

ABSTRACT

Title of Document: FROM ONE TO MANY: TOWARD AN UNDERSTANDING OF MULTIPLE MEANS AND MULTIPLE GOALS

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Consumers often use products, services, and behaviors to help them pursue their multiple goals. They eat fresh produce to be healthy, buy suits to look professional at work, and buy movie tickets to relax and have fun. These goal-related products and services are collectively referred to as “means” to goal attainment (Kruglanski et al. 2002).

Prior research to-date has primarily focused on the use of a single means to pursue a single goal. This one-to-one relationship between a single means and a single goal, however, is an overly simplistic perspective. Consumers typically utilize *multiple means* for goal pursuit, and have *multiple goals* they wish to pursue at the same time. My dissertation adopts this more realistic framework for understanding how consumers use means to pursue their goals. In three essays I explore how relationships among *multiple means* and *multiple goals*, which I define in terms of variety, impact consumer motivation.

The first two essays of my dissertation examine how the degree of variety among consumers' multiple means impacts goal-directed motivation. In Essay I, I consider how the motivational impact of having more (vs. less) varied means evolves as consumers move from perceiving low to high progress towards goal attainment. Relatedly, in Essay II I consider how adopting a near versus far future time horizon for goal pursuit moderates the impact of variety among means on motivation. Finally, Essay III examines how perceived variety among consumers' multiple goals influences evaluations of means to goal attainment, and how incidental mood influences such perceptions.

My research has a number of implications for marketers. Highly motivated consumers are more likely to make repeated purchases within goal-related product categories, and also tend to have higher willingness to pay. These findings suggest how marketers might strategically manage consumer motivation in order to achieve such desirable outcomes. Perceptions of variety, among means and among goals, are malleable. Marketers may thus encourage consumers to perceive their product offerings, or associated goals, as more or less varied depending on consumers' position relative to goal attainment, their adopted time horizon for goal pursuit, and presence use of incidental mood appeals.

FROM ONE TO MANY: TOWARD AN UNDERSTANDING OF MULTIPLE
MEANS AND MULTIPLE GOALS

By

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Chapter 1: Introduction

Consumers often use products, services, and behaviors to help them pursue their multiple goals. They eat fresh produce to be healthy, buy suits to look professional at work, and purchase movie tickets to relax and have fun. These goal-related products and services are collectively referred to as “means” to goal attainment (Kruglanski et al. 2002).

Prior research to-date has primarily focused on the use of a single means to pursue a single goal. People striving to be fit, for instance, might use a treadmill as a means to achieving this goal (see Fishbach and Ferguson 2007; Zhang et al. 2007). This one-to-one relationship between a single means and a single goal, however, is an overly simplistic perspective. Consumers typically utilize *multiple means* for goal pursuit. In addition to a treadmill, for instance, consumers might use free weights or take group exercise classes to help them get fit. They may also buy certain supplements, articles of athletic clothing, or hire a personal trainer; all of these products and services are means to attainment of a fitness goal. Together, the multiple means consumers use for goal pursuit constitute their set of means to goal attainment.

In addition to having multiple means, consumers typically have not one, but *multiple goals* they wish to pursue at the same time. Besides wanting to be fit, for instance, consumers may have goals related to professional success, saving money, social relationships, and happiness. Likewise, the multiple goals consumers wish to pursue at the same time constitute their set of goals.

Moving from *one* means and goal to *many* means and goals has important implications for understanding goal-directed motivation. When the focus is on *one* (means or goal), potential influences on goal-directed motivation are restricted to direct effects of the single means or the single goal (e.g., higher commitment to the goal corresponds to higher motivation; Fishbach and Dhar 2005). Adopting a focus on *many*, however, introduces an additional consideration: relationships between consumers' multiple means and between their multiple goals. Beyond the direct impact of each individual means or goal on motivation, the relationships between consumers' set of means and set of goals may also influence motivation.

In my dissertation, I explore how the relationships among *multiple means* and *multiple goals* impact consumer motivation. I focus on consumer motivation specifically because highly motivated consumers are more likely to make repeated purchases within goal-related product categories, and also tend to have higher willingness to pay. Thus, from the perspective of marketers, motivated consumers are desirable consumers.

I define relationships between consumers' multiple means and multiple goals in terms of variety. Sets of means and sets of goals may both differ in degree of variety, ranging from relatively similar means (goals) to relatively different means (goals). A "high variety" set of means to a fitness goal, for instance, might consist of protein bars, free weights, and running shoes; a "low variety" set might consist of three different flavors of protein bars. A "high variety" set of goals might consist of goals that serve different ends; for instance, goals related to physical fitness, getting a raise, and having a baby. At the same time, a "low variety" set of goals might consist

of goals that serve a single overarching end, like goals related to physical fitness, healthy eating, and weight loss. Sets of means and goals may also differ in perceived variety, holding actual variety constant. One could, for instance, focus on how goals related to physical fitness, healthy eating, and weight loss are different from one another versus similar to one another; these goals would seem more varied in the former case than the latter.

Variety itself is by no means a new construct; in fact, it has been the subject of decades of research by marketing scholars. Variety has not, however, been considered in the important and everyday context of consumer goal pursuit. By incorporating insights from prior work on variety to understanding issues surrounding use of *multiple means* and pursuit of *multiple goals*, my research offers novel insight into how consumers use multiple means to pursue their multiple goals.

Three essays investigate how the degree of variety among sets of means and sets of goals impact consumer motivation. Across essays I operationalize degree of variety both by altering actual variety (e.g., two different sets of means to a fitness goal) and by manipulating perceived variety (e.g., by directing individuals to focus on similarities vs. differences).

Essays I and II focus on *multiple means*, identifying moderators of the relationship between variety and motivation. Essay I (*JCR*, April 2012) investigates how the impact of variety among means on motivation changes dynamically over the course of goal pursuit (i.e., as consumers move from low to high progress toward goal attainment). Prior work suggests at early stages of goal pursuit, consumers are uncertain about their ability to attain their goal (Atkinson 1957; Bandura 1997; Locke

and Latham 1990; Zhang and Huang 2010). Having a more varied set of means reduces such uncertainty by suggesting there are multiple ways to achieve the goal. At more advanced stages of goal pursuit, in contrast, consumers are concerned with reducing the remaining discrepancy between where they currently stand relative to goal achievement (Carver and Scheier 1998; Huang and Zhang 2011; Locke and Latham 1990; Zhang and Huang 2010). Having less variety among means enables consumers to stay focused on goal pursuit by minimizing distractions.

Based on this reasoning, I make the following predictions: 1) among consumers who perceive they have made low progress towards goal attainment, more varied sets of means will increase motivation, 2) among consumers who perceive they have made high progress towards goal attainment, less varied sets of means will increase motivation. Five studies provide support for these predictions, providing suggestive evidence consistent with the proposed underlying processes.

Essay II (*JCR*, February 2013) extends Essay I by considering a different moderator of the impact of variety among means on motivation: the temporal horizon adopted for goal pursuit. I explore how the impact of varied (vs. similar) sets of means on motivation depends on whether consumers focus on goal pursuit in the near future (e.g., within the next week) versus far future (e.g., a week in six months). Recent work on temporal construal (i.e., considering the near versus far future) finds that consumers processing information at a high level of construal naturally attend to similarities among stimuli, whereas consumers processing information at a low level of construal naturally attend to differences among stimuli (Förster 2009). In the context of goal pursuit, these findings suggest consumers planning to use multiple

means to help them pursue a goal in the near future will more readily process differences among the means. Consumers planning to use multiple means to help them pursue a goal in the far future will, in contrast, more readily process similarities among the means. Because there are more differences (similarities) among relatively varied (similar) sets of means, varied sets of means should facilitate identification of differences, whereas similar sets of means should facilitate identification of similarities.

I thus predict: 1) varied sets of means will increase motivation for consumers focused on goal pursuit in the near future, 2) similar sets of means will increase motivation for consumers focused on goal pursuit the far future. Six studies provide support for these predictions, demonstrating that temporal compatibility between varied versus similar means drives our results.

Essay III considers *multiple goals*, and the impact of perceiving goals as more versus less varied on evaluations of means utility for multiple-goal pursuit. Prior work suggests consumers with multiple goals benefit from using means that help them pursue several goals at the same time (i.e., “common means,” Chun and Kruglanski 2005; Köpetz et al. 2011; Kruglanski et al. 2002). Green tea, for instance, is useful for pursuing both health goals and professional goals (i.e., its antioxidants promote good health and its caffeine enhances attention); drinking green tea would thus allow consumers to pursue their health and professional goals at the same time.

Despite their advantages, means simultaneously useful for multiple goals are not always available to consumers. One key factor in determining their availability is the similarity, or variety, among consumers’ multiple goals. More similar goals share

a greater number of common means (Köpetz et al. 2011). Goals to be healthy and get in shape, for instance, share more common means than goals to be healthy and do well in school. Consumers pursuing objectively different (or varied) goals therefore have fewer opportunities to use common means. Extending this research, I propose that holding all else constant, perceiving goals as more different (vs. similar) should hamper consumers' ability to recognize means as useful for multiple-goal pursuit. Factors that influence perceived inter-goal similarity, then, may influence consumers' evaluations and propensity to choose means useful for pursuing multiple goals.

I propose that merely being in a positive mood will lead consumers to spontaneously see their goals as more different. Multiple-goal pursuit often requires tradeoffs. Making tradeoffs prompts consumers to focus on differences, or unique features, of items under consideration (Brenner, Rottenstreich, and Soon 1999; Dhar and Sherman 1996; Gilbert, Giesler, and Morris 1995; Nosofsky 1986; Tversky 1977). I reason that the tradeoffs implicit in multiple-goal pursuit lead consumers to focus on differences between their goals. Positive mood, then, increases adoption of this processing cue (e.g., Hunsinger, Isbell, and Clore 2012; Murray et al. 1990; Showers and Canter 1985), making consumers perceive their goals as more different from one another. Because relatively different goals are less likely to share common means (Köpetz et al. 2011), perceiving goals as more different should lead consumers to evaluate means as less useful for multiple-goal pursuit. I thus predict positive mood should: 1) make consumers perceive more differences between their multiple goals; and 2) make them perceive means as less useful for multiple-goal pursuit. Five studies support these predictions, demonstrating the impact of positive mood on

increasing perceived differences between goals drives lower means utility evaluations.

In sum, in three essays I explore how relationships among sets of means and sets of goals impact consumer motivation, defining these relationships in terms of variety. Essays I and II identify moderators of the relationship between variety among means and motivation (goal progress and temporal horizon, respectively). Essay III considers antecedents of the perceived variety among goals, as well as consequences of these perceptions for evaluation and choice of means useful to multiple-goal attainment.

In the next three chapters I will describe my dissertation essays in greater depth. Each chapter will review relevant literature and offer unique predictions regarding how variety among means (Chapters 2 and 3) and goals (Chapter 4) impact consumer behavior. I describe empirical support for these predictions and discuss implications for consumers and marketing practitioners.

Chapter 2: The Dynamic Impact of Variety among Means on Motivation

Many of consumers' choices are driven by their goals. For example, consumers go to the gym because they care about being fit and have family dinners because they wish to maintain strong interpersonal relationships. In addition to engaging in goal-congruent behaviors, consumers often use products to help them advance towards goal attainment. Most goals are associated with multiple products, or "means," to goal attainment (Kruglanski et al. 2002). Together, these goal-related products can be thought of as constituting a set of means to goal attainment. To illustrate, consider Joe, who has an active fitness goal and who uses protein supplements to help him pursue this goal. The set of protein supplements that Joe uses as means to his fitness goal may include protein bars, protein powders, protein gels, etc., or any combination of these products.

Sets of means to goal attainment may differ in terms of the variety of products contained within the set. For instance, a set of means may be less varied, consisting of a set of relatively similar products that only differ on a few attributes, or may be more varied, consisting of a set of diverse products that differ along multiple attributes. Returning to Joe and his protein supplements, a less varied set of protein supplements may consist of PowerBar protein bars of various flavors (peanut butter, chocolate chip, etc.) whereas a more varied set of protein supplements may consist of assorted protein supplements that differ in terms of flavor, form, and brand (vanilla whey

protein powder, strawberry protein bites, etc.). Might the variety in Joe's set of means to goal attainment affect his motivation to pursue his fitness goal?

In the present research we examine how variety among a set of means impacts motivation to pursue the associated goal. Building on existing work on variety, goal pursuit, and motivation, we propose that the variety among means to goal attainment will affect consumers' motivation to pursue their goals. Further, we suggest that the relationship between variety and motivation will depend on the amount of progress made towards goal attainment. We propose that when consumers are far from goal attainment, they will be more motivated to pursue a goal when there is more variety among a set of means to goal attainment. However, when consumers are close to goal attainment, we propose they will be more motivated to pursue a goal when there is less variety among a set of means to goal attainment. In the remainder of the article, we first review relevant literature on variety and motivation, from which we develop our predictions regarding the relationship between variety among means to a goal and motivation. Next, we present and discuss a series of five studies that support our hypotheses and conclude with a discussion of the theoretical and managerial implications of the findings.

VARIETY AND MOTIVATION

Consumers often use means to help them pursue their goals. Generally speaking, a means to goal attainment may be any activity, event, or circumstance perceived as likely to contribute to attainment of that goal (Kruglanski et al. 2002;

Markman, Brendl, and Kim 2007; Shah and Kruglanski 2003). For any given goal, there are typically multiple means that would facilitate its attainment (Kruglanski et al. 2002). The sum total of all of the means related to a single goal is termed the goal's equifinality configuration in the goal systems literature (Kruglanski et al. 2002), and any subset of a goal's equifinality set may constitute a consumer's idiosyncratic set of means to goal attainment.

The presence or availability of means to goal attainment has been found to impact motivation to pursue the relevant goal. Because means and goals are associatively linked, properties associated with means to goal attainment may transfer to the goal itself (Fishbach, Shah, and Kruglanski 2004; Kruglanski et al. 2002; Shah and Kruglanski 2003). For example, when primed with the goal of food enjoyment, the positive affect associated with this goal transferred to eating high-caloric food, its means to attainment (Fishbach et al. 2004). Properties of sets of means to goal attainment may also transfer to the related goal. For instance, the size of a goal's equifinality set has been found to affect goal-directed motivation; participants felt more committed to a goal when they had a larger (versus smaller) set of available means to goal attainment, which in turn motivated them to exert more effort in goal pursuit (Kruglanski, Pierro and Sheveland 2010).

Though previous research has explored some instances where means to goal attainment impacts motivation, little is known about how the amount of *variety* within a set of means to goal attainment may affect motivation. Just as sets of means may differ in number, they may also differ in terms of amount of variety in the set. For example, variety in a set of means may range from high, consisting of products that

simultaneously differ along multiple attributes (i.e., form and function; Gourville and Soman 2005), to low, consisting of sets of relatively similar products (e.g., that only differ on a single attribute, such as flavor). We propose that the variety among a set of means will affect motivation to pursue the associated goal. Specifically, we predict that having more variety in a set of means will have a positive impact on motivation when consumers are far from their goal, but less variety in a set of means will have a positive impact on motivation when consumers are close to their goal.

Our reasoning is as follows. When far from goal attainment, consumers may feel uncertain about the best way to approach their goal. They also may anticipate that their preferences among means to goal attainment may change over time. Having more (vs. less) variety among a set of means to goal attainment may benefit these low progress consumers by helping to reduce these sources of uncertainty associated with goal pursuit. Indeed, one reason that consumers seek variety is to allow for potential changes in future preferences (Simonson 1990). Because they have further to go before accomplishing their goals, low progress consumers may also experience uncertainty if they anticipate satiating on a particular means to goal attainment. By facilitating “means-switching,” the presence of variety among means reduces the potential of satiation, minimizing this source of uncertainty (Kruglanski and Jaffe 1988; Raju 1980; Redden 2008; Simonson 1990). Thus, having more (vs. less) variety in a set of means should do more to reduce the uncertainty associated with goal pursuit when goal progress is low. Based on this intuition, we propose that consumers who have made low goal progress will be more motivated to pursue a goal when they have more variety among means to its attainment.

H1: When progress towards a goal is low, a more (vs. less) varied set of means will increase motivation to pursue the goal.

In contrast, the benefits of having variety among means to goal attainment for consumers close to goal attainment are less clear. Because they are close to goal attainment, these high progress consumers are less likely to feel uncertain about their future preferences among means to goal attainment. Likewise, they may also be less concerned with the possibility of satiating on any particular means. Thus, the benefits of having variety among means to goal attainment experienced by low progress consumers may not be as relevant to high progress consumers as they are to low progress consumers.

Further, the presence of variety is not without its costs. Having too much variety might complicate goal pursuit; indeed, “too much variety” has been found to increase decision conflict, the incidence of choice deferral, and post-choice dissatisfaction (Chernev 2003; Dhar 1997; Diehl and Poynor 2010; Gourville and Soman 2005; Iyengar and Lepper 2000). Instead of benefiting from variety, high progress consumers may be overwhelmed by having a broader array of means to goal attainment and desire instead to reduce uncertainty about the most direct way to reach their goal. As they are farther along the path toward achieving their goals, these consumers will likely be more concerned with staying focused on reaching their goal than having a wide set of options to pursue the goal. Having more variety among means to goal attainment suggests a greater number of distinct paths to reach the goal,

which may dilute the perceived degree of focus within the set of means (Berger, Draganska, and Simonson 2007). Without clear benefits of variety among means to offset these costs, the downsides of variety will likely weight more heavily on consumers who have made high (vs. low) progress towards goal attainment. Therefore, we propose that these high progress consumers will be more motivated to pursue a goal when there is less variety among its means to attainment.

H2: When progress towards a goal is high, a less (vs. more) varied set of means will increase motivation to pursue the goal.

We test our propositions in a series of five studies. In studies 1a and 1b we test our basic interaction prediction between variety among means and goal progress on motivation and find support using actual and perceived variety. Next, in study 2 we consider the most extreme case of low variety – a set of identical products that serve as means – and its effect on motivation. In studies 3 and 4 we show that the dynamic impact of variety among means on motivation extends to real behavior, using persistence and performance on a goal-related task in study 3 and actual willingness to pay for a set of products in study 4. Across these studies we obtain consistent support for our two key hypotheses regarding the impact of goal progress and variety among means to goal attainment on motivation.

STUDY 1A: EFFECT OF PRIMED PROGRESS AND MEANS VARIETY

The purpose of study 1a was to provide an initial test of how goal progress and variety among means interact to impact motivation to pursue the focal goal. We manipulated both variety in the set of means and perceived goal progress, and measured the impact on motivation (commitment and effort devoted to goal pursuit; Fishbach and Dhar 2005).

Design and Procedures

Eighty-one undergraduate students at the University of Maryland were randomly assigned to a 2 (goal progress: low vs. high) by 2 (variety among means: low vs. high) between-subjects design.

First, participants were asked whether “being physically fit is a goal that you have” (yes-no). Participants then received the goal progress manipulation. Specifically, goal progress was manipulated by drawing participants’ attention to their own frequency of exercise (i.e., as one means to meeting a goal of being physically fit): participants were asked how many times they exercised in the past week and when they last exercised (i.e. “How many times have you exercised in the past seven days?”; “When was the last time that you exercised?”). Perceptions of goal progress were manipulated by varying the frequency of response options to these questions. Participants in the low goal progress condition gave their responses on high-frequency scales (i.e., response options “5 or fewer”, “6-7”, “8-9”, “10 or more”

in response to the question, “How many times have you exercised in the past week?”), designed to make participants feel as if they had made low progress toward their goal. Participants in the high goal progress condition gave their responses on low-frequency scales (i.e., response options “0”, “1-2”, “3-4”, “5 or more” in response to the question, “How many times have you exercised in the past week?”), designed to make participants feel as if they had made high progress toward their goal.

Next, participants were shown a set of six protein supplements and asked to choose three that they would like to try after their next three workouts, to help them achieve their fitness goal. The variety of these protein supplements was manipulated by varying the similarity of products in the set. Half of participants viewed a set of six PowerBar protein bars that varied only in flavor (low variety set) whereas half viewed a set of six assorted protein supplements that varied in form, brand, and flavor (high variety set). Participants were asked to rate the similarity of the items within the set (“As a set, how similar were the protein supplements that you saw on the previous page?”) on a 7-point scale (1 = not at all similar, 7 = very similar), as well as their commitment to the goal (“How committed are you to your fitness goal?”) and intentions to devote effort to goal pursuit (“How much effort are you willing to devote towards achieving your fitness goal?”) also on 7-point scales (1 = not at all committed, not a lot of effort, 7 = very committed, a lot of effort).

Results

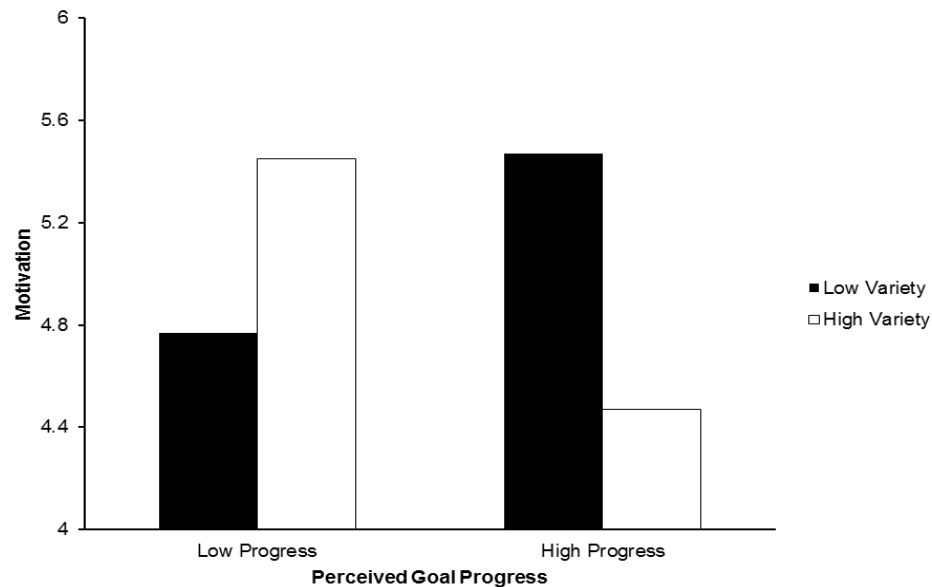
Manipulation Checks. Only those participants who reported having a fitness goal (i.e., responded “yes”; $N = 79$) were included in further analyses. A 2 (goal progress) x 2 (variety among means) ANOVA on perceived similarity of the items within the set revealed only a main effect of variety ($F(1,75) = 4.61, p < .05$). As expected, the items within the low variety set were perceived to be more similar ($M_{\text{low}} = 5.68$) than the items within the high variety set ($M_{\text{high}} = 5.11$).

A pre-test was conducted to validate our manipulation of goal progress. Participants ($N = 43$) were first asked whether “being physically fit is a goal that you have” (yes-no; all reported yes). Next, they were either exposed to the low goal progress manipulation (high frequency response scales) or the high goal progress manipulation (low frequency response scales) and were then asked to report their perceptions of progress made towards goal attainment on a 7-point scale (1 = not a lot of progress, 7 = very much progress). As we expected, participants exposed to the low progress manipulation perceived themselves to have made less progress toward their fitness goal compared to those exposed to the high progress manipulation ($M_{\text{low-progress}} = 3.60, M_{\text{high-progress}} = 4.65; F(1,41) = 4.41, p < .05$).

Motivation. The main dependent measure in this study was participants’ reported motivation to pursue the fitness goal. Participants’ responses to the questions about their commitment and willingness to devote effort to their fitness goal were averaged to create a measure of motivation ($r = .75$). A 2 (goal progress) x 2 (variety among means) ANOVA on this measure of motivation revealed the predicted

interaction ($F(1,75) = 11.31, p < .01$; e.g., figure 1). As expected, participants in the low goal progress condition reported being more motivated to pursue their fitness goal when they viewed the high variety ($M_{\text{high}} = 5.45$) versus low variety ($M_{\text{low}} = 4.77$) set of protein supplements ($F(1,75) = 3.30, p < .05$). However, participants in the high goal progress condition were more motivated to pursue their fitness goal when they viewed the low variety ($M_{\text{low}} = 5.47$) versus high variety ($M_{\text{high}} = 4.47$) set of supplements ($F(1,75) = 7.26, p < .01$).

Fig 1. Effects of primed progress and variety among means on motivation.



These results provide an initial demonstration of the impact of variety in a set of means to goal attainment on motivation over the course of goal pursuit. When perceived progress towards goal attainment is low, a more (vs. less) varied set of means increases motivation (hypothesis 1), whereas when perceived progress towards

goal attainment is high, a less (vs. more) varied set of means increases motivation (hypothesis 2). One plausible critique of the design of study 1a is that our manipulation of variety among means involved varying the means themselves (i.e., showing participants different sets of products) with minimal overlap between sets. Manipulating variety in this way leaves open the possibility that characteristics of the products themselves rather than the degree of variety between conditions produced our results. We address this concern in study 1b by holding the set of means constant and manipulating perceived variety in a separate priming task.

STUDY 1B: EFFECT OF PROGRESS AND PRIMED PERCEPTIONS OF VARIETY

This study had the following objectives: (1) to replicate the interaction pattern obtained in study 1a while holding the actual products in the set of means constant and (2) to show that our predicted effects of goal progress and variety on motivation hold when individuals naturally evaluate their own progress towards goal attainment. To accomplish these goals, we showed all participants the same set of protein supplements, manipulated degree of perceived variety through an ostensibly unrelated task, and measured perceived goal progress.

Design and Procedures

Ninety-six undergraduate students at the University of Maryland were randomly assigned to one of two conditions (variety among means: low vs. high) and perceived goal progress was measured.

First, participants were asked whether being physically fit was a goal that they have (yes-no). Participants were then asked to write out an example of one specific fitness goal they wished to attain (e.g., “go to the gym three times a week”) and to rate the amount of progress they had made toward their fitness goal (“How much progress do you perceive that you have made towards your goal of being fit?”).

Next, to manipulate perceived variety in the target protein supplements we showed all participants two pictures side by side, one of a microwave and one of a traditional oven. Participants were either asked to describe how the microwave and oven were similar (in the low variety condition) or how they were different (in the high variety condition). Previous research suggests that perceptions of variety are inversely related to perceptions of similarity (i.e., sets of products that are perceived as more similar are also perceived as less varied; Mogilner, Rudnick, and Iyengar 2008). By asking participants to elaborate on similarities between the microwave and oven, we intended to reduce perceptions of variety in the subsequently presented set of PowerBar protein supplements, and vice versa when participants were asked to elaborate on differences.

After exposure to this variety manipulation, participants were shown a set of six PowerBar protein products of various flavors and forms (bar, powder, gel, etc.)

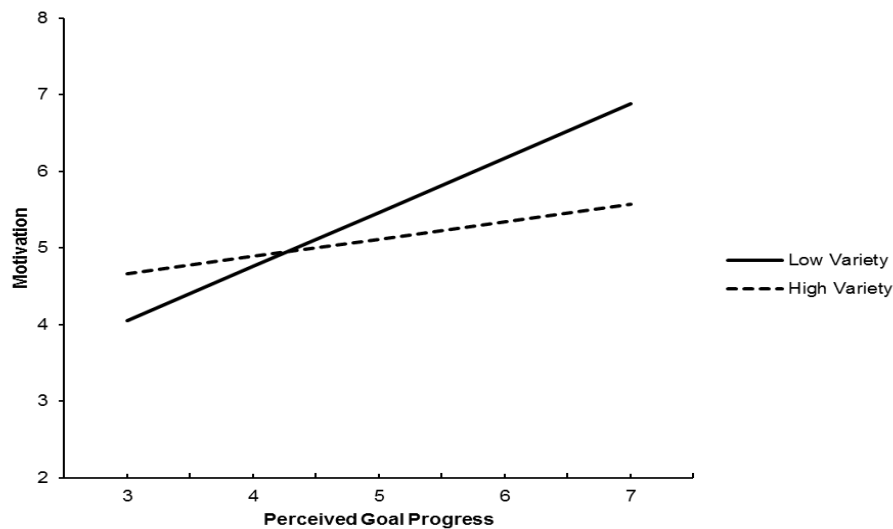
and were asked to choose three that they would like to try after their next three workouts, to help them achieve their fitness goal. Finally, motivation to pursue the fitness goal was assessed through two measures. Participants indicated their commitment to their fitness goal and intentions to devote effort to attainment of the goal, on 7-point scales (1 = not at all committed, not a lot of effort; 7 = very committed, a lot of effort).

Results

Manipulation Check. Only participants who reported having a fitness goal (i.e., responded “yes”; $N = 95$) were included in further analyses. A pre-test ($N = 35$) assessed perceptions of variety among items in the set of protein supplements. Participants were first asked whether “being physically fit is a goal that you have” (yes-no; three participants were excluded for reporting that they did not have a fitness goal). Next, perceptions of variety were assessed using two measures (“How similar were the protein supplements that you saw on the previous page?” and “How focused is the set of protein supplements?”) on 7-point scales (1 = not at all similar, not at all focused; 7 = very similar, very focused; $r = .50$). An ANOVA using the average of these two measures confirmed the success of the variety manipulation ($F(1, 33) = 4.75, p < .05$). Participants who were asked to describe similarities in the priming task perceived the set of protein supplements as more similar (i.e., low variety set) than did participants asked to describe differences (i.e., high variety set) ($M_{\text{low}} = 5.45$ vs. $M_{\text{high}} = 4.63$).

Motivation. The main dependent measure in this study was participants' reported motivation to pursue the fitness goal. Participants' responses to the questions about their commitment and willingness to devote effort to their fitness goal were averaged and mean-centered to create a measure of motivation ($r = .81$). A regression of motivation on goal progress (measured), variety (manipulated), and their interaction revealed a significant main effect of goal progress ($\beta = .47, t = 5.39, p < .001$) qualified by the predicted interaction ($\beta = -.24, t = -2.76, p < .01$; e.g., figure 2).

Fig. 2. Effects of perceived goal progress and primed perceptions of variety among means on motivation.



To explore the nature of the interaction, we examined the effects of variety conditions on motivation at both low and high levels of goal progress. We performed a spotlight analysis at plus and minus one standard deviation from the mean of goal progress (Fitzsimons 2008). Consistent with our predictions, the planned contrast at

low levels of goal progress revealed that motivation was higher when participants viewed the high versus low variety set of means ($M_{\text{high}} = 4.63$, $M_{\text{low}} = 3.98$; $\beta = -.34$, $t = -2.15$, $p < .05$). The planned contrast at high levels of goal progress revealed the reverse pattern: motivation was higher when participants viewed the low versus high variety set of means ($M_{\text{low}} = 5.94$, $M_{\text{high}} = 5.27$; $\beta = .33$, $t = 1.95$, $p = .05$).

These data provide further evidence that the variety in a set of means to goal attainment interacts with one's stage in the course of goal pursuit (low vs. high progress) to impact motivation. Replicating the results of study 1a, we find that a set of means perceived to be more (vs. less) varied increases motivation to pursue the associated goal when one is far from goal attainment (hypothesis 1), but means perceived to be less (vs. more) varied increases motivation to pursue the associated goal when one approaches goal attainment (hypothesis 2). Further, we show these effects while holding the actual set of means constant and manipulating perceptions of the amount of variety within the set.

Studies 1a and 1b suggest that the amount of variety most motivating for goal pursuit depends on perceived goal progress. But will some degree of variety in a set of means always be beneficial for motivation to pursue a goal? Though the stimuli used in our studies thus far have all incorporated some amount of variety, there are many instances where consumers may encounter a set of means with no variety. For example, protein bars are sold both in variety packs that contain bars of different flavors, but also in "identical" packs, which contain multiple bars of the same flavor (e.g., chocolate). How might sets of identical means to goal pursuit impact motivation? We examine this question in the next study.

STUDY 2: EFFECT OF IDENTICAL MEANS ON MOTIVATION

We argue that identical sets of means can be viewed as a low variety set taken to the extreme: a set of means that has so little variety to the point that it only consists of a single type of product. Interpreting this special case within the context of our larger framework, we propose that consumers who have made high progress towards goal attainment will be even more motivated by an identical set of means that has no variety relative to sets of means that do have some (even a relatively small amount of) variety, whereas consumers who have made low goal progress will be more motivated by a set containing at least some variety relative to an identical set of means. In study 2 we test this idea by comparing the impact of an identical set of means (a set of six chocolate protein bars) to a varied set of means (a set of six protein bars of different flavors, as in study 1a) on motivation to pursue the goal.

Design and Procedures

Fifty-three undergraduate students at the University of Maryland were randomly assigned to one of two conditions (variety among means: identical vs. varied) and perceived goal progress was measured.

First, participants were asked to confirm that they were actively pursuing a fitness goal (yes-no) and to report how much progress they had made towards goal pursuit in a series of two measures (“I exercise... (rarely = 1, frequently = 7)”; “I exercise... (a little = 1, a lot = 7)”) on 7-point scales.

Next, participants were then shown a set of six protein supplements. Because choice is not an integral part of the present investigation, we asked participants to think about using these supplements as means to pursuing their goal instead of asking them to make a series of choices as in studies 1a and 1b. Participants were told that these supplements can be used after a workout, to help them achieve their fitness goal. Variety was manipulated with the actual similarity of products in the set. Half of participants viewed a set of identical protein bars (six chocolate flavored PowerBar protein bars) and half viewed a set of varied protein bars (the low variety set of six different flavors of PowerBar protein bars used in study 1a). After viewing one of the two sets of bars, participants were asked to rate their commitment to the goal and intentions to devote effort to goal pursuit on 7-point scales (1 = not at all committed, not a lot of effort; 7 = very committed, a lot of effort).

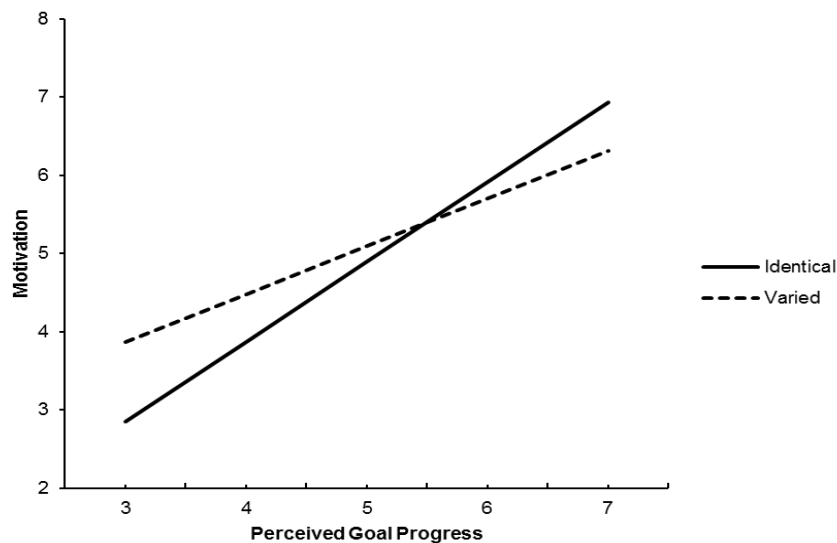
Results

Manipulation Check. All participants indicated that they were pursuing a fitness goal and were therefore included in the following analyses.

Motivation. The main dependent measure in this study was participants' reported motivation to pursue their fitness goals. Participants' responses to the questions about their commitment and willingness to devote effort to their fitness goal were averaged to create a measure of motivation ($r = .80$). Participants' responses to the two progress measures were averaged and mean-centered to form an index of goal progress ($r = .86$). A regression of motivation onto goal progress, variety, and their

interaction revealed a significant main effect of goal progress ($\beta = .82, t = 10.95, p < .001$) and the predicted interaction between goal progress and variety ($\beta = -.21, t = -2.75, p < .01$; e.g., figure 3).

Fig. 3. Effects of perceived goal progress and variety among means on motivation.



Consistent with our theory, subsequent spotlight analyses (Fitzsimons 2008) revealed that motivation was higher for participants who had made low progress towards their fitness goal when asked to think about using the varied versus identical set of means to goal attainment ($M_{\text{varied}} = 4.54, M_{\text{identical}} = 3.98; \beta = -.24, t = -1.89, p = .065$). Conversely, motivation was higher for participants who had made high progress towards their fitness goal when asked to think about using the identical versus varied set of means to goal attainment ($M_{\text{identical}} = 6.60, M_{\text{varied}} = 6.11; \beta = .28, t = 2.09, p < .05$).

The results of this study confirm our predictions about how a set of identical means (i.e., the complete absence of variety) impacts motivation to pursue a goal. We find that individuals who have made low goal progress are more motivated by a varied than an identical set of means to goal attainment (hypothesis 1), whereas individuals who have made high goal progress towards achieving their goal are even more motivated by an identical than a low-variety set of means to goal attainment (hypothesis 2). These results provide additional evidence for our argument that one's state of goal progress and variety among a set of means interact to impact motivation to pursue the goal. Those who have made high progress towards goal attainment are more motivated by less variety in the set.

Studies 1a, 1b, and 2 provide consistent support for our hypotheses. When far from goal attainment, having more variety among means increases motivation to pursue the goal. However, when close to goal attainment, having less variety among means increases motivation to pursue the goal. Although these studies demonstrate our predicted effects, they do so with a hypothetical measure of motivation (commitment and intentions to devote energy). In studies 3 and 4, we replicate these effects of goal progress and variety among means using real behavioral measures of motivation. In study 3, we manipulate perceived progress and variety among means to an academic goal and measure real persistence and performance on a goal-related task. In study 4, we manipulate perceived progress and variety among means to a fitness goal and capture the effects on motivation with a more managerially relevant measure: willingness to pay for the means.

STUDY 3: PERSISTENCE AND PERFORMANCE ON A GOAL-RELATED TASK

In study 3 we sought to find support for our hypotheses regarding the effects of goal progress and variety among means on motivation with a real measure of motivation: persistence and performance on a goal-related task. When individuals feel more motivated to pursue a goal, they work harder and perform better at subsequent goal-related tasks (Kruglanski et al. 2002). Thus, in this study, we gave participants the opportunity to work on a goal-related task and measured their persistence and performance on this task following our progress and variety manipulations. Further, to increase the generalizability of our findings, in study 3 we tested our hypotheses in a new goal domain - academic goals - and manipulated perceptions of variety among behaviors (instead of products as in studies 1a, 1b, and 2) related to goal attainment.

Design and Procedures

One hundred and four undergraduates at the University of Maryland enrolled in summer school participated in this study in exchange for a small cash payment. Participants were randomly assigned to condition in a 2 (goal progress condition: low vs. high) by 2 (variety among means: low vs. high) between-subjects design.

First, participants were asked to confirm that they were pursuing an academic goal (yes-no) and were then asked to bring to mind an instance where they spent a small or large amount of time studying, intended to serve as anchors for subsequent

inference of progress made towards the academic goal. In the low progress condition, participants were asked to report the last time they had spent at least 30 consecutive minutes studying, intended to make participants feel that they had not spent much time studying. In the high progress condition, participants were asked to report the last time they had spent at least eight consecutive hours studying, intended to make participants feel that they had spent a lot of time studying. To check the validity of this manipulation (i.e., that these prompts led people to bring to mind short versus long periods of studying), we also asked participants to report how many hours they had spent studying in the past day. Following the manipulation, participants were asked to report how frequently they study (1 = rarely, 7 = frequently; 1 = a little, 7 = a lot) and to rate how much progress they had made towards achieving their academic goal on a 7-point scales (1 = not a lot of progress; 7 = a lot of progress).

Next, variety among means was manipulated through a similarity priming task. Participants were told that they would be given a list of four academic behaviors related to their academic goal (reading a textbook, meeting with a tutor, attending a review session, and reading supplementary materials) and asked to describe the relationship between these behaviors. In the low variety condition, participants were asked to describe how these goal-related behaviors were similar to one another, whereas in the high variety condition, they were asked to describe how they were different from one another.

Finally, all participants were presented with an anagram task that measured real motivation to pursue their academic goal. Participants were told that the anagram task was developed by psychologists to be an indicator of academic performance; as

such, the task was positioned as directly related to participants' academic goal. The task consisted of ten difficult but solvable anagrams (adapted from Shah, Higgins, and Friedman 1998). Participants were able to attempt as many anagrams as they wished, proceeding at their own pace. The anagrams were presented sequentially, and on each page participants had the option to view the next anagram or to quit the task.

Results

Manipulation Checks. Only those participants who reported having an academic goal (i.e., responded “yes”; $N = 102$) were included in further analyses. To check the validity of the goal progress manipulation, we ran a 2 (goal progress) x 2 (variety among means) ANOVA on the number of hours participants reported studying in the past day. Supporting the validity of our progress manipulation, this analysis revealed only a main effect of goal progress ($F(1, 98) = 10.13, p < .01$). Participants reported having spent more hours in the past day studying in the high progress (i.e., high anchor) condition relative to the low progress (i.e., low anchor) condition ($M_{\text{high progress}} = 3.53$ hours, $M_{\text{low progress}} = 2.20$ hours).

To form a measure of perceived progress, participants' responses to the questions regarding how frequently they study and how much progress they have made were averaged ($\alpha = .76$). A 2 (goal progress) x 2 (variety among means) ANOVA on perceived goal progress revealed only a main effect of goal progress ($F(1, 97) = 3.90, p = .05$). As expected, participants perceived that they had made more progress towards achieving their academic goal in the high progress condition

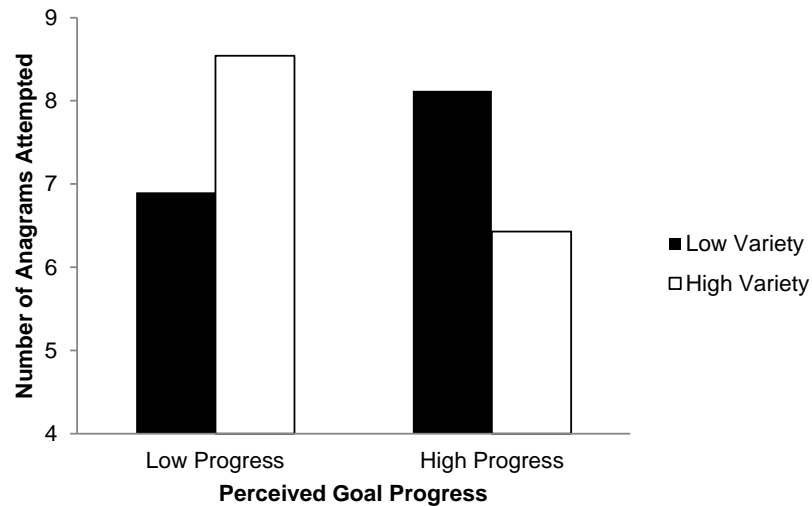
($M_{\text{high progress}} = 5.33$) relative to the low progress condition ($M_{\text{low progress}} = 4.92$). This manipulation check of perceived progress suggests that participants found it relatively easy to bring to mind instances in which they had studied for 30 minutes and in which they had studied for 8 hours; had they not found these instances easy to bring to mind, we likely would have found the opposite pattern, such that those asked to bring to mind 8 hours (vs. 30 minutes) of studying would have felt lower perceived progress toward their academic goals (Schwarz et al. 1991). The obtained pattern indicates that the prompt to bring to mind a longer (vs. shorter) period of studying led participants to perceive they had made greater progress toward their academic goal.

In addition, a pre-test (N=105; all participants reported having an academic goal) confirmed the success of the variety manipulation: participants who were asked to describe similarities among the four behaviors (i.e., low variety condition) perceived the set as more similar ($M_{\text{low}} = 5.21$) than participants asked to describe differences (i.e., high variety condition) ($M_{\text{high}} = 4.62$; $F(1, 103) = 5.12, p < .05$).

Motivation. The key dependent measures in this study were the number of anagrams attempted (persistence) and the number correctly solved (performance) by participants. First, a 2 (goal progress) x 2 (variety among means) ANOVA on the number of anagrams attempted revealed the predicted interaction ($F(1, 98) = 9.11, p < .01$; e.g., figure 4). As we expected, in the low goal progress condition participants attempted to solve more anagrams when asked to describe how the academic goal-related means were different (high variety condition) versus similar (low variety condition) ($M_{\text{high}} = 8.54, M_{\text{low}} = 6.90$; $F(1, 98) = 4.19, p < .05$). However, in the high goal progress condition participants attempted to solve more anagrams when asked to

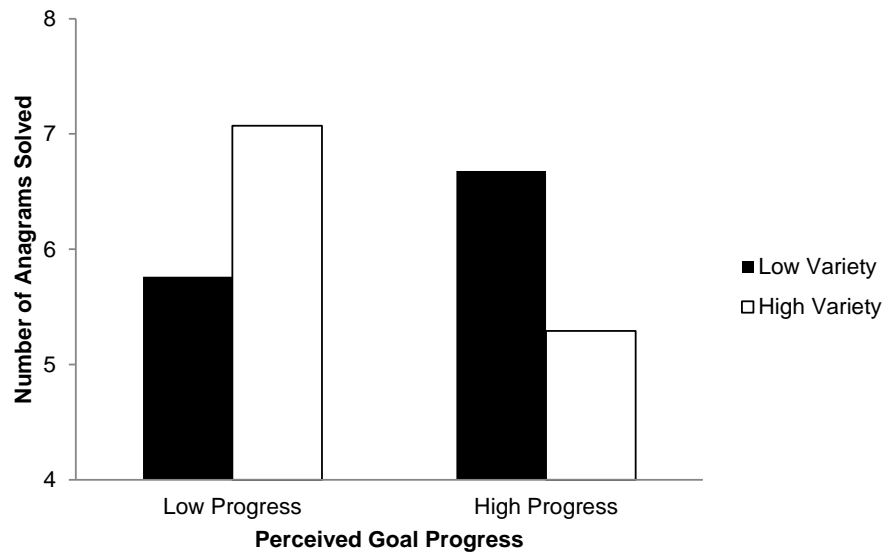
describe how the academic goal-related means were similar (low variety condition) versus different (high variety condition) ($M_{\text{low}} = 8.12$, $M_{\text{high}} = 6.43$; $F(1, 98) = 4.96$, $p < .05$).

Fig. 4. Effects of goal progress and variety among means on persistence on a goal-related task.



Next, a 2 (goal progress) x 2 (variety among means) ANOVA on the number of anagrams solved correctly also revealed a significant interaction ($F(1, 98) = 6.25$, $p < .05$; see figure 5). In the low goal progress condition participants solved directionally more anagrams correctly in the high variety condition relative to the low variety condition ($M_{\text{high}} = 7.07$, $M_{\text{low}} = 5.76$; $F(1, 98) = 2.80$, $p < .1$). However, in the high goal progress condition participants solved more anagrams correctly in the low variety condition relative to the high variety condition ($M_{\text{low}} = 6.68$, $M_{\text{high}} = 5.29$; $F(1, 98) = 3.49$, $p = .06$).

Fig. 5. Effects of goal progress and variety among means on performance on a goal-related task.



The results of study 3 provide support for our hypotheses with actual motivation measured in a new goal domain: persistence and performance on an academic goal-related task. Consistent with hypothesis 1, when perceived goal progress was low, participants worked harder on an academic goal-relevant anagram task when primed to think about a set of academic goal-related means as different from one another (i.e., high variety condition) versus similar to one another (i.e., low variety condition). Consistent with hypothesis 2, when perceived goal progress was high, participants worked harder on an academic goal-relevant anagram task when primed to think about similarities among the set (i.e., low variety condition) versus differences among the set (i.e., high variety condition).

Another way to capture motivation to pursue a goal is to consider willingness to pay for goal-related means of attainment. Previous research suggests that the value ascribed to a goal transfers to its means of attainment (Fishbach et al. 2004). When consumers are more motivated to pursue a goal, they value the goal more highly, and this higher value should transfer to increase the value of the means to the goal. In study 4 we test this reasoning by measuring participants' real willingness to pay for a set of means to goal attainment.

STUDY 4: WILLINGNESS TO PAY FOR MEANS TO GOAL ATTAINMENT

The key objective of study 4 was to test whether these effects of goal progress and variety among means on motivation extend to real willingness to pay for means to goal attainment. To assess willingness to pay, we invited participants to enter an auction for a set of means to goal attainment. All participants bid on the same product (i.e., a pack of seven protein bars) following manipulations of perceived goal progress and perceived variety.

In addition, this study included measures of perceived importance and attainability of the goal to rule out effects on attitudes toward the goal itself as a function of our manipulations.

Design and Procedures

One hundred and five undergraduates at the University of Maryland participated in this study in exchange for course credit. Participants were randomly assigned to condition in a 2 (goal progress condition: low vs. high) by 2 (variety among means: low vs. high) between-subjects design.

First, participants were asked to indicate whether they were pursuing a fitness goal (yes-no). They were then given the same goal progress prime used in study 1a. In the high goal progress condition, participants were asked to respond to a series of items regarding the frequency of their recent workouts on low-frequency scales (i.e., response options “0”, “1-2”, “3-4”, “5 or more” in response to the question, “How many times have you exercised in the past week?”). In the low goal progress condition, participants were asked to respond to a series of items regarding the frequency of their recent workouts on high-frequency scales (i.e., response options “5 or fewer”, “6-7”, “8-9”, “10 or more” in response to the question, “How many times have you exercised in the past week?”). Variety was manipulated via a similarity prime (as in study 3). In the low variety condition, participants were asked to describe how the protein bars in the pack were similar to one another, whereas in the high variety condition, participants were asked to describe how the protein bars in the pack were different from one another.

Next, participants were invited to participate in a real auction with the other participants in their session for a pack of seven HealthSmart protein bars. Participants were given a list of the flavors of the bars in the pack (i.e., Caramel Brownie,

Caramel Crunch, Double Peanut Butter, Oatmeal, Peanut Butter, Rocky Road, and Strawberry Cheesecake) and told (correctly) that each bar had approximately 165 calories, 14 grams of protein, 14 grams of carbohydrates, and eight grams of sugar. They were each allowed to make one bid, the highest amount that they would be willing to pay for the protein bars. Participants made their bids on the pack of protein bars in a blank space provided below the description of the bars. If they would not be willing to pay any amount of money for the pack of protein bars, participants were instructed to write “0” as their bid. To further demonstrate that the auction was real, we asked participants to enter their email address after making a bid so that they could be contacted if they were the highest bidder, and we provided the room number where winners would be directed to collect the pack of bars.

Lastly, they answered a series of follow up questions regarding the similarity of the set of protein bars (1 = not at all similar, 7 = very similar), the importance of their fitness goal (1 = not at all important, 7 = very important), and the attainability of their fitness goal (1 = not at all attainable, 7 = very attainable).

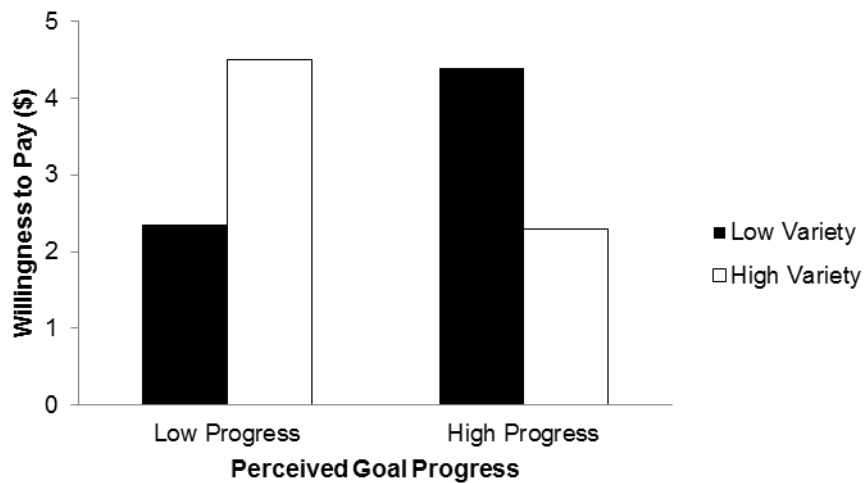
Results

Manipulation Check. All participants indicated that they were pursuing a fitness goal. A 2 (goal progress: low vs. high) x 2 (variety among means: low vs. high) ANOVA on perceived similarity revealed only a main effect of variety condition. Participants perceived the pack of protein bars as more similar (i.e., less

varied) when asked to think about how the bars were similar ($M_{\text{low}} = 4.93$) versus different ($M_{\text{high}} = 3.43$; $F(1, 101) = 25.82, p < .001$).

Motivation. Our key measure of motivation in this study was the bid made for the set of protein bars. A 2 (goal progress) x 2 (variety among means) ANOVA on the amount bid revealed the predicted interaction between variety among means and goal progress ($F(1, 101) = 8.05, p < .01$; e.g., figure 6). As we expected, when goal progress was low, participants bid more for the box of protein bars when perceived variety was high (i.e., when asked to think about differences between the bars) versus low (i.e., when asked to think about similarities between the bars) ($M_{\text{high}} = \$4.50, M_{\text{low}} = \2.35 ; $F(1, 101) = 3.96, p < .05$). However, when goal progress was high, participants bid more for the box of protein bars when perceived variety was low versus high ($M_{\text{low}} = \$4.39, M_{\text{high}} = \2.30 ; $F(1, 101) = 4.10, p < .05$).

Fig. 6. Effects of goal progress and variety among means on willingness to pay for the means.



Supplemental Measures. No significant effects of variety among means or goal progress emerged on ratings of goal importance nor on ratings of goal attainability (F 's < 1). Consistent with our predictions, these results indicate that our effects of means variety and goal progress are not driven by perceived goal importance or the attainability of the goal.

Together with study 3, the results of the auction in study 4 demonstrate that our predicted effects of goal progress and variety among means impact actual behaviors in which people engage to pursue their goals.

GENERAL DISCUSSION

Over the course of goal pursuit consumers often use products to help them advance towards goal attainment. As is the case with any sets of products, sets of means to goal attainment may differ in terms of the variety contained within the set. Understanding how the variety among means affects consumers' motivation to pursue the goal is an important research objective and one that had yet to be addressed.

In the present research, we propose that variety impacts motivation dynamically over the course of goal pursuit. We predicted (1) that when progress towards goal attainment was low, a set of means with more variety would increase motivation relative to a set of means with less variety, but (2) that when progress towards goal attainment was high, a set of means with less variety would increase motivation relative to a set of means with more variety. Across five studies we find convergent support for our hypotheses. In studies 1a and 1b we demonstrated the

predicted interaction between goal progress and variety on motivation, both by manipulating actual variety and perceptions of variety, and by manipulating and measuring perceived goal progress. Study 2 extends our analysis to a situation in which the set of means for some participants contained no variety at all (i.e., identical means). Consistent with our overall framework, participants whose perceived goal progress was higher were even more motivated by an identical set of means (e.g., a pack of identical protein bars) than a varied set. Two final studies provide further support for our hypotheses using real measures of motivation. In study 3, we measured the impact of goal progress and variety among means in the domain of academic goals, demonstrating our effects with real measures of motivation (e.g., actual persistence) on an academic goal-related task. Lastly, in study 4, we show that the effects of goal progress and variety on motivation extend to real willingness to pay for a set of means to goal attainment.

We have suggested that feelings of uncertainty associated with goal pursuit play a role in the relationship between variety and motivation. To obtain more insight into the underlying process, we ran a follow-up study ($N = 113$) in which we manipulated variety among means to an academic goal as in study 3, measured goal progress, and measured perceptions of how helpful the set of means was in “reducing any uncertainty you feel about the best way to pursue your academic goal.” Supporting an uncertainty account of our effects, we found a significant interaction between goal progress and variety ($\beta = -.75, t = -2.67, p < .01$). Consistent with our reasoning that high variety sets of means do more to reduce uncertainty associated with goal pursuit than do low variety sets of means when perceived goal progress is

low, spotlight analyses revealed that participants who perceived goal progress to be low found the more (vs. less) varied set of means to be more helpful in reducing uncertainty associated with goal pursuit ($\beta = 2.75, t = 2.23, p < .05$). However, the opposite was true for participants who perceived goal progress to be high. Among these individuals, less (rather than more) varied sets of means were found to be more helpful in reducing uncertainty associated with goal pursuit ($\beta = 4.32, t = 2.34, p < .05$). These results suggest that there is uncertainty associated with both high and low goal progress. However, because more variety reduces uncertainty to a greater degree when progress is low whereas less variety reduces uncertainty to a greater degree when progress is high, the nature of uncertainty associated with goal pursuit appears to differ across states of goal progress.

We had speculated that individuals far from goal attainment might be uncertain about their future preferences among means to goal attainment, implying that they may be more motivated by a set of means that offers more flexibility (i.e., a high variety set). Individuals close to goal attainment might be less concerned with potential changes in future preferences but be uncertain about the most effective way to achieve their goal, implying that they may be more motivated by a more focused set of means (i.e., a low variety set). To test this reasoning, in a second follow-up study ($N = 43$), we manipulated perceptions of progress towards achieving a fitness goal (as in studies 1a, 2, and 4) and measured the extent to which participants valued having flexibility among means to goal attainment and valued the effectiveness of means to goal attainment. The results of this follow-up study do not support this account of our effects; neither the effect of goal progress on the reported value of

flexibility nor the value of effectiveness were significant (p 's > .3). Together, these results suggest either that the relative value of flexibility and efficacy across stages of goal pursuit do not play a role in driving our effects, or that these factors do play a role in producing our effects but are not being revealed through the various self-report measures we have employed. In sum, the exact nature of the uncertainty associated with low and high goal progress remains an open question, and one worthy of future research.

The present research makes a number of contributions to the literatures on goals, motivation, and variety. Whereas past research has considered how consumers' goals and motivation affect their preferences for variety (Kahn and Ratner 2005), the present work is the first to consider the reverse direction of causality: how variety impacts motivation toward goal pursuit. Our research also introduces the idea that the effect of variety on motivation changes over the course of goal pursuit. We consider the relationship between variety and motivation to be dynamic, changing over time as progress is made towards goal attainment. We find our effects of goal progress and means variety on motivation replicate across multiple goal domains (fitness goals and academic goals), with different measures of motivation (self-report, persistence, willingness to pay) and different types of means (products and behaviors), construed both relatively concretely (as in the case with the protein bars in studies 1 and 4) and abstractly (as in the case with the academic-goal related behaviors in study 3), suggesting that our effects would hold across a broad range of goals, sub-goals, and means. Further, our results suggest that having no variety (i.e., identical) among means to goal attainment can do more to increase motivation to pursue a goal when

progress made towards goal attainment is high than having even a small amount of variety among means to attainment (study 2).

Our findings also extend previous research on the effects of goal progress on motivation. Prior work has found mixed support for the relationship between perceived goal progress and motivation. Some research shows that motivation increases with perceived goal progress (Carver and Scheier 1998; Dreze and Nunes 2006; Kivetz, Urminsky, and Zheng 2006); for example, the goal-gradient hypothesis suggests that consumers accelerate their goal-directed efforts as they approach their goal (Kivetz et al. 2006). However, other work has not found there to be a systematic relationship between motivation and perceived goal progress (Fishbach and Dhar 2005; Fishbach and Zhang 2009; Oettingen Mayer 2002; Zhang et al. 2008). In this stream of research, the particular influence of goal progress on motivation has been shown to depend on a number of moderators, including goal commitment, upwards versus downwards social comparisons, the framing of future plans as fantasies versus expectations, and whether the initial decision to adopt a goal is perceived as autonomous. For example, Fishbach and Dhar (2005) find that when people infer that they have made high goal progress they are subsequently less motivated to pursue the focal goal. The present findings contribute to this literature by identifying means variety as an additional moderator of the effect of goal progress on motivation. Though we find mixed support for a main effect of perceived goal progress on motivation across our five studies, we consistently find that individuals who have made high versus low goal progress are more motivated when they have a low variety

set of means to goal attainment, and vice versa in the case of a high variety set of means to goal attainment.

We believe this research has a number of managerial implications. Consumers who are highly motivated to pursue a particular goal are more likely to stay engaged in goal pursuit, increasing the likelihood that they will purchase within product categories related to the goal. Consequently, retailers would benefit from keeping consumers motivated to pursue goals related to their product offerings. For example, retailers that sell protein supplements would benefit from keeping their customers motivated to pursue fitness goals. The present research suggests that one way retailers may maintain a high level of motivation is by strategically manipulating perceptions of variety among their goal-related product offerings.

Depending on their target consumer segments, retailers may want to enhance or minimize perceptions of variety. For example, specialty stores that are positioned to target consumers who have presumably made high progress towards their fitness goals (such as GNC) may wish to make their fitness-related product assortments seem less varied in order to increase motivation and purchase incidence, purchase volume, etc. within the category. However, more general stores, such as Wal-Mart, that likely cater to consumers who overall have made less progress towards their fitness goals, may wish to make their fitness-related product assortments seem more varied in order to increase motivation and purchases within the category. Managers have the ability to influence perceptions of variety in their product offerings, for example, by subcategorizing a product assortment into separately labeled categories to enhance perceptions of variety (Mogilner et al. 2008). Our work suggests that

subcategorization may be beneficial for retailers if their target consumer segments have made low progress on related goals.

Our findings are also relevant to the sale of “variety packs,” or multi-unit packages of a product that contain a variety of flavors, similar to our low variety conditions (studies 1a and 2). Our results suggest that consumers’ evaluations of products sold in this format will vary depending on consumers’ stage in the course of goal pursuit. In particular, consumers who have made high goal progress may value these types of (low variety) product packs more highly than those who have made less progress. To capture this higher valuation, marketers of variety packs may want to make their consumers feel as if they have made high progress towards attainment of a goal related to the pack, for instance, by incorporating language related to having made high goal progress on the products’ packaging (e.g., “Reward yourself after a tough workout”). Our work also cautions that variety packs may not always be the best format for selling multiple units of the same product. The results of study 2 suggest that consumers who feel very accomplished in pursuing a goal may actually have less value for variety packs relative to packs of identical items (i.e., boxes containing multiple bars of the same flavor).

The present findings also offer a number of important insights for consumers. For example, people who have made less progress towards a savings goal may be more motivated to keep saving if they have many different options of ways to save, whereas people who have made more progress towards a goal may be more motivated if they are given more similar options of ways to save. Likewise, following an exam early in the semester, teachers may best motivate students to improve their grades by

giving them diverse options for subsequent assignments, but following an exam late in the semester, teachers may best motivate students by giving them a less varied set of options or even a single option. Finally, patients who are at the early stages of treatment for an illness may benefit from being offered a varied set of options for remedies from their physicians, but patients who are at later stages of recovery from an illness may benefit from being given a less varied set of remedies. These and other applications of our results may have far-reaching implications for consumer well-being.

In conclusion, our findings indicate that goal progress systematically impacts the attractiveness of products that consumers could use to help them achieve their goals. The extent to which consumers will value varied products relative to product assortments that contain less or no variety will depend on how much progress they perceive they have made toward their focal goal.

Chapter 3: Goal Pursuit, Now and Later: Temporal Compatibility of Different versus Similar Means

Planning for goal pursuit occurs on a continual basis. Health-conscious consumers go grocery shopping for healthy snacks to consume over the next few days, social individuals make plans with friends for now and upcoming weeks, and students buy study guides for standardized tests weeks or months in advance. When planning for goal pursuit, consumers often use multiple products or engage in multiple behaviors to help them achieve their goals. These goal-related products and behaviors (i.e., means) may differ in similarity. For example, consumers may purchase many of the same healthy snack or many different healthy snacks (e.g., granola bars, fresh fruit, etc.) with the intention of using the products to help them pursue their health goal. Likewise, individuals may plan similar activities or very different activities to socialize with friends, and students may purchase relatively similar versus different study guides when preparing for standardized tests. How might the similarity of the means consumers plan to use for goal pursuit affect their motivation? Will the relationship between means similarity and motivation change depending on whether consumers plan to use the means in the near future versus in the far future?

In the present research we explore how goal-directed motivation depends on when consumers plan for goal pursuit and the similarity of means they intend to use. We propose that consumers planning for goal pursuit in the near future will be more motivated by a set of relatively different means, whereas consumers planning for goal

pursuit in the far future will be more motivated by a set of relatively similar means. We base this idea on past research demonstrating that the anticipated timing of an activity affects the way it is construed (Trope and Liberman 2000; 2003). Focusing on engaging in an activity in the near future leads consumers to a more concrete construal, whereas focusing on engaging in an activity in the far future leads to a more abstract construal. These construals, in turn, affect how consumers process information regarding sets of items (Förster 2009). Whereas concrete construals lead consumers to spontaneously seek out differences among a set of items, abstract construals lead consumers to spontaneously seek out similarities. In the context of goal pursuit, these findings suggest that consumers planning to use multiple means to help them pursue a goal in the near future will more readily process differences among the means. In contrast, consumers planning to use multiple means to help them pursue a goal in the far future will more readily process similarities among the means.

Extending this prior work, we argue that whether consumers focus on goal pursuit in the near versus far future will affect the similarity of means most motivating for goal pursuit. As suggested in the opening example, the means that consumers use to pursue a goal may vary in similarity (e.g., multiples of the same type of snack vs. multiple different snacks). The relative similarity of the means, in turn, should affect the ease of identifying similarities versus differences among the means. Specifically, because there are more similarities (differences) among relatively similar (different) sets of means, we reason that a similar (vs. different) set

of means should facilitate identification of similarities, whereas a different (vs. similar) set of means should facilitate identification of differences.

Thus, for consumers focused on goal pursuit in the near future, a different (vs. similar) set of means should be more compatible with their mindset (i.e., to search for differences). In contrast, for consumers focused on goal pursuit in the far future, a similar (vs. different) set of means should be more compatible with their mindset (i.e., to search for similarities). We argue that the metacognitive value from fit arising from the temporal compatibility of sets of relatively similar versus different means to goal attainment will result in an increase in consumers' goal-directed motivation (Higgins 2000; Higgins et al. 2003).

The remainder of this article is organized as follows. First, we review relevant literature on temporal focus, means to goal attainment, and motivation to develop our predictions regarding how similarity among means effects goal-directed motivation in the near versus far future. Next, we present six studies, which provide support for our hypotheses. We conclude with a discussion of the implications of our findings for consumer behavior theory, for marketing practice, and for consumers' success in pursuit of long-term goals.

PLANNING FOR GOAL PURSUIT

Unlike goals that can be satisfied in a single consumption episode (e.g., buying a cup of coffee from Starbucks), self-control goals (e.g., a goal to be healthy) often persist over a long time period. Consequently, consumers must formulate plans

to pursue these types of goals that include goal pursuit in the near future as well as in the far future. For example, consumers pursuing a health goal may plan to purchase snacks when they go to the grocery store to use either in the next few days or in the next few months. Likewise, health-conscious consumers may plan to meet with a personal trainer at the beginning of next week or next year. As these examples suggest, consumers' plans for goal pursuit often involve using products (the healthy snacks) or services (the personal trainer) that they believe will help them achieve their goal. We refer to these types of products and services, along with goal-related behaviors more generally, as means to goal attainment (Kruglanski et al. 2002).

Consumers often use multiple means to pursue a goal (Kruglanski et al. 2002). These sets of means may differ in number, consisting of relatively few or many means. Likewise, sets of means may differ in similarity, consisting of means that differ on few (if any) attributes (e.g., many types of fresh fruit as healthy snacks) or means that differ on several attributes (e.g., fresh fruit, granola bars, and low-fat yogurt as healthy snacks). Recent research has explored how the composition of a set of means might affect motivation to pursue the associated goal. For example, Kruglanski, Pierro, and Sheveland (2010) show that larger sets of means increase people's commitment to a goal, subsequently increasing motivation to achieve it. Etkin and Ratner (2012) demonstrate that more (vs. less) varied sets of means increase goal-directed motivation when progress towards goal attainment is low, but decrease goal-directed motivation when progress towards goal attainment is high.

In the present research, we argue that characteristics of sets of means will also affect motivation as a function of when consumers plan to use the means for goal

pursuit. Specifically, we argue that the relative similarity of means that consumers find motivating when they focus on goal pursuit in the near future is different from the relative similarity of means that consumers find motivating when they focus on pursuit in the far future.

TEMPORAL FOCUS AND MEANS SIMILARITY

Past work on temporal focus has shown that the temporal focus of goal pursuit changes how consumers construe information pertaining to their goal (Förster, Higgins, and Idson 1998; Higgins et al. 2010). Whereas focusing on engaging in an activity in the near future results in a more concrete construal of the activity, focusing on engaging in an activity in the far future results in a more abstract construal of the activity (Trope and Liberman 2000; 2003). High-level construals involve conceptualizing information about objects and events at a more abstract level, capturing the superordinate, or central features of those constructs. Low-level construals, in contrast, involve conceptualizing information about objects and events at a more concrete level, capturing subordinate, unique, and specific features of focal constructs (Fujita et al. 2006).

More recent research has considered how temporal focus affects evaluations of assortments. In particular, temporal construal has been found to lead consumers to pay differential attention to similarities versus differences among sets of items (Förster 2009). When evaluating an assortment, abstract construals lead consumers to spontaneously search for similarities among items in the set, whereas concrete

construals lead consumers to spontaneously search for differences among items in the set. For example, participants asked to imagine an upcoming event in the near future subsequently identified more differences (vs. similarities) between two unrelated items (e.g., TV shows) in a subsequent task. In contrast, participants asked to imagine an upcoming event in the far future subsequently identified more similarities (vs. differences) between these two unrelated items (e.g., Förster 2009; Macrae and Lewis 2002).

Whether people attend to similarities or differences among items can have important implications for decision-making and cognition (Brooks, Norman, and Allen 1991; Dhar, Nowlis, and Sherman 1999; Förster 2009). For example, a recent article (Goodman and Malkoc 2012) demonstrates that consumers' search for differences in the near future leads them to prefer a large choice set to a small choice set, as a focus on differences increases the perceived uniqueness of items in the set, rendering them less substitutable. This preference for a large (vs. small) choice set diminishes in the far future when consumers' search for similarities leads them to perceive choice options as more substitutable.

Applied to the context of goal pursuit, this prior research suggests that consumers focused on pursuing a goal in the near future will attend more readily to differences among an available set of means to goal attainment. In contrast, consumers focused on pursuing a goal in the far future will attend more readily to similarities among an available set of means to goal attainment. Extending this work, we propose that consumers' temporal orientation towards goal pursuit will affect how motivated they feel to use sets of similar versus different means to pursue a goal.

Our reasoning is as follows. The relative ease of identifying similarities versus differences among a set of means depends on the number of similarities (vs. differences) present among the means. Because similar means have more in common with each other than do different means, a relatively similar (vs. different) set of means will facilitate consumers' search for similarities. Conversely, a relatively different (vs. similar) set of means will facilitate consumers' search for differences. Thus, we reason that a different (vs. similar) set of means will be more compatible with the mindset of focusing on goal pursuit in the near future, whereas a similar (vs. different) set of means will be more compatible with the mindset of focusing on goal pursuit in the far future.

We propose that compatibility between consumers' temporal focus-induced processing orientation and the relative similarity of the means they plan to use for goal pursuit will increase goal-directed motivation. Indeed, past work has shown that consumers derive value from compatibility between the manner in which a goal is pursued and their idiosyncratic orientation towards goal pursuit. Such value has been found to transfer to enhance goal pursuit, increasing the amount of effort expended and consumers' willingness to pay for goal-related products (Cesario, Grant, and Higgins 2004; Fishbach, Shah, and Kruglanski 2004; Förster et al. 1998; Higgins 2005; Higgins et al. 2010; Merton 1957). For example, compatibility between participants' chronic regulatory focus orientation and their adopted choice strategy increased willingness to pay for a chosen product by 40 - 60% (Higgins et al. 2003).

Building on these findings, we predict that consumers focused on goal pursuit in the near future will feel more motivated to pursue their goal when they plan to use

a set of different (vs. similar) means to goal attainment. In contrast, we predict that consumers focused on goal pursuit in the far future will feel more motivated to pursue their goal when they plan to use a set of similar (vs. different) means to goal attainment.

H1: Consumers focused on pursuing a goal in the near future will be more motivated to pursue the goal by sets of different (vs. similar) means to goal attainment.

H2: Consumers focused on pursuing a goal in the far future will be more motivated to pursue the goal by sets of similar (vs. different) means to goal attainment.

We test our predictions in a series of six studies. In studies 1 and 2 we seek initial support for our two hypotheses by measuring motivation as a function of the actual similarity of the provided means (study 1) and of the variety among participants' chosen means (study 2) to pursue fitness goals. Study 3 extends the investigation to an additional goal domain (savings goals) and elicits participants' self-generated means. Next, study 4 provides evidence for the proposed metacognitive mechanism underlying the obtained effects. The study manipulates the ease of identifying similarities (differences) among sets of means and shows that making the search for similarities (differences) difficult eliminates the effect of temporal compatibility on motivation. Study 5 extends the investigation to

demonstrate temporal compatibility effects on participants' real willingness to pay for the means. Finally, study 6 explores an extension of our paradigm, showing that the relative similarity of means can influence whether consumers expedite or delay use of means for goal pursuit. Taken together, these studies demonstrate that the effect of similarity among means to goal attainment on motivation depends on when consumers plan to use the means to pursue their goal.

STUDY 1: EFFECTS OF TIME HORIZON AND IDENTICAL VERSUS VARIED MEANS ON MOTIVATION

Study 1 provides an initial test of the hypothesized effects of temporal focus and means similarity on motivation. This study varies the actual similarity of a set of means (identical vs. varied protein bars) and measures participants' motivation to pursue their (fitness) goal when planning to consume the means over a short time horizon versus a longer time horizon. Following our hypotheses, we expect consumers planning to use the means over a short time (i.e., near future) to be more motivated to pursue their goal by varied (vs. identical) means. Likewise, we expect consumers planning to use the means over a longer time horizon to be more motivated to pursue their goal by identical (vs. varied) means.

Design and Method

Ninety-seven members of a national panel (ages 20 to 69) participated in this study in exchange for a small payment. Participants were randomly assigned to condition in a 2 (time horizon: short, long) X 2 (similarity of means: identical, varied) between-subjects design.

We first asked participants whether “being physically fit is a goal that you have” (yes-no). Fifteen participants indicated that they did not have a fitness goal and were excluded from further analyses ($N = 82$). Next, we presented participants with one of two sets of three PowerBar protein bars, depending on condition. In the identical condition, all three protein bars were of the same flavor (chocolate chip), whereas in the varied condition, the three protein bars differed in flavor (chocolate chip, vanilla yogurt, and peanut butter).

We asked participants to imagine that they had been given the three bars to use in pursuit of their fitness goal. To manipulate temporal focus, we varied the time period over which we asked participants to consider using the bars. In the short time horizon condition, we asked participants to imagine using the bars over the next seven days. In the long time horizon condition, we asked participants to imagine using the three bars over the next seven weeks.

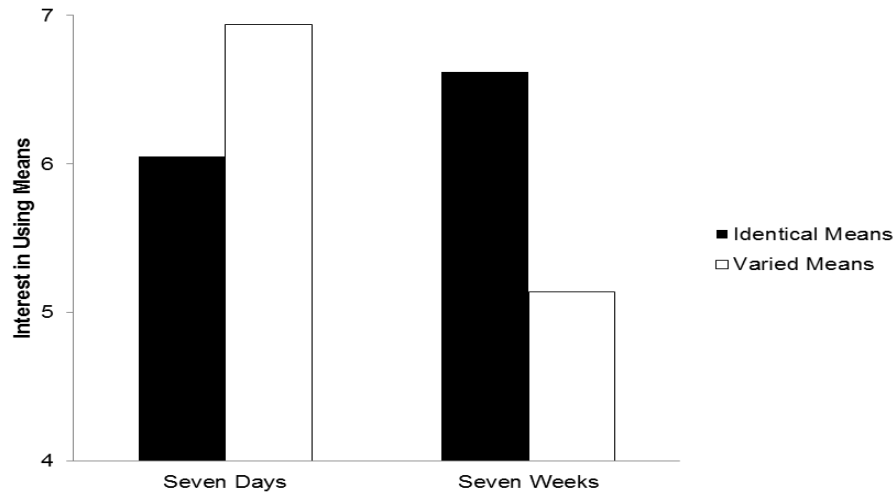
Finally, to measure motivation to be physically fit, we asked participants to report their interest in participating in a study in which they would be given the same protein bars to help them pursue their fitness goal (“How interested would you be in participating in a follow-up study where you would be given three protein bars and

asked to track when you ate them?”) on a 7-point scale (1 = *Would definitely not participate*, 7 = *Would definitely participate*).

Results

Motivation. A two-way ANOVA revealed the predicted interaction between time horizon and means similarity ($F(1, 78) = 9.07, p < .01$, see figure 7). Consistent with hypothesis 1, participants who planned to use the means over the next week (near future) were directionally more interested in participating in the follow-up study when they imagined using the varied versus identical set of means ($M_{\text{varied}} = 6.92, M_{\text{ident}} = 5.95; F(1, 78) = 3.13, p = .08$). In contrast, consistent with hypothesis 2, participants who planned to use the means over the next seven weeks (far future) were more interested in participating in the follow-up study when they imagined using the identical versus varied set of means ($M_{\text{identical}} = 6.46, M_{\text{varied}} = 5.36; F(1, 78) = 7.01, p < .01$).

Fig. 7. Effects of time horizon and identical versus varied means on motivation.



Discussion

The results of study 1 provide preliminary support for hypotheses 1 and 2. When participants planned to pursue their fitness goal over a short (one-week) time horizon, they were more interested in using a varied versus identical set of means. In contrast, when participants planned to pursue their fitness goal over a long (seven-week) time horizon, they were more interested in using an identical versus varied set of means. In the next study, we extend the paradigm of study 1 by allowing participants to choose which of the presented means they would use (i.e., varied or identical means). Different than study 1, here we hold the consumption interval constant, varying only whether participants receive their chosen means now (i.e., near future) or two months from now (i.e., far future).

STUDY 2: EFFECTS OF TEMPORAL FOCUS AND CHOSEN MEANS ON MOTIVATION

Study 2 extends the investigation by incorporating two key changes. First, we invite participants to choose which of the provided means they will use, as opposed to being given a specified set. We present participants with two types of protein bars and allow them to choose one of each type of bar or two units of the same type of bar to use in pursuit of their fitness goal. This manipulation allows us to consider how temporal focus affects participants' choice of goal-related products, as well as how their choice (of identical vs. varied means) interacts with temporal focus to affect subsequent motivation. Second, study 2 uses a different manipulation of temporal focus. Whereas in study 1 we manipulated the time horizon of goal pursuit by varying inter-consumption interval, here we hold the inter-consumption interval constant and manipulate temporal focus by informing participants that they will receive their chosen protein bars now versus later in the semester.

Design and Method

Ninety-six undergraduate students at the University of Maryland participated in this study in exchange for course credit. Participants were randomly assigned to a temporal focus condition: present versus future.

First, we asked participants whether “being physically fit is a goal that you have” (yes-no). Two participants did not report having a fitness goal and were

excluded from subsequent analyses ($N = 94$). Next, we invited participants to choose protein bars to help them pursue their fitness goal. Specifically, we presented them with a choice of two types of protein bars (Nashua HealthSmart Oatmeal-flavored and Rockie Road-flavored). We asked participants to choose a total of two protein bars in any combination that they wished. Thus, participants could either choose a varied assortment (one each of the Oatmeal and Rockie Road protein bars) or they could choose an identical assortment (two of the Oatmeal protein bars or two of the Rockie Road protein bars).

To manipulate temporal focus, we varied when participants anticipated receiving these protein bars. In the present condition, participants read that they would receive their chosen protein bars at the end of the experimental session (i.e., in a few moments). In the future condition, participants read that they would receive their chosen protein bars when they returned to the lab next month to participate in a different experimental session.

After reading these instructions, participants proceeded to choose their two protein bars. We coded participants as either choosing a varied set of means (i.e., one of each type of bar) or an identical set of means (i.e., two of one type of bar).

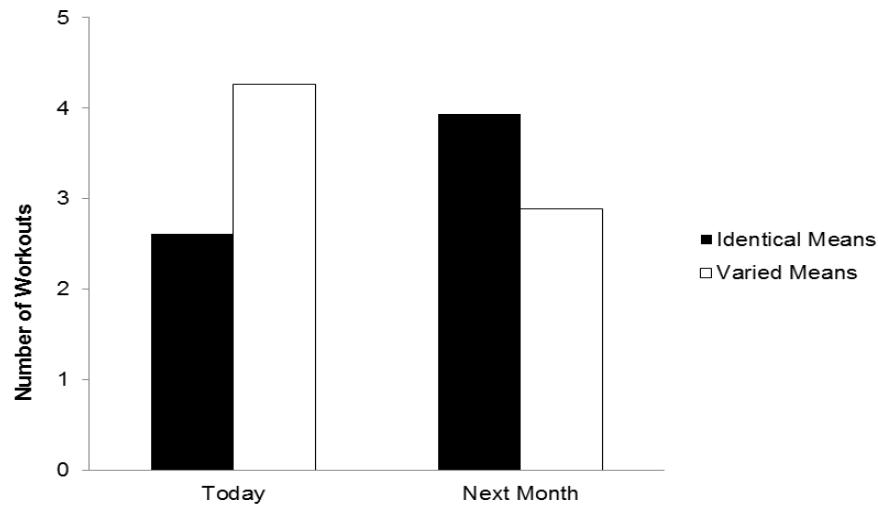
Finally, to measure motivation, we asked participants to indicate the number of times (open-ended) they intended to exercise over the next seven days. Participants in the present condition then received their two protein bars. Participants in the future condition received their two protein bars when they returned to the lab the following month.

Results

Choice of Means. First, we compared choice of means (identical vs. varied) across temporal focus conditions. Participants were more likely to choose varied means when they expected to receive the means immediately following the current experimental session than when they expected to receive the means the following month ($M_{\text{present}} = 63.3\%$, $M_{\text{future}} = 40.0\%$; $\chi^2[1] = 5.09$, $p < .05$). Overall, most people chose the compatible amount of variety among means for goal pursuit (i.e., varied means in the near future vs. identical means in the far future). However, the fact that these percentages are not 100% indicates that not all people behave in this manner.

Motivation. To test the effects of temporal focus and chosen variety on motivation we conducted a two-way ANOVA of chosen variety (1 = varied, 0 = identical) and temporal focus on the number of times participants anticipated exercising in the next week. This analysis revealed an interaction between temporal focus and chosen variety ($F(1, 90) = 13.03$, $p = .001$, see figure 8). Consistent with hypothesis 1, participants who anticipated receiving the bars in the present felt more motivated to pursue their fitness goal when they chose varied bars versus identical bars ($M_{\text{var}} = 4.26$, $M_{\text{ident}} = 2.61$; $F(1, 90) = 10.08$, $p < .01$). In contrast, consistent with hypothesis 2, participants who anticipated receiving the bars in the future felt more motivated to pursue their fitness goal when they chose identical bars versus varied bars ($M_{\text{ident}} = 3.93$, $M_{\text{var}} = 2.89$; $F(1, 90) = 3.79$, $p = .05$).

Fig. 8. Effects of temporal focus and chosen means on motivation.



Discussion

The results of study 2 provide additional support for our hypotheses. Consistent with hypothesis 1, participants were more motivated to pursue their fitness goals when they had chosen (vs. declined) variety among means to goal attainment that they anticipated receiving in the present. In contrast, consistent with hypothesis 2, participants were more motivated to pursue their fitness goals when they had declined (vs. chosen) variety among means to goal attainment that they anticipated receiving in the future.

One interesting aspect of these findings comes from our assessment of participants' current level of motivation to pursue their fitness goals as the dependent measure. Although we asked half of participants to imagine receiving their chosen protein bars in the future, these participants subsequently reported motivation to

pursue their fitness goal in the present. One could wonder if directing participants' attention to goal pursuit in the far future might decrease motivation in the near future, because the temporal compatibility of similar means differs in these two instances. We interpret the fact that the obtained pattern of results supports our hypotheses as consistent with past work on transfer of value from fit (Cesario et al. 2004; Fishbach et al. 2004; Förster et al. 1998; Higgins 2005; Higgins et al. 2010; Merton 1957). Specifically, we suggest that the value derived from temporal compatibility between identical means and goal pursuit in the far future transferred to enhance general goal-directed motivation, which in this particular instance manifested as motivation in the present.

Our next study builds on studies 1 and 2 by testing our propositions in the context of an additional goal domain: savings goals. In addition, as opposed to providing participants with a menu of means to goal attainment, study 3 allows participants to list their own (similar or different) means to use for goal pursuit.

STUDY 3: GENERALIZATION TO SELF-GENERATED MEANS AND NEW GOAL DOMAIN

Study 3 builds on the results of the first two studies in two ways. First, we ask participants to generate their own perceived similar or different approaches to attaining the goal, rather than providing them with similar or different means. Second, we extend the investigation to another domain relevant to consumer behavior: financial savings. Specifically, we ask participants to describe a savings goal they are

pursuing at the present time (“right now”) or over the next year, and then assess their motivation to save money.

Design and Method

One hundred and ten undergraduate students at the University of Maryland participated in this study in exchange for course credit. Participants were randomly assigned to condition in a 2 (temporal focus: near future, far future) X 2 (means similarity: similar, different) between-subjects design.

First, participants read that we were interested in understanding how students formulate plans to save money. We then asked participants in the near future condition to describe a goal they had for themselves “right now” related to saving money. In contrast, we asked participants in the far future condition to describe a goal they had for themselves “over the next year” related to saving money. Nine participants in the two conditions reported not having a corresponding savings goal and were excluded from further analyses ($N = 101$).

Next, we asked participants to list approaches they could take to help them achieve their goal. Specifically, in the similar means condition we asked participants to list three similar approaches to meet their savings goal, whereas in the different means condition we asked participants to list three different approaches to meet their savings goal. A pre-test ($N = 56$) indicated that our manipulation altered participants’ perception of the similarity of their means as we intended (“How similar to each other are the ways to achieve your savings goal that you listed on the previous page?” 1 =

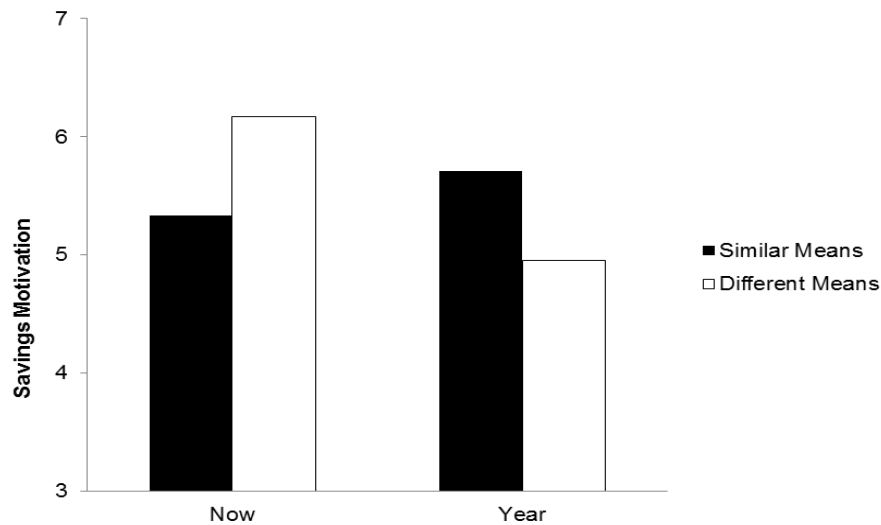
Very different, 7 = *Very similar*). Participants asked to list three similar approaches to saving money perceived their means as more similar to each other ($M = 5.07$) relative to participants asked to list three different approaches to saving money ($M = 4.19$, $F(1, 54) = 4.36, p < .05$).

After the means listing task, we assessed participants' motivation to save money by asking them how "motivated do you feel to save money" and how "committed are you to saving money" on 7-point scales (1 = *Not at all*, 7 = *Very much*). We combined these measures ($\alpha = .90$) to form a composite measure of motivation.

Results

Motivation. A two-way ANOVA revealed the predicted interaction between temporal focus and means similarity ($F(1, 97) = 8.85, p < .01$, see figure 9). Consistent with hypothesis 1, participants who described goals to save for right now felt more motivated to save when they listed three different versus three similar approaches to achieving their savings goal ($M_{\text{diff}} = 6.17, M_{\text{sim}} = 5.33; F(1, 97) = 5.15, p < .05$). In contrast, consistent with hypothesis 2, participants who described goals to save money over the next year felt more motivated to save when they listed three similar versus three different approaches to achieving their savings goal ($M_{\text{sim}} = 5.71, M_{\text{diff}} = 4.95; F(1, 97) = 3.80, p = .05$).

Fig. 9. Effects using self-generated means in a new goal domain.



Discussion

Study 3 demonstrates that our predicted interaction pattern obtains in another critical domain of self-regulation: financial savings. Directing students to think of different (vs. similar) means increased their motivation to save for right now, whereas directing students to think of similar (vs. different) means increased their motivation to save over the next year.

In a follow-up study, we replicated the design of study 3 in the domain of academic goals. The key interaction pattern emerged in this follow-up study as well. Students planned to spend more hours studying in the near future (for midterm exams) when prompted to think about different (vs. similar) approaches they could take to meeting their midterm exam- performance goal. Conversely, students planned to spend more hours studying in the far future (for final exams) when prompted to

think about similar (vs. different) approaches they could take to meeting their final exam-performance goal. That the pattern from studies 1 and 2 in the context of fitness goals emerged in two additional goal domains speaks to the robustness of temporal compatibility effects on motivation across a variety of contexts.

Taken together, studies 1, 2, and 3 provide support for the predicted interaction pattern captured in our two hypotheses. Consistent with our propositions, we find that consumers are more motivated in the near (far) future by relatively different (similar) means to goal attainment. In our next study we seek to elucidate the process underlying this pattern of results. Specifically, study 4 tests our theorizing that the process driving the temporal compatibility effects of similar versus different means on motivation relates to consumers' propensity to search for differences (similarities) among sets of means when focusing on goal pursuit in the near (far) future.

STUDY 4: EVIDENCE FOR MECHANISM UNDERLYING TEMPORAL COMPATIBILITY OF MEANS

We have argued that consumers are more motivated by different (similar) means in the near (far) future because consumers in the near (far) future spontaneously attend to differences (similarities) among means, which are easier to identify among relatively different (similar) means. This reasoning implies that manipulating the ease with which consumers are able to find similarities versus differences among a set of means should moderate the relationship between means

similarity and motivation when planning for goal pursuit in the near versus far future. Specifically, increasing the subjective difficulty of finding differences should attenuate the positive effect of different (vs. similar) means on motivation to pursue a goal in the near future, whereas increasing the subjective difficulty of finding similarities should attenuate the positive effect of similar (vs. different) means on motivation to pursue a goal in the far future.

We test this reasoning in study 4 by asking participants to list either two (easy) or 10 (difficult) similarities versus differences among means, prior to considering use of the means in the near versus far future. We reasoned that making what would otherwise be a fluent experience (identifying differences in the near future and similarities in the far future) more difficult would attenuate the temporal compatibility effects of similar versus different means on motivation.

Design and Method

One hundred and sixty members of an online panel (ages 18 to 73) were recruited to participate in this study in exchange for a small payment. Participants were randomly assigned to condition in a 2 (temporal focus: near future, far future) X 2 (means similarity: similar, different) X 2 (ease of processing: easy, difficult) between-subjects design.

First, we asked participants whether “being physically fit is a goal that you have” (yes-no). Nine participants in the main study did not report having a fitness goal and were excluded from subsequent analyses ($N = 151$). We presented

participants with a set of three different flavors of PowerBar protein bars, as used in the different means condition of study 1 (chocolate chip, vanilla yogurt, and peanut butter). Participants read that these bars could be used after a workout to help them achieve their fitness goals.

Next, we either asked participants to identify similarities (similar condition) or differences (different condition) among this set of bars. The task instructions were designed to make this process more difficult for half of participants. Specifically, participants in the easy condition were asked to list two similarities (differences) among the protein bars, whereas participants in the difficult condition were asked to list 10 similarities (differences) among the protein bars (adapted from Schwarz et al. 1991). This task was designed so that identifying similarities (differences) would be relatively easy for participants when asked to list two similarities (differences), but more difficult when asked to list 10 similarities (differences).

The temporal focus manipulation came after this similarity/difference listing task. We asked participants in the near future condition to imagine that they had been given the three bars to use over the course of the next week, but asked participants in the far future condition to imagine that they would be given the three bars to use over the course of a week six months in the future.

Finally, participants reported their motivation to pursue their fitness goal on a series of three 7-point scales (“How motivated do you feel to pursue your goal to be physically fit?” “How much effort do you intend to devote towards your goal of being physically fit?” and “How committed are you to pursuing your goal to be physically fit?” 1 = *Not at all motivated, Very little effort, Not at all committed*; 7 = *Very*

motivated, A lot of effort, Very committed). We combined these measures ($\alpha = .93$) to form an average measure of motivation.

We also asked participants to report their perceptions of the similarity of their means to goal attainment (“How similar are the three protein bars to each other?”) on a 7-point scale (1 = *Very similar*, 7 = *Very different*) to test whether our ease of processing and temporal focus manipulations influenced participants’ perceptions of the similarity of their means to goal attainment.

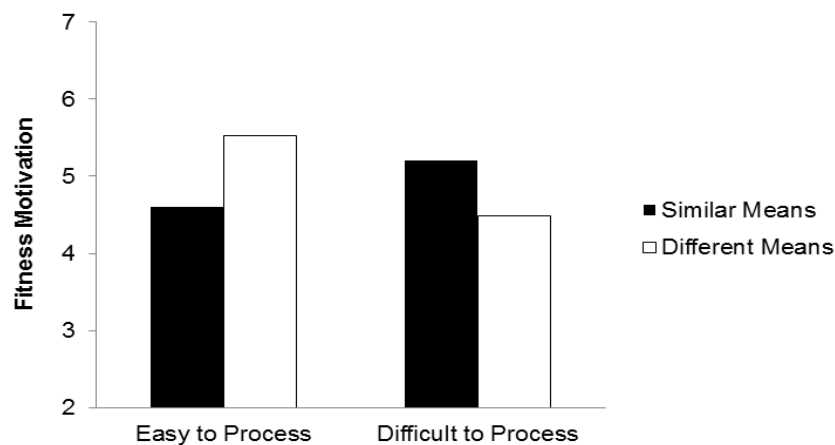
Results

Motivation. A three-way ANOVA revealed a main effect of temporal focus ($F(1, 143) = 5.40, p < .05$), qualified by a three-way interaction between temporal focus, means similarity, and ease of processing on motivation to pursue the fitness goal ($F(1, 143) = 10.99, p = .001$). To explore the nature of this interaction, we ran separate analyses for goal pursuit in the near versus far future.

First examining participants who considered using the means in the near future, a two-way ANOVA revealed a significant interaction between the prompt to list similarities versus differences and the ease of processing manipulation on motivation ($F(1, 143) = 8.04, p < .01$; see figure 10a). Consistent with our predictions, when it was easy for participants considering the near future to list thoughts about the protein bars, motivation was higher when participants listed differences than when they listed similarities ($M_{\text{diff}} = 5.53, M_{\text{sim}} = 4.60; F(1, 143) = 4.65, p < .05$). In contrast, when it was more difficult for participants to list thoughts

about the bars, motivation was directionally lower when participants focused on differences versus similarities ($M_{\text{diff}} = 4.48$, $M_{\text{sim}} = 5.20$; $F(1, 143) = 3.39$, $p < .07$). Though unanticipated, this directional reversal is consistent with the prediction that those who find it easy to generate differences (or hard to generate similarities) will be more motivated when thinking about the near future.

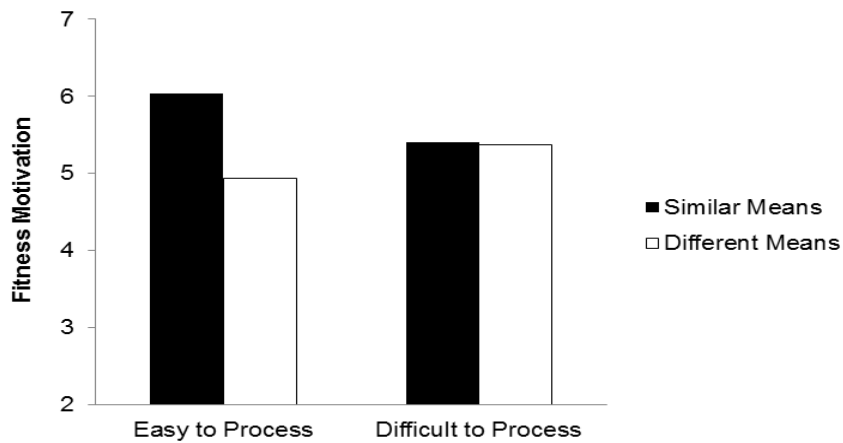
Fig. 10a. Ease of processing moderates the effect of means similarity on motivation in the near future.



Examining next participants who considered using the means in the far future, a two-way ANOVA revealed a marginally significant interaction between the prompt to list similarities versus differences and the ease of processing manipulation on motivation ($F(1, 143) = 3.43$, $p < .07$; see figure 10b). Consistent with our predictions, when it was easy for participants considering the far future to list thoughts about the protein bars, motivation was higher when participants listed similarities than when they listed differences ($M_{\text{sim}} = 6.04$, $M_{\text{diff}} = 4.93$; $F(1, 143) =$

7.40, $p < .01$). In contrast, there was no comparable effect when it was more difficult for participants to list their thoughts about the bars ($M_{sim} = 5.40$, $M_{diff} = 5.37$; $F < 1$).

Fig. 10b. Ease of processing moderates the effect of means similarity on motivation in the far future.



Perceived Similarity. One could argue that our ease of processing manipulation influenced motivation by leading individuals to conclude that the set of means was more or less similar, which then affected motivation differently depending on whether the temporal focus of goal pursuit was distant or proximate. To address this issue, we conducted a three-way ANOVA on perceptions of means similarity, which revealed a main effect of the prompt to list similarities versus differences only. Participants perceived the three protein bars to be more similar to each other when asked to list similarities ($M = 5.86$) than when asked to list differences ($M = 5.34$; $F(1, 143) = 7.53$, $p < .01$).

Note that prior demonstrations of manipulated ease of processing (e.g., Schwarz et al. 1991) might have predicted an interaction between our means similarity manipulation and our ease of processing manipulation on perceived means similarity. That we do not obtain such an effect in the present research paradigm suggests that it is the ease of identifying similarities versus differences rather than the content of identified similarities versus differences that drives the temporal compatibility effects on goal-directed motivation.

Discussion

The results of study 4 support the proposed process underlying the effects of temporal focus and means similarity on motivation. Because consumers in the near (far) future more readily attend to differences (similarities) among sets of items, making the identification of differences (similarities) relatively easy by only asking participants to list two examples increased motivation, replicating the results of our prior studies and supporting hypotheses 1 and 2 (see the left-most bars of figure 10). Specifically, focusing on differences (vs. similarities) increased participants' motivation to pursue their fitness goal in the near future, whereas focusing on similarities (vs. differences) increased participants' motivation to pursue their fitness goal in the far future. However, increasing the difficulty of identifying differences (similarities) by asking participants to list 10 examples attenuated these effects (see the right-most bars of figure 10).

This pattern of results provide support for our theorizing that the temporal compatibility of different (similar) means in the near (far) future stems from consumers' natural inclination to search for differences (similarities) among sets of items in the near (far) future. Consistent with prior work on individuals' metacognitive experience (Schwarz et al. 1991), we find that when consumers search for differences (similarities) among means and easily identify those differences (similarities), goal-directed motivation increases. In contrast, when consumers' search for differences (similarities) is experienced as more difficult, temporal compatibility effects of means similarity on motivation do not obtain.

Importantly, the results of study 4 suggest that the underlying mechanism relates to metacognitive experiences of ease in identifying similarities versus differences, rather than other plausible mechanisms. For example, the findings do not support an account based on perceptions of the items as more or less similar. If this account explained the results, the ease of processing manipulation should have affected perceptions of means similarity as well as motivation, which it did not. Though ease of identifying similarities (differences) could influence individuals' perception of means similarity, this relationship did not emerge in this study. This finding demonstrates that the two need not co-vary and that the critical element is ease of processing. A more general weighting of variety in the near versus far future also cannot account for the results of study 4; such a pattern would have been reflected in a two-way interaction between means similarity and temporal focus, which did not emerge.

We turn next to consider the behavioral implications of our propositions: we invite participants to take part in an auction for means to the attainment of a fitness goal (an hour-long personal training session), thereby measuring their real willingness to pay for the means.

STUDY 5: WILLINGNESS TO PAY FOR SIMILAR VERSUS DIFFERENT MEANS TO GOAL ATTAINMENT

Study 5 extends our study of the temporal-compatibility of similar versus different means to consumers' actual willingness to pay for the means. Previous research suggests that the value consumers ascribe to a goal transfers to increase the value of its means to attainment; thus, measuring consumers' willingness to pay for means to goal attainment offers another way to capture goal-directed motivation (Etkin and Ratner 2012; Fishbach et al. 2004). To measure willingness to pay, we invited participants to enter an auction for a service related to the attainment of a fitness goal: a one-hour session with a personal trainer at the University's recreation center. We manipulated whether we emphasized differences or similarities in the description of the exercise program, as well as whether participants planned to start the program in the near versus far future, prior to eliciting participants' willingness to pay.

Design and Method

One hundred and eleven students at the University of Maryland were recruited to participate in this study in exchange for course credit. Participants were randomly assigned to condition in a 2 (temporal focus: near future, far future) X 2 (similarity of means: similar, different) between-subjects design.

We first asked participants to indicate whether they were currently pursuing a goal to be physically fit (yes-no). One participant indicated that s/he did not have a fitness goal and was excluded from further analyses ($N = 110$). Next, we asked participants to consider a situation in which they had hired a personal trainer to help them meet their fitness goal. In the near future condition, we asked participants to imagine that their first hour-long session with the personal trainer was scheduled for next week, whereas in the far future condition we asked participants to imagine that their first hour-long session with the personal trainer was scheduled for next month.

All participants read a description of the hour-long personal training session, which included three components: a 10 minute warm-up, 40 minutes of interval training, followed by a 10 minute cool-down. To manipulate the perceived similarity of exercises within the personal training session, we varied the language used to describe the interval portion of the session. In particular, participants in the similar [different] condition read the following instructions: “Your trainer emphasizes that during the interval training portion of the session you will complete many repetitions of the same [different] exercises, working the same [different] muscle groups in your

body. Your trainer believes it is important to work out the same [different] muscle groups to meet your fitness goal.”

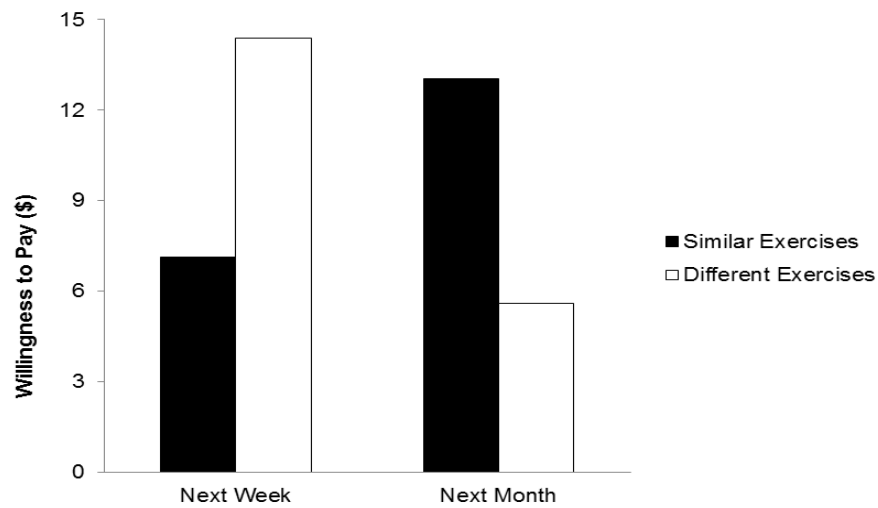
Finally, we invited participants to enter an auction for a one-hour personal training session with a trainer at the University’s recreation center, where the trainer would follow the program as was described (i.e., focusing on variation vs. commonalities in the interval training portion of the session). Participants were each permitted to submit one bid (\$) for the personal training session and were told to write “0” if they would be not be willing to pay any amount of money for it. We selected and notified the winning bidder at the end of each day of data collection. Participants’ bids for the one-hour personal training session served as our main dependent measure in this study.

Results

Willingness to Pay. A two-way ANOVA revealed the predicted interaction between temporal focus and means similarity on the amount bid for the personal training session ($F(1, 106) = 12.67, p = .001$; see figure 11). Consistent with hypothesis 1, participants planning to start the personal training program in the near future bid more for the session advocating different exercises relative to the session advocating similar exercises ($M_{\text{diff}} = \$14.39, M_{\text{sim}} = \$7.14; F(1, 106) = 5.45, p < .05$). Consistent with hypothesis 2, participants planning to start the personal training program in the far future bid more for the session advocating similar exercises relative to the session advocating different exercises ($M_{\text{sim}} = \$13.04, M_{\text{diff}} = \5.60 ;

$F(1, 106) = 6.50, p < .01$). This pattern continued to emerge even when excluding participants ($N = 74$) who indicated that they would not pay any money (\$0) for the session.

Fig. 11. Willingness to pay for similar versus different means to goal attainment.



Discussion

These results demonstrate our effects with a different measure of consumer motivation: willingness to pay for means to goal attainment. Replicating the pattern of results from our earlier studies, participants were willing to pay more for means to goal attainment in the near future when the means was described using differences (vs. similarity) language, but were willing to pay more for means to goal attainment in the far future when the means was described using similarity (vs. differences) language.

STUDY 6: MEANS SIMILARITY AFFECTS TIMING OF GOAL PURSUIT

One final study explores an extension of our paradigm. Our results thus far indicate that temporal focus influences the similarity of means most motivating to goal pursuit, but might means similarity affect when consumers desire to use the designated means to engage in goal pursuit? If such a reciprocal relationship does exist, our theorizing would suggest that consumers may prefer to expedite usage of relatively different means to goal attainment, but to delay usage of relatively similar means to goal attainment. We test these predictions by describing a personal training session using either similarity or differences language and measuring when participants anticipate using the means to pursue their fitness goal.

Design and Method

Forty undergraduate students at the University of Maryland participated in this study. Participants were randomly assigned to either the similar or different means condition.

We first asked participants to indicate whether they were currently pursuing a goal to be physically fit (yes-no). Two participants indicated that they did not have a fitness goal and were excluded from further analyses ($N = 38$). Next, we asked participants to imagine that they had hired a personal trainer to help them meet their fitness goal. As in study 5, participants read a description of an hour-long personal

training session in which the trainer either emphasized use of similar or different exercises.

Next, we asked each participant two questions regarding when they would be likely to start working with the personal trainer. Specifically, we asked participants how likely they would be to take an available appointment with the trainer today versus one month from today (“If your trainer had an opening today [one month from today], how likely would you be to take it?”) on 7-point scales (1 = *Not at all likely*, 7 = *Very likely*). To compute a measure of propensity to delay goal pursuit, we subtracted each participant’s likelihood of taking an available training session today from their likelihood of taking an available training session next month. A positive score on this measure would indicate a preference to delay usage of means into the future, whereas a negative score on this measure would indicate a preference to expedite usage of the means.

Results and Discussion

Timing of Goal Pursuit. A one-way ANOVA on propensity to delay goal pursuit revealed a main effect of means similarity ($F(1, 36) = 5.15, p < .05$). As we anticipated, participants who read the description of similar (vs. different) means preferred to delay goal pursuit further into the future ($M_{\text{sim}} = 2.35, M_{\text{diff}} = .22$). Extending our paradigm, these results suggest that the relationship between temporal focus and means similarity may be reciprocal; in addition to temporal focus influencing the relative similarity of means most motivating for goal pursuit, means

similarity may influence when in time consumers plan to use designated means for goal pursuit.

GENERAL DISCUSSION

Pursuing long-term self-control goals requires consumers to plan for goal pursuit both in the near future as well as the more distant future. When considering use of means to pursue these types of goals, consumers can plan to use the means immediately (e.g., eating the healthy snacks over the next week) or further into the future (e.g., eating the healthy snacks over the next several months). To the extent that the type of means (i.e., similar vs. different) consumers plan to use for goal pursuit may affect their motivation, understanding how timing interacts with means similarity to influence goal-directed motivation is an important line of inquiry.

Building on past work investigating effects of temporal construal on information processing (Förster 2009), we reasoned that consumers focused on pursuing a goal in the near future will spontaneously search for differences among means to goal attainment, whereas consumers focused on pursuing a goal in the far future will spontaneously search for similarities among means to goal attainment. We argued that when consumers plan to use sets of means compatible with their temporally-induced search for similarities versus differences (i.e., a set of relatively similar vs. different means), the value from this experience of fit will transfer to increase motivation to pursue the associated goal.

We tested our propositions in a series of six studies, utilizing different manipulations of means similarity and multiple measures of motivation (including willingness to pay for the means to attainment). As predicted, consumers were more motivated by different (vs. similar) means when they planned to use the means for goal pursuit in the near future, but were more motivated by similar (vs. different) means when they planned to use the means for goal pursuit in the far future (studies 1, 2, 3, and 5). These findings are of particular note because they run somewhat contrary to common intuition. Whereas one might expect that over a longer time span consumers may have both the need and opportunity to use a greater variety of means, we find that people are actually less motivated by relatively different means in the far future. We further show that greater ease of processing differences (similarities) in the near (far) future underlies these effects (study 4). As was the case in studies 1, 2, 3, and 5, when the temporally-compatible identification of similarities versus differences was relatively easy, participants reported greater motivation to pursue their goal. In contrast, when the identification of similarities (differences) was made more difficult, compatibility between the temporal focus of goal pursuit and similarity of means did not increase motivation.

Importantly, we obtain support for our propositions with two different operationalizations of temporal distance: focusing participants on short versus long time horizons over which they would be using the means (studies 1 and 3) and holding constant the inter-consumption interval while varying whether the interval occurs in the near or far future (studies 2, 4, 5, and 6). That our effects were robust to these two different operationalizations of temporal distance demonstrates both the

construct validity (that effects are indeed due to temporal distance rather than confounds with different lengths of the consumption period) and external validity (that the effects will extend to short versus long consumption intervals) of our findings.

There are two plausible alternative accounts for our findings that warrant discussion. First, one could argue that consumers are more motivated by different (vs. similar) means in the near (vs. far) future because they are more concerned with satiation in the near future. Though this may be true, it is not clear how satiation concerns would explain the greater motivation arising from similar (vs. different) means in the far future. In contrast, the relative ease of processing similarities versus differences in the far future can explain the reversal. Second, one might reason that consumers are in fact more motivated by different (similar) means in the near (far) future because having more variety among means makes goal pursuit more feasible (a concern more salient in the near future), whereas having a less varied, more focused set of means makes goal pursuit more desirable (a concern more salient in the far future; Trope and Liberman 2000). To address this argument, we collected ratings on the feasibility versus desirability of having variety and consistency among means to goal attainment and found that, if anything, consumers seem to find having variety among means to be more desirable than feasible thereby casting doubt on the ability of feasibility versus desirability concerns to account for our effects.

Theoretical Contributions

Our findings contribute to the literatures on goal pursuit and temporal construal. Previous research has considered the motivational implications of how one plans to pursue a goal; for example, considering how the formation of specific implementation intentions increases goal-directed motivation (Gollwitzer 1990). Less attention, however, has been paid to how plans to pursue a goal now or in the future affect motivation. Further, though past work has considered how consumers negotiate the pursuit of multiple conflicting goals over time (Dhar and Simonson 1999; Fishbach and Dhar 2005; Khan and Dhar 2006), the question of how consumers use multiple means to pursue a single goal over time has not been addressed in the literature. By considering how the timing of goal pursuit interacts with characteristics (i.e., the perceived similarity) of means to goal attainment to impact motivation, the present work begins to address this gap.

One implication of the present findings is that consumers may sometimes choose too little variety when they plan for goal pursuit in the far future. Whereas people might prefer low-variety (i.e., similar) sets of means when focused on the far future (indeed this was the pattern obtained in study 2), when the time comes for them to actually engage in goal pursuit they may prefer to have more variety among means instead. From this perspective, our results demonstrate the opposite pattern from that illustrated in the classic findings by Simonson (1990), where people chose more variety than they later wanted. We note that whereas in the Simonson paradigm, participants incorporated more variety into simultaneous than in sequential (i.e.,

separate) choices, in the present studies, all participants made judgments after seeing multiple items simultaneously (i.e., sets of means). Instead, we manipulated the time horizon that individuals adopted regarding when they would use the means for goal pursuit. The present findings suggest that when evaluating varied sets of goal-related items, consumers' judgments would be more favorable when they think about consuming the set in the near (vs. far) future.

This research also builds on recent work exploring the relationship between variety among means and motivation, and specifically the moderating role of goal progress (Etkin and Ratner 2012). That work demonstrated that high-variety (vs. low-variety) sets of means are more motivating when individuals perceive they have made little progress toward goal attainment, whereas low-variety (vs. high-variety) sets of means are more motivating when individuals perceive they have made substantial progress toward goal attainment. One question that naturally arises when comparing the present findings to the results of Etkin and Ratner (2012) is how the temporal focus of goal pursuit relates to progress towards goal attainment. For instance, does a near (far) temporal orientation towards goal pursuit lead consumers to perceive less (more) progress towards achieving their goal?

We collected some additional data to investigate this relationship, manipulating temporal focus and asking participants ($N = 107$) to indicate agreement with the following statements: "I have far to go to achieve my goal," "I have made a lot of progress towards achieving my fitness goal," and "I anticipate making a lot of progress towards my fitness goal" on 7-point scales (1 = *Strongly disagree*, 7 = *Strongly agree*). We did not find any effects of temporal focus on these perceived

progress measures (F 's < 1), suggesting that the present phenomenon is distinct from that documented by Etkin and Ratner (2012). Of course, in some situations, temporal focus and goal progress may co-vary. For example, when consumers attempt to lose a specified amount of weight, low progress towards goal attainment likely corresponds to adopting a far time horizon for goal pursuit and vice versa. Though the current findings suggest that temporal compatibility of means is itself a significant predictor of consumer motivation, a more thorough investigation of this relationship is an interesting direction for future research,

Also interesting to consider in future research is how the obtained effects of means similarity and temporal focus on motivation may generalize to other situations. Past work on temporal construal shows that non-temporal measures of distance, such as psychological distance, probabilistic distance, and social distance, likewise affect how individuals mentally construe various events (e.g., Trope and Liberman 2003). Thus, it may be the case that the motivational effects of means similarity vary across these construal dimensions as well. For instance, might one's motivation to engage in social activities with friends vary depending on the perceived similarity of the friends and social proximity (i.e., perceived closeness) to the group?

Our conceptualization of means similarity could also be expanded to include a broader array of consumption situations. In the present studies we held the quantity of means constant in order to isolate the influence of means similarity on motivation, but the quantity of means available for goal pursuit may also vary. Extrapolating from the present findings, might offering consumers a single means for goal pursuit in the long run be more effective than a choice between several different means? Results of a

recent article (Goodman and Malkoc 2012) may be interpreted to suggest that offering consumers a choice between multiple means (vs. a single means) might be evaluated more positively in the near future (i.e., when consumers prefer larger choice sets), but whether this preference would reverse in the far future remains an open question. Broadening the present framework along these dimensions may generate new insights for the relationship between means to goal attainment and consumer motivation.

Implications for Marketers and Consumers

This research offers novel insights to both marketing practitioners and consumers. To the extent that marketers have direct control over when to encourage consumers to pursue their goals and how much variety to offer in their product assortments, understanding how perceived product similarity and the anticipated timing of goal pursuit impacts willingness to pay may allow marketers to make more informed product and promotion decisions. For example, when encouraging consumers to consider the importance of being healthy in the present (future), marketers may wish to highlight differences (commonalities) among goal-related product assortments, such as by strategically using contextual cues (see Mogilner, Rudnick, and Iyengar 2008), altering the language on product packaging, or reducing assortment variety.

Moreover, the results of study 6 suggest that marketers can emphasize commonalities versus differences among goal-related products and behaviors

strategically to influence whether a consumer would want to use a product now or would be content (e.g., in light of a stockout) to wait to use the product later. Conversely, when encouraging consumers to select relatively similar (vs. different) product assortments, marketers may wish to highlight usage of those products in the distant (vs. near) future (e.g., “Meet your fitness goal this year” to sell similar items vs. “Meet your fitness goal today” to sell varied items).

Finally, with respect to consumers, many of the benefits of pursuing self-control goals such as being healthy are experienced in the future, not in the present. Thus, a key component of self-regulatory success is the ability to feel motivated when considering goal pursuit across time. Our results suggest one way for consumers to manage motivation is to strategically construct sets of means to match the timing of when they plan to use them. For example, consistent with the results of the follow-up to study 3 in the context of academic goals, students preparing to take the GREs next month may study harder if they use relatively similar prep books to prepare. In contrast, students preparing to take the GREs next week may study harder if they use relatively different prep books to prepare. Likewise, consumers saving for vacation next summer may save more money by reducing expenditures in related areas of their lives, whereas consumers saving for vacation next week may save more money by reducing expenditures in different areas of their lives. These and other implications of our research may have far-reaching applications for helping consumers to be successful in pursuit of their long-term goals.

In sum, our research demonstrates how consumers’ goal-directed motivation varies over time as a function of the perceived similarity of means to goal attainment.

To the best of our knowledge, we are the first to identify the temporal compatibility of means to goal attainment as a predictor of goal-directed motivation. By furthering understanding of how properties of means (i.e., perceived similarity) affect motivation, our work better enables consumers, as well as marketers, to manage goal pursuit over time.

Chapter 4: Two Birds, One Stone? How Positive Mood Makes Products Seem Less Useful for Multiple-Goal Pursuit

From striving for a promotion at work, losing a few pounds, spending time with loved ones, to saving for a rainy day, the demands on consumers' time, money, and energy are numerous and persistent. Unfortunately, these resources are limited, which often requires consumers to make tradeoffs among their various pursuits (Emmons and King 1988; Fishbach and Ferguson 2007; Kruglanski et al. 2002). Consumers with professional and health goals, for instance, must decide whether to spend their evening hours at the office or the gym.

One way consumers can reduce the need to make inter-goal tradeoffs is by utilizing means (products, services, etc.) that help them pursue multiple goals at the same time. These types of means offer consumers more 'bang for the buck' by enabling them to make simultaneous progress towards several of their goals (Chun et al. 2011; Köpetz et al. 2011; Kruglanski et al. 2002) In the example above, for instance, an in-office gym membership might enable consumers to exercise without taking much time away from work, thereby simultaneously furthering their professional and health goals. Indeed, research finds that consumers with multiple goals tend to prefer means useful for several of their goals relative to means useful for just one goal (Chun et al. 2011; Köpetz et al. 2011; Kruglanski et al. 2002).

But while consumers with multiple goal strivings *should* prefer means useful for multiple goals, will they always do so? In this paper, we examine how incidental

mood positive mood undermines multiple-goal pursuit by causing consumers to perceive means as less useful for pursuing multiple goals. We propose being in a positive mood will lead consumers to spontaneously see their goals as more different. Because relatively different goals are less likely to share common means (Köpetz et al. 2011), perceiving goals as more different should decrease consumers' perceptions of means utility for multiple-goal pursuit.

We consider the role of positive mood in particular due to its important and multifaceted role in information processing. Prior research finds being in a positive mood increases responsiveness to contextual cues, leading individuals to adopt and perpetuate whatever mode of processing most accessible in a specific context (Isen and Daubman 1984; Hunsinger, Isbell, and Clore 2012; Lee and Sternthal 1999; Murray et al. 1990; Showers and Canter 1985). Being in a positive mood, for instance, can lead one to see more similarities or more differences between items, depending on whether a cue to focus on inter-item similarities or differences is more accessible (Murray et al. 1990; Showers and Canter 1985).

We predict that multiple-goal pursuit is one context where consumers will spontaneously focus on inter-item differences; in this case, differences between their goals. As noted earlier, multiple-goal pursuit typically requires consumers to make tradeoffs when allocating their scarce resources to goal pursuit. Tradeoff saliency leads consumers to focus on differences, or unique features of items under consideration (Brenner, Rottenstreich, and Soon 1999; Dhar and Sherman 1996; Gilbert, Giesler, and Morris 1995; Nosofsky 1986; Tversky 1977). We expect being in a positive mood will facilitate adoption of this differences focus, making

consumers see their goals as more different from one another relative to other mood states. Perceiving goals as more different will consequently lead consumers to perceive means as less useful for multiple-goal pursuit.

Our research makes three key contributions. First, we identify conditions where consumers fail to take advantage of means useful for pursuing multiple goals, even when they would benefit from doing so. Our findings thus suggest a more nuanced understanding of how consumers use products to pursue multiple goals. Second, we offer a novel way to categorize the relationship between multiple goals: as more or less different from one another. We show the degree to which consumers perceive their goals as different has consequences for consumer choice. Finally, we highlight an important context (i.e., multiple-goal pursuit) in which positive mood spontaneously increases perceptions of inter-item differences; thereby contributing to extant knowledge on how incidental positive mood affects information processing.

In what follows, we review relevant work on goals, positive mood, and similarity assessment to develop our hypotheses. We then present five studies providing empirical support for our predictions and conclude with a discussion of theoretical and practical implications of our research.

MULTIPLE-GOAL PURSUIT

Consumers often pursue multiple goals at the same time (Fishbach and Ferguson 2007; Kruglanski et al. 2002). Working adults, for example, may simultaneously want to achieve professional success, be healthy, spend time with

their family, and save money. Pursuing multiple goals, however, can be difficult to execute. Achieving goals require resources, including time, money, and energy, which are limited in quantity (Emmons and King 1988; Fishbach and Dhar 2005; Kruglanski et al. 2002; Louro, Pieters, and Zeelenberg 2007). Consumers must therefore make tradeoffs when allocating resources across their various pursuits, a process which is difficult and psychologically aversive (Emmons and King 1988; Louro et al. 2007; Wicklund and Gollwitzer 1982).

One way to avoid engaging in such tradeoffs is by utilizing products (services, behaviors, etc.) that facilitate the pursuit of multiple goals at the same time. Green tea, for instance, has health benefits and improves one's ability to focus at work; cooking dinner at home is both cost-effective and a way to spend time with family. Seeking out and utilizing means useful for multiple-goal pursuit increases consumers' chance of successfully achieving their goals (Chun and Kruglanski 2005; Köpetz et al. 2011; Kruglanski et al. 2002).

Critical to capitalizing on means useful for multiple goals, however, is consumers' ability to identify such means. If consumers do not see green tea as useful for both their health and professional goals, for example, they may opt for another beverage option, like soda or coffee. Such a choice may still provide a caffeine-fueled boost in attention at work, but would not further pursuit of consumers' health goals.

What affects consumers' perceptions of means as more or less useful for pursuing multiple goals at the same time?

ROLE OF POSITIVE MOOD

We propose that incidental positive mood will impact consumers' perceptions of means utility for multiple-goal pursuit. Not only is positive mood ubiquitous in everyday life, but positive affect is inextricably linked to goal pursuit. By definition, goals are positively-valenced end states (Carver and Sheier 1998; Custers and Aarts 2005; Ferguson and Bargh 2004; Kruglanski et al. 2002). The positive affect derived from goal achievement drives goal-directed behavior (Fishbach et al. 2004, Louro et al. 2007; Gervy, Igou, and Trope 2005), facilitating single-goal adoption (Fishbach and Labroo 2007) and motivation to pursue a single goal more generally (Fishbach et al. 2004; Herrald and Tomaka 2002; Labroo and Patrick 2009).

Critical to the present research, positive mood also plays an important and multifaceted role in information processing. Positive mood increases the diversity of information accessed from memory, allowing consumers flexibility in how they interpret various stimuli (Isen and Daubman 1984; Fredrickson 2001; Hunsinger et al. 2012; Murray et al. 1990; Showers and Canter 1985). Consumers in a positive mood thus adaptively adopt situation-specific information processing cues most accessible in a given situation (Hunsinger et al. 2012; Murray et al. 1990; Showers and Canter 1985). Murray et al. (1990), for instance, shows that positive mood leads participants to identify more differences between items when explicitly asked to focus on differences, but more similarities between items when asked to focus on similarities. Thus, while some work suggests people in a positive mood spontaneously focus on similarities between items (Barone, Miniard, and Romeo 2000; Isen and Daubman

1984; Isen, Daubman, and Nowicki 1987; Kahn and Isen 1993; Lee and Sternthal 1999; Murray et al. 1990), positive mood should instead increase perceptions of differences in contexts where a differences focus is spontaneously cued.

THE CURRENT RESEARCH

We propose multiple-goal pursuit is an important context in which positive mood spontaneously increases consumers' perceptions of differences between items; in this case, between goals. Critical to our theory is the inherent nature of tradeoffs in multiple-goal pursuit. When faced with the need to make tradeoffs, consumers tend to spontaneously focus on unique, or different, features of items under consideration (Dhar and Sherman 1996; Gati and Tversky 1984; Gilbert et al. 1995; Medin, Goldstone, and Gentner 1993; Tversky and Simonson 1993). Choice, for instance, often involves tradeoffs; as a result, consumers tend to focus on unique features of choice options (Brenner et al. 1999; Dhar and Sherman 1996).

Extrapolating from these findings, we expect multiple-goal pursuit, which generally requires tradeoffs, to make consumers spontaneously focus on how their goals are different from one another. By facilitating adoption of this focus, positive mood should thus increase consumers' perceptions of differences between their goals.

Importantly, perceiving one's goals as more different has downstream consequences for multiple-goal pursuit. In particular, we propose seeing goals as more different makes available means seem less useful for pursuing multiple goals at the same time. Prior work suggests relationships between goals determine the

availability of means useful for multiple-goal pursuit. More different goals share fewer common means (Köpetz et al. 2011). Goals to be healthy and get in shape, for instance, share more common means than goals to be healthy and do well in school (Köpetz et al. 2011). Consumers pursuing objectively different goals thus have fewer opportunities to use means simultaneously useful for their goals. When consumers *perceive* their multiple goals as more different, then, they should perceive available means as less useful for simultaneously pursuing multiple goals.

H1: Consumers in a positive mood will perceive means to goal attainment as less useful for pursuing multiple goals at the same time.

H2: This effect will be mediated by perceiving more differences between goals.

Five studies test these predictions. Study 1 provides a preliminary test of how mood influences evaluations of product utility for multiple-goal pursuit. Studies 2a and 2b test the proposed underlying mechanism, that positive mood increases consumers' perceptions of differences between their goals, and demonstrates the moderating role of tradeoff saliency. Study 3 tests the complete model and shows that perceiving more differences between goals mediates the effect of positive mood on perceptions of means utility. Finally, study 4 illustrates consequences of being in a positive mood for choosing among means that vary in their usefulness for multiple-goal pursuit.

STUDY 1: EVALUATIONS OF MEANS UTILITY

Study 1 provides an initial test of how incidental positive mood shapes evaluations of means utility for multiple-goal pursuit. We induce either a positive or neutral mood and activate two goals: a health goal and an academic goal. Then, we give participants samples of two products useful for both goals, but described as useful for the health goal only. We ask participants to rate how useful these products would be in helping them achieve their academic goals and both their health and academic goals simultaneously.

Design and Method

Eighty-five students at a large East Coast University completed this study in exchange for course credit. We randomly assigned participants to one of two mood conditions, positive versus neutral mood, and asked them to complete two ostensibly unrelated tasks.

In the first task, we manipulated incidental mood by showing participants one of two video clips. In the positive mood condition, participants viewed a video clip of a laughing baby; in the neutral mood condition, participants viewed a video clip of children going about a typical day. The videos were not accompanied by dialogue and each lasted approximately two minutes. We pretested this mood manipulation ($N = 94$) with a series of nine 5-point scales (e.g., “I had unpleasant [pleasant] feelings after watching the videos,” “The words were depressing [upbeat]”; $\alpha = .97$). As

intended, participants in the positive mood condition experienced more positive feelings than participants in the neutral mood condition ($M_{\text{pos}} = 5.75$, $M_{\text{neut}} = 4.34$; $F(1, 92) = 41.33$, $p < .001$). After watching the videos we thanked participants and invited them to proceed to the next task, positioned as a separate study.

In the second task, we activated two commonly held goals: a goal to be healthy and a goal to do well in school. We told participants we were interested in learning about goals commonly held by students and asked them to indicate whether they had each goal (yes-no).

Participants then sampled two products related to both health and academic goals: a small cup of green tea (approximately 1.5 ounces) and a small nut bar. Both products were healthy (green tea is rich in antioxidants and nut bars are all-natural and low-calorie) and useful for doing well in school (green tea helps people pay attention and nut bars are a convenient, energizing snack). We explicitly described the products as “healthy”, but left the interpretation of their utility for doing well in school up to participants’ subjective perceptions.

Participants consumed the samples one at a time, and then rated each in terms of usefulness for achieving their health goal (1 = *Not at all useful*, 7 = *Very useful*), academic goal (1 = *Not at all useful*, 7 = *Very useful*), and both goals at the same time (1 = *Not at all useful*, 7 = *Very useful*). We randomized the order in which participants sampled the products (green tea first vs. nut bar first) to control for potential order effects.

Based on our hypothesis, we expected participants in a positive mood would perceive the green tea and nut bar as less useful for their academic goal and less

useful for both goals at the same time. Since we explicitly designated the products as healthy, we did not anticipate differences in perceived usefulness for the health goal across mood conditions.

Results

There was no effect of product order (green tea vs. mini nut bar first) on the perceived utility of these products. We thus conducted a series of one-way ANOVAs to test the effect of positive mood on evaluations of the green tea and mini nut bar samples.

Green tea. As we predicted, being in a positive mood decreased participants' perceptions of green tea as useful for doing well in school ($M_{\text{pos}} = 2.00$, $M_{\text{neut}} = 3.11$; $F(1, 83) = 11.98$, $p = .001$) and for being healthy and doing well in school at the same time ($M_{\text{pos}} = 2.76$, $M_{\text{neut}} = 3.68$; $F(1, 83) = 6.95$, $p = .01$). Perceptions of usefulness for being healthy did not differ across mood conditions ($M_{\text{pos}} = 4.93$, $M_{\text{neut}} = 5.11$; $F < 1$).

Nut bar. Replicating the pattern of results for green tea, being in a positive mood decreased participants' perceptions of the nut bar as useful for doing well in school ($M_{\text{pos}} = 2.59$, $M_{\text{neut}} = 3.44$; $F(1, 83) = 4.88$, $p < .05$) and for being healthy and doing well in school at the same time ($M_{\text{pos}} = 3.24$, $M_{\text{neut}} = 3.95$; $F(1, 83) = 3.84$, $p = .05$). There was no difference in perceived usefulness for being healthy alone ($M_{\text{pos}} = 5.12$, $M_{\text{neut}} = 4.93$; $F < 1$).

Discussion

Study 1 demonstrates that being in a positive mood decreases consumers' perceptions that products can be useful for pursuing multiple goals at the same time. Participants in a positive mood perceived the "healthy" green tea and nut bar samples as less useful for pursuing their academic goals and less useful for pursuing both of their goals simultaneously, relative to participants in a neutral mood. Importantly, positive mood did not impact perceptions of product healthiness, suggesting that positive mood does not have a general negative effect on product evaluations. That the usefulness ratings followed actual consumption episodes increases the external validity of our findings.

Next, studies 2a and 2b test the proposed process leading consumers in positive mood to perceive means as less useful for pursuing multiple goals; namely, that consumers in a positive mood see their goals as more different.

STUDY 2A: PERCEIVED DIFFERENCES BETWEEN GOALS

Study 2a considers how incidental positive mood impacts perceptions of differences between goals. We activate three goals and induce one of three mood states: positive, neutral, or negative mood. We predict participants in a positive mood will perceive more differences between their goals relative to those in other mood states.

Design and Method

Ninety-four members of a national online panel participated in this study in exchange for small payment. We randomly assigned participants to a positive, negative, or neutral mood condition and asked them to complete two ostensibly unrelated tasks.

In the first task, we activated three commonly held goals: a goal to be healthy, a goal to succeed professionally, and a goal to maintain relationships with one's family. As in study 1, we asked participants to indicate whether they had each of these goals (yes-no). At this point we thanked participants and invited them to proceed to the next task, positioned as a separate study.

In the second task, we manipulated participants' mood using a word-prime task adapted from Pyone and Isen (2011). Participants viewed a series of 10 words, each on a separate page, intended to evoke the target emotion: positive in the positive mood condition (e.g., laughter, fun), neutral in the neutral mood condition (e.g., chair, staple), and negative in the negative mood condition (e.g., loss, war). We instructed participants to read each prime word and write down the first word that came to mind in response. Results of a pretest ($N = 77$) indicated participants experienced more positive feelings in the positive versus neutral mood condition ($M_{\text{pos}} = 3.88$, $M_{\text{neut}} = 3.43$; $F(1, 74) = 10.96$, $p < .01$); and more positive feelings in the neutral versus negative mood condition ($M_{\text{neut}} = 3.43$, $M_{\text{neg}} = 2.78$; $F(1, 74) = 131.52$, $p < .001$).

Following the mood manipulation, we asked participants to report their perceptions of differences between their goals on two 7-point scales (1 = *Not at all*, 7

= *Very much*): “How different are these three goals from one another?” “How similar are these three goals to one another?” We combined these measures (similarity question reverse-scored; $r = .85$), to form an index of perceived differences.

Results

A one-way ANOVA on the perceived differences index revealed a significant effect of mood ($F(2, 91) = 4.17, p < .05$). Supporting our prediction, participants in a positive mood perceived their goals as more different ($M = 4.63$) than participants in a negative mood ($M = 3.59; F(1, 91) = 8.11, p < .01$) and those in a neutral mood ($M = 3.90; F(1, 91) = 4.03, p < .05$). Perceptions of inter-goal differences did not differ between negative and neutral mood ($M_{\text{neg}} = 3.59, M_{\text{neut}} = 3.90; F < 1$).

Discussion

Study 2a provides support for our prediction that being in a positive mood makes consumers see their goals as more different. Positive mood increased perceptions of inter-goal differences relative to both negative and neutral mood, which did not differ from one another. Given the latter equivalence, in subsequent studies we use negative and neutral mood interchangeably, as a basis against which to compare effects of positive mood (e.g., see Fishbach and Labroo 2007; Isen et al. 1987).

In our next study we seek additional support for the effect of positive mood on increasing perceptions of inter-goal differences, also considering the critical role of tradeoff saliency in the obtained effects.

STUDY 2B: MODERATING ROLE OF TRADEOFF SALIENCY ON PERCEIVED DIFFERENCES BETWEEN GOALS

Study 2b introduces tradeoff saliency as a key driver of our effects. We have argued that the tradeoffs required by multiple-goal pursuit prompt a focus on differences, causing consumers in a positive mood to spontaneously see their goals as more different from one another. In situations where tradeoff saliency is low, then, we would not expect positive mood to increase perceptions of inter-goal differences. Instead, following prior research, positive mood may revert to making consumers' goals seem less different from one another (Isen and Daubman 1984; Lee and Sternthal 1999; Murray et al. 1990). We thus expect tradeoff saliency to moderate the impact of positive mood on perceived differences between goals, such that positive mood only increases perceptions of inter-goal differences when tradeoffs between goals are salient.

We test this prediction by varying whether participants consider multiple goals they are currently pursuing (control condition) or multiple goals they have already accomplished (low tradeoff saliency condition). When participants consider active goals we expect tradeoffs to be salient, as in studies 1 and 2a. Considering completed goals, in contrast, should reduce tradeoff saliency because completed goals

do not still require participants' scarce resources. We expect to replicate the findings of study 2a in the control condition (i.e., positive mood should increase perceived inter-goal differences), but not in the low tradeoff saliency condition.

An additional objective of study 2b is to cast doubt on an alternative explanation of results obtained thus far. In study 2a we asked participants to first report their perceptions of differences between goals, followed by their perceptions of similarity. Because positive mood leads consumers to adopt accessible processing cues, it is possible that asking the differences question first cued a focus on differences, instead of salient inter-goal tradeoffs. This question order may have biased positive mood participants' perceptions of the relationship between their goals in favor of differences. Though this alternative process does not well explain the product evaluation results of study 1, we randomize the order of the similarity and difference questions to cast further doubt on this account.

Design and Method

One hundred and sixty-three members of a national online panel participated in this study in exchange for small payment. We randomly assigned participants to condition in a 2 (mood: positive, neutral) X 2 (tradeoff condition: control, low saliency) between-subjects design and asked them to complete two ostensibly unrelated tasks.

In the first task, we manipulated participants' mood using the same word-prime task as in study 2a (positive and neutral mood conditions only). We then

thanked participants and invited them to proceed to the next task, positioned as a separate study.

In the second task, we asked half of participants to list the three most important goals they planned to pursue in the next six months (control condition), and half to list the three most important goals they had completed within the past six months (low tradeoff saliency condition). A pretest ($N = 67$) confirmed participants were more aware of tradeoffs between their goals (“To what extent does wishing to pursue your three goals at the same time require you to make tradeoffs among these goals?” 1 = *Not at all*, 7 = *Very much*) in the control condition (i.e., active goals) than in the low tradeoff saliency condition (i.e., completed goals; $M_{\text{control}} = 4.71$, $M_{\text{low}} = 3.48$; $F(1, 65) = 9.37$, $p < .01$).

Next, participants reported their perceptions of differences between their three goals on two 7-point scales, the order of which was randomized (1 = *Not at all*, 7 = *Very much*): “How similar are these three goals to one another?” “How different are these three goals from one another?” We combined these measures (similarity question reverse-scored; $r = .84$), to form an index of perceived differences.

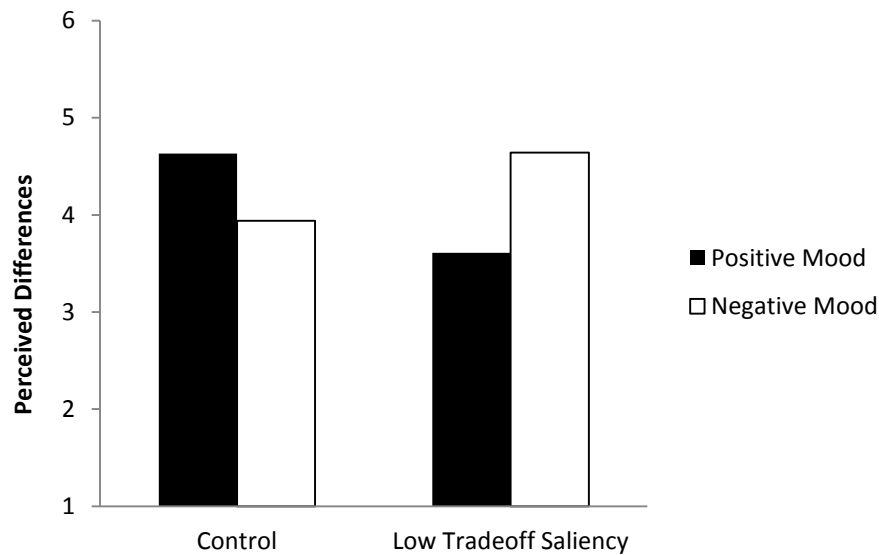
Results

There was no effect of question order (difference vs. similarity question first) on the perceived differences index.

A 2 X 2 ANOVA on the perceived differences index revealed only the predicted interaction between mood and tradeoff saliency ($F(1, 159) = 6.95$, $p < .05$,

see figure 12). Consistent with the results of study 2a, in the control condition (i.e., active goals), being in a positive mood led participants to see their goals as more different ($M_{\text{pos}} = 5.02$, $M_{\text{neut}} = 4.33$; $F(1, 159) = 4.31$, $p < .05$). In the low tradeoff saliency condition (i.e., complete goals), however, the opposite occurred. Positive mood directionally decreased participants' perceptions of differences between their goals ($M_{\text{pos}} = 4.36$, $M_{\text{neg}} = 4.84$; $F(1, 159) = 1.89$, $p = .17$). This directional reversal supports our reasoning that, in the absence of a cue to focus on differences (i.e., when tradeoff saliency is low), positive mood will no longer spontaneously lead consumers to see their goals as more different.

Fig. 12. Positive mood increases perceptions of differences between goals.



Discussion

Study 2b provides evidence for the critical role of tradeoff saliency in determining how being in a positive mood influences the perceived relationship between consumers' goals. When inter-goal tradeoffs are salient, which we consider to be the baseline state, being in a positive mood makes consumers spontaneously see their goals as more different. When tradeoff saliency is reduced, in contrast, we find the opposite pattern. This reversal suggests a way to reconcile our findings with prior work demonstrating facilitative effects of positive mood on perceiving similarities between items (Isen and Daubman 1984; Lee and Sternthal 1999; Murray et al. 1990). In the absence of salient inter-goal tradeoffs (i.e., a cue to focus on differences), positive mood helps consumers see their goals as more similar. Multiple-goal pursuit does, however, seem to be an important context where a spontaneous focus on differences is the norm.

Of note, we obtain support for the predicted effect of positive mood on perceived differences between goals (in the control, high tradeoff-saliency, condition) despite randomizing the order of the similarity and difference measures in the study procedure. That we find the same pattern of results regardless of the order in which we ask these measures casts serious doubt on an alternative explanation due to a potential flaw in the design of study 2a.

Study 3, reported next, integrates the findings of studies 1, 2a, and 2b by testing the full proposed model, whereby positive mood leads consumers to see their goals as more different, and means as less useful for multiple-goal pursuit.

STUDY 3: PERCEIVED DIFFERENCES BETWEEN GOALS MEDIATES EFFECT OF POSITIVE MOOD ON PERCEPTIONS OF MEANS UTILITY

Study 3 has two objectives. First, we test the underlying role of perceived inter-goal differences in driving how positive mood impacts evaluations of means utility. We predict perceiving more differences between one's goals mediates the detrimental impact of positive mood on seeing means as less useful for multiple-goal pursuit.

Second, to further test its role in driving our effects, we utilize a different manipulation of tradeoff saliency. For half of participants we activate goals that serve distinct ends, as in our prior studies (control condition), but for the remaining half we activate goals that serve the same ends (low tradeoff saliency condition). We expect tradeoff saliency will be low when consumers consider pursuit of multiple goals serving the same ends; because such goals all lead to the same higher-order outcome, they are less likely to be perceived as competing for resources. Consumers should consequently feel less of a need to make tradeoffs in allocating their resources across goals serving the same ends, compared to situations where goals serve distinct ends. Positive mood should increase perceived differences between goals that serve distinct ends, but not between goals that serve the same ends.

Design and Method

Ninety-three members of a national online panel participated in this study in exchange for small payment. We randomly assigned participants to condition in a 2 (mood: positive, negative) X 2 (tradeoff condition: control, low saliency) between-subjects design and asked them to complete two ostensibly unrelated tasks.

In the first task, we manipulated participants' incidental mood state using the same word-priming task as in studies 2a and 2b (positive and negative mood conditions only). We then thanked participants and invited them to proceed to the next task, positioned as a separate study.

In the second task, we activated three goals that either served distinct ends or the same ends, depending on condition. In the control condition, we activated goals related to health, work, and family, as in study 2a, which serve distinct ends. In the low tradeoff saliency condition, in contrast, we activated goals related to exercising, weight maintenance, and health eating, which serve a common end: being healthy. We followed the procedure from our prior studies to activate the goals in both tradeoff saliency conditions. A pretest ($N = 43$) confirmed that tradeoffs were more salient to participants ("To what extent does wishing to pursue your three goals at the same time require you to make tradeoffs among these goals?" 1 = *Not at all*, 7 = *Very much*) in the control condition than in the low tradeoff saliency condition ($M_{\text{control}} = 3.90$, $M_{\text{low}} = 2.22$; $F(1, 41) = 10.37$, $p < .01$).

Next, participants reported their perceptions of differences between goals on two 7-point scales (1 = *Not at all*, 7 = *Very much*): "How similar are these three goals

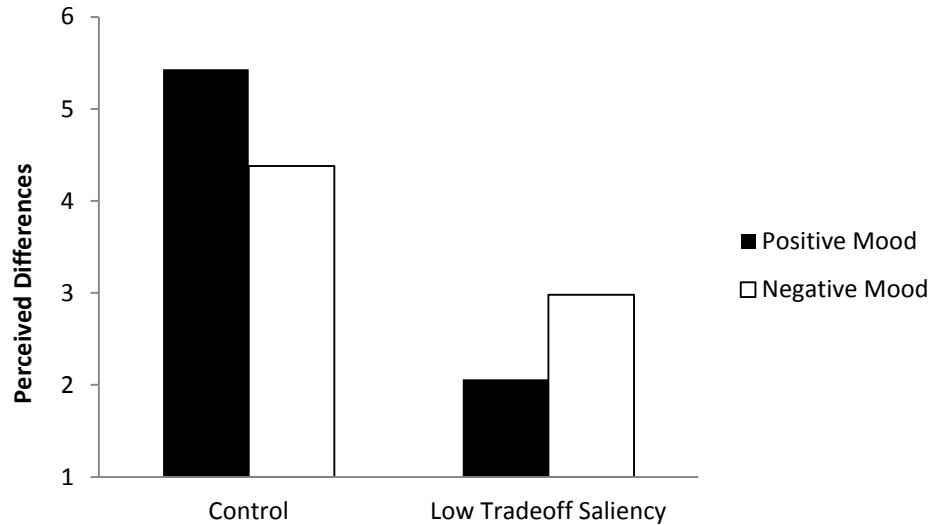
to one another?” “How different are these three goals from one another?” We combined these measures (similarity question reverse-scored; $r = .89$), to form an index of perceived differences.

After completing a brief filler task, we asked participants to list three means (products, behaviors, etc.) they could use to pursue each of their multiple goals (nine means total). We then measured how useful participants perceived the means they listed for goal 1 [2, 3] would be in also helping them pursue their other goals (e.g., “To what extent will the means that you listed as helping you pursue goal 1 [goal 2, goal 3] help you pursue your other two goals at the same time?” 1 = *Does not help at all*, 7 = *Helps very much*). We combined these three measures ($\alpha = .87$) to form an index of perceived means utility for multiple-goal pursuit. Four participants did not complete the usefulness measures and were excluded from subsequent analyses ($N = 89$).

Results

Perceived Differences. A 2 X 2 ANOVA on the perceived differences index revealed a main effect of tradeoff saliency ($F(1, 85) = 59.88, p < .001$), qualified by the predicted interaction between mood and tradeoff saliency ($F(1, 85) = 12.09, p < .001$, see figure 13).

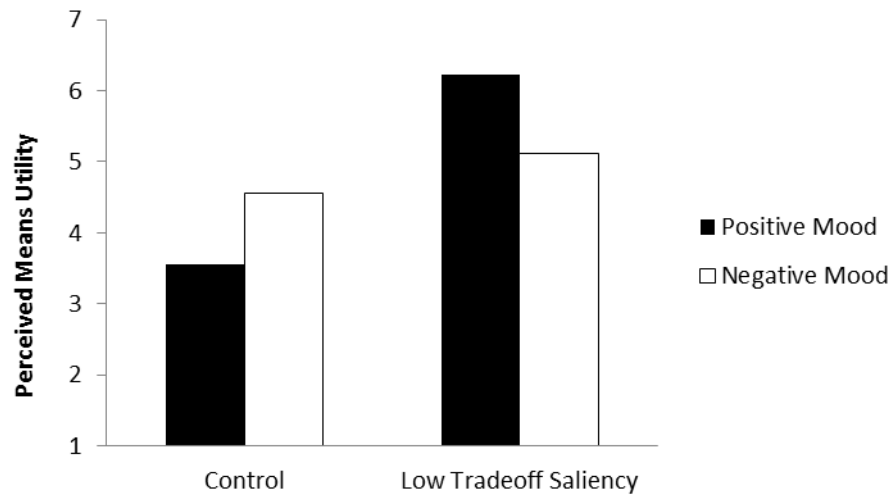
Fig. 13. Tradeoff saliency moderates impact of positive mood on perceived differences between goals.



In the control condition (i.e., goals serve distinct ends), being in a positive mood increased participants' perceptions of differences between their goals ($M_{\text{pos}} = 5.40$, $M_{\text{neg}} = 4.24$; $F(1, 85) = 7.31$, $p < .01$). This effect reversed, however, in the low tradeoff saliency condition (i.e., goals serve the same ends). Being in a positive mood led participants to see their goals as less different ($M_{\text{pos}} = 2.10$, $M_{\text{neg}} = 2.98$; $F(1, 85) = 4.83$, $p < .05$).

Means Utility. A 2 X 2 ANOVA on the utility index revealed a main effect of tradeoff saliency ($F(1, 85) = 27.92$, $p < .001$), qualified by the expected interaction between mood and tradeoff saliency ($F(1, 85) = 12.15$, $p = .001$, see figure 14).

Fig. 14. Tradeoff saliency moderates impact of positive mood on perceptions of means utility.



As predicted, in the control condition (i.e., when goals serve distinct ends), being in a positive mood caused participants to see their self-generated means as less useful for multiple-goal pursuit ($M_{\text{pos}} = 3.56$, $M_{\text{neg}} = 4.56$; $F(1, 85) = 4.28$, $p < .05$). In the low tradeoff saliency condition (i.e., when goals serve the same end), however, being in a positive mood led participants to see their means as more useful for multiple-goal pursuit ($M_{\text{pos}} = 6.23$, $M_{\text{neg}} = 5.11$; $F(1, 85) = 3.94$, $p < .05$). We believe this reversal follows from positive mood decreasing perceived differences between goals when tradeoff saliency is low.

Mediation. We ran a moderated mediation model (Preacher, Rucker, and Hayes 2007; Zhao, Lynch, and Chen 2010) to test whether perceived differences between goals mediates the detrimental effect of mood on perceptions of means utility for multiple-goal pursuit. In the mediator model, the interaction between mood and tradeoff condition predicted perceived differences between goals ($\beta = 1.03$, $t = 3.48$, $p < .001$). When we added the perceived differences measure to the dependent

variable model, it predicted means utility ($\beta = -.60, t = -6.69, p < .001$), whereas the interaction between mood and tradeoff condition was reduced ($\beta = -.45, t = -1.68, p < .1$).

We used biased-corrected bootstrapping ($n = 5000$) to generate 95% confidence intervals around the indirect effects of perceived inter-goal differences at each level of tradeoff condition, where successful mediation occurs if the confidence intervals exclude zero (Preacher et al. 2007). Results support the predicted mediated moderation in both tradeoff saliency conditions. We found perceptions of inter-goal differences mediated the negative effect of positive mood on perceptions of means utility in the control condition (i.e., when goals serve distinct ends; indirect effect = $-.35$; 95% CI: $-.49$ to $-.21$), as well as the positive effect of positive mood on perceptions of means utility in the low tradeoff saliency condition (i.e., when goals serve the same ends; indirect effect = $.26$; 95% CI: $.14$ to $.39$).

Discussion

Study 3 demonstrates how being in a positive mood decreases perception of means as useful for multiple goals, replicating the results of study 1. Further, we show participants' perceptions of differences between their goals mediate the impact of positive mood on perceived means utility, moderated by level of tradeoff saliency. When tradeoffs were salient (control condition), being in a positive mood increased perceptions of differences between goals and decreased the perceived usefulness of

means for multiple-goal pursuit. When tradeoff saliency was reduced, in contrast, these effects reversed.

Taken together, the studies presented thus far demonstrate being in a positive mood (1) increases consumers' perceptions of differences between their goals, and (2) seeing goals as more different lowers perceptions that means are useful for pursuing multiple goals at the same time. In our final study, we consider an important consequence of these effects for consumer behavior: choice of means for multiple-goal pursuit.

STUDY 4: CHOICE OF MEANS TO MULTIPLE-GOAL ATTAINMENT

Study 4 builds on prior studies by considering consumers' propensity choose an available means simultaneously useful for pursuing multiple goals from a set of options. If being in a positive mood makes consumers see means as less useful for multiple goals, positive mood should also decrease the likelihood of choosing means useful for multiple goals over means useful for only one of their goals. Such an outcome would be detrimental for consumers' success in multiple-goal pursuit (Chun et al. 2011; Köpetz et al. 2011; Kruglanski et al. 2002).

We test this hypothesis by manipulating participants' mood and inviting them to choose between three lunch options, which vary in their usefulness to participants' multiple goals. Our key interest is in the percentage of participants choosing the lunch option most useful for both goal pursuits.

Study 4 also utilizes a different manipulation of tradeoff saliency: choosing for the self (control, salient tradeoffs) versus others (low tradeoff saliency). Prior work finds making choices for others reduces the salience of subjective choice consequences (Pronin, Olivola, and Kennedy 2008) and decreases involvement in the decision-making process, as the self is no longer the recipient of the decision outcome (Beisswanger et al. 2003). Leveraging these findings, we anticipate considering others' goals will reduce tradeoff saliency, as these goals do not require one's own resources. We thus expect being in a positive mood will decrease (vs. increase) choice of an available means useful for multiple-goal pursuit when participants choose for themselves (vs. others).

Design and Method

One hundred and forty-two undergraduate students at a large East Coast University participated in this study in exchange for course credit. We randomly assigned participants to a condition in a 2 (mood: positive, negative) X 2 (tradeoff condition: control, low saliency) between-subjects design and asked them to complete two ostensibly unrelated tasks.

In the first task, we manipulated mood by showing participants one of two video clips, similar to study 1. We used a video clip pretested ($N = 106$) to induce negative mood in place of the neutral mood video clip ($M_{\text{pos}} = 5.69$, $M_{\text{neg}} = 2.75$; $F(1, 104) = 222.47$, $p < .001$). After viewing the video clips we thanked participants and invited them to proceed to the next task, positioned as a separate study.

In the second task, we activated two commonly held goals: doing well in school and being healthy. In the control condition, we asked participants to indicate whether they themselves were currently pursuing an academic goal and a health goal (yes-no). In the low tradeoff saliency condition, in contrast, we asked participants to indicate whether they thought other undergraduate students had academic goals and health goals (yes-no). A pretest ($N = 44$) supported our tradeoff saliency manipulation, demonstrating that participants were more aware of tradeoffs between their goals (“To what extent does wishing to pursue your goals to be healthy and do well in school at the same time require you to make tradeoffs among these goals?” 1 = *Not at all*, 7 = *Very much*) in the control condition than in the low tradeoff saliency condition ($M_{\text{control}} = 5.05$, $M_{\text{low}} = 4.09$; $F(42) = 5.14$, $p < .05$).

Participants next read a scenario involving choice of what to have for lunch. We asked them to imagine they decided to buy lunch 30 minutes prior to an in-class exam from one of the following options: Salad Works, Subway, and Sbarro. These options were all available in the student center at the University where we ran the study, making this a realistic scenario for our participants.

Our intention was to have one of these lunch options be useful for the health and academic goals, one useful for the health goal only, and one useful for the academic goal only. We anticipated natural variation in the extent to which Salad Works, Subway, and Sbarro are perceived as healthy. Specifically, we expected Salad Works and Subway would both be perceived as healthy lunch options, whereas Sbarro would not. To manipulate the usefulness of each lunch option for doing well in school, we varied the length of the line one would stand in to purchase lunch at

each place; a longer wait in line implies less time available for studying before the upcoming exam. We described Salad Works as having a line of 10 students, Sbarro as having a line of two students, and Subway as having a line of five students.

In a pretest drawing from the same population ($N = 161$) we presented participants with this exact scenario and asked them to rate how useful each lunch option would be for a health goal, and academic goal, and both goals at the same time ($1 = \text{Not at all useful}$, $7 = \text{Very useful}$). Results indicate our manipulation had the intended effects (see table 1). Importantly, participants perceived Subway ($M = 4.56$) as most useful for pursuing both their health and academic goals compared to Salad Works ($M = 4.02$; $t(159) = 4.58, p < .001$) and Sbarro ($M = 3.36$; $t(159) = 7.89, p < .001$). Subway thus offered participants in the main study a way to pursue their health and academic goals at the same time.

Table 1. Pretest ratings for choice of common means.

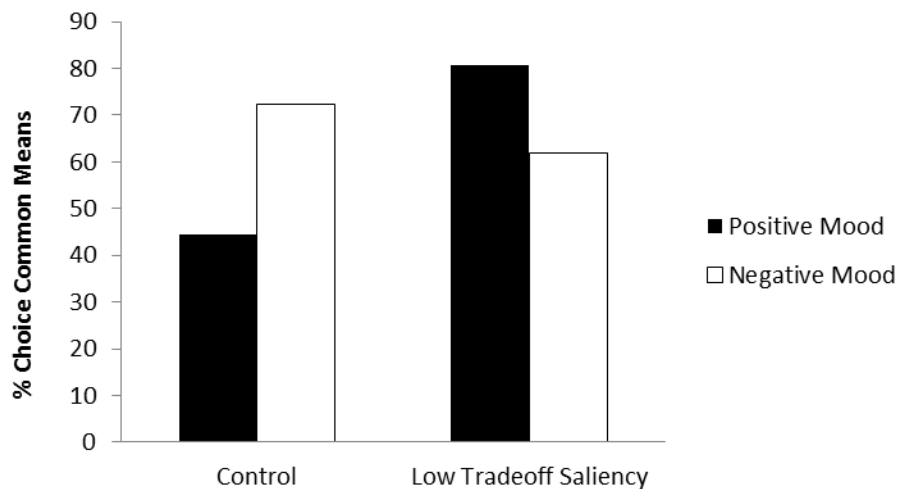
	$M_{\text{useful_health}}$	$M_{\text{useful_school}}$	$M_{\text{useful_both}}$
Salad Works	5.76	2.47	4.02
Subway	4.78	3.88	4.56
Sbarro	2.29	4.61	3.46

After reading the scenario, participants indicated their lunch choice (for themselves or on behalf of other students). We re-coded participants' choice of Salad Works or Sbarro as choosing a means useful for one goal (coded "0") and choice of Subway as choosing a mean useful for multiple goals (coded "1"). This re-coded choice measure served as our key dependent variable.

Results

A binary logistic regression of choice on mood, tradeoff condition, and their interaction yielded a significant effect of mood ($\beta = -.59, \chi^2 = 5.54, p < .05$), qualified by the predicted interaction between mood and tradeoff condition ($\beta = 1.06, \chi^2 = 8.13, p < .01$, see figure 15). Supporting our prediction, being in a positive mood decreased choice share of Subway when participants chose lunch for themselves ($M_{\text{pos}} = 44.4\%$, $M_{\text{neg}} = 72.2\%$; $\chi^2 = 5.71, p < .05$). When participants chose lunch on behalf of a typical student, however, the opposite occurred. Being in a positive mood increased choice of Subway ($M_{\text{pos}} = 80.6\%$, $M_{\text{neg}} = 61.8\%$; $\chi^2 = 3.03, p = .08$).

Fig. 15. Positive mood decreases choice of means useful for multiple goals.



Discussion

Study 4 demonstrates one important consequence of positive mood's effect on increasing perceived differences between goals and decreasing perceived usefulness of means for multiple-goal pursuit. Namely, being in a positive mood made consumers less likely to choose an available means that would in fact help them pursue both of their active goals. The effect reversed when consumers chose in the absence of salient tradeoffs. These findings ironically imply that when consumers most need multiply-useful means (i.e., when their goals would otherwise compete for resources), being in a positive mood causes them to forgo valuable opportunities to pursue multiple goals at the same time.

GENERAL DISCUSSION

Consumers often pursue multiple goals at the same time. These goals compete for a limited pool of resources, requiring people to make psychologically aversive tradeoffs between them (Emmons and King 1988; Fishbach and Ferguson 2007; Kruglanski et al. 2002). Utilizing means (products, behaviors, etc.) simultaneously useful for pursuing multiple goals reduces the need to make inter-goal tradeoffs, bettering consumers' chances of accomplishing their multiple goals. Consumers will only capitalize on such means, however, when they identify them as useful for several pursuits at the same time. Understanding factors that influence perceptions of means

utility for multiple-goal pursuit thus offers important insight into how consumers use products to pursue their goals.

This paper demonstrates that merely being in a positive mood decreases perceptions of means utility for multiple-goal pursuit. Our theorizing involves three propositions: (1) Being faced with the need to make inter-goal tradeoffs naturally leads consumers to focus on differences between their goals. (2) Positive mood facilitates adoption of this differences focus, causing consumers to see their multiple goals as more different, relative to individuals in other mood states. (3) Perceiving goals as more different decreases consumers' evaluations of means utility for multiple-goal pursuit.

Five studies support our theorizing. Study 1 shows, using real product samples, that being in a positive mood makes consumers see products as less useful for pursuing their multiple goals. Studies 2a and 2b test the proposed underlying process driving these lower perceptions of means utility for multiple-goal pursuit: being in a positive mood makes consumers see their goals as more different. Study 3 demonstrates that perceiving more differences between goals mediates the effect of positive mood on decreasing perceptions of means utility. Finally, study 4 illustrates consequences of these effects for choosing means for multiple-goal pursuit.

Studies 2b, 3, and 4 also highlight the critical role of tradeoff saliency in the observed effects of positive mood. Positive mood increases perceived differences between goals and decreases perceptions of means utility when inter-goal tradeoffs are salient, but we find the opposite pattern when tradeoff saliency is reduced. Importantly, we obtain convergent support for the moderating role of tradeoff

saliency with different saliency-reduction manipulations across studies. These manipulations include whether the focal goals are active (vs. completed), serve distinct (vs. common) ends, and are personal goals (vs. goals of others). Though we expect tradeoffs to be generally salient when consumers pursue multiple goals, these manipulations point to situations where tradeoffs may be inherently less salient. Whether positive mood helps or hurts consumers' ability to see means as useful for multiple goals depends on the extent to which consumers see their goals as requiring tradeoffs.

Theoretical Contribution

Our findings make three important contributions to extant literature on positive mood, means to goal attainment, and multiple-goal pursuit. Only limited research to-date, particularly in marketing, has considered how consumers evaluate products in relation to their multiple goals. The few articles beginning to explore this topic suggest consumers with multiple active goals should prefer means useful for multiple goals over means useful for just one goal (Chun and Kruglanski 2005; Chun et al. 2011; Köpetz et al. 2011). We extend this work by demonstrating that merely being in a positive mood may lead consumers to fail to take advantage of such means. Although we specifically focus on how incidental mood impacts evaluations and utilization of means simultaneously useful for multiple goals, it is likely that other contextual factors also affect such evaluations. Future research may wish to identify these factors and corresponding consequences for preference and choice.

Our work also informs extant research on effects of incidental positive mood, particularly with respect to how mood impacts perceptions of similarity. The majority of research to-date concludes that positive mood leads to a spontaneous focus on inter-item similarities, facilitating cognitive integration processes (Isen and Daubman 1984; Isen et al. 1987; Kahn and Isen 1993; Lee and Sternthal 1999; see Murray et al. 1990 for an exception). Our findings, in contrast, suggest positive mood may at times enhance a spontaneous focus on differences, and identify multiple-goal pursuit as one important context where such an effect occurs. There are likely other contexts as well. Being in a positive mood when making choices, for instance, may lead consumers to see choice options as more different, particularly when choosing requires difficult tradeoffs. Exploring situations where positive mood leads consumers to focus on differences (vs. similarities) is a promising direction for future research.

Limitations

We wish to acknowledge two potential limitations of our research. In each of our studies, we first ask participants to indicate (yes-no) whether they have a specific type of goal, and to describe their goal. With such a design, one may wonder whether conscious multiple-goal activation is necessary to obtain our effects. If so, our findings may have limited applicability for consumers choosing between goal-related products in the field. We speculate that indeed, effects of mood on perceptions of means utility rely on consumers evaluating products in relation to their personal goals. We argue, however, that such an evaluation mode is quite common. Scholars

have widely accepted the view that consumer behavior is goal-directed (Fishbach and Ferguson 2007), and goals can be activated in numerous and subtle ways (e.g., exposure to goal-related products and advertisements; Kruglanski et al. 2002; Shah and Kruglanski 2003). We thus do not believe any potential dependency of our effects on multiple-goal activation limits the contribution of our findings.

We also acknowledge, though our specific focus is on how positive mood shapes evaluations of means utility, positive mood plays a diverse and multifaceted role in consumer behavior. It is therefore plausible that positive mood may have influenced other aspects of consumers' perceptions of the relationship between their goals and subsequent evaluations of means. Positive mood, for instance, makes people think more abstractly (Labroo and Patrick 2009; Pyone and Isen 2011). Thus, one might expect positive mood to increase perceptions of means utility for multiple-goal pursuit, by focusing consumers on abstract product usages. More generally, positive mood increases the positivity of product evaluations (Adaval 1996; Clark and Isen 1982). Thus, one may have expected positive mood to improve consumers' evaluations of means across the board. Importantly, neither of these previously documented effects can explain the full pattern of results we obtain across studies. We speculate in the context of multiple-goal pursuit, positive mood's effect on enhancing focus on inter-goal differences is the strongest determinant of how consumers perceive relationships between goals and the usefulness of means for multiple-goal pursuit.

Implications

Understanding how positive mood shapes evaluations of means utility for multiple-goal pursuit has important implications for marketing practitioners. Marketers are increasingly developing products with multiple functions, intended to serve many of consumers' needs at the same time (Brown and Carpenter 2000; Olson and Reynolds 1983; Thompson, Hamilton, and Rust 2005). The assumption, however, that simply positioning a product as useful for multiple goals increases purchase incidence seems to be false. Our research suggests consumers' evaluations of means to multiple-goal attainment are sensitive to incidental contextual cues (e.g., positive mood), present at the time of choice. If such cues cause consumers to spontaneously focus on differences between the multiple purposes of a given product, they may end up favoring single-purpose options instead.

Finally, our results suggest incorporating positive mood appeals into marketing communication materials may not always benefit the target product. When products are framed as meeting several distinct needs, positive mood might make consumers see them as less useful for their stated purposes; consumers may consequently be less likely to choose the target product from an array of comparable options. Thus, if incorporating mood appeals into communication materials, marketers may be well advised to consider the purpose(s) of the target product, or how such purposes are framed. Positive mood inductions may be a more effective tactic for products marketed as having one (vs. many) goal-related uses.

In sum, our results call for a more nuanced understanding of how consumers use products to pursue multiple goals. By identifying incidental positive mood as one important factor influencing consumers' evaluations of goal-related products, our work makes a first step in this direction.

Chapter 5: Summary and Conclusion

Consumers' goals drive much of their behavior. People with health and fitness goals may buy fresh produce at the grocery store, sign up for a gym membership, or buy new athletic clothes. Those with professional goals may register for training classes or buy professional clothing, and those with savings goals may cut back on coffee purchases, pack lunch, or consult with a financial advisor. As illustrated in these examples, consumers often have *multiple goals* at one time, and *multiple means* available to pursue them. This idea of “many” (means and goals) represents an important departure from prior work, which has primarily focused on understanding how consumers use *one* means to pursue *one* goal.

In my dissertation I explore one important difference between the proposed multiple means-multiple goals paradigm and the extant single means-single goal paradigm: relationships. Namely, the “many” perspective requires the additional consideration of relationships among consumers' multiple means and among their multiple goals, over and above the direct impact of each single means (goal) on motivation. I argue these relationships, defined in terms of degree of variety, have unique implications for goal-directed motivation, not well accounted for by prior research alone.

Three essays explore how variety among means and among goals impacts goal-directed motivation. Across essays I utilize different operationalizations of

variety (e.g., among sets of products, services, goals and behaviors) and measures of motivation (e.g., self-reports, willingness to pay, choice and performance on goal-related tasks). I also test my predictions in several goal domains, including fitness goals, savings goals, and academic goals. My results are robust to variation in variety manipulations, motivation measures, and goal domains, suggesting the demonstrated effects may persist across a wide range of consumer behaviors in the field.

Essays I and II focus specifically on variety among means, identifying two important moderators of the relationship between variety and motivation: perceived progress to goal achievement and the temporal horizon adopted for goal pursuit. Essay I demonstrates that whether consumers find more (vs. less) varied sets of means motivating depends on their perceptions of progress relative to goal attainment. Five studies show that when consumers perceive they have made low progress to-date towards a goal, more (vs. less) varied sets of means increase motivation. When consumers perceive they have made high progress to-date towards a goal, in contrast, less (vs. more) varied sets of means increase motivation. I also obtain suggestive evidence that these motivation effects are driven by differing concerns at low versus high progress. Consumers seem to be more concerned about the likelihood of achieving their goal when progress is low, but about staying focused on goal pursuit when progress is high.

Building on Essay I, Essay II considers a related question: how the impact of variety among means on motivation changes depending on the temporal horizon adopted for goal pursuit. Six studies demonstrate that when consumers adopt a near future time horizon for goal pursuit (e.g., the next week), varied (vs. similar) sets of

means increase goal-directed motivation. When consumers adopt a far future time horizon for goal pursuit (e.g., a week in six months), in contrast, similar (vs. varied) sets of means increase goal-directed motivation. These motivation effects arise from temporal compatibility between consumers' propensity to attend to differences (similarities) in the near (far) future, and the ease with which differences (similarities) are identified among sets of means.

Lastly, Essay III focuses on variety among goals, considering the role of incidental positive mood as a contextual cue influencing consumers' perceptions of inter-goal differences. Five studies demonstrate that being in a positive mood makes consumers perceive their multiple goals as more different, particularly when inter-goal tradeoffs are salient. Seeing their goals as more different subsequently leads consumers to evaluate means to multiple-goal attainment as less useful for pursuing multiple goals at the same time. Lower evaluations of means utility have important consequences for consumer choice of means in multiple-goal contexts. Despite the advantages offered by means simultaneously useful for pursuing multiple goals, consumers in a positive mood may forgo valuable opportunities to capitalize on such means if they do not perceive means as useful for multiple-goal pursuit.

Taken together, the results of my research begin to develop a more nuanced understanding of how consumers use *multiple means* to pursue their *multiple goals*. As such, my findings contribute to extant literature on variety, motivation, means, and goals, as well as progress dynamics, temporal focus, and positive mood. Integrating these diverse streams of research sheds new light on how goal-directed behavior operates in the multiplicitous and complex world in which we live.

Implications

My research also has numerous implications for both marketers and consumers concerned with sustaining a high level of motivation. I show that perceptions of variety, both among means and among goals, seem to be malleable. Thus, perceptions of variety may be strategically managed, and matched to perceptions of progress made towards goal attainment, adopted time frame for goal pursuit, and presence of incidental mood appeals, to keep consumers motivated. For instance, consumers who have just recently joined a gym may be more motivated to be fit if staff emphasizes the variety of equipment and classes available for use. Long-time gym members, in contrast, may be more motivated to be fit if presented with a more focused, streamlined approach to physical fitness. Likewise, consumers focused on saving money in the present might actually save more when presented with a variety of ways to do so, whereas consumers who adopt a more future-oriented perspective on saving money might save more when offered similar means to their goal. Finally, and perhaps most counter-intuitively, positive mood appeals may be best paired with products described as having one focal purpose; results of Essay III suggest being in a positive mood may decrease evaluations of products advertised as serving many of consumers' needs.

The idea of malleability seems applicable to more than just perceptions of variety; my research suggests that consumers' perceptions of progress made towards goal attainment as well as the time horizon adopted for goal pursuit are also be

sensitive to subtle framing manipulations. Thus, given a certain level of variety, one may wish to alter consumers' perceptions of progress (e.g., by making them feel like they have accomplished more or less than the average), or of temporal horizon (e.g., by focusing consumers on goal pursuit in the present vs. future). Many advertisements, for instance, incorporate time cues in their copy. Gyms often use language such as "get fit today!" to recruit new members. The results of Essay II suggest, however, that asking consumers to "get fit today!" may have a significantly different impact on their behavior than asking them to "get fit for life!" Marketers and consumers may be well advised to consider interdependencies between variety, progress, and time when designing marketing communication materials.

Future Research

Though my dissertation contributes to the development of a more nuanced understanding of consumer motivation, many interesting questions have yet to be addressed. For instance, extending Essays I and II, what else may moderate the impact of variety among means on consumer motivation?

In follow-up research I am currently considering two factors: the perceived length to-date of one's romantic relationship (Etkin and Berger, working paper) and promotion versus prevention orientation (Etkin, data collection in-progress). I will discuss each of these ideas in turn.

Romantic partners spend a great deal of time together and engage in a wide range of joint-activities. Couples may, for instance, watch different TV shows, go out

to dinner, and play recreational sports. I suggest that the variety of activities couples do together can influence partners' willingness to invest effort (time, money, etc.) in their relationship (i.e., pro-relationship motivation). The direction of this influence critically depends on where partners see themselves in the course of their relationship. In early stages of relationships, partners exhibit more pro-relationship motivation when they perceive their joint-activities as varied (vs. similar); in later stages of relationships, in contrast, partners exhibit more pro-relationship motivation when they perceive their joint-activities as similar (vs. varied). These effects are driven by greater value placed on excitement when perceptions of future relationship-time are large, but stability when perceptions of future relationship-time are short (see Mogilner, Kamvar, and Aaker 2011; Mogilner, Aakar, and Kamvar 2012). I find support for this interaction pattern across a wide range of pro-relationship behaviors, including willingness to spend on dinner with one's partner, avoidance of attractive members of the opposite sex, and picking up a free rose to give to one's partner. I will further explore variety in the context of interpersonal relationships in future research.

Regulatory focus theory (Higgins 1997) distinguishes between self-regulation with a promotion focus, concerned with accomplishments and aspirations, and self-regulation with a prevention focus, concerned with safety and responsibilities. Regulatory focus orientation has important implications for goal pursuit; promotion-oriented consumers approach products and behaviors they perceive as facilitating goal attainment, whereas prevention-oriented consumers avoid products and behaviors they perceive as interfering with goal attainment (Higgins et al. 1994). I suggest more (vs. less) varied means will be differentially motivating to consumers with chronic (or

situationally-induced) promotion versus prevention orientation. Variety (vs. similarity) is somewhat risky in that it introduces consumers to novel experiences, which may or may not prove successful or desirable. As such, variety affords consumers opportunities for growth and learning, values aligned with promotion-focused goal pursuit. Similarity, in contrast, protects consumers from risk and failure, values aligned with prevention-focused goal pursuit. I thus expect varied means will be more motivating to promotion (vs. prevention) focused consumers, whereas similar means will be more motivating to prevention (vs. promotion) focused consumers.

There may be some situations, however, where these effects reverse. Varied also offers consumers a way to hedge their bets against the possibility that any one type of means fails to advance them towards goal attainment. Thus, in some situations, varied means may appeal to prevention-focused consumers more so than similar means. I intend to identify some such situations, as well as the circumstances leading them to arise.

Joint consideration of Essays I and II suggests an additional direction for future research: the interplay of progress dynamics and time dynamics in goal pursuit (Etkin and Ratner, working paper). Research on progress dynamics and time dynamics has developed relatively independently to-date, providing little insight into how progress and time might jointly influence goal-directed motivation. In some situations, goal progress and time horizon may align; for instance, consumers whom have just begun a weight-loss program may perceive low progress towards their weight-loss goal but also a longer time horizon for goal pursuit (e.g., 1 year to

complete the goal). In other situations, however, goal progress and time horizon may operate orthogonally; for instance, among consumers whom have been saving money for a long time but have yet to accumulate much progress towards their savings goal. I intend to demonstrate how short versus long time-horizons for goal pursuit (e.g. one week versus six months) differentially impact motivation for consumers who perceive little versus much progress to-date towards accomplishing a goal. Consumers who have made low (high) progress toward goal attainment are more motivated when they perceive their goal as more (less) attainable (Bandura 1977; 1997; Etkin and Ratner 2012; Zhang and Huang 2010). Consequently, I speculate whether a short (long) time horizon makes goal-pursuit more (vs. less) difficult will determine its effect on motivation. When consumers perceive goals with short versus long time horizons as more or less attainable is an important question I intend to answer.

There are also a number of interesting questions to be asked building on the findings of Essay III. As I suggest in the General Discussion, there may be situations beyond multiple-goal pursuit per se in which positive mood promotes a spontaneous focus on inter-item differences. Choices, for instance, that require consumers to make tradeoffs may likewise support such a focus. Indeed, in a series of studies (Etkin and Pocheptsova, work-in-progress), I find positive (vs. negative and neutral) mood makes consumers perceive a set of available choice options as more different from one another; as a result, consumers experience more difficulty choosing, measured as increased decision times and incidence of choice deferral. These effects reverse in situations where choosing does not require tradeoffs.

Finally, in Essay III I categorize relationships among consumers' multiple goals in terms of dissimilarity; another way to describe these relationships is in terms of conflict. Goal conflict may manifest in one of two ways: conflict over limited resources (e.g., time, energy, money, etc.) or direct, inherent, conflict (e.g., in self-control dilemmas, temptations are diametrically opposed to higher order self-regulatory goals). I am primarily interested in understanding implications of the former type of 'resource' conflict. Prior work finds conflict to have a negative effect on motivation in multiple-goal pursuit (e.g., Emmons and King 1988). I suggest, in contrast, that when goals conflict due to resource limitations, experiencing conflict may actually be motivating (Etkin, Khan, and Pocheptsova, working paper). I find resource conflict makes people infer their multiple goals are more important, which increases motivation to pursue them. Such effects do not occur when individuals are confident they have sufficient resources to achieve all goals or when resource conflict is reframed as direct conflict. I will continue to explore consequences of experiencing resource conflict in future work.

In sum, by investigating consumer motivation in the context of *multiple means* and *multiple goals*, I hope to advance understanding of how consumers use products (services, etc.) to pursue their goals. My dissertation takes an initial step in the direction of a more nuanced understanding of motivated behavior. Consumers' perceptions of relationships, and in particular, of variety, among means and among goals have important consequences for goal-directed motivation. Future work should continue this movement towards a richer understanding of goal-directed behavior in consumption environments.

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