

Pursuing Attainment versus Maintenance Goals: The Interplay of Self-Construal and Goal Type on Consumer Motivation

HAIYANG YANG
ANTONIOS STAMATOGIANNAKIS
AMITAVA CHATTOPADHYAY

This research examines how self-construal (i.e., independent vs. interdependent) and goal type (i.e., attainment vs. maintenance) are conceptually linked and jointly impact consumer behavior. The results of five experiments and one field study involving different operationalizations of self-construal and goal pursuit activities suggest that attainment (maintenance) goals can be more motivating for participants with a more independent (interdependent) self-construal and that differences in salient knowledge about pursuing the goals are one potential mechanism underlying this effect. This interaction effect was found within a single culture, between cultures, when self-construal was experimentally manipulated or measured, and when potential confounding factors like regulatory focus were controlled for. The effect was also found to impact consumer behavior in real life—self-construal, as reflected by the number of social ties consumers had, impacted the likelihood that they opted to reduce versus maintain their bodyweight. Further, after setting their goal, consumers who were more independent exhibited more (less) motivation, as measured by the amount of money they put at stake, when their goal was weight reduction (maintenance). These findings shed light on the relationship between self-construal and goal type, and offer insights, to both consumers and managers, on how to increase motivation for goal pursuit.

Keywords: goal type, self-construal, attainment goal, maintenance goal, independent self-construal, interdependent self-construal, culture, motivation

Haiyang Yang is an assistant professor of marketing at the Johns Hopkins Carey Business School, Johns Hopkins University, 100 International Drive, Baltimore, MD 21202 (haiyang.yang@jhu.edu). Antonios Stamatogiannakis is an assistant professor of marketing at IE Business School - IE University, Calle Maria de Molina, 12, 28006, Madrid, Spain (antonios.stamatogiannakis@ie.edu). Amitava Chattopadhyay is the GlaxoSmithKline Chaired Professor of Corporate Innovation at INSEAD and a Fellow of the Institute on Asian Consumer Insight, 1 Ayer Rajah Avenue, Singapore 138676 (amitava.chattopadhyay@insead.edu). The first two authors contributed equally. This paper has benefited from comments of the *JCR* editor, associate editor, three anonymous reviewers, as well as Peter Darke, Pulak Ghosh, Monica Wadhwa, Robert S. Wyer Jr., and seminar participants at the Chinese University of Hong Kong, Georgetown University, IE, INSEAD, and Virginia Tech. The authors gratefully acknowledge the financial support provided by IE, INSEAD, Johns Hopkins University, Institute on Asian Consumer Insight hosted at Nanyang Technological University and People Program (Marie Curie Actions) of the European Union's Seventh Framework Program (FP7/2007-2013) under REA Grant Agreement No. 298420.

Mary Frances Luce and Vicki Morwitz served as editors and Rebecca Ratner served as associate editor for this article.

Extant research shows that consumer behavior is often influenced by consumers' self-construal (e.g., Aaker and Lee 2001; Lee, Aaker, and Gardner 2000; Luna, Ringberg, and Peracchio 2008) as well as the goals consumers hold (e.g., Bagchi and Li 2011; Bonezzi, Brendl, and De Angelis 2011; Cheema and Bagchi 2011; Fishbach and Dhar 2005; Lee and Ariely 2006). To illustrate, the well-known endowment effect—that the highest sum consumers will pay to obtain a good is considerably lower than the lowest sum for which they will part with the same good (cf. Kahneman, Knetsch, and Thaler 1991)—has been shown to vary significantly and even reverse among individuals with different self-construals (Maddux et al. 2010); the robust loss aversion effect has been shown to be influenced by the extent to which consumers hold a concrete versus abstract goal (Heath, Larrick, and Wu 1999). Nonetheless, how self-construal and goals are conceptually linked and jointly influence consumer behavior is not well understood. Our research helps fill this gap in the

literature, shedding light on the interaction effect of self-construal and goal type on consumers' motivation for goal pursuit.

We focus on two types of self-construals—*independent* (e.g., distinction from others) and *interdependent* self-construal (e.g., connection with others; Markus and Kitayama 1991), and two common types of goals—*attainment* and *maintenance* goals. Whereas attainment goals are those for which the actual state differs from the desired state (e.g., decrease one's weight from 165 to 164 pounds or lower this year), maintenance goals are those for which the actual and the desired states already match, and the actual state should be the same as or better than the desired state (e.g., keep one's weight at the current 165 pounds or lower this year).

Prior research suggests that the two goal types are qualitatively distinct on dimensions such as how people evaluate the outcome of successfully completed goals (Brodscholl, Kober, and Higgins 2007) and how they assess satisfaction (Koo and Fishbach 2010) and goal difficulty (Stamatogiannakis, Chattopadhyay, and Chakravarti 2010). Adding to this research stream, we propose that because independent self-construal emphasizes individual advancement, whereas interdependent self-construal emphasizes stability and continuity of social relations, attainment (maintenance) goals, in general, can be more motivating for consumers with an independent (interdependent) self-construal.

Further, building on the literature on how goals form associations with goal-relevant knowledge (Kruglanski et al. 2002), we investigate one potential mechanism underlying the interaction effect between self-construal and goal type. Specifically, we propose that independent (vs. interdependent) self-construal emphasizes individual advancement (vs. stability; Markus and Kitayama 1991). This can lead to completion of more advancement (e.g., standing out from others; attaining more than others) versus stability (e.g., keeping proper roles in the social hierarchy; maintaining harmonious relations with others) related activities when an independent self-construal is salient. However, the opposite pattern can occur when an interdependent self-construal is salient. As a result, independent (interdependent) self-construal can become more strongly associated with knowledge pertaining to completing attainment (maintenance) goals. This saliently associated knowledge pertaining to completing a specific goal type can lead to higher motivation for that goal type (Kruglanski et al. 2002).

We tested our propositions in five experiments and one field study. In study 1, we showed that attainment (maintenance) goals were more motivating for individuals from a culture that emphasizes independence (interdependence). Study 2 experimentally manipulated the salience of each type of self-construal, replicating the effect. In study 3, we found that framing an attainment goal as appealing to an independent as opposed to interdependent self-construal boosted participants' motivation for that goal. The opposite pattern emerged for

maintenance goals. Controlling for the potential influence of regulatory focus did not affect the results.

In studies 4 and 5, we investigated one potential mechanism underlying this phenomenon—goal pursuit knowledge—and found that consumers with a more independent (interdependent) self-construal had a higher (lower) expectation of completing attainment goals, and they exhibited more (less) salient goal pursuit knowledge, identifying more (fewer) factors relevant to goal completion. The opposite patterns emerged for maintenance goals. These differences mediated the self-construal \times goal type interaction effect on motivation. Finally, in study 6, we tracked and analyzed 2120 consumers' real-life goal pursuit behaviors (i.e., losing vs. maintaining weight) over a period of 13 months in the field. We found that compared to individuals who valued independence, those who valued interdependence were more (less) motivated to pursue maintenance (attainment) goals. Overall, the results of these six studies offer converging support for our central proposition: Self-construal interacts with goal type to impact consumers' motivation for goal pursuit.

Our research contributes to both theory and practice. First, we are among the first to examine the interaction effect of self-construal and goal type on motivation for goal pursuit. Understanding this phenomenon is important because the research streams on self-construal and goals have largely advanced in parallel, and relatively little is known about the relationship between the two constructs and their joint effect on consumer behavior. Second, we suggest a potential mechanism regarding why each goal type can be more motivating as a function of self-construal. We explored this phenomenon in a series of five experiments and one field study, providing empirical evidence supporting our propositions. Third, our research has practical implications. For example, consumers should consider framing their goals differently to boost their persistence for completing their goals; marketing practitioners should consider leveraging the two types of goals differently across different segments of consumers and across cultures.

The remainder of the article is organized as follows. We first review and discuss the literature pertaining to goal type and self-construal, develop our hypotheses, and highlight how our work complements related prior research. We next report five experiments and one field study that investigate the hypotheses we offer. We conclude with a discussion of the theoretical contributions of our research, the practical implications of our findings, and possible future research directions.

CONCEPTUAL BACKGROUND

Goals and Goal Types

Goals are typically defined as internal representations of desired states—outcomes or events an individual strives

for (Austin and Vancouver 1996; Baumgartner and Pieters 2008; Miller, Galanter, and Pribram 1960). Many goal categorizations have been proposed in the literature (e.g., specific vs. abstract, hard vs. easy [Locke and Latham 1990]), illustrating that variations in goal dimensions can result in predictable variations in goal pursuit processes and outcomes (Austin and Vancouver 1996).

In this research, we focus on two common types of goals: maintenance and attainment goals. Attainment goals are goals in which the current state of an individual deviates negatively from the desired state (e.g., increase one's savings from \$35,000 to, at least, \$35,500 in a year's time), whereas maintenance goals are goals in which the current state already matches the desired state; consumers pursuing this type of goal seek to maintain a current state that is the same as or more favorable than the desired state (e.g., have at least \$35,000 in the savings account in a year's time).

Despite the important distinction between attainment and maintenance goals, few studies to date have examined how this difference might impact behavior in general, and to our knowledge, no research has examined how this difference might impact consumer behavior in particular. In one study, Koo and Fishbach (2010) explored factors influencing the extent to which individuals aspire to reach a higher level of performance and the extent to which they are satisfied with the current performance level. These researchers found, for example, that when a firm's employees were asked to consider what they had already accomplished on their job to date, they were more satisfied with their current level of performance. However, when they were asked to consider what they would still like to accomplish on their job going forward, they became more motivated to improve their performance (Koo and Fishbach 2010).

In another study, Brodscholl et al. (2007) examined how the valuation of a successfully completed goal pursuit task is jointly influenced by the task type (gain from 0 to 100 tokens vs. maintain the initially endowed 100 tokens) and regulatory focus (promotion vs. prevention). Participants worked on problems and, for each correct answer, either gained 5 tokens (in the attainment condition) or avoided losing 5 tokens (in the maintenance condition). False performance feedback was provided so that participants in both conditions completed their goals and were able to exchange their 100 tokens for a mug. The results showed that participants with a promotion focus valued the outcome of their successful effort (i.e., the mug they received) on an attainment task more than those with a prevention focus; the opposite pattern of valuation was found when participants worked on a maintenance task.

While the results of these two pioneering studies suggest that the distinction between attainment and maintenance goals is important, the current understanding of how these two goal types influence consumer behavior is incomplete.

Building on Koo and Fishbach's (2010) finding that motivation for attaining a higher state and satisfaction with the current state are malleable and influenced by whether individuals focus on what they have accomplished to date versus what they still need to accomplish, we demonstrate that self-construal (independent vs. interdependent) also is an important factor influencing motivation for attainment versus maintenance goals.

We also extend Brodscholl et al.'s (2007) finding that people's valuation of the outcome (e.g., a mug) of a successfully completed maintenance versus attainment task can differ, depending on their regulatory focus. Specifically, Brodscholl et al.'s (2007) finding applies to situations in which (1) people perceive that they have already successfully completed the assigned goal pursuit tasks, (2) the starting states for the attainment and maintenance tasks are different (e.g., 0 vs. 100 tokens), and (3) the end states for the two tasks are the same (e.g., 100 tokens). We add to this research by investigating (1) consumers' motivation for pursuing attainment versus maintenance goals, independently of whether the goals have been successfully completed, in which (2) the starting states for the attainment and maintenance goals are held constant, and (3) the end states for the two types of goals differ. Further, we examine whether and how the two types of goals impact consumers from different segments of the population and different cultures. That is, how consumers' independent versus interdependent self-construal, which can be shaped by consumers' sociocultural background or made salient by consumption contexts, interact with goal type to impact motivation for goal pursuit.

Self-Construal and Goal Types

Self-construal pertains to how people perceive themselves in relation to others (Brewer and Gardner 1996; Markus and Kitayama 1991; Singelis 1994): People with a predominantly independent self-construal tend to define the self by the unique achievements and distinguished status that set them apart from others, whereas people with a predominantly interdependent self-construal tend to define the self by their social roles and relationships with others.

Because of the importance of being distinct from others, independent self-construal emphasizes individual advancement (Markus and Kitayama 1991). In order to be consistent with the activated self-construal, the individuals tend to engage in more advancement-related activities when an independent self-construal is salient, which can lead to the independent self-construal becoming more strongly associated with knowledge pertaining to completing attainment goals. Conversely, because of the importance of connection with others, interdependent self-construal emphasizes stability and continuity of social ties (Markus and Kitayama 1991). As such, the individuals tend to engage in more stability- and harmony-fostering activities when an

interdependent self-construal is salient, which can lead to the interdependent self-construal becoming more strongly associated with knowledge pertaining to completing maintenance goals.

These differences in salient knowledge regarding pursuing the goals, as a function of the type of self-construal, are likely to lead to differences in individuals' ability to identify factors relevant to accomplishing the goals and their expectation of successful goal completion, which, in turn, can impact motivation for pursuing the goals (cf. Kruglanski et al. 2002). Therefore, attainment goals can be more motivating for people with a more independent (vs. interdependent) self-construal, whereas maintenance goals can be more motivating for people with a more interdependent (vs. independent) self-construal.

Chronic versus Situational Differences in Self-Construal

A considerable body of research has shown that cultural background shapes self-construal: People from a collectivist cultural background (e.g., East Asian, Latin American) tend to possess a predominantly interdependent self-construal, whereas those from an individualist cultural background (e.g., North American, Western European) tend to possess a predominantly independent self-construal (Hofstede 2001; Markus and Kitayama 1991; Singelis 1994). Thus, based on the conceptualization discussed thus far, we posit that individuals from different cultural backgrounds, hence with different self-construals, can differ in their motivation for pursuing maintenance versus attainment goals. Specifically, attainment (maintenance) goals can be more motivating for consumers with an independent (interdependent) self-construal.

Furthermore, regardless of an individual's cultural background, independent and interdependent self-construals coexist within the individual (Brewer and Gardner 1996; Singelis 1994; Trafimow, Triandis, and Goto 1991), and their accessibility can be temporarily increased by contextual factors (e.g., Aaker and Lee 2001; Gardner, Gabriel, and Lee 1999; Lee, Aaker, and Gardner 2000; Maddux et al. 2010; Mandel 2003). A temporary increase in the accessibility of an independent (interdependent) self-construal can thus lead to greater accessibility of knowledge related to pursuing attainment (maintenance) goals, which can positively impact the motivation for that type of goal.

Based on the discussion above, we hypothesize:

H1: Attainment (maintenance) goals can be more (less) motivating for people with a more independent self-construal than for those with a more interdependent self-construal.

H2: Regardless of an individual's chronic self-construal, activation of an independent (interdependent) self-construal can accentuate motivation for pursuing attainment (maintenance) goals.

It is important to note that our hypotheses relate to situations in which the gap between the current and desired state for attainment goals is not extreme. For a desired state that is far away from the current state (e.g., increase the amount of time one exercises from the current level of 15 minutes to at least four hours daily for the next six months; increase the level of contribution to one's 401(k) retirement plan by at least 300% next year), the obvious large gap would have a strong negative impact on perceived difficulty and expectation of goal completion (cf. Stamatogiannakis et al. 2010), making the attainment goal less motivating than the corresponding maintenance goal. In the current research, rather than studying the effect of a large gap between the current and desired states, we seek to understand the qualitative differences between attainment and maintenance goals. Thus, we focus on attainment goals involving relatively modest differences between the current and desired states.

Potential Influence of Regulatory Focus

The goal type (attainment vs. maintenance) construct is conceptually distinct from regulatory focus (Brodscholl et al. 2007; Higgins 1997). While the former refers to specific desired states, the latter pertains to self-regulation strategies (e.g., the extent to which one focuses on maximizing positive versus minimizing negative outcomes; Aaker and Lee 2001).

Prior research has shed important light on the link between self-construal and regulatory focus (Lee, Aaker, and Gardner 2000). For example, Lee et al. (2000; study 1) presented participants with a game scenario that was either promotion framed (e.g., probability of winning) or prevention framed (e.g., probability of losing), and then asked them to evaluate the importance and favorability of the scenario. Participants with a predominantly interdependent self-construal perceived the prevention-framed scenario as more important than the promotion-focused one. Those with a predominantly independent self-construal exhibited the opposite pattern. However, no self-construal \times regulatory focus interaction effect on measures pertaining to favorability (i.e., likelihood of success) was found (Lee et al. 2000). While the potential mechanism we proposed would predict a self-construal \times goal type interaction effect on favorability, regulatory focus may still play a role in the phenomenon we investigate. Thus, to ensure that the interaction effect we examine is not simply due to differences in regulatory focus, we controlled for regulatory focus in the studies probing the potential mechanism we proposed. In the sections that follow, we report five experiments and one field study that test our hypotheses.

STUDY 1: THE IMPACT OF CHRONIC SELF-CONSTRUAL

Study 1 investigated whether self-construal can interact with goal type to impact motivation for goal pursuit

(hypothesis 1). Self-construal was manipulated by including participants from two different national cultures (i.e., the United States and China, the two biggest economies in the world). Further, to examine the generalizability of our propositions across behavioral domains, study 1 utilized two goal pursuit contexts that are important to consumer welfare (i.e., going to the gym, saving money).

Method

A total of 185 participants were recruited from China and the United States (123 women, 111 Chinese) in exchange for monetary compensation or small gifts worth \$3. A 2 × 2 × 2 mixed design was used, with goal type (attainment vs. maintenance) and self-construal (Americans as independents vs. Chinese as interdependents) as between-participant factors, and goal pursuit context (savings money vs. physical fitness) as the within-participant factor. Given that extensive prior research has established that individuals from the United States tend to possess a more independent self-construal, and individuals from China a more interdependent one (Hofstede 2001; Markus and Kitayama 1991; Triandis 1995), we, following prior research (e.g., Aaker and Lee 2001; Aaker and Williams 1998), operationalized the self-construal manipulation in this study by recruiting participants from these two countries.

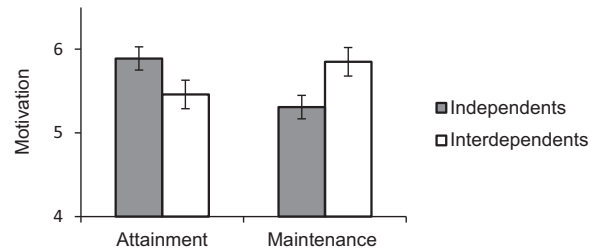
All participants were asked to read two goal pursuit contexts that were presented in a random order. To minimize effects that might arise from very different target goal levels, rather than from qualitative differences between attainment and maintenance goals, we kept the gap between attainment and maintenance goals moderate. Half of the participants read the attainment goal stimuli (i.e., Ms. E has \$35,000 in her bank account and has the goal of having, at least, \$35,500 in her account in one year’s time; Mr. Z who works out 30 minutes each day has the goal of working out for at least 35 minutes each day in the next month). The other half read the maintenance goal version (i.e., maintaining savings/exercising time at, at least, the current level in one year’s time/in the next month).

After controlling for differences in the average household income between the two countries, prevalent currency exchange rate, and cost of living, we estimated that \$1 was similar in value to ¥1. Past research (e.g., Hsee and Weber 1999) has also shown that \$1 has the same psychological value to the Americans as ¥1 to the Chinese. Thus, \$35,000 versus \$35,500 was used for the American sample; ¥35,000 versus ¥35,500 was used for the Chinese sample.

To measure motivation for goal pursuit, participants were asked to rate the extent to which the person described in the goal pursuit context would persist in pursuing the goal on a 7-point scale (1 = Not persist at all, 7 = Persist very much). Finally, participants responded to basic demographic measures and were thanked and debriefed.

FIGURE 1

STUDY 1: THE INTERACTION EFFECT OF GOAL TYPE × CHRONIC SELF-CONSTRUAL ON MOTIVATION FOR GOAL PURSUIT



Results

The data were analyzed using a 2 × 2 × 2 repeated measures analysis of variance (ANOVA) with goal type (attainment vs. maintenance) and participants’ self-construal (independents vs. interdependents) as two between-participant factors, goal pursuit context (savings vs. physical exercise) as a within-participant factor, and motivation ratings as the dependent variable. As shown in figure 1, the goal type × self-construal interaction effect on goal commitment was significant ($F(1, 181) = 9.9, p < .002$). Pairwise contrasts revealed that attainment goals were perceived as significantly more motivating for independents than for interdependents ($M_{independents} = 5.89, M_{interdependents} = 5.46, F(1, 181) = 3.87, p < .05$), but the opposite was found for maintenance goals ($M_{independents} = 5.31, M_{interdependents} = 5.85, F(1, 181) = 6.14, p < .02$). These findings support hypothesis 1: Attainment (maintenance) goals were more (less) motivating for independents than for interdependents.

STUDY 2: THE IMPACT OF SITUATIONALLY ACTIVATED SELF-CONSTRUAL

While the results of study 1 provided support for our proposition, there might be other factors that differ across cultures that could have affected the pattern of results we obtained. We addressed this potential limitation in study 2 by directly manipulating both variables of interest: activation of an independent versus interdependent self-construal, and pursuit of attainment versus maintenance goals (hypothesis 2). Further, to examine the robustness of our findings, we utilized a different goal pursuit context—donating to charity.

Method

A total of 125 American participants (63 women) from an online consumer panel completed this computer-based

study for monetary compensation. They were randomly assigned according to a 2 (self-construal prime: independence vs. interdependence) \times 2 (goal type: attainment vs. maintenance) between-participant design. The self-construal priming procedure was adapted from Brewer and Gardner (1996). Participants were told the cover story that we were interested in learning about how people read information on computers. They were instructed to read a paragraph of text carefully and double-click on every pronoun in the paragraph. Those in the independence condition were shown a paragraph with 19 singular pronouns (i.e., I, me, my, mine); those in the interdependence condition were asked to read a paragraph with 19 plural pronouns (i.e., we, us, our, ours). To make the manipulation appear unrelated to the dependent measures, participants then responded to a few neutral filler questions and were told they had completed the first study.

Next, participants responded to the dependent measure in a supposedly new study. They were asked to identify their favorite charity and indicate the amount of money they were willing to donate to that charity this year. The goal type was manipulated in the next question. Participants were asked to imagine that they had the chance to precommit to make a second donation, exactly a year from now. Participants in the attainment goal condition were told that the amount they would be asked to donate was at least one cent more than the amount they had specified for the first donation. Participants in the maintenance goal condition, however, were told that the amount they would be asked to donate was, at least, the same as before. This one-cent difference between the two goal-type conditions provided a very conservative test of the distinction between the two goal types. As a measure of motivation for goal pursuit, participants indicated how willing they were to precommit on two 7-point measures (one of which was reverse coded; 1 = Very unlikely/definitely would, 7 = Very likely/definitely would not). Finally, participants responded to basic demographic measures and were thanked and debriefed.

Results

The two items of willingness to precommit were averaged into a single measure of motivation for goal pursuit ($r = .62$, $p < .001$). A 2×2 ANOVA with self-construal prime (independence vs. interdependence) and goal type (attainment vs. maintenance) as between-participant factors revealed only a significant self-construal prime \times goal type interaction ($F(1, 121) = 7.84$, $p < .006$), suggesting that each prime affected willingness to precommit for the two types of goals differently. Willingness to precommit to a maintenance goal was greater when participants were primed with an interdependent versus independent self-construal ($M_{\text{independent}} = 4.00$, $M_{\text{interdependent}} = 4.90$, $F(1, 121) = 3.93$, $p < .05$), but the opposite was found for

willingness to precommit to an attainment goal ($M_{\text{independent}} = 4.89$, $M_{\text{interdependent}} = 3.99$, $F(1, 121) = 3.91$, $p < .05$).

We also examined the possibility that the preceding results were obtained not because of the primed self-construal, but because of differences in the stated amount of donation. Thus, we repeated the above ANOVA but with donation amount, instead of willingness to precommit as the dependent variable. None of the effects were significant (p 's $> .2$). In addition, when the donation amount was entered as a covariate in an analysis of covariance, it had no significant effects on willingness to precommit ($p > .8$). This account based on donation amount was also not supported when we repeated our analyses after dropping extreme outliers (five standard deviations from the means, $M_{\text{independent}} = 39.71$, $M_{\text{interdependent}} = 47.09$) or log transforming the donation amounts (p 's $> .2$; we thank an anonymous *JCR* reviewer for suggesting these analyses).

Our results thus support hypothesis 2: Although participants were from a single culture, priming an independent self-construal accentuated their motivation for attainment goals. Conversely, priming an interdependent self-construal increased their motivation for maintenance goals.

STUDY 3: FRAMING GOALS TO APPEAL TO DIFFERENT SELF-CONSTRUALS

In the first two studies, we measured or manipulated self-construal and obtained results consistent with our propositions. In study 3, we utilized another method to examine the interaction between self-construal and goal type. Whereas independent self-construal emphasizes the importance of undertaking actions driven by one's own will, interdependent self-construal underlines the importance of the collective will of one's close social group (Markus and Schwartz 2010). Given the coexistence of both types of self-construals within each person (Brewer and Gardner 1996; Singelis 1994; Trafimow et al. 1991), framing an attainment goal as reflecting a person's own will (and hence appealing to and activating the person's independent self-construal) can boost the person's motivation for that attainment goal. The opposite pattern is likely to emerge for maintenance goals. That is, framing a maintenance goal as reflecting the will of one's close social group (and hence appealing to and activating the person's interdependent self-construal) can positively impact motivation to pursue that maintenance goal. In study 3, we tested whether we can obtain the same pattern of results by framing goals.

Furthermore, study 3 explored whether regulatory focus (Brodsholl et al. 2007; Lee et al. 2000)—self-regulation strategies that can be either promotion focused (i.e., on one's aspirations and potential gains) or prevention focused (i.e., on one's responsibilities and potential losses; Higgins 1997)—could affect our findings. We measured participants'

regulatory focus tendency and examined whether this tendency can account for the pattern of results we obtained.

Method

A total of 189 American participants (109 women) from an online consumer panel completed this computer-based study for monetary compensation. They were randomly assigned according to a $2 \times 2 \times 3$ mixed factorial design with goal type (attainment vs. maintenance) and goal framing (for self vs. for close social group) as the between-participant factors, and goal pursuit contexts (financial [maintaining savings at, at least, \$35,000 vs. increasing the amount to, at least, \$35,500 in a year's time], weight management [maintaining the current bodyweight at, at most, 185 vs. reducing it to, at most, 183 pounds by the end of the coming month], and learning goals [maintaining the current grade point average at, at least 3.2 vs. increasing it to at least 3.3 by the time of graduation]; adapted from study 1 as the within-participant factor. About half of the participants read the attainment goal version of the three goal pursuit contexts, and the rest read the maintenance goal version. In addition, participants in the for-self condition were told that the person pursuing the goal is doing so for herself or himself, whereas those in the for-social-group condition were told that the goal is pursued for close social groups (e.g., her or his family). To measure motivation for goal pursuit in each scenario, participants were asked to indicate on 7-point scales the level of goal commitment (1 = Not committed at all, 7 = Very committed), attractiveness (1 = Not at all attractive, 7 = Very attractive), and persistence (1 = Not persist at all, 7 = Persist a lot). Finally, they completed the regulatory focus scale (Higgins et al. 2001; promotion subscale $\alpha = .65$, prevention subscale $\alpha = .83$), basic demographic questions, and were thanked and debriefed.

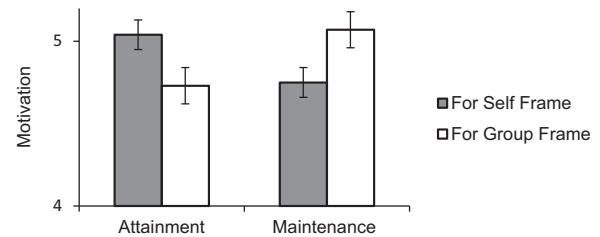
Results

The data were analyzed using an ANOVA with goal type (attainment vs. maintenance) and goal framing (for self vs. for close social group) as two between-participant factors, goal pursuit context (savings, weight, and learning) as a within-participant factor, and the average of three dependent measures (savings $\alpha = .68$, weight $\alpha = .75$, and learning $\alpha = .85$) as the dependent variable. The goal type \times goal framing interaction effect on motivation for goal pursuit was significant ($F(1, 185) = 9.91, p < .002$). The only other significant effect of this analysis was a main effect of goal pursuit context ($F(2, 370) = 5.69, p < .004$), indicating that participants' motivation for the three goal pursuit contexts (savings, weight, and learning) was different.

As shown in figure 2, motivation for attainment goals was greater when the goals were framed as for one's self versus close social group ($M_{\text{self}} = 5.04, M_{\text{group}} = 4.73, F(1, 185) = 4.39, p < .04$). The opposite was found for

FIGURE 2

STUDY 3: THE INTERACTION EFFECT OF GOAL TYPE \times GOAL FRAMING ON MOTIVATION FOR GOAL PURSUIT



maintenance goals—motivation for maintenance goals was greater when the goals were framed as for one's close social group versus oneself ($M_{\text{self}} = 4.75, M_{\text{group}} = 5.07, F(1, 185) = 5.63, p < .02$). These findings thus provide further support for hypothesis 2. Finally, including the regulatory focus measure and all its interactions with the other variables as covariates, in the preceding analyses, did not affect the significance of the results. This, suggests that the findings of study 3 could not simply be explained by differences in regulatory focus.

Replication Study

To ensure that the effect we observed indeed holds after controlling for regulatory focus, we conducted a replication study. A 2×2 mixed design was used, with goal type (attainment vs. maintenance) as the between-participant factor and goal pursuit context (learning and weight management goals, adapted from study 3) as the within-participant factor. Following a procedure similar to that of study 1, participants read information pertaining to their assigned goal contexts, indicated their motivation for pursuing the goals, and responded to the self-construal scale (Singelis 1994) as well as the regulatory focus scale (Higgins et al. 2001).

Replicating the results of study 3, a significant goal type \times self-construal interaction in the expected direction was found ($p < .002$). This interaction effect remained significant ($p < .04$) after including participants' regulatory focus score and all its interaction terms with the other independent variables in the analysis. None of the new predictors had a significant effect (p 's $> .1$). Thus, replicating the results of study 3, differences in self-construal but not regulatory focus accounted for the pattern of results we found in this study.

STUDY 4: SELF-CONSTRUAL AND EXPECTATION OF GOAL COMPLETION

Study 4 extended the first three studies in multiple ways. First, we investigated a potential mechanism underlying

the effect we observed thus far. Specifically, we explored whether independents (interdependents) tend to have a higher expectation of completing attainment (maintenance) goals and whether this difference in expectation can mediate the difference in their motivation for the two types of goals. Second, while we used one widely adopted measure of regulatory focus (Higgins et al. 2001) in study 3 and the replication study, to ensure that we measure regulatory focus robustly, we utilized the latest psychometrically verified scale for regulatory focus (Haws, Dholakia, and Bearden 2010) in study 4.

Third, we utilized a new experimental paradigm to examine the generalizability of our findings. Pioneered by Heider (Heider 1944; Heider and Simmel 1944) and widely adopted in cultural psychology research (e.g., Masuda and Nisbett 2001; Morris and Peng 1994), this approach involves presenting participants with animals that participants do not consciously associate with specific social or cultural topics (Hong et al. 2000). Because this experimental paradigm is less susceptible to participants' idiosyncratic differences (e.g., one's own body weight, learning ability, current level of savings, etc.), it can also better capture the underlying psychological processes we investigate.

Method

A total of 74 American participants (42 women) from an online consumer panel completed this computer-based study for monetary compensation. Participants were randomly assigned to either the attainment or maintenance goal condition. Participants in both conditions were presented with an image (figure 3) showing four goats racing across a field. The participants were informed that the goats were a third of the way into the race, and that Goat C was in the lead, with Goat D, second, Goat B (the target goat), third, and Goat A, last. The illustration showed that the gaps between the goats were small. Participants in the attainment condition were informed that Goat B had the goal of being at least in the second position by the end of the race, whereas those in the maintenance condition were

told that Goat B had the goal of being at least in the third position by the end of the race.

Next, participants were asked to evaluate Goat B's motivation for pursuing its goal (1 = Not motivated at all, 7 = Very motivated), and goal attractiveness (1 = Very unattractive, 7 = Very attractive), persistence (1 = Will not persist at all, 7 = Will persist until the end), as well as commitment (1 = Not committed at all, 7 = Very committed). Thereafter, participants assessed the likelihood that Goat B would achieve its goal (1 = Definitely will not, 7 = Definitely will), the probability that Goat B would succeed or fail (1 = Definitely will fail, 7 = Definitely will succeed), and the extent the goal would be easy for Goat B (1 = Very difficult, 7 = Very easy). Finally, participants completed the extended version of Singelis's (1994) self-construal scale (extended from 24 items to 30 items), the most recently published regulatory focus tendency scale (Haws et al. 2010), as well as measures of demographics. Participants were then debriefed, thanked, and dismissed.

Results

The scale items pertaining to motivation (motivation, persistence, attractiveness, and commitment) and expectation of successful goal completion (likelihood, achievability, and ease) were averaged into two motivation ($\alpha = .96$) and expectation of success ($\alpha = .69$) measures, respectively. The promotion subscale of the regulatory focus scale (Haws et al. 2010) exhibited reasonable reliability ($\alpha = .62$), but this was not the case for the prevention subscale ($\alpha = .43$). Correlation analyses indicated that the low α score was due to a single reverse-worded item of the prevention subscale ("Not being careful enough has gotten me into trouble at times"). Dropping this item resulted in a reasonable level of reliability for the prevention subscale ($\alpha = .64$). We thus used this "reduced" prevention subscale in subsequent analyses (including the reverse-worded item in the subscale that yielded an identical pattern of results). The self-construal scales also exhibited reliabilities (independence subscale $\alpha = .61$; interdependence subscale $\alpha = .60$) consistent with prior research (cf. Singelis 1994). In line with past research (e.g., Aaker and Williams 1998), we combined the self-construal subscales and regulatory focus subscales into two composite scores, respectively, for subsequent analyses.

Using the PROCESS macro for SPSS (Hayes 2013, Model 8, 5000 bootstrap resamples), we conducted a mediated moderation analysis (Zhao, Lynch, and Chen 2010) with goal type (attainment = 1, maintenance = 0) as the independent variable, expectation of goal completion as the mediator, and mean-centered self-construal score as the moderator of the effect of goal type on expectation and motivation. Providing support for a mediated moderation, the goal type \times self-construal interaction had a significant effect on expectation of goal completion ($\beta = .87$,

FIGURE 3

STUDY 4: GRAPHICAL SCENARIO

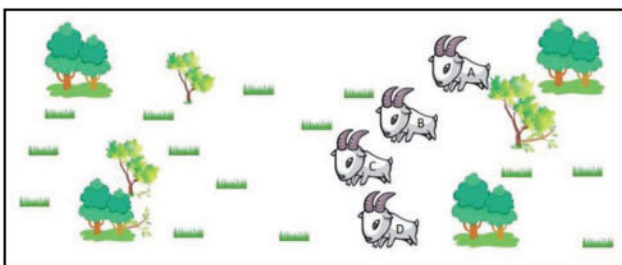
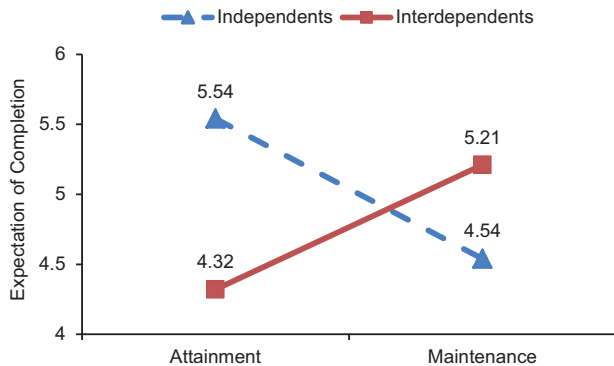


FIGURE 4

STUDY 4: THE INTERACTION EFFECT OF GOAL TYPE × SELF-CONSTRUAL ON EXPECTATION OF GOAL COMPLETION



$t(70) = 2.05, p < .05$). Expectation of goal completion, in turn, had a significant and positive effect on motivation ($\beta = .67, t(69) = 4.04, p < .001$).

Because this sample of participants was from a single predominantly independent culture and the variance of participants' self-construal score was relatively moderate, following prior research (Fitzsimons 2008; Keinan and Kivetz 2011; Wu, Cutright, and Fitzsimons 2011), we conducted spotlight analyses at two standard deviations above and below the mean of the self-construal score. Consistent with our proposition, at two standard deviations below the mean, an attainment (vs. maintenance) goal had a significant negative indirect effect on motivation (95% confidence interval [CI], -1.39 to $-.04$). On the contrary, at two standard deviations above the mean of the self-construal score, an attainment (vs. maintenance) goal had a significant positive indirect effect on motivation (95% CI, $.05$ to 1.66); figure 4). Finally, the index of moderated mediation for this indirect effect was also significant (95% CI, $.05$ to 1.36).

Furthermore, a significant main effect of goal type on motivation ($\beta = .83, t(69) = 2.59, p < .02$) also emerged, indicating that, in general, attainment goals were perceived as more motivating than maintenance goals in this particular setting. This is consistent with the fact that the American participants in general tend to have a predominantly independent self-construal (Markus and Kitayama 1991) and hence can be more motivated by attainment goals (hypothesis 1). In addition, when the mediating role of expectation of goal completion was controlled for, the interaction effect between goal type and self-construal on motivation was significant ($\beta = -1.23, t(69) = -2.04, p < .05$). This residual effect potentially suggests the existence of another mediating factor. We further examine this potential issue of residual effect in study 5.

To test whether regulatory focus could account for these results, we reran the previously mentioned model but with

regulatory focus, instead of self-construal, as the moderator. The goal type × regulatory focus interaction did not have a significant effect on expectation of goal completion ($\beta = -.29, t(70) = -1.30, p = .2$). Finally, we also reran the model with regulatory focus as an additional moderator (Hayes 2013, models 10 and 12, 5000 bootstrap resamples). Consistent with the findings of prior research (Lee et al. 2000), regulatory focus did not have any significant main or interaction effects (p 's $> .3$) on expectation of goal completion.

Overall, the results of study 4 are consistent with our proposed mechanism: Independents (interdependents) had a higher expectation of completing attainment (maintenance) goals, and this difference in expectation mediated the difference in the motivation for pursuing the two goals.

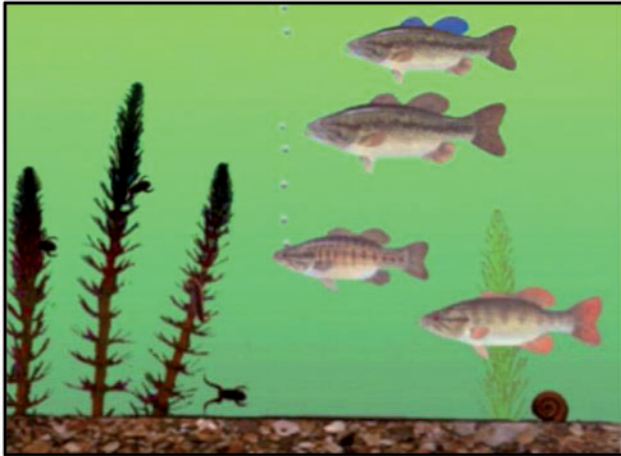
STUDY 5: SELF-CONSTRUAL AND IDENTIFICATION OF FACTORS INVOLVED IN COMPLETING DIFFERENT TYPES OF GOALS

In study 5, we further explored the potential underlying mechanism: whether independents (interdependents) can be more capable of identifying factors relevant to completing attainment (maintenance) goals and whether this difference in salient goal pursuit knowledge can mediate the difference in their motivation for pursuing the two types of goals. Further, we also examined another potential alternative account—whether the effects are driven by independents' (interdependents') willingness to work harder at analyzing attainment (maintenance) goals. Finally, to ensure that the effects we found in study 4 using the graphical task are reliable, we utilized an additional graphical task (adapted from Masuda and Nisbett 2001) in study 5.

Method

A total of 134 participants (76 women) from an online consumer panel completed the study in exchange for monetary compensation. They were randomly assigned to a 2 × 2 between-participant design with goal type (attainment vs. maintenance) and goal scenario replicate (fish and goat) as factors. One of the scenarios was identical to that used in study 4. The other scenario was developed based on a visual task in Masuda and Nisbett (2001). The illustration used in this scenario showed four fish swimming across a pond. The participants were informed that halfway through the swim, the blue-fin fish (figure 5) was in third position, and the gaps between the fish were small. Participants in the attainment condition were informed that the blue-fin fish had the goal of being at least in second position by the end of the swim, whereas those in the maintenance condition were informed that the blue-fin fish had

FIGURE 5
STUDY 5: GRAPHICAL SCENARIO



Note.—Developed based on Masuda and Nisbett (2001)

the goal of being at least in third position by the end of the swim.

The time that participants spent examining each stimulus was recorded. For each scenario, participants rated the target animal's goal motivation (1 = Not motivated at all, 7 = Very motivated), attractiveness (1 = Very unattractive, 7 = Very attractive), persistence (1 = Will not persist at all, 7 = Will persist until the end), and commitment (1 = Not committed at all, 7 = Very committed) in a random order. On a separate screen, as a measure of participants' salient knowledge pertaining to completing attainment (maintenance) goals, participants were asked to write down why they thought that the target animal would be motivated or unmotivated to pursue its goal. The time that participants spent on listing their thoughts was recorded. Next, participants completed the independence-interdependence self-construal scale (Singelis 1994) and measures pertaining to demographics. Participants were then debriefed, thanked, and dismissed.

Our proposition is that participants with more salient goal pursuit knowledge would be able to list more reasons relevant to completing the goal. To assess this, two independent coders who were blind to the experimental conditions and the purpose of this study coded the reasons generated by participants. Specifically, they counted the number of reasons per participant that were positive (facilitating goal completion, $M = 1.72$), negative (inhibiting goal completion, $M = .63$), or irrelevant (unrelated to the goal, $M = .29$). To illustrate, "the blue-fin fish was so close to the other fish in 1st and 2nd place" was coded as a positive reason; "the other fish were probably faster than the blue-fin fish" as a negative reason; "B has a very goatish demeanor" as irrelevant. The coders agreed in 94% of a

total of 355 thoughts coded, and differences were resolved via discussion.

Results

The scale items pertaining to motivation (motivation, persistence, attractiveness, and commitment) were averaged into a single motivation measure ($\alpha = .94$). The self-construal scale exhibited reliabilities (independence subscale $\alpha = .75$; interdependence subscale $\alpha = .68$) in line with prior research (cf. Singelis 1994). Following the same procedure (cf. Aaker and Williams 1998) used in study 4, we created a single self-construal score. As a measure of participants' ability to identify the factors relevant to pursuing the goals, we totaled the number of relevant reasons for goal completion on the thought protocol measure. This composite measure accounts for both the positive reasons (factors facilitating goal completion) and negative reasons (factors hampering goal completion) that each participant generated, and thus it reflects the participant's overall ability to assess the factors relevant to pursuing the goals.

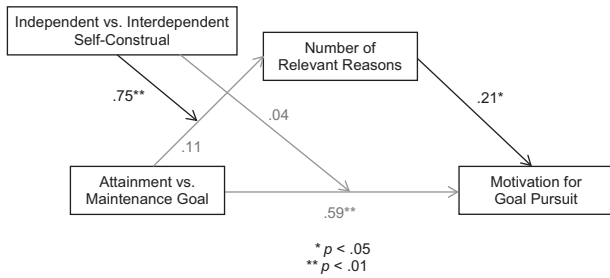
Using the PROCESS macro for SPSS (Hayes 2013, Model 8, 5000 bootstrap resamples), we conducted a mediated moderation analysis (Zhao et al. 2010) with goal type (attainment = 1, maintenance = 0) as the independent variable, number of relevant reasons for goal completion as the mediator, and mean-centered self-construal score as the moderator of the effect of goal type on number of relevant reasons and motivation.

Providing support for this mediated moderation process model, the goal type \times self-construal interaction had a significant effect on the number of relevant reasons for goal completion ($\beta = .75$, $t(130) = 2.66$, $p < .009$; figure 6). In turn, the number of reasons had a significant and positive effect on motivation ($\beta = .21$, $t(129) = 2.12$, $p < .036$). Because this sample of participants was from a single predominantly independent culture and the variance of participants' self-construal score was relatively moderate, we followed suggestions of prior research (Fitzsimons 2008; Keinan and Kivetz 2011; Wu et al. 2011) and conducted spotlight analyses at two standard deviations above and below the mean of the self-construal score. Consistent with our proposition, at two standard deviations below the mean of the self-construal score, attainment (vs. maintenance) goals had a significant negative effect on motivation (95% CI, $-.61$ to $-.04$). On the contrary, at two standard deviations above the mean of the self-construal score, attainment (vs. maintenance) goals had a significant positive effect on motivation (95% CI, $.02$ to $.54$). Finally, the index of moderated mediation for this indirect effect was also significant (95% CI, $.02$ to $.40$).

Furthermore, a significant main effect of goal type on motivation ($\beta = .59$, $t(129) = 2.67$, $p < .009$) also emerged, indicating that in general attainment goals were perceived as more motivating than maintenance goals in this

FIGURE 6

STUDY 6: MEDIATED MODERATION ANALYSIS



particular setting. This finding is consistent with the fact that the American participants in general tend to have a more independent self-construal (Markus and Kitayama 1991) and hence can be more motivated by attainment goals (hypothesis 1). In addition, when the effect of the mediator was controlled for, there was no residual interaction effect between goal type and self-construal on motivation ($p > .8$). This suggests that differences in salient knowledge pertaining to goal pursuit completely mediated the interaction effect of goal type and self-construal on motivation.

We also examined the possibility that the preceding results were obtained not because of differences in independents' (vs. interdependents') salient goal pursuit knowledge, but because they spent more time on examining the stimuli and/or spent more time thinking about reasons for completing attainment (vs. maintenance) goals. To test this possibility, we conducted a series of mediated moderation analyses to determine whether the interaction effect between goal type and self-construal score on motivation was mediated by the time participants spent on examining the stimuli, the time they spent on listing reasons about the target animal's level of motivation for completing the goal, or both time measures. Ruling out this "working harder" account, none of the time measures exhibited a significant effect (p 's $> .1$) in any of the mediated moderation analyses.

While we already measured regulatory focus using different established scales in previous studies and found that regulatory focus did not account for the results, to ensure generalizability, we also examined predictions that would stem from regulatory focus theory in this study. Specifically, regulatory focus theory argues that an active promotion (vs. prevention) focus makes individuals focus on achieving success (vs. avoiding failure; Higgins 1997). Thus, if regulatory focus drove our results, we would likely find that for attainment (vs. maintenance) goals, individuals with a more independent (vs. interdependent) self-construal should list relatively more success (vs. failure) related reasons. That is, we would likely find a goal

type \times self-construal interaction effect on the difference between the number of positive reasons and the number of negative reasons.

To examine this, we conducted mediated moderation analysis with goal type (attainment vs. maintenance) as the independent variable, mean-centered self-construal score, as the moderator, and the difference between the number of positive reasons and the number of negative reasons, as the mediator. This analysis revealed that the goal type \times self-construal interaction did not have a significant effect on the potential mediator ($p > .7$), indicating that the results of study 5 could not simply be explained by regulatory focus.

Overall, the results of study 5 are consistent with the potential mechanism we proposed: Independents (interdependents) were more capable of identifying factors relevant to goal completion for attainment (maintenance) goals, and this difference in salient goal pursuit knowledge mediated the difference in their motivation for pursuing the two types of goals.

STUDY 6: LOSING VERSUS MAINTAINING WEIGHT IN REAL LIFE

In the five studies reported thus far, we obtained support for the relation between self-construal and motivation to pursue different types of goals. One potential limitation of these studies is that participants responded to goal pursuit contexts that were provided by the researchers but did not set those goals themselves. To address this and further assess the generalizability of our findings, study 6 examined natural goal pursuit behaviors in the field: consumers' pursuit of weight management goals. We expected to find that individuals with a more independent (interdependent) self-construal tend to prefer attainment (maintenance) weight management goals and allocate more resources toward pursuing these goals.

Method

We monitored American consumers' goal pursuit behaviors on the popular online goal management website, Stickk.com, over a period of 13 months: August 1, 2010, to August 31, 2011. (Respecting privacy, we only observed those users who chose to make their goal pursuit information publicly available.) Stickk.com enables its users to set goals and keep track of their progress. The website provides features that enable us to test our proposition: Users can set both attainment and maintenance goals, and choose to put money at stake—if they fail the goals they set, the money staked is forfeited. Further, users can also choose to become friends with other users of the website, developing social relations in this online community.

Of the goal pursuit categories available (e.g., smoking cessation, marathon participation) on Stickk.com, two

“Lose Weight” vs. “Maintain Weight”) involve the same task and correspond to the two goal types we explore. We thus focused on users who undertook these two goals. Prior research suggests that the number of social ties one has correlates with the extent to which the person holds an interdependent (vs. independent) self-construal. For example, Hsee and Weber (1999) found that individuals from a predominantly interdependent culture maintained a significantly larger number of social ties ($M=7.34$) than those from a predominantly independent culture ($M=5.08$). Mandel (2003) showed that individuals whose interdependent self-construal was made salient identified a significantly larger number of friends and family members who could be helpful to them ($M=8.62$) than individuals whose interdependent self-construal was not made salient ($M=5.42$). Thus, because the number of social relations an individual possesses tends to reflect the extent to which the person holds interdependent self-construal, we utilized the number of friends each user made on Stickk.com as a proxy measure of independent versus interdependent self-construal.

Further, Stickk.com users have the option of putting some money at stake for the goals they set. That is, if a user succeeds in her or his attainment or maintenance weight management goal, the person gets to keep the money they staked. If, however, the person fails, the money is forfeited (e.g., given to a charity of the user's choice). Hence, as a measure of users' motivation for achieving their goal, we used the amount of money that they put at stake on the goal (cf. Koo and Fishbach 2008). To control for other factors (e.g., experience and involvement with Stickk.com) that could potentially affect motivation to pursue different types of goals, we also obtained data on the total number of goals that each user set during the 13 month period, as well as the number of days since the user started using the website.

Results

Data Cleanup. Overall, 2120 weight management goals were set during the 13 month period by individuals who participated in at least one social activity on the website (i.e., befriended and interacted with at least one other user on the website). To control for the potential impact of prior goal pursuit experience on subsequent behavior, we only included the first goal of each user in our analyses (thus excluding 513 goals that were set by users who already had set another goal). This left a total of 1607 usable observations. Note that this data filtering did not affect our results; the effects reported here remained significant when the entire unfiltered sample was used.

Goal Preference. To test whether the extent to which an individual is independent versus interdependent influences the likelihood of the person choosing an attainment

versus maintenance goal, we ran a logistic regression with goal type (attainment = 0, maintenance = 1) as the dependent variable and the mean-centered number of friends as the independent variable. Consistent with our proposition, individuals with more friends were more likely to opt for the goal of maintaining as opposed to losing weight ($\beta = .30, z = 4.94, p < .001$).

Given the field setting of this study, one might argue that the number of friends is not a stringent measure of the extent to which an individual is independent versus interdependent, but rather reflects the amount of experience or the level of involvement with the website. To rule out these potential alternative accounts, we ran a logistic regression with goal type (attainment vs. maintenance) as a dependent variable, and mean-centered number of friends, number of days since the user joined the website, number of goals that the user set during the data collection period, and the interaction terms of these measures as the independent variables. Further supporting our hypothesis, the only significant effect was that of the number of friends ($\beta = .29, z = 2.67, p < .008$).

Motivation for Goal Pursuit. To examine whether motivation for goal pursuit of each goal type is moderated by the extent to which an individual is independent (vs. interdependent), we ran a regression with the motivation for goal pursuit measure—money at stake—as the dependent variable, and goal type (attainment vs. maintenance), mean-centered number of friends, and their interaction term as the independent variables. We found a significant effect of goal type on the amount of money staked ($\beta = -211.24, t(1603) = 2.66, p < .008$), indicating that [American] users who had attainment goals put more money at stake than those who had maintenance goals. However, this main effect was qualified by a significant goal type \times number of friends interaction ($\beta = 71.12, t(1603) = 2.18, p < .03$). This interaction effect persisted even when the entire unfiltered sample was analyzed or when only users who actually put money at stake were included in the analysis.

We probed this interaction via a spotlight analysis at two standard deviations above and below the mean (Irwin and McClelland 2003). The number of friends was plotted at two standard deviations above versus below the mean, which enabled us to observe the effect of goal type on money at stake for people with more versus fewer friends. While we only found a directional effect of the goal type on money at stake for users with a larger number of friends ($p > .10$), as we predicted, users with fewer friends put more money at stake when they had attainment versus a maintenance goals ($\beta = -440.2, t(1603) = 2.94, p < .01$). To see if these results are sensitive to the choice of two standard deviations as the bar for the spotlight analysis we conducted a second spotlight analysis at one standard deviation above and below the mean, and found a similar

pattern of results: While no significant effect was found for users with a larger number of friends ($p > .10$), users with fewer friends put more money at stake when they had attainment versus maintenance goals ($p < .01$).

Further, including the number of goals set by the individual, number of days since the user joined the website, and respective interaction terms as additional independent variables into the analyses, did not alter the significance of the effects reported above. This suggests that experience and involvement with the website could not explain the results. Taken together, these findings provide support for our central hypothesis: Independents (interdependents) can be more motivated to pursue attainment (maintenance) goals. Finally, note that, in our data set, the average amount of weight that consumers pursuing attainment goals wanted to lose was not extreme (1.56 pounds per week). Providing evidence that our findings are reasonably robust, the pattern of results reported held even when we only included attainment goals of different levels of modesty, ranging from very modest (i.e., goals that are more modest than the average [1.56 pounds per week] or the median [1.08 pounds per week]) to not-so modest levels (i.e., those within .5, 1, 2, 5 or 10 standard deviations from the mean).

Discussion

The findings of this field study are consistent with hypothesis 1. The extent to which individuals possess a more independent (vs. interdependent) self-construal, as reflected by the number of social ties they have (Hsee and Weber 1999; Mandel 2003), impacted the likelihood that they would pursue attainment (vs. maintenance) weight management goals. Further, after setting their goals, individuals with a more independent (vs. interdependent) self-construal exhibited higher motivation, as measured by the amount of money they put at stake, for pursuing attainment (vs. maintenance) goals. These findings held regardless of whether the entire or a cleaned sample was used in the analyses. Given that users pursued the goals they set themselves in a natural setting, the results of this study provide evidence of the external validity of our propositions and illustrate the real-world consequences for consumers.

GENERAL DISCUSSION

Consumer behavior in a wide spectrum of domains is influenced by consumers' self-construal as well as their goals. This research examines how self-construal (independent vs. interdependent) interacts with two major goal types (attainment vs. maintenance) to impact consumers' motivation for goal pursuit. In study 1, we showed that attainment (maintenance) goals were more motivating for individuals from a culture that emphasizes independence (interdependence). Study 2 experimentally manipulated the salience of

each type of self-construal, replicating the effect. In study 3, we found that framing an attainment goal as appealing to and hence activating an independent self-construal boosted participants' motivation for that goal, compared to when the same goal was framed as appealing to an interdependent self-construal. The opposite pattern emerged for maintenance goals. Controlling for the potential influence of regulatory focus (Higgins et al. 2001) did not affect the results.

In studies 4 and 5, we explored a potential mechanism using a new graphical experimental paradigm that was less susceptible to participants' idiosyncratic differences and could better capture the underlying psychological processes. We found that consumers with a more independent (interdependent) self-construal had a higher (lower) expectation of completing attainment goals, and they exhibited more salient goal pursuit knowledge, identifying more factors relevant to goal completion. The opposite patterns emerged for maintenance goals. These differences mediated the effect on motivation for pursuing the two types of goals. Controlling for the potential influence of regulatory focus using the latest measurement instrument (Haws et al. 2010) did not affect the results. Finally, in study 6, we tracked and analyzed consumers' real-life goal pursuit behaviors over a period of 13 months in the field. We found that, consumers' self-construal, as reflected by the number of social ties consumers had, impacted the likelihood that they opted to reduce versus maintain their body weight. Further, after setting their goal, consumers who were more independent exhibited more (less) motivation, as measured by the amount of money they put at stake, when their goal was weight reduction (maintenance). Overall, the results of these six studies offer converging support for our central proposition: Self-construal can interact with goal type to impact consumers' motivation for goal pursuit.

This research contributes to theory. We identify the link between self-construal and consumers' motivation for goal pursuit, and we explored a potential underlying mechanism for this relationship. Specifically, we suggest that independent (vs. interdependent) self-construal emphasizes individual advancement (vs. stability; Markus and Kitayama 1991). This can lead to completion of more advancement (e.g., standing out from others; attaining more than others) versus stability (e.g., keeping proper roles in the social hierarchy; maintaining harmonious relations with others) related activities when an independent self-construal is salient. However, the opposite pattern can occur when an interdependent self-construal is salient. As a result, independent (interdependent) self-construal can be more strongly associated with knowledge pertaining to completing attainment (maintenance) goals. This saliently associated knowledge pertaining to completing a specific goal type can lead to higher motivation for that goal type (Kruglanski et al. 2002). In studies 4 and 5, we obtained results consistent with these propositions.

This research also provides useful managerial insights on international marketing and localization of products and services. Our findings suggest that the two types of goals can be leveraged differently across different segments of consumers and across cultures to boost consumers' motivation for goal pursuit. To illustrate, in cultures that emphasize independence, marketing goods and services relating to attainment goals can motivate consumers more. In cultures that emphasize interdependence, however, promoting goods and services relating to maintenance goals may motivate consumers more. For example, a bank can motivate its customers in the United States by nudging them to increase their savings account balance annually by a small amount in order to obtain special benefits (e.g., higher interest rate, higher credit limit). In contrast, the same bank can motivate its customers in China by nudging them to maintain their savings account balance at a certain level so that they can retain the benefits.

The same notion can also be applied to within-firm goals such as defining project deliverables for employees with different sociocultural backgrounds. Moreover, our results also suggest that marketing practitioners should consider engineering purchase environments or consumption contexts to activate respective self-construal, nudging consumers toward goals congruent with firms' marketing objectives and hence increasing the likelihood of consumers' adoption of those consumption goals. Similarly, our findings can also be leveraged by consumers themselves—they can, for example, structure their goal pursuit environment or frame their goals to “match” the appropriate self-construal, to boost their persistence on goal pursuit activities and hence likelihood of completion.

The current research opens up interesting questions for future research. In studies 4 and 5, we obtained results that are consistent with our propositions. However, given the scope of our research, we did not examine how consumers with different self-construals acquire different types of goal pursuit knowledge and how such knowledge is activated and utilized. Future research could thus explore these topics and provide more definitive evidence for our proposed mechanism. Future research could also shed light on the precise content of the knowledge independents (interdependents) have about completing attainment (maintenance) goals.

The results of our studies suggest that the effects we observed were driven by differences in salient goal pursuit knowledge. However, because both self-construal and goals are rich psychological constructs, we cannot preclude that they may have interaction effects via different process mechanisms. One such mechanism that we considered is regulatory focus (Brodscholl et al. 2007; Lee et al. 2000). In our studies 3 and 4, chronic regulatory focus measures (Haws et al. 2010; Higgins et al. 2001) did not account for our results. In study 5 we did not find a significant

interaction effect between goal type and self-construal on the number of positive minus the number of negative thoughts, as a regulatory focus account would likely predict. While we did not obtain results supporting a regulatory focus based account, it may still be possible that more sensitive measures of that construct may detect a regulatory focus based mechanism that plays a role in the phenomenon we investigated. Future research could explore this possibility.

Our studies focused on common situations in which attainment (maintenance) goals interact with independent (interdependent) self-construal to increase motivation. However, while perhaps less common, there are some attainment goals that pertain to the collective (e.g., represent one's country and win a medal in the Olympic Games). In those cases, the attainment goals can be in line with interdependence, and thus individuals with an interdependent self-construal can have high motivation for such attainment goals. However, to the extent that the attainment goals relate to one's self rather than one's social groups, individuals with an interdependent self-construal are likely to be less motivated to pursue these goals compared to those with an independent self-construal. Conversely, there are some occasions where maintenance goals pertain to one's self (e.g., keep winning matches to maintain one's champion title). In those cases, individuals with an independent self-construal may have high motivation as well. Future research could investigate these possibilities and shed more light on the interaction between goal type and self-construal.

Finally, independent versus interdependent self-construal is just one dimension of the cultural mosaic; there are other important differences between cultures (e.g., Hofstede 2001; Schwartz 1999; Wyer, Chiu, and Hong 2009). There are also other characteristics of goal pursuit (e.g., Bagchi and Li 2011; Cheema and Bagchi 2011; Dreze and Nunes 2011; Fishbach and Dhar 2005; Locke and Latham 1990). Future research could thus investigate whether and how differences in dimensions of culture may impact consumers' goal pursuit behaviors. For example, compared to individuals from cultures that do not value a long-term time orientation, individuals from cultures that do may commit to more long-term goals. As another example, cultural differences in cognitive styles (e.g., Monga and Roedder John 2007) may also impact how consumers evaluate and approach different types of goals. Exploring such research questions can help further our understanding of the relations between culture and goal type, and offer important insights for consumers and firms.

DATA COLLECTION INFORMATION

The studies were designed by all three authors. The experimental data for the studies were collected by research assistants under the supervision of the first two authors. Study 1 was completed in November 2010, study 2 in

February 2011, study 3 in April 2012, and study 4 and study 5 in February 2014. Online consumer panel studies were conducted via Qualtrics and Amazon Mechanical Turk. The Chinese data were collected by research assistants at Yunnan Normal University in China. The field data in study 6 were observed from Stickk.com between August 2010 and August 2011. All three authors participated in analyzing the data, with support of statistical specialists.

REFERENCES

- Aaker, Jennifer L. and Angela Y. Lee (2001), "'I' Seek Pleasures and 'We' Avoid Pains: The Role of Self-Regulatory Goals in Information Processing and Persuasion," *Journal of Consumer Research*, 28 (6), 33–49.
- Aaker, Jennifer L. and Patti Williams (1998), "Empathy versus Pride: The Influence of Emotional Appeals across Cultures," *Journal of Consumer Research*, 25 (December), 241–61.
- Austin, James T. and Jeffrey B. Vancouver (1996), "Goal Constructs in Psychology: Structure, Process, and Content," *Psychological Bulletin*, 120 (3), 338–75.
- Bagchi, Rajesh and Xingbo Li (2011), "Illusionary Progress in Loyalty Programs: Magnitudes, Reward Distances, and Step-Size Ambiguity," *Journal of Consumer Research*, 37 (2), 888–901.
- Baumgartner, Hans and Rik Pieters (2008), "Goal-Directed Consumer Behavior," in *Handbook of Consumer Psychology*, ed. Curtis P. Haugtvedt, Paul M. Herr, and Frank Kardes, New York: Psychology Press, 367–92.
- Bonezzi, Andrea, C. Miguel Brendl, and Matteo De Angelis (2011), "Stuck in the Middle: The Psychophysics of Goal Pursuit," *Psychological Science*, 22, 607–12.
- Brewer, Marilyn B. and Wendi Gardner (1996), "Who Is This 'We'? Levels of Collective Identity and Self-Representations," *Journal of Personality and Social Psychology*, 71 (1), 83–93.
- Broscholl, Jeff C., Hedy Kober, and E. Tory Higgins (2007), "Strategies of Self-Regulation in Goal Attainment versus Goal Maintenance," *European Journal of Social Psychology*, 37 (4), 628–48.
- Cheema, Amar, and Rajesh Bagchi (2011), "Goal Visualization and Goal Pursuit: Implications for Consumers and Managers," *Journal of Marketing*, 75 (2), 109–23.
- Dreze, Xavier and Joseph C. Nunes (2011), "Recurring Goals and Learning: The Impact of Successful Reward Attainment on Purchase Behavior," *Journal of Marketing Research*, 48 (4), 268–81.
- Fishbach, Ayelet and Ravi Dhar (2005), "Goals as Excuses or Guides: The Liberating Effect of Perceived Goal Progress on Choice," *Journal of Consumer Research*, 32 (12), 370–77.
- Fitzsimons, Gavan J. (2008), "Death to Dichotomizing," *Journal of Consumer Research*, 35(1), 5–8.
- Gardner, Wendi L., Shira Gabriel, and Angela Y. Lee (1999), "'I' Value Freedom but 'We' Value Relationships: Self-Constraint Priming Mirrors Cultural Differences in Judgment," *Psychological Science*, 10 (4), 321–26.
- Haws, Kelly L., Utpal M. Dholakia, and William O. Bearden (2010), "An Assessment of Chronic Regulatory Focus Measures," *Journal of Marketing Research*, 47 (5), 967–82.
- Hayes, Andrew F. (2013), *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*, New York, NY: Guilford Press.
- Heath, Chip, Richard P. Larrick, and George Wu (1999), "Goals as Reference Points," *Cognitive Psychology*, 38 (1), 79–109.
- Heider, Fritz (1944), "Social Perception and Phenomenal Causality," *Psychological Review*, 51, 358–74.
- Heider, Fritz and Marianne Simmel (1944), "An Experimental Study of Apparent Behavior," *American Journal of Psychology*, 57, 243–59.
- Higgins, E. Tory (1997), "Beyond Pleasure and Pain," *American Psychologist*, 52 (12), 1280–300.
- Higgins, E. Tory, Ronald S. Friedman, Robert E. Harlow, Lorraine Chen Idson, Ozlem N. Ayduk, and Amy Taylor (2001), "Achievement Orientations from Subjective Histories of Success: Promotion Pride versus Prevention Pride," *European Journal of Social Psychology*, 31, 3–23.
- Hofstede, Geert (2001), *Culture's Consequences*, 2nd ed., Thousand Oaks, CA: Sage.
- Hong, Ying-yi, Michael W. Morris, Chi-yue Chiu, and Veronica Benet-Martinez (2000), "Multicultural Minds: A Dynamic Constructivist Approach to Culture and Cognition," *American Psychologist*, 55 (7), 709–20.
- Hsee, Christopher K. and Elke U. Weber (1999), "Cross-National Differences in Risk Preference and Lay Predictions," *Journal of Behavioral Decision Making*, 12 (6), 165–79.
- Irwin, Julie R. and Gary H. McClelland (2003), "Negative Consequences of Dichotomizing Continuous Predictor Variables," *Journal of Marketing Research*, 40 (8), 366–71.
- Kahneman, Daniel, Jack L. Knetsch, and Richard H. Thaler (1991), "Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias," *Journal of Economic Perspectives*, 5 (1), 193–206.
- Keinan, Anat, and Ran Kivetz (2011), "Productivity Orientation and the Consumption of Collectable Experiences," *Journal of Consumer Research*, 37 (6), 935–50.
- Koo, Minjung, and Ayelet Fishbach (2008), "Dynamics of Self-Regulation: How (Un) Accomplished Goal Actions Affect Motivation," *Journal of Personality and Social Psychology*, 94 (2), 183–95.
- . (2010), "Climbing the Goal Ladder: How Upcoming Actions Increase Level of Aspiration," *Journal of Personality and Social Psychology*, 99 (1), 1–13.
- Kruglanski, Arie, James Y. Shah, Ayelet Fishbach, Ron Friedman, Woo Young Chun, and David Sleeth-Keppler (2002), "A Theory of Goal Systems," *Advances in Experimental Social Psychology*, 34, 331–78.
- Lee, Angela Y., Jennifer L. Aaker, and Wendi L. Gardner (2000), "The Pleasures and Pains of Distinct Self-Concepts: The Role of Interdependence in Regulatory Focus," *Journal of Personality and Social Psychology*, 78 (6), 1122–134.
- Lee, Leonard, and Dan Ariely (2006), "Shopping Goals, Goal Concreteness, and Conditional Promotions," *Journal of Consumer Research*, 33 (1), 60–70.
- Locke, Edwin A. and Gary P. Latham (1990), *A Theory of Goal Setting and Task Performance*, Englewood Cliffs, NJ: Prentice Hall.
- Luna, David, Torsten Ringberg, and Laura A. Peracchio (2008), "One Individual, Two Identities: Frame Switching among Biculturals," *Journal of Consumer Research*, 35 (2), 279–93.
- Maddux, William, Haiyang Yang, Carl Falk, Hajo Adam, Wendi Adair, Yumi Endo, Ziv Carmon, and Steve Heine (2010),

- "For Whom Is Parting from Possessions More Painful: Cultural Differences in the Endowment Effect," *Psychological Science*, 21(12), 1910–1917.
- Mandel, Naomi (2003), "Shifting Selves and Decision Making: The Effects of Self-Construal Priming on Consumer Risk-Taking," *Journal of Consumer Research*, 30 (6), 30–40.
- Markus, Hazel R. and Shinobu Kitayama (1991), "Culture and the Self: Implications for Cognition, Emotion, and Motivation," *Psychological Review*, 98 (2), 224–53.
- Markus, Hazel R. and Barry Schwartz (2010), "Does Choice Mean Freedom and Well-Being?" *Journal of Consumer Research*, 37 (8), 344–55.
- Masuda, Takahiko, and Richard E. Nisbett (2001), "Attending Holistically versus Analytically: Comparing the Context Sensitivity of Japanese and Americans," *Journal of Personality and Social Psychology*, 81 (5), 922–34.
- Miller, George A., Eugene Galanter, and Karl H. Pribram (1960), *Plans and the Structure of Behavior*, New York: Holt, Rinehart & Winston.
- Monga, Alokparna Basu and Deborah Roedder John (2007), "Cultural Differences in Brand Extension Evaluation: The Influence of Analytic versus Holistic Thinking," *Journal of Consumer Research*, 33 (3), 529–36.
- Morris, Michael W., and Kaiping Peng (1994), "Culture and Cause: American and Chinese Attributions for Social and Physical Events," *Journal of Personality and Social Psychology*, 67 (6), 949–71.
- Schwartz, Shalom H. (1999), "A Theory of Cultural Values and Some Implications for Work," *Applied Psychology*, 48, 23–47.
- Singelis, Theodore M. (1994), "The Measurement of Independent and Interdependent Self-Construals," *Personality and Social Psychology Bulletin*, 20 (10), 580–91.
- Stamatogiannakis, Antonios, Amitava Chattopadhyay, and Dipankar Chakravarti (2010), "Maintenance versus Attainment Goals: Why People Think It Is Harder to Maintain Their Weight Than to Lose a Couple of Kilos," in *Advances in Consumer Research*, Vol. 37, ed. Margaret C. Campbell, Jeff Inman, and Rik Pieters, Duluth, MN: Association for Consumer Research.
- Trafimow, David, Harry Triandis, and Sharon Goto (1991), "Some Tests of the Distinction between the Private Self and the Collective Self," *Journal of Personality and Social Psychology*, 60 (May), 649–55.
- Triandis, Harry C. (1995), *Individualism and Collectivism*, Boulder, CO: Westview.
- Wu, Eugenia C., Keisha M. Cutright, and Gavan J. Fitzsimons (2011), "How Asking 'Who Am I?' Affects What You Buy: The Influence of Self-Discovery on Consumption," *Journal of Marketing Research*, 48 (2), 296–307.
- Wyer, Robert S., Chi-Yue Chiu, and Ying-Yi Hong (2009), *Understanding Culture: Theory, Research and Application*, New York, NY: Psychology Press.
- Zhao, Xinshu, John G. Lynch, and Qimei Chen (2010), "Reconsidering Baron and Kenny: Myths and Truths about Mediation Analysis," *Journal of Consumer Research*, 37 (2), 197–206.