USING PROCESS-FOCUSED VERSUS OUTCOME-FOCUSED THOUGHT TO ENHANCE CONSUMER JUDGMENTS

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ABSTRACT

While it is crucially important for consumers to make good decisions, decades of research suggests that it is unrealistic to expect all segments of consumers to engage in effortful cognitive processing. We propose that process-focused mental 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. We report two studies testing the efficacy of process-focused thought in segments with a low tendency to elaborate due to deficits in motivation. We find that low-motivation consumers make more beneficial choices following process- (versus outcome-) focused mental simulation. This differential advantage does not exist for consumers who are motivated to elaborate.

One of the most important goals of the marketing discipline is to assess and increase consumer decision quality. Consumer judgments and decisions are often insensitive to factors that appear to be normatively relevant. For example, research on advertising regulations in fields such as pharmaceutical and food labeling indicates that consumer decisions are often relatively insensitive to such seemingly important factors as health risks of medicines (Morris, Mazis & Brinberg 1989), the nutritional value of breakfast cereal (Stanley 1991), the cumulative impact of individual spending choices (Hill 1994), or health behaviors (Cohen 1996). Clearly, there are benefits to be gained from improving the quality of routine consumer decisions regarding purchases of discretionary consumer goods, food, and medicines. 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.

Below, we briefly review traditional approaches that suggest increasing cognitive effort as the primary pathway for improving the quality of consumer decisions. Then, we introduce recent research suggesting that decision quality can sometimes be improved through the *form* rather than the *amount* or 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 our hypothesis development and two experiments, we

show that this insight from the work on mental simulation, defined to be the imitative mental representation of events (Taylor and Schneider 1989), can be adapted to 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. Overall, we show that recent work on process-focused mental simulation can be leveraged to improve consumer decision making, but only if the marketer or policy maker is cognizant of the boundary conditions of these effects.

THEORETICAL FRAMEWORK

The Role of Cognitive Effort in Decision Quality

A vast array of research demonstrates a large gap between normative guidelines and descriptive reality in decision behavior. Simon's (1959) insight that decision makers exhibit bounded rationality has had an enormous impact on theoretical views of individual consumer decision making. Simon and others have argued that given limited cognitive resources, individuals may at times trade off accuracy and effort concerns (e.g., Payne, Bettman, and Johnson 1993). Similarly, within the advertising and persuasion literature, cognitive effort or elaboration is postulated as a key moderating factor for individual judgments (e.g., the elaboration likelihood model [Petty, Cacioppo, and Shuman 1983] and the heuristic-systematic model [Chaiken 1980]). The critical element in these theories is the amount of thought or elaboration that an individual devotes to the message in the ad, with more elaboration generally associated with better (i.e., more normatively accurate) responses to persuasion attempts. One

clear implication of these views is that decision processes need to become more effortful for them to become more accurate.

Two approaches for improving decision quality are recommended in the consumer behavior and decision making literature. First, given the dominance of the cognitive miser view, it is not surprising that one approach focuses on making certain information easier to process (e.g., simplifying food labels, Mazis & Staelin 1982). This approach presumably lowers the level of ability needed for consumers to elaborate on relevant information. However, some segments are likely to be unmotivated to process even simplified information. For instance, some consumers may be uninvolved with a product class, and other individuals may be low in need for cognition (Cacioppo, Petty and Morris 1983). Thus, even if they are perfectly able to process relevant decision information, consumers may neglect to put in the relevant effort. Everyday consumer decisions have been empirically demonstrated to be low in terms of time taken (Dickson and Sawyer 1990) and have been described as mindless (Alba 2000; Wallendorf 2001).

Another common approach involves restricting consumer decisions (e.g., Palmer, Pinto and Parente 2001). Many of these techniques seem to implicitly (or explicitly) assume that it is infeasible to increase consumers' levels of cognitive elaboration in order to improve the quality of everyday consumer decision making. Thus, the implication is often that consumer advocates must "work around" low-elaboration consumers' limitations, essentially by removing decision making responsibility from the consumer. This may be feasible in some situations (e.g., restricting illicit drugs) but is clearly not feasible in others (e.g., restricting access to fattening foods).

We believe that there is a clear need for an approach that improves decision making without making demands on consumers to engage in high levels of elaboration. As a result, we

use a new tactic for improving the quality of consumer decisions. First, we explicitly recognize the likely existence of groups of customers who are low in motivation and hence are unlikely to elaborate. We apply a marketing segmentation approach that uses emerging techniques from mental simulation research to address these decision makers' unique needs and constraints. In this paper, we demonstrate that we can increase the quality of decision making for low involvement segments through a focus on the *type* of consumer decision processing rather than the *amount*. Specifically, research on mental simulation of likely future events concludes that mental simulation can affect future outcomes through positive changes in attitudes, behavioral intentions, and actual behavior, particularly if the simulation is self-relevant and repeated (e.g., Anderson 1983; Carroll 1978; Gregory, Cialdini, and Carpenter 1982). More importantly, as we review below, emerging work suggests that a certain type of mental simulation, namely process-focused simulation, provides specific advantages in terms of increasing judgment quality without increased cognitive effort.

Process- Versus Outcome-Focused Mental Simulation

In marketing research, the differential effects of different types of consumer thought are relatively under-studied (vis-à-vis the amount of thought or elaboration). However, in the popular press, self-help writers commonly advise people to simulate favorable outcomes and consequences in order to motivate successful achievement of individual goals (e.g., Fanning 1994, Peale 1982). Some examples include visualizing oneself enjoying the benefits of having attained one's financial goals or simulating oneself making the free throw shot that wins the basketball game (as opposed to imagining practicing free throw shots). More generally, advertising often encourages consumers to simulate favorable outcomes of product use (e.g.,

encouraging dreaming of buff bodies, vacation fun, lottery winnings). Thus, in both the self-help domain and advertising practice, consumers are encouraged to engage in simulations that focus on the enjoyment of achieved positive outcomes – an 'eyes on the prize' approach.

However this approach is inconsistent with recent research in social psychology on the nature of mental simulation, which actually suggests the opposite view, namely that process-focused thought can be superior to outcome-focused thought (Taylor et al. 1998). Therefore, the advice currently available to consumers seems misleading at best. For instance, Pham and Taylor (1999) look at the effects of students' mental simulation on increased studying and better grades and conclude that the most successful simulation focuses on processes (e.g., "imagine the process of studying for your next exam") rather than outcomes (e.g., "imagine how you would feel if you received a high grade on your next exam"). Thus, simulating progressive steps towards a goal is more effective towards achieving that goal than simulating the experience of success resulting from having reached that goal. These ideas can be extended to help improve consumer decisions and judgments.

Escalas and Luce (2003, 2004) demonstrate that participants instructed to focus 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 occur 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. Thus, we expect that process-focused types of thought have the potential to increase decision accuracy holding constant the amount of thought. We believe that these “low effort” advantages accrue to process-focused simulation because processes of narrative construction or simulation tend to occur quite naturally within human cognition. Much research on narrative processing shows that people naturally think about and interpret the world around them through stories (Bruner 1990; Kerby 1991). Some researchers believe that narrative processing is extremely pervasive, such that "all of our knowledge is contained in stories and the mechanisms to construct and retrieve them" (Schank and Abelson 1995, p. 1). Further, recruitment of (different) exemplars for process- versus outcome-focused thought may often occur through an automatic process of recruitment of mental representations (Bargh and Chartrand 1999) rather than through an overt and effortful search for specific memories. For example, this process could occur through pattern recognition and matching to related prior plans, which may be relatively low in effort if not completely automatic (e.g., see Klein 2000 on recognition-primed decision making). Thus, we believe that the effects we attribute to process-focus thought do not require significant amounts of cognitive elaboration to occur.

The above description of process-focused thought is counter to well-established findings for outcome-focused thought, where consumers are insensitive to argument strength under low involvement. High levels of elaboration are necessary for outcome-focus 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. 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 paper, we focus on segments that are resistant to engage in effortful thought processes due to low motivation

In summary, encouraging consumers to focus on the process of using a product is a potential method for improving decision making for consumer segments that lack the motivation to elaborate. When consumer thought is process-focused yet relatively moderate in elaboration, persuasion occurs when appropriate (that is, when ad arguments are strong, but not when they are weak). These arguments, combined with prior findings on outcome-focused thought, provide a flexible template for improving consumer decisions. Outcome-focused thought is beneficial in situations where high elaboration can be assumed or can be successfully encouraged. However, in situations where consumers are unwilling to engage in extensive elaboration, then process-focused thought is a useful tool for improving the quality of consumer decisions. Fortunately, it is relatively easy to segment markets based on predicted levels of motivation. First, there are known situational determinants, related to the task at hand. Second, motivation to elaborate can often be predicted on the basis of stable individual characteristics, such as Cacioppo and Petty’s (1982) need for cognition construct.

HYPOTHESES

It is important to note that we are not rejecting the paradigm established by dual processing persuasion models, such as the elaboration likelihood model (ELM; Petty et al. 1983).

Those theories assert that higher motivation is generally associated with more normatively accurate consumer judgments, regardless of thought-focus. That is, increased cognitive effort typically leads to better consumer decision making under the thought processes traditionally studied in marketing, namely outcome-focused thought, which is likely to be the default mode of processing. In our work, we are adding process-focused thought as a moderator of the traditional persuasion models. We still believe that under high motivation to elaborate, outcome-focused thought will be associated with appropriate decision behavior, such as sensitivity to the strength of message arguments or level of product appropriateness. Also consistent with dual process models, under conditions of low elaboration to elaborate, outcome-focused thought will be associated with a relative insensitivity to the strength of message arguments or level of product appropriateness. Thus, our first hypothesis essentially replicates traditional persuasion research findings, with the caveat that we consider these findings to be applicable only to outcome-focused thought.

H1: For high (low) motivation segments, outcome-focused thought will result in decision outcomes that are more (less) appropriate for the consumer.

However, we extend the traditional paradigm by asserting that process-focused mental simulation can be important for improving judgment quality for low-motivation segments. Following Taylor et al. (1998), we hypothesize that process-focused mental simulation will facilitate appropriate behavior by focusing the consumer on problem-solving activities directed towards formulating a plan. We believe that these spontaneous planning activities will lead to greater behavioral intentions for low-motivation consumers, but only when those intentions are

themselves appropriate for increasing consumer welfare. For instance, the spontaneous planning process generated by process-focused thought during advertising will fail to generate behavioral intentions if the ad's argument linking the suggested action to the outcome is weak or if the outcome itself is not desirable. Thus, we predict that process- (versus outcome-) focused thoughts, which generate spontaneous consideration of the steps required in a relevant behavioral domain, will make individuals more discerning about whether behavioral plans will result in a desired goal and hence more sensitive to argument strength in an advertising context or product appropriateness in a purchase situation. We believe that process-focused thought will therefore cause low motivation consumers to mimic the higher-quality thought patterns generally associated with high-involvement (and higher-elaboration) customers.

H2: For low motivation segments, process-focused thought will result in decision outcomes that are more appropriate for the consumer.

We have no clear prediction for the condition of high motivation to elaborate, process-focused thought, so we leave that as an empirical question.

In order to test hypotheses 1 and 2, we report the results of two experiments examining the effect of thought-focus (process vs. outcome) on behavioral intentions under conditions of both low and high motivation to elaborate. There are multiple ways to operationalize motivation to elaborate. In our studies, we use indicators of motivation that are feasible to implement in a field setting. In Experiment 1, we follow the original work of Taylor et al. (1998) and ask students to simulate studying for their next exam. Consistent with classic findings in the literature on achievement motivation (e.g., Battle 1965, Mitchell and Nebeker 1973 and Todd et

al. 1962), we expect motivation to be particularly problematic for students who expect that they would receive a low grade, even if they were to study. While the classic treatment has used expectancy to predict studying directly, we show that expectancy moderates the impact of process-focused thought on intentions to study. In Experiment 2, we extend our findings to a more traditional consumer domain and use a variant of a potential segmentation variable, need for cognition. Need for cognition has been used successfully as a method of measuring likely elaboration levels in ELM persuasion research. Further, need for cognition is a very easy to measure and stable individual difference (e.g., see Cacioppo and Petty 1982; we use a simplified version of the need for cognition tool that could be implemented as part of an interview- or web-based decision support tool, whereby advice is dispensed based on responses to initial items).

Both experiments also contain a manipulation aimed at detecting more versus less-appropriate decision making, in terms of discriminating between more and less appropriate environments for action. In Experiment 1, this construct is represented by a manipulation of the quality of the class, under the assumption that it is more appropriate to study for classes where the materials themselves (i.e., the professor) support potential achievement. In Experiment 2, this construct is represented by a standard manipulation of argument strength, whereby we argue that more appropriate decisions are those that are differentially sensitive to argument strength.

EXPERIMENT 1

In this study, we test the effect of mental simulation in the same college exam setting as used by Pham and Taylor (1999), extending their research to test whether the beneficial effect of process-focused thought on study behavior that they identify is moderated by both motivation to elaborate and the appropriateness of that behavior in the student's particular context. We

operationalize motivation to elaborate by using a measure of "expected grade given maximal possible effort" as a moderator variable. Our rationale is that students who expect to receive a high grade if they study should be highly motivated to elaborate. We operationalize the degree to which studying is appropriate by asking students about their best and worst courses that semester (with a manipulation check measuring whether the professor in the class is considered by the student to be good or bad.) We reason that, while studying is generally beneficial, it is relatively more appropriate for an individual student to study when their efforts are supported by a professor with greater skill. We argue that is a "normatively" good decision to study for a test in a high quality course. Thus, we expect the beneficial effects of process-focused thought to be contingent on both motivation of the decision maker and the appropriateness of the relevant action in the particular context.

Method

Design, Participants, and Procedure. This study is a 2 x 2 x 2 between-subjects design, with thought-focus (outcome-/process-focus) and appropriateness of action (best course vs. worst course randomly presented, with course names based on self-identified course ratings) manipulated between subjects. Motivation to elaborate (expected potential grade in the course, self-identified) was a measured independent variable. Stimuli were presented and responses collected via a Visual Basic ® computer program run in a university computer lab. Participants received simulation instructions for either their best course or their worst course that semester and were forced to simulate for approximately one minute. Then, they answered a series of opinion questions using 0 to 100 sliding scales and read a debriefing statement. The study was embedded in a larger experiment which yielded 195 respondents.

Independent Variables. We manipulated process- versus outcome-focus between subjects with the simulation instructions given in appendix A. Action appropriateness was manipulated by having participants fill in their favorite course for that semester as well as their least favorite course. Participants were then randomly presented with one or the other course for the simulation exercise. Finally, we measured participants' expected grade in the course as a continuous measure of their motivation to elaborate during the simulation exercise, consisting of two scale items: "What grade do you expect on the next test in this course?" and "What grade would you expect if you studied as hard as you possibly could for the exam (that is, ignoring all other courses and responsibilities)?" $\alpha = .78$).

Dependent Measures. After simulating about their course, students were asked a three item scale to assess the extent to which they planned on studying for their next exam, our key dependent variable ("My intentions for this course are to study" anchored by zero hours/20 hours, "How much do you plan to study for the next exam in this course?" anchored by much less than other classes/much more than other classes, and "Compared to other students, I intend to study" anchored by much less than other students/much more than other students, $\alpha = .88$).

Manipulation Checks. Process focus was checked with two items: "While simulating, how much did you think about incorporating the act of studying into your daily routine?" and "While simulating, how much did you think about studying on a daily basis?" ($\alpha = 87$). Outcome focus was also checked with two items: "While simulating, how much did you think abou thte benefits you would gain from studying?" and "How much did you think about the results of achieving a good grade?" ($\alpha = .49$). Appropriateness of action was checked with three items assessing the quality of the professor in the course ("The professor for this course is an excellent instructor," "I am learning a lot from the professor for this course," and "I consider the professor

of this course to be a very good teacher," all anchored by strongly disagree/strongly agree, α = .96). A single item controlling for other aspects of course quality ("The book and other outside materials in this course are very good") was used as a main effect covariate in all analyses (it did not interact with other variables).

Results

Manipulation Checks. In the full model used to test our hypotheses below, we find a marginally significant main effect of our simulation focus instructions on both our process manipulation check ($F(1, 194) = 2.89$, $p < .09$) and our outcome manipulation check ($F(1, 194) = 3.49$, $p < .06$), in the expected directions (see table 1). Participant assessed quality of their professor was significantly higher for the best course, compared to the worst course ($F(1, 194) = 118.04$, $p < .001$, best = 82.23, worst = 44.50), supporting the notion that our worst versus best course manipulation manipulates the appropriateness of an individual student to study, depending on whether or not their efforts are supported by a professor with relatively high versus low skill.

Insert table 1 about here

Hypotheses 1 and 2. Hypothesis 1 predicts that action appropriateness (operationalized here through self-reported course quality) will differentially affect plan to study under outcome-focused thought for participants who are highly motivated to elaborate (here, participants who expect a relatively high grade in the course), but this effect will not be present under conditions of low motivation to elaborate. On the other hand, hypothesis 2 predicts that high motivation to elaborate will not be necessary to achieve a differential effect of action appropriateness under

conditions of process-focused thought. As expected, we find a three-way action appropriateness by thought-focus by motivation to elaborate interaction for plan to study ($F(1, 194) = 5.74$, $p < .05$). As can be seen in figure 1 (with motivation to elaborate dichotomized for graphical representation), we find that the high motivation to elaborate participants differentiate between strong versus weak action appropriateness under both conditions of outcome- and process-focused thought (hypothesis 1; the only marginally significant contrast is that for best vs. worst course, outcome-focus; $F(1, 194) = 3.02$, $p < .08$). On the other hand, low motivation to elaborate participants differentiate between strong versus weak action appropriateness only under conditions of process-focused thought (hypothesis 2; contrasts show that the process-focus, best course mean is significantly higher than process-focus, worst course mean; [$F(1, 194) = 4.28$, $p < .05$], and marginally significantly higher than the other two conditions [Fs$(1, 194) >= 2.90$, ps $< .09$]).

Insert figure 1 about here

Discussion of Results

Experiment 1 supports our assertion that under conditions of low to moderate levels of elaboration motivation (operationalized as expecting a poor grade in the course), students are more sensitive to action appropriateness when given process-focused (vs. outcome-focused) instructions. We further demonstrate that the action appropriateness by thought-focus interaction is not found under conditions of high motivation to elaborate (students expecting a high grade in the course). Our results demonstrate that consumers who are not motivated to elaborate but engage in process-focused thought show more sensitivity to course quality than do such low-motivation consumers who engage in outcome-focused thought. In this way, process-focused

thought leads to more discerning consumer judgments. This differential advantage of process-focused thought is not found for consumers who are likely to be motivated to process; due to extensive elaboration, highly motivated consumers differentiate action appropriateness in the outcome-focused condition as well. These results indicate that process-focused thought represents a relatively unique way to improve consumer judgments in those cases where consumers are unlikely or unable to engage in high levels of elaboration. In study 2, we extend these findings to a non-student population, in the context of print advertisements for health related products (vitamins and a new, healthier type of bread).

EXPERIMENT 2

In this study, we examine the interactive effect of process versus outcome thought-focus and argument strength on behavioral intentions, in the context of print advertisements for fictitious vitamin ("Millennium Vitamins") and bread products ("Meta-Grain Whole Grain Oat Bran Bread"). We also used measured need for cognition to test our hypotheses that high motivation to elaborate leads to differentially discerning judgments, dependent on thought-focus. Finally, we used demographically diverse sample and a web-based data collection panel in order to extend our findings from Experiment 1 to a non-student sample.

Method

Design, Participants, and Procedure. This study is a 2 x 2 x 2 mixed design, crossing product (vitamins/bread, within subjects) with two between-subjects factors, thought-focus (outcome-/process-focus) and argument strength (strong vs. weak). The model also included need for cognition as a measured independent variable. Order (vitamin first/bread first) was also

counterbalanced between subjects but was dropped from the model due to lack of effects and will not be discussed further. The experiment was administered via a Web-based facility for fielding online research. A total of 358 respondents responded to a randomized invitation to participate from an online panel, ultimately yielding a usable sample of 213 participants, after subjects were eliminated for non-consent, deficits in the English language, failure to complete study questions, or too rapid (more than 2 standard deviations below average study time) / random responding. Up to three e-mail notifications over a one week period were used to secure cooperation, and the chance to win one of three drawings for a $100 prize served as an incentive. Respondents were directed to a login screen where they were provided with a consent form. Those participants who consented to participate in the study received pre-ad processing instructions (relevant to each participant's thought-focus), viewed a one-page print advertisement (for vitamins or for bread), answered opinion questions using 1 to 100 sliding scales, started the process again for their second print advertisement, and finally read a debriefing statement. Half the participants completed the individual difference scales before viewing the first ad, while the remainder completed them after viewing both ads (order was found to be non-significant).

Independent Variables. We manipulated process- versus outcome-focus between subjects using the pre-ad thought-focus instructions in appendix B. We manipulated argument strength between subjects by varying the credibility and strength of the 'scientific' claims made in each ad (see appendix C for ad text). We used a reduced form of Cacioppo and Petty's (1982) need for cognition scale, consisting of two items: I don't like to have to do a lot of thinking and I try to avoid situations that require thinking in depth about something ($\alpha = .76$, averaged to form one continuous variable). This extremely brief scale would be simple to implement in interview or interactive web-based interventions.

Dependent Variable. After viewing the print ad on the computer screen, participants completed the primary dependent variable, behavioral intentions (BI), measured by averaging two 1 to 100 sliding scale questions: how likely is it that you would buy this product, anchored by definitely would not/definitely would, and how likely would you use a free sample of this product, anchored by not at all likely/very likely ($\alpha = .75$).

Manipulation Checks. Three items measured the extent to which participants' simulations focused on the process of using the vitamin or bread products: "While viewing the ad, how much did you think about incorporating the product into your daily routine?" "While viewing the ad, how much did you think about using the product on a daily basis?" and "While viewing the ad, how much did you think about the possibility of changing your current habits or behavior in order to use the product effectively?" ($\alpha = .91$). Two items measured the extent of outcome-focused thought: "Please indicate how much you thought about the end benefits or results of the vitamins while you were viewing the ad," and "While viewing the ad, how much did you think about how you would feel after you had taken the vitamins?" ($\alpha = .80$). Finally, two items measured the strength of the arguments presented in the ads: "Please rate the strength of the reasons that the ad gave for buying the product" anchored by very weak/very strong, and "Please rate the reasons given in the ad (as a set) for why you should buy the product" anchored by not at all convincing/very convincing, $\alpha = .94$).

Results

Manipulation Checks. In the full model used to test our hypotheses below, we find a significant main effect of our simulation focus instructions on our process manipulation check ($F(1, 205) = 7.12$, $p < .01$; process = 60.80, outcome = 52.14), but not on our outcome

manipulation check ($F(1, 205) < 1$, *n.s.*). We find that both conditions think about the outcomes (outcome = 70.51, process = 70.03), consistent with previous work in this area (Escalas and Luce 2003, 2004), which finds that it is the addition of process-focused thoughts that drives the key effects, as opposed to a reduction in outcome-focused thought. Ad arguments were rated as marginally significantly higher in the strong (66.84) versus the weak ad condition (61.87; $F(1, 205) = 3.25$, $p < .07$).

Hypotheses 1 and 2. Hypothesis 1 predicts that argument strength will differentially affect BI under outcome-focused thought for participants with high need for cognition, while hypothesis 2 predicts that argument strength will be differentially persuasive with process-focused thought under conditions of low need for cognition. As expected, we find a three-way argument strength by thought-focus by need for cognition interaction for behavioral intentions ($F(1, 205) = 3.87$, $p = .05$). A graphical representation of our results, dichotomizing the need for cognition variable, is provided in figure 2. We find a differential effect of argument strength in the *process* condition for participants who are low in need for cognition (a priori contrast: $F(1, 209) = 2.67$, $p = .05$ [one-tailed]). (These results generalize across the two products: vitamins and bread [we find a main effect of product, such that the bread ad was more persuasive than the vitamin ad, but no interactive effects].) The fact that we were able to predict the occurrence of these beneficial process-focused effects using a brief scale measure of need for cognition suggests that it would be possible to target interventions based on process-focused mental simulation to the appropriate (i.e., low in trait need for cognition) sample. Conversely, we can also identify consumers for whom outcome-focused thought should generally result in heightened sensitivity to argument strength and thus improved decision making.

Insert figure 2 about here

Discussion of Results

Our experiment supports our assertion that under conditions of high levels of motivation to elaborate (operationalized as high need for cognition), consumers are more sensitive to argument strength when given outcome-focused instructions (a priori contrast: $F(1, 209) = 6.59$, $p < .01$; hypothesis 1). We further demonstrate that the argument strength by thought-focus interaction is reversed under conditions of low motivation to elaborate (i.e., participants with low need for cognition; hypothesis 2), such that process-focused thought leads to more discerning consumer judgments.

DISCUSSION

Our research shows that focusing on the process of using a product can improve consumer decision quality in common, low-motivation to elaborate settings. Thus, 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.”

Our finding that process-focus can increase sensitivity to argument strength parallels the findings of social psychology on mental simulation in that a process-focus appears to make participants better planners, students, etc. However, it also extends these findings in that it shows that process-focused appeals are actually not beneficial for high-motivation consumers. Thus, our research shows that high motivation to elaborate is an important boundary condition for the beneficial effects of process-focused though. Fortunately, it is possible to predict involvement based on simple trait measures such as need for cognition and situational factors, such as product involvement.

Our findings also extend the work in social psychology by demonstrating that process-focused thought can specifically help decision makers distinguish between situations where behavioral change is more or less attractive overall. While process-focused mental simulation leads individuals to be better students simply by convincing them to study more (Pham and Taylor 1999), it gets low-involvement individuals to be better consumers not by convincing them to buy more but by convincing them to buy *more* when products are recommended by strong reasons and to buy *less* when products are recommended by weak reasons. Importantly, it does so without requiring a change in underlying involvement or propensity to elaborate. This increased sensitivity to argument strength per se (as opposed to simply an increased or decreased propensity to buy) is important because consumer welfare is generally increased by the purchase of appropriate (needed, well-rated, etc.) items rather than being increased by a simple dictate to buy less (or more).

Additionally, we identify when instructions to think “harder” will be effective: in those cases where consumers are highly motivated to process and focus on the outcome or benefits of using a product. This is consistent with standard findings to the effect that consumers are

sensitive to argument strength (and similar constructs) when more motivated to process (given ability). Process-focused thought appears generally less beneficial than outcome-focused thought when motivation is high, suggesting that interventions leveraging the type of though must be matched to the motivation level of the segment. In fact, in study 2, we find that under conditions of high involvement, process-focused thought reduces the differential effect of strong versus weak arguments found in the low motivation to elaborate conditions (we also find a slight directional trend that is not statistically significant, but is consistent with these results, in Study 1). . One possible mechanism for this apparent distraction effect is narrative transportation, where individuals become immersed in a story and engage in lower levels of critical analysis (Green and Brock 2000).

Directions for Future Research

Future research could explore the idea that under conditions of high elaboration, consumers are transported by their process-focused thoughts and thus distracted from ad arguments. This implies that narrative transportation may lead to poorer choices under conditions of high involvement. While our pattern of results is consistent with this assertion, our study is limited by a lack of thought protocols or other process measures exploring the underlying processes at work under high involvement. Escalas (2007) finds that not all individuals will be equally likely to be transported by advertisements designed to evoke narrative self-referencing. In particular, consumers who are skeptical about the persuasive intentions of the advertiser are more likely to be critical of an ad and evaluate it in a more analytical fashion, rather than becoming caught up in, and hence transported by, advertisements. This is true for consumers who have a general tendency to be skeptical about advertising and also in those cases where

consumers evaluate the ad in a critical fashion due to a manipulation of situational factors. Escalas (2007) finds that in those situations where a consumer processes an ad with skepticism, narrative transportation does not occur, and consumer thoughts tend to be a critical analysis of the ad. Thus, ad skepticism provides one avenue to explore in order to correct for the detrimental effects of narrative transportation on consumer judgments in high involvement conditions.

APPENDIX A

PROCESS- VERSUS OUTCOME-FOCUS

SIMULATION INSTRUCTIONS FOR STUDY 1

Process-Focused Instructions

We would now like you to visualize yourself studying for the next exam in such as way that would lead you to obtain a high grade for the exam. Imagine how you would study to get a high grade on your next exam in this course. It is very important that you see yourself actually studying and have this picture in your mind. Please take a minute to visualize yourself studying for the exam…

Outcome-Focused Instructions

We would now like you to visualize yourself getting a high grade on the next exam in this course and imagine how you would feel. It is very important that you see yourself actually getting a high grade on the next exam and have that picture in your mind. Please take a minute to visualize receiving a high grade on the exam…

APPENDIX B

PROCESS- VERSUS OUTCOME-FOCUS

PRE-AD SIMULATION INSTRUCTIONS FOR STUDY 2

Process-Focused Instructions

While you are looking at the advertisement on the following screen, we would like you to imagine the PROCESS of using the vitamin being advertised. As you imagine, focus on how you would incorporate the vitamins into your daily routine. Imagine how you would feel if you took these vitamins EVERY DAY. That is, focus on the process of using the vitamins -- focus on how you would feel as you used the advertised product.

Remember, please focus on the process of using the vitamins while you view the ad.

Outcome-Focused Instructions

While you are looking at the advertisement on the following screen, we would like you to imagine the END BENEFITS that you would receive from the vitamin being advertised. As you imagine, focus on the benefits you would gain from using the vitamins. Imagine how you would feel if your health improved as a result of the vitamins. That is, focus on the end result of using the vitamins -- focus on how you would feel as a result of your using the advertised product.

Remember, please focus on the end benefits of using the vitamins while you view the ad.

APPENDIX C
AD TEXT FOR STUDY 2

Vitamin Arguments: Strong [*Weak*]

It's often hard to keep up with all the pressures of modern life. Millennium is a new vitamin designed especially for you. Studies run at Harvard University Medical School prove that Millennium increases energy and mental concentration without harmful side effects. [*Studies run in Millennium's laboratories indicate that Millennium may increase energy and mental concentration for some users with limited side effects.*] Millennium is a healthy way to improve your quality of life!

Bread Arguments: Strong [*Weak*]

Meta-Grain has developed a new recipe for whole grain oat bran bread that contains more oat bran than any other commercial bread available [*more oat bran than it had before*.] Studies at Harvard Medical Center show that regular consumption of whole-grain foods is associated with a 26% risk reduction of coronary heart disease. In general, soluble fiber (of which oats are a good source) is the dietary fiber most linked to a reduction of cholesterol levels. American Heart Association studies show that an additional 20 grams of oat bran per day can successfully lower cholesterol. [*Studies at Meta-Grain labs show that regular consumption of whole-grain foods might be associated with a lower risk of coronary heart disease. In general, soluble fiber (of which oats are a good source) is a dietary fiber that may be linked to a slight reduction of cholesterol levels. Other studies show that an additional 20 grams of oat bran per day might successfully lower cholesterol in some people.*] Meta-Grain bread is a delicious way to improve your health!

TABLE 1

SIMULATION FOCUS MANIPULATION CHECK RESULTS

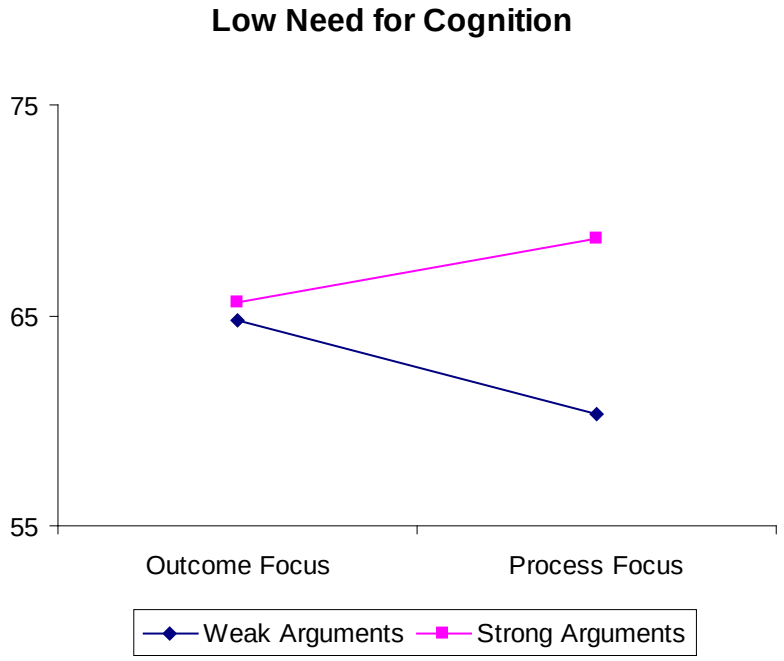
	Process Measure	Outcome Measure
Process Focus Condition	62.65	70.51
Outcome Focus Condition	56.01	75.49

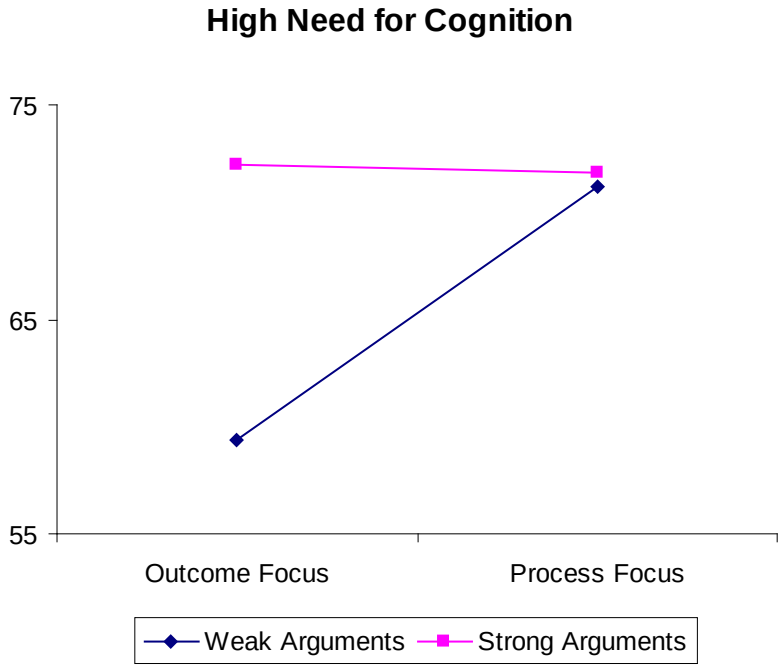
FIGURE 1

STUDY 1 RESULTS:
PLAN TO STUDY FOR NEXT EXAM

FIGURE 2

STUDY 2 RESULTS:
BEHAVIORAL INTENTIONS (VITAMINS & BREAD)





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