisions: the Effort-Outcome Link and the Construction of Effortful Decision Processes

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This paper demonstrates that individuals who strongly link effort with positive outcomes complicate what should be easy decisions. Other than spending more time on the decision and conducting superfluous search for information, individuals also complicate by distorting their preferences and the information they recall or receive about the alternatives.

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Illusions of Preference Construction

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Paper #1: "Liking Goes with Liking: An Intuitive Measure of Preferences at a Flip of a Coin"

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Paper #2: "The Feeling of Preference"

Aner Sela, University of Florida, USA
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Paper #3: "Complicating Decisions: The Effort-Outcome Link and the Construction of Effortful Decision Processes"

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Paper #4: "Evolving Front-runners: Choice under Gradual Construction"

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SESSION OVERVIEW

It is now widely accepted that "people's preferences are often constructed in the process of elicitation" (Tversky, Sattath, and Slovic 1988), but despite four decades of research, our understanding of preference construction processes is still far from complete. Whereas most prior research has focused on task characteristics and information processing, the current session explores the role of decision-makers' intuitions and implicit motives.

Why are people sometimes motivated to deliberately distort their preferences as they construct them? How is the choice construction strategy people use influenced by their intuition? And if intuitive preferences do, in fact, exist outside of the construction context, how might they be best revealed? Four papers explore these and related questions as they look to deepen our understanding of consumer preference construction processes.

The first two papers examine, in different ways, the role of implicit intuitions in the preference construction process, and the notion that certain preference intuitions may exist independent of the elicitation context. **Morvinski and Amir**'s paper shows that consumers intuitively associate preferred options with prominent labels or cues. They further show that incorporating such cues in the preference construction context can decrease system-2 bias and susceptibility to certain context effects. The paper by **Sela and Simonson** examines how the preference construction strategy (i.e., lexicographic vs. tradeoff-based) is impacted by a subjective "feeling of preference," which can be triggered by situational cues even before any options or attributes are encountered.

The next two papers focus on the dynamics of the construction process itself. The paper by **Schrift, Kivetz, and Netzer** shows that the ingrained intuition that positive outcomes are the fruits of an effortful and diligent decision process may drive people to distort and thereby complicate the process by which they construct their preferences and choice. In the fourth paper, **Liu and Simonson** examine the dual role played by preference instability and preference affirmation in a process called Evolving Front-runners (EF), in which preference is constructed gradually.

Much prior work on preference construction has demonstrated effects of task characteristics and information processing goals and constraints, but little is known about how preference construction is impacted by consumers' intuitions and implicit motives. Taken together, the four papers in this session present novel findings that further our understanding of the elusive nature of the mechanisms by which consumers construct their preferences. The session should be of interest not only to researchers who study consumer preference and choice, but also those who are more broadly interested in heuristic and systematic decision making, information processing, and metacognition. Consistent with this ACR's theme – Advancing Connections – this session incorporates multiple methodologies and speaks to audiences that include theory-inclined academics, consumers, policy-makers, and marketers.

Liking Goes with Liking: An Intuitive Measure of Preferences at a Flip of a Coin

EXTENDED ABSTRACT

In a series of five experiments, we explore congruence between preferred products to prominent labels. We find that people intuitively relate high evaluative judgments, such as preferred products, to prominent labels, but this effect is not symmetric as no similar relation was found between low evaluative judgments and non-prominent labels. We discuss the link between prominence and preference and suggest a fluency-based congruence explanation between two positively judged ends. Lastly, we demonstrate an important implication of our finding in which our intuitive measure of relative evaluative judgment helps de-bias compromise effect, an established system-2 bias.

In the initial demonstration of the effect (Experiment 1), participants played a game in which they saw two alternative DVD movie rewards and tossed a virtual coin to determine which movie they hypothetically win. Before tossing the coin, participants decided on the reward they will win in each of the coin-toss outcomes, but the question was framed using the prominent label of heads (Schelling 1960; Bar Hillel et al. 2014), i.e., "In the case of head, which movie will you win?" When the movie "The Alamo" was presented together with a least preferred movie ["Superbabies: Babies Geniuses 2"] as was determined by a pretest from the same population, 81% of the participants assigned heads to this movie. However, when the alternative was a more favorite movie ["Forrest Gump"], only 34% of the participants indicated they want to win the movie "The Alamo" in case the coin landed heads up. Therefore, keeping the reward constant, participants in our study associated the same reward with a prominent label when it was their preferred choice but not when it was their least preferred choice. In Experiment 2, we explored the asymmetry property of the effect in which framing the same assignment task with tails (a non-prominent label) instead of heads, did not yield the reverse results. The likelihood that our participants assigned their least preferred movie to tails did not differ from chance (53%, p= .78). This finding also rules out a simple rank-matching explanation (i.e., polarity alignment principle). Additionally, participants in the heads assignment condition, compared to those in the tails assignment condition, did not feel more control over the winning outcome, nor did they feel they had a better chance of winning their preferred reward. In Experiment 3, participants performed 20 consecutive choice tasks, each comprised of a different pair of rewards. After examining a pair of rewards for 5 seconds, one of the rewards started to blink after which participants had only one second to assign either heads or tails to the blinking reward. The results showed a similar pattern of behavior. That is, whether the task involved assign-

ing a choice to a label (Experiments 1-2) or vice versa (Experiment 3) did not change our participants' behavior. More importantly, we replicated our initial findings even when participants had only one second to submit their choice, suggesting that the preference-prominence link is intuitive, not requiring long deliberate thinking. Experiment 4 extended our findings to other prominent labels (i.e., even/ odd, card ranks). Lastly, Experiment 5 was designed to demonstrate how the use of the coin-flip task (based on preference-prominence congruity) can help reduce a System-2 bias, a bias that occurs when System 2 processing is inferior to more intuitive judgment. Utilizing the Compromise Effect, a well-established System-2 bias, we demonstrated how the bias significantly decreases when we replaced the standard choice task with the coin-face assignment task. Compared to a 33% bias in the focal product market share in the regular choice task condition, the bias was reduced to 15% in the assignment task condition. It is worth noting that even in the assignment task condition, the compromise effect did not completely disappear and participants' assignments of heads to their "favorite" product differed significantly from chance.

Together, our findings demonstrate that people intuitively relate high evaluative judgments to prominent labels. As one of our online participants bluntly commented: "I chose the item that I thought I would want more: Heads I win, Tails you lose". We refute alternative explanations such as simple rank-matching and subjective probability. We propose that prominent labels are processed more fluently compared with non-prominent ones. Existing evidences support the link between fluency and likable (E.g., Reber, Winkielman & Schwarz 1998) and the fact that fluent cues are hedonically marked (Winkielman et al. 2003). Therefore, high congruence is achieved because both prominence and preference carry positive affective reaction. Consumers are affectively evaluative matching in the same manner as they associate positively valenced stimuli (e.g., positive words) with positive responses (e.g., familiar, known). That is, like goes with like (but not the reverse). We drew our conclusions from existing literature that support the idea that it is pervasive human characteristic to prefer fluent cues such as known to the unknown and familiar to unfamiliar. For example, psychologists have long observed that repeated, unreinforced exposure results in an increased evaluation of stimulus (Zajonc, 1968). On the other hand, things that deviate from the usual and expected are curiosity arousing and under most condition will be positively evaluated (Mandler 1987). We also try to explain the asymmetry property using the concept of markedness. We discuss our findings in light of the existing literature from economic and psychology on focal point (Schelling 1960), perceptual fluency (Reber et al. 1988), hedonic familiarity, and hedonic marking of fluency (Winkielman et al., 2003), as well common used implicit measures of preferences.

Our work concludes with a suggestion for those who are about to make a decision via a coin toss: choose the option you have assigned heads to regardless of the coin toss outcome. Most likely, this is your most preferred option.

The Feeling of Preference

EXTENDED ABSTRACT

As has been well established, consumers often do not have well-defined preferences and they construct their preferences on the fly, using ad-hoc decision strategies determined by salient decision goals, processing constraints, and task characteristics (Bettman, Luce, and Payne 1998).

We propose that the construction of preferences is also influenced by a previously unexamined factor, the "feeling of prefer-ence," which is the sense that one has or should be able to form a preference in a given domain. The feeling of preference (FOP) can be triggered by situational cues pertaining to the ability to formulate or retrieve a preference (e.g., the perception of prior experience), regardless of actual preference retrieval, cognitive ease (i.e., fluency), or a motivation to express a preference.

Unlike the feeling of knowing (Koriat 1993), the feeling of preference can be triggered independently (and is therefore not a by-product) of the preference formation process or experiences of cognitive ease (fluency). Because it is independent of – and can be triggered prior to – the formation of a preference, FOP is also distinct from certainty (Rucker et al. 2014), which is conceptualized as a property of a particular attitude, preference, or judgment.

We demonstrate how FOP impacts the construction of choices from non-dominated, two-attribute, three-option choice sets ("compromise sets"). We use compromise sets because research has shown that, whereas choice of the middle (compromise) option often reflects a tradeoff-based strategy and/or difficulty forming a preference (Dhar and Simonson 2003; Levav, Kivetz, and Cho 2010), choosing one of the extreme options indicates that the decision maker prefers one attribute over another, reflecting more of a lexicographic strategy. We expected that activating a FOP would increase choice of extreme options and decrease compromising. In a series of studies we test alternative mechanisms that trigger and underlie the feeling of preference.

Study 1 activated FOP by manipulating perceived experience. Participants completed a series of choices from several "compromise sets" that are characterized by a high share of the middle option (portable grills, lawnmowers, and flashlights) and before seeing the choice options, rated on a 7-point scale how many times they had made a choice in each domain. We manipulated FOP by varying the anchors of the scale: 1="never"/7="a few times" in the high relative experience condition and 1="a few times"/7="multiple times" in the low relative experience condition. Consistent with our prediction, believing one is experienced and therefore should be able to form a preference increased the tendency to choose extreme options in all three decisions.

Study 2 activated FOP by priming people with preference-related words (e.g., opinion, attitude) or control words (e.g., bird, color). Consistent with our prediction, priming preferences increased choice of extreme options and decreased compromising in two separate choice problems (lawnmowers and microwave ovens). Casting doubt on an alternative account according to which our priming activated certainty, we found no effects of the prime on several measures of certainty and choice confidence (in fact, certainty was slightly lower in the preference prime condition).

One could argue that, rather than activating a general feeling of preference, our prior manipulations activated or brought to mind preexisting preferences in the respective domains. To rule out this possibility, Study 3 used a choice context in which participants could not possibly have had prior preferences. First, we primed preferences by asking half of the participants to describe a situation in which their decision was strongly influenced by personal beliefs, values, or principles. The other half served as control. Then, participants saw a decision problem consisting of a fictitious product ("skimbles") with fictitious attribute names ("atmority" and "predorsity"). Despite the fact that participants could not possibly retrieve preferences for skimbles, priming preferences significantly increased choice of extreme options and decreased compromising. This provides a strong test of our proposition regarding the impact of a general feeling of preference on choice construction, as well as rules out an ease-of-re-

trieval (fluency) account. We again found no differences in certainty or confidence between conditions.

In addition to ruling out preference retrieval and certainty as alternative explanations, Study 3 provides insight into the underlying process. After making their choice, we asked participants to explain their decision in their own words, and then to classify their responses as most closely corresponding to one of five general statements (identified in a pretest). Four statement options pertained to lack of preference and/or an attempt to choose what seemed like a balanced product, whereas the fifth statement read "I had a vague intuition that the option I chose was somehow better or that one attribute was more important than the other". Consistent with our suggestion that priming preferences activated a general feeling of preference that is independent of specific knowledge or attributes, participants were significantly more likely to mention preference intuition as an explanation in the preference prime condition, and this was correlated with choice of extreme options (i.e., "non-compromising").

We further argue that the feeling of preference reflects consumers' perceptions rather than any motivation to have or display a preference. Study 4 tested this motivational explanation by varying whether choice was public (i.e., evaluated by others) or not. We used the same choice task and manipulation of experience from Study 1, but we also varied whether participants thought their choices would be shown to other respondents who will judge the quality of the choices made by the participant (Maimaran and Simonson 2011; Simonson and Nowlis 2000). If our manipulation activated a desire to have or display a preference then expecting to be evaluated should strengthen its effect. Casting doubt on this alternative account, the results revealed a main effect of FOP priming, without an experience x evaluation interaction.

Taken together, the findings show that preference construction (e.g., non/compromising) can be influenced by a feeling of preference: a sense that one has or should be able to form a preference in a given domain. The studies illustrate several situational cues that can activate such a feeling, and show that it can operate independently of retrieval processes, motivation, cognitive ease, and preference certainty.

Complicating Decisions: The Effort-Outcome Link and the Construction of Effortful Decision Processes

EXTENDED ABSTRACT

The ethos that effort and hard work yield desired and positive outcomes is ingrained in our lives and many cultures. Whether through bedtime stories at a young age (e.g., Three Little Pigs and The Little Red Hen) or popular slogans such as "no pain, no gain," the link between effort and positive outcomes is essentially hardwired into the way we think and behave in many situations. This belief may be functional and serve an important and fundamental purpose, such as fostering the sense that one can impact the world in predictable ways (e.g., the just-world hypothesis; Lerner 1980). However, can the belief in the effort-outcome link (hereafter EOL) impede decision-making when important decisions seem too easy?

In this paper we postulate that since decision-makers believe that positive outcomes are the fruits of effortful decision-making processes, when confronted with a decision that feels too easy, decision-makers will artificially construct more effortful choice processes (i.e., complicate their choice). The notion that decision-makers complicate their choices under certain conditions is consistent with recent findings (e.g., Schrift, Netzer, and Kivetz 2011; Sela and Berger 2012). In particular, Schrift et al. demonstrate that decision-makers seek to attain compatibility between the effort they anticipate

in a certain decision context and the effort they actually exert. Building on these findings, the main contribution of this research is to (i) delve deeper into the mechanism that triggers complicating behavior, namely belief in the EOL and (ii) demonstrate additional and unique ways by which decision makers complicate their impending decisions.

In Study 1 participants were first asked to rate 10 fictitious company logos on their level of attractiveness. In the second part of the study we manipulated participants' strength of EOL beliefs using a well-established (and pretested[1]) paradigm of manipulating metacognitive experiences (Schwarz et al. 1991). In the third and final section of the study participants imagined that they had recently created their own new company, and read an excerpt emphasizing the importance of choosing a company logo. Participants then received (in a between-subjects design) a choice between two fictitious logos at varying degrees of choice difficulty (based on participants' own pre-measured preferences). Prior to making their choice, participants were asked to re-rate the attractiveness of the logos, enabling us to examine the degree and direction by which participants distorted their preferences. We find that when facing a relatively easy decision, participants distorted their preferences in a manner that intensified their conflict in choice[2] (after controlling for statistical artifacts possibly arising from the test-retest design). Further, consistent with our hypothesis, we find that strength of EOL beliefs moderate such tendency to complicate[3].

In Study 2, participants reviewed information about 12 job candidates before deciding whom to hire for a senior position in their company. Later, participants were asked to choose one of two candidates and were given partial information of that they originally reviewed about the candidates. Based on the available information, one candidate was clearly superior over the other. Aside from choosing, participants were also asked to recall the missing information from memory. In this study, three factors were examined. First, we measured participants' chronic tendency to link effort with positive outcomes using the Protestant Work Ethic (PWE) scale (Mirels & Garrett, 1971). Second, we manipulated (between subjects) the stage in which participants were asked to recall the missing information (pre-decisional vs. post-decisional stage). Finally, we also manipulated the degree to which the decision was framed as important (based on Jecker 1964). We find that when decisions are relatively easy, individuals with stronger PWE beliefs distort the information they recall about potential dates (Study 2a) and job candidates (Study 2b) in a manner that artificially increases their choice-conflict (i.e., complicating behavior). Consistent with our motivational account and inconsistent with several rival accounts (e.g., market-efficiency inferences and conversational norms) such patterns were (i) observed only in the pre-decisional stage (and not after the choice is made) and (ii) were more pronounced when the decision was framed as important[4].

In Study 3 we again manipulate perceptions of the EOL using a pretested[5] priming procedure (based on Quinn & Crocker 1999) and demonstrate that decision-makers not only distort the information they recall, but also selectively interpret incoming information about the alternatives. We find that participants distort and interpret other consumers' recommendations in a manner that detracts from the superior car, thus increasing conflict in choice. Further supporting a motivational account (and inconsistent with inferential processes), such distortions were observed only when participants were facing a decision and not when such evaluations were done outside the context of an impending choice[6].

In Studies 4 and 5 we examine whether individuals with a stronger EOL beliefs would actively exert more effort in choice by

seeking more information and spending more time before finalizing their decision. In Study 4, when choosing either e difficult or easy choice of a company logo, decision-makers spent more time and searched for more information before finalizing their choice compared to when the decision was moderately difficult. That is, we find a U-shape pattern of decision time and information search as a function of choice difficulty[7]. Moreover, the tendency to conduct this superfluous information search when facing easy decisions was more pronounced for individuals with stronger EOL beliefs[8]. In Study 5 a similar pattern was observed for individuals that chose different models (to advertise their company's brand)[9].

To summarize, whether choosing which job candidate to hire, which person to date, or which property to buy, sometimes an apparently easy choice is indeed ripe for the making. In this article, we argue that a belief that positive outcomes are attained only through diligent and effortful decisions may backfire and cause people to artificially construct a more effortful decision even when such choice conflict is unwarranted. Such superfluous deliberations may waste valuable resources, cause people to miss out on opportunities, and even lead to inferior choices. Six studies validate the EOL as the underlying mechanism, rule out several rival accounts, and demonstrate unique ways in which individuals complicate their choice.

Evolving Front-runners: Choice under Gradual Construction

EXTENDED ABSTRACT

How do people make a choice among a larger set of options (of more than two or three)? Although much previous research examines choice sets of two or three options, when there are more options, less is known about the process by which people sort through the choice set to arrive at a final decision, especially when options are introduced not all at once. For example, do people mentally keep all options in mind, or do people engage in interim comparisons and eliminations, and if so, how? And furthermore, how does the choice outcome change depending on the process involved? In this research, we examine one process that people might use to make a choice among multiple options, namely, the Evolving Front-runners (EF) process. We argue that even though in real life people might not engage in a pure version of this process, choices among multiple options can often have an EF component. In 17 experiments we study the EF process. Our findings have implications for understanding preference construction in larger choice sets.

The EF process works as follows: Imagine a consumer is looking to buy a dress from a designer. There are 10 new dresses this season, and she will be presented with the dresses sequentially. Further, she will be advised to make eliminations as she goes along. Specifically, she will first see two dresses, and will decide which of the two she prefers. The preferred dress will be held for her, whereas the other one will be eliminated from her consideration. The person is then presented with the third dress. She now compares this third dress to the one held. If the third dress is better than the one held, the third dress will be held to be compared to the fourth dress, while the old incumbent is eliminated. If the third dress is not better than the one held, then the third dress is eliminated, and the held dress will still be held, and will be compared to option 4. The process goes on whereby a newly introduced option is always compared to the current incumbent, and can either "beat it" and replace it, or fail and let the incumbent live on. Finally, the last option is revealed, and the person makes a choice between this option and the final incumbent, and the chosen option is the final selection for the entire set.

Thus in this EF procedure, a newly introduced option needs to compare to only one of the previous options, namely, the incumbent, as opposed to all earlier options. This greatly cuts down the amount of processing required to make a selection. This process may be used when a decision make does not wish to carry information of all options in one's mind, but instead just focuses on a forerunner at any stage.

Our research focuses on the following questions: what are the properties of this choice process? Is it accurate? Does it create systematic preference shifts compared to a default simultaneous choice? And do decision makers like this procedure?

We answer these questions in 17 real incentive experiments. We find that preference instability plays a large role in choice outcome under EF. Further, an incumbent often gets compared to a number of new options, and this creates a process of repeated preference affirmation for the incumbent. We find preference affirmation to have a positive effect on subsequent preferences. The combined effect of preference instability and preference affirmation leads to systematic shifts in preferences compared to a default simultaneous choice. Specifically, options introduced late are the most advantaged, whereas middle options are the most disadvantaged. Implications for understanding preferences in larger choice sets are discussed.

REFERENCES

Bar-Hillel, M., Peer, E., & Acquisti, A. (2014, April 28). "Heads or Tails?"—A Reachability Bias in Binary Choice. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 40 (6), 1656−1663.

Bettman, J. R., Luce, M., & Payne, J. (1998). Constructive consumer choice processes. *Journal of Consumer Research*, 25, 187−217.

Dhar, R. & Simonson, I. (2003). The Effect of Forced Choice on Choice. *Journal of Marketing Research*, 40 (May), 146−160.

Jecker, J. D. (1964). The Cognitive Effects of Conflict and Dissonance. In Leon Festinger (Ed.), Conflict, Decision, and Dissonance. Stanford, CA: Stanford University Press.

Koriat , A. (1993). How Do We Know That We Know? The Accessibility Model f the Feeling of Knowing. *Psychological Review*, 100 (4), 609−639.

Lerner, M. J., (1980). *The Belief in a Just World: A Fundamental Delusion*. New York: Plenum Press.

Levav, J., Kivetz, R., & Cho, C.K. (2010). Motivational Compatibility and Choice Conflict. *Journal of Consumer Research*, 37 (October), 429−442.

Maimaran, M. & Simonson, I. (2011). Multiple routes to Self- Versus other-Expression in consumer choice. *Journal of Marketing Research*, 48 (August), 755–766.

Mandler, G., Nakamura, Y., & Van Zandt, B. J. (1987). Nonspecific effects of exposure on stimuli that cannot be recognized. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 13 (4), 646.

Mirels, H. L., & Garrett, J. B. (1971). The Protestant Ethic as a Personality Variable. *Journal of Consulting and Clinical Psychology*, 36(1), 40–44.

Quinn, D. M., & Crocker, J. (1999). When Ideology Hurts: Effects of Belief in the Protestant Ethic and Feeling Overweight on the Psychological Well-being of Women. *Journal of personality and social psychology*, 77(2), 402–414.

Rucker, D.D., Tormala, Z.L., Petty, R.E., & Briñol, P. (2014). Consumer conviction and commitment: An appraisal-based framework for attitude certainty. *Journal of Consumer Psychology*, 24 (1), 119–136.

Schelling, T.(1960). *The Strategy of Conflict*. Harvard University Press, Cambridge, Mass.

Schrift, R. Y., Netzer, O., & Kivetz, R. (2011). Complicating Choice. *Journal of Marketing Research*, 48(2), 308-326.

Schwarz, N., Bless, H., Strack, F., Klumpp, G., Rittenauer-Schatka, H., & Simons, A. (1991). Ease of Retrieval as Information: Another Look at the Availability Heuristic. *Journal of Personality and Social Psychology*, 61(2), 195–202.

Sela, A., & Berger, J. (2012). Decision Quicksand: How Trivial Choices Suck Us in. *Journal of Consumer Research*, 39 (2), 360-370.

Simonson, I. & Nowlis, S.M. (2000). The Role of Explanations and Need for Uniqueness in Consumer Decision Making: Unconventional Choices Based on Reasons. *Journal of Consumer Research*, 27 (June), 49−68.

Tversky, A., Sattath, S., & Slovic, P. (1988). Contingent weighting in judgment and choice. *Psychological Review*, 3, 371−384.

Reber, Rolf, Piotr Winkielman, and Norbert Schwarz. Effects of perceptual fluency on affective judgments. *Psychological science* **9** (1), 45−48.

Winkielman, P., Schwarz, N., Fazendeiro, T., & Reber, R. (2003). The hedonic marking of processing fluency: Implications for evaluative judgment. *The psychology of evaluation: Affective processes in cognition and emotion*, 189−217.

Zajonc, R. B. (1968). Attitudinal effects of mere exposure. *Journal of personality and social psychology*, 9 (2), 1.