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In this research, we examine how manipulating the type of information processing mode (cognitive vs. affective) at a different point of time elicits the unique effects of process and outcome simulation on the evaluation of RNPs. Our findings indicate that in an instant evaluation scenario, outcome simulation under a cognitive mode or process simulation under an affective mode is more effective in increasing the evaluation of RNPs. However, a reversal of this result pattern emerged (i.e., outcome under an affective mode or process simulation under a cognitive mode is more effective) after we introduce a distant future time frame.

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SPECIAL SESSION SUMMARY
The Effects of Process and Outcome Simulations on Decision Making
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SESSION OVERVIEW
Process and outcome mental simulations have been researched in psychology for over two decades; however, the marketing literature has only recently begun exploring their effects on consumer behavior. Process simulation focuses on the process of reaching a goal (or using a product) while outcome simulation focuses on the benefits of reaching a goal (or the benefits that are derived from product usage.) Which simulation is better for consumers, and under which conditions? The research presented in this session addresses these questions by examining the positive and negative effects of these simulations on effort, choice, product evaluations, and decision making.

Three papers, each with multiple studies, were presented. The first paper shows that when a product is instrumental to goal pursuit then process simulation increases its appeal, but when it is not instrumental then outcome simulation increases its appeal. The second paper shows that process-focused simulation can enhance the judgments of consumer segments that resist effortful processing, because the beneficial effects of process-focused thought can be obtained without increases in cognitive effort. Finally, the third paper examines the effect of these simulations on the evaluation of really new products (RNPs) and finds that outcome simulation under a cognitive information processing mode or process simulation under an affective information processing mode is more effective in increasing the evaluation of RNPs. The reverse is found for a distant future time frame.

EXTENDED ABSTRACTS
“The Journey to Goal Attainment: When Process Focus is Engaging”
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Prior research distinguishes between two types of mental simulations, outcome and process (Taylor et al. 1998). Process simulation focuses on the process of reaching a goal while outcome simulation focuses on the benefits of reaching a goal. Which simulation encourages proactivity? The literature provides mixed findings. On one hand, outcome simulation increases effort and choice. For example, Thompson, Hamilton, and Petrova (2009) show that in the face of a tradeoff between a desirable option (e.g., a camera with many features that is difficult to use) and a feasible option (e.g., a camera with less features that is easy to use), process-oriented thinking increases decision difficulty because individuals focus on the tradeoff attributes. As a result, choice was delayed and task performance was degraded. Similar results were obtained in the context of consumer saving (Baumeister 2002)—consumers perceive saving money as important when its benefits are mentioned, but find it less important when the process of savings is mentioned. This is because the process of saving money highlights its difficulty and as a result consumers yield to temptations (spending now rather than in the future.)

On the other hand, process simulation increases effort and choice. For example, Pham and Taylor (1999) show that students who simulated the process for doing well on an exam (good study habits) studied more and received better grades compared with those who simulated the desired outcome (getting a good grade). Escalas and Luce (2003, 2004) show that when advertising arguments are strong, process (vs. outcome) oriented thinking increases behavioral intentions because it delineates the path consumers should take.

The distinction between the two streams seems to be that in the latter (process simulation is better) participants pursued a goal while in former (outcome simulation is better) they did not. Is goal pursuit the explanation for these differences? Specifically we ask: when consumers encounter a product, under which conditions process simulation (how to use the product) increases its appeal and under which conditions outcome simulation (the benefits of using the product) increases its appeal? The answer, we suggest, largely depends on the extent to which one considers the product to be relevant and instrumental to goal attainment. When a product is perceived as relevant then process simulation will increase its appeal, because it maps the path to goal attainment (the necessary steps required to use the product and achieve the goal.) However, when the product is not relevant then outcome simulation will increase its appeal because it focuses on the benefits which are important even to those who do not pursue a goal.

We support our claims in three experiments using different manipulations, products (hedonic or utilitarian), and behavioral measures, including actual behavior. In all experiments we manipulate focus by creating two ads for the same product, one highlights the process of using the product and the other, the outcome (benefits) of using it.

In experiment 1 we measured the individual inclination toward success vs. enjoyment goals, and manipulated outcome vs. process focus using two ads for a new business magazine. The process ad focused on what needs to be done in order to find a good job (with the help of the magazine), while the outcome ad focused on the benefits of finding a good job (again, with the help of the magazine.) As predicted, the magazine was more appealing to participants who saw the process focused ad and have a success (vs. an enjoyment) orientation, and to participants who saw the outcome focused ad and have an enjoyment (vs. a success) orientation. Next we explore the important role of instrumentality of the product as means to goal attainment in driving this result.

In experiment 2 participants adopted either an enjoyment or self control goal, and read one of two ads for new imported chocolate truffles. The ads either focused on the outcome of eating the chocolate (sensual, delightful, luxurious taste) or the process of eating the chocolate (opening the box, smelling the chocolate, unwrapping it while making sure not to drop even the minutest chocolate dusting). We note that the ads did not alter the importance participants assigned to their adopted goal. Results show that the chocolate was perceived as more instrumental to feeling good and more appealing to participants who saw the process focused ad and adopted an enjoyment (vs. self control) goal and to participants who saw the outcome focused ad and adopted a self control (vs. enjoyment) goal. Regression analyses show that increased instrumentality of the chocolate as means to feeling good mediated the effect of process vs. outcome focus on the chocolate’s appeal.

Finally, we tested our predictions with real choice behavior in experiment 3. Participants adopted either a health or enjoyment goal, saw an ad for a health drink based on vinegar that is “really good for you but not so tasty”, and rated its instrumentality to becoming healthier. Our main dependent variable is the amount participants drank from the “health drink” (they were given a mix
of water and vinegar). Consistent with our previous results, those who saw the process focused ad and adopted a health goal and those who saw the outcome focused ad and adopted an enjoyment goal found the health drink more instrumental to becoming healthier and actually drank more. Regression analyses show that increased instrumentality of the healthy drink as means to becoming healthier mediated the effect of focus on the amount of participants drank.

The literature is inconclusive regarding the effects of process and outcome simulation on effort and choice. In goal pursuit, Pham and Taylor (1999) show that process simulation is better, but when people do not pursue a goal, Thompson et al. (2009) show that outcome simulation is better. Our research contributes by explaining why we see this difference. Instrumentality of the means (e.g., to what extent chocolate truffles are considered a means to a feel-good outcome) is the driver of this difference.

“Using Process-Focused vs. Outcome-Focused Thought to Enhance Consumer Judgment”

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One of the most important goals of the marketing discipline is to assess and increase consumer decision quality. However, increasing the quality of many everyday consumer judgments is complicated by the fact that a clear cut behavioral rule is not feasible. That is, consumers cannot (and should not) be told to stop purchasing food, to avoid all use of over-the-counter drugs, or to avoid going outdoors during daylight to reduce the risk of skin cancer. However, these everyday decisions often lead to negative outcomes and the standard, normative advice to work harder or think more carefully, is often resisted in practice. In this paper, we argue that encouraging process-focused mental simulation is a creative option that will lead to more appropriate choices for consumer segments with low motivation to engage in decision effort.

Traditional consumer research approaches suggest increasing cognitive effort as the primary pathway for improving the quality of consumer decisions. However, our research suggests that decision quality can sometimes be improved through the form rather than the amount of effortfulness of decision-related thought. Specifically, process-focused (versus outcome-focused) thought can improve decision making without increasing the cognitive effort required in decision making. In two experiments, we show that process-focused thought can improve decision quality for low-motivation consumers. We believe that this is particularly important because low-motivation consumers seem particularly unlikely to respond to interventions designed to increase the amount of processing. We also show that the beneficial effects of process-focused thought do not extend to high motivation segments.

Escalas and Luce (2003, 2004) demonstrated that focusing on the process of using fictitious vitamin and shampoo products show enhanced sensitivity to argument strength, such that process-focused instructions enhance the favorable effect of strong arguments and the unfavorable effect of weak arguments. However, these beneficial effects of process-focused thought occurred only under conditions when consumers do not engage in systematic processing. Escalas and Luce (2004)’s results are consistent with the argument that relatively spontaneous planning processes are evoked by process-focused thought. When consumers engage in process-focused thought, they naturally attempt to link actions and outcomes to each other in the context of forming a plan. Thus, process-focused participants accept (or reject) the link between advertised behavior and outcomes as they spontaneously formulate (or veto) such a plan. There is also some evidence that higher elaboration actually dilutes or undermines these beneficial effects (Escalas and Luce 2004).

Given these prior findings, we predict that the advantages of process-focused thought in increasing sensitivity to argument strength will be greatest under low-to moderate-elaboration conditions. We expect that process-focused types of thought have the potential to increase decision accuracy holding constant the amount of thought; process-focused thought is naturally occurring and does not require significant amounts of cognitive elaboration. On the other hand, high levels of elaboration are necessary for outcome-focused thought to elicit sensitivity to argument strength, consistent with traditional findings of dual process models such as the elaboration-likelihood model. Thus, we expect “accuracy without effort” effects for process-focused mental simulation specifically, and not for outcome-focused thought. Process-focused thought should be a relatively easy way to improve judgment quality, particularly for those segments that are resistant to increased cognitive effort. In this research, we focus on segments that are resistant to engage in effortful thought processes due to low motivation.

In our first experiment, we tested the effect of mental simulation in a college exam setting to test whether the beneficial effect of process-focused thought on study behavior is moderated by both motivation to elaborate and the appropriateness of that behavior in the student’s particular context (a corollary of strong vs. weak arguments in an advertising context). We found a three-way action appropriateness by thought-focus by motivation to elaborate interaction for our plan to study dependent variable (F(1, 194)=5.74, p<.05). High motivation participants differentiated between strong versus weak action appropriateness under both conditions of outcome- and process-focused thought. On the other hand, low motivation participants differentiated between strong versus weak action appropriateness only under conditions of process-focused thought. Thus, our results support our assertion that under conditions of low to moderate levels of elaboration motivation, students are more sensitive to action appropriateness when given process-focused (vs. outcome-focused) instructions. In this way, process-focused thought led to more discerning consumer judgments.

In our second study, we examined the interactive effect of thought versus outcome thought-focus and argument strength on behavioral intentions (BI), in the context of print advertisements for a fictitious vitamin and a healthy bread product. Our results again supported our expectation that argument strength will differentially affect BI under process-focused thought for participants who are low in need for cognition (NFC) and thus not motivated to elaborate. We found a significant three-way argument strength by thought-focus by NFC interaction for BI (F(1, 205)=3.87, p=.05). There was a differential effect of argument strength in the process condition for participants who are low in NFC, but in the case of the outcome condition, the differential effect of argument strength only existed for participants who are high in NFC.

Our research shows that focusing on the process of using a product can improve consumer decision quality in common, low-motivation to elaborate settings. Encouraging consumers to focus on the process of using a product may be a good method for improving consumer decision-making in low motivation segments, without the perhaps unattainable goal of convincing consumers to engage in effortful elaboration. This seems to be particularly promising for those consumers likely to resist the call to increase the amount of their elaboration or the complexity of their decision processes, because process-focused thought can do so without relying on appeals that consumers “think” or “work” harder. Thus, we believe it will be easier to motivate low-involvement consumers to “think better” (by encouraging them to think about the process
involved, which is a relatively natural and easy thing to do) than to motivate them to “think more.”

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In this research, we examine the role of process- versus outcome-focused mental simulation in the learning of really new products (RNPs). Research in psychology has identified two distinct types of mental simulation: process simulation that is focused on the process of reaching a goal versus outcome simulation that is focused on the desirable outcome of achieving the goal (Taylor et al. 1998). Process simulation has been found to be generally more effective than outcome simulation in facilitating goal attainment (e.g., Taylor et al. 1998) or behavioral intentions (Escalas and Luce 2003, 2004). However, we believe that when applied to the new product domain, process simulation is only more effective for INPs, for which people are able to figure out how to use the product (Hoeffler 2003), whereas for RNPs which evoke high learning cost association (Mukherjee and Hoyer 2001), process and outcome simulation with a traditional approach does not lead to enhanced product evaluation.

We demonstrate how manipulating the type of information processing mode (cognitive vs. affective) with a different temporal perspective elicits the unique effects within process and outcome simulation on the evaluation of RNPs. Much previous research on mental simulation has either confounded process and outcome simulation with cognitive and affective components (i.e. process simulation with a cognitive focus vs. outcome simulation with an affective focus (Taylor et al. 1998), or has incorporated both cognitive and affective components into process and outcome simulation (Escalas and Luce 2003, 2004). We attempted to tease apart the cognitive and affective processing focus and to investigate the unique effect of process and outcome simulation on the evaluation of RNPs under each type of processing when a different temporal perspective is involved. We predict that in an instant evaluation scenario where the learning cost is salient, when evaluating the RNP with a cognitive focus, outcome simulation will lead to higher product evaluations than will process simulation, whereas the reversal is true when these products are evaluated with an affective focus. However, when we introduce a distant future perspective for the product evaluation such that consumers’ natural focus of the RNPs is shifted to the product benefits, we hypothesize that outcome simulation under an affective mode or process simulation under a cognitive mode will be more effective in increasing the evaluation of RNPs.

In Experiment 1, we first examined the role of traditional process and outcome simulation (i.e. combined focus on both the cognitive and affective components) on the evaluation of RNP (i.e., AudioPC) compared with INP (i.e., ThinkPad). We asked participants to practice either a process-oriented (i.e. visualizing the steps of using the product) or outcome-oriented (i.e. visualizing the benefits of using the product) simulation task after they read the ad. The results showed that the positive effect of process simulation was only replicated for the INP, whereas for the RNP, which naturally evoked high learning cost association, the effect of process and outcome simulation on product evaluation did not differ.

Experiment 2 investigated the specific effects of process and outcome simulation on the evaluation of RNPs (i.e., AudioPC) by teasing apart the effect of cognitive vs. affective processing mode in an instant evaluation scenario where consumers’ natural focus of RNPs is on the learning cost. Participants performed either a process-focused or outcome focused visualization task that emphasized either the cognitive or affective components. The results indicated that under a cognitive processing mode, outcome simulation increased product evaluation more than process simulation, whereas under an affective mode, process simulation was more effective than the opposite type of simulation. In addition, we found a partial mediating role of product uncertainty on this pattern.

In Experiment 3, we explicitly introduced different temporal frames by asking the participants to evaluate a RNP (a new video-editing software in this study) in a distant future scenario which enhanced participants’ construal level and evoked benefit-related considerations, or in a near future scenario which evoked default usage process consideration and served as our control conditions. The results showed that when the usage process information was more salient (i.e. in the near future conditions which were similar to the settings in experiment 2), we replicated the findings of experiment 2. However, when the novel benefits became more salient, the effect of mental simulation was reversed such that process simulation led to higher product evaluation under a cognitive processing mode, and outcome simulation led to higher evaluation under an affective processing mode. In addition, product uncertainty mediated this interactive effect between time, simulation type and processing mode.

Our research centers on the role of process- and outcome simulation in the evaluation of RNPs. Our findings showed the role of affective and cognitive considerations in the different effectiveness of these two types of simulations under a different temporal perspective. We further identified performance uncertainty as a mediator. We believe that our research provides some answers to the open questions about new product preference development, and well as the open questions about the exact nature of different types of mental simulations and their effectiveness.

REFERENCES