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Intrinsic versus extrinsic goals: The role of self-construal in understanding consumer response to goal framing in social marketing

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ABSTRACT

According to Self-Determination Theory, goal framing can be categorized as intrinsic or extrinsic. Intrinsic goal framing emphasizes the attainment of intrinsic goals (e.g., autonomy, growth, and health), whereas extrinsic goal framing articulates the attainment of extrinsic goals (e.g., wealth, image, and fame). Although prior research has demonstrated that intrinsic (vs. extrinsic) goal framing leads to more desirable goal-related outcomes, three experiments in the context of persuasion reveal a boundary condition of this established relationship. Specifically, this work demonstrates that the established positive effect of intrinsic (vs. extrinsic) goal framing is evident only when consumers' independent self-construal is accessible. In addition, findings show that both autonomous motivation and message persuasiveness mediate these effects. This work offers a theoretical contribution to the motivation and consumer behavior literature streams by demonstrating the moderating role of consumers' accessible self-construal on goal framing. This work also offers practical implications for advertising and message strategy.

1. Introduction

Marketers can shape behavior through message framing in advertising. Prior research in consumer behavior has identified that goal framing significantly affects persuasion (Min, Martin, & Jung, 2013; Poels & Dewitte, 2008). For example, ads that emphasize attaining a positive outcome, or promotion-focus goal, are more effective when paired with a gain frame, whereas ads that emphasize preventing a negative outcome, or prevention-focus goal, are more effective when paired with a loss frame (Lee & Aaker, 2004). Additionally, prior research has established a compatibility effect for messages that highlight a promotion-focus (prevention-focus) goal and that feature an independent (interdependent) self-construal (Aaker & Lee, 2001). Interestingly, research in persuasion has yet to examine the impact of intrinsic and extrinsic goals, proposed by the seminal motivation theory, Self-Determination Theory (SDT; Deci & Ryan, 1985). This is surprising as prior research has demonstrated that intrinsic and extrinsic goals play a fundamental role in human behavior and goal pursuit processes (Deci & Ryan, 2000).

According to SDT, intrinsic goals stem out of interests and values related to one's innate self that reflect an individual's natural growth

tendencies, such as health, self-development, and contributing to community (Kasser & Ryan, 1993). In contrast, extrinsic goals are associated with achieving an external outcome with an "outward orientation," such as financial success, social recognition, and physical attractiveness (Kasser & Ryan, 1993; Williams, Hedberg, Cox, & Deci, 2000). The majority of research on intrinsic and extrinsic goals has primarily focused on the different processes and/or goal outcomes associated with pursuing or attaining intrinsic versus extrinsic goals. For example, pursuing an intrinsic goal, compared to an extrinsic goal, is more positively correlated to physical and psychological wellbeing (Deci & Ryan, 2000). Also, intrinsic goals are associated with autonomous motivation, or doing an activity with volition and self-initiation, while extrinsic goals are associated with controlled motivation, or performing an activity in order to attain some separable outcome (Deci & Ryan, 2000).

Recently, work has focused on whether information pertaining to goal pursuit can be framed and presented to individuals in a manner that is consistent with pursuing an intrinsic versus extrinsic goal (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). For example, prior research has framed information about the goal of exercising on a consistent basis as pursuing an intrinsic goal in the following way:

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“exercising regularly helps you achieve physical fitness.” The same goal was alternatively framed as pursuing an extrinsic goal by stating: “exercising regularly helps you achieve a more physically attractive body” (Vansteenkiste et al., 2004). Findings within this research stream have revealed that intrinsic goal framing (vs. extrinsic goal framing) generally leads to more desirable goal-outcomes, such as higher academic performance and behavioral persistence. This pattern of findings has been attributed to, at least partially, autonomous motivation, which leads to a higher level of engagement with a given activity (Vansteenkiste et al., 2004; Vansteenkiste, Simons, Lens, Soenens, & Matos, 2005).

However, prior research suggests that autonomous motivation can be experienced differently. For example, Iyengar and Lepper (1999) found that for Americans being able to make a decision independently resulted in greater autonomous motivation, but for people of Asian cultures, autonomous motivation was higher when a trusted other made the decision (compared to making an independent decision for the self). These findings could be attributed to the possibility that autonomy is manifested differently by how to perceive the self in relation to others. Hence, we believe self-construal, or the distinction between an independent or interdependent self-view (Singelis & Sharkey, 1995), may offer additional insight into how intrinsic goals function.

Interestingly, despite both intrinsic and extrinsic goal framing being used in persuasion in the marketplace, it has been understudied in the fields of consumer behavior and advertising. For example, the Nike ad depicted in Appendix I, features the use of intrinsic goal framing (e.g., getting fit) and an independent self-construal, by emphasizing the word “Yourself.” Accordingly, there is a need to better understand the nuances of messages that use goal framing and activate an independent or interdependent self-construal. The purpose of this work is to examine the interplay between goal framing and self-construal on persuasion outcomes. Further, we seek to examine the potential mediating roles of message persuasiveness and autonomous motivation. Three experiments were conducted to assess these objectives. Study 1 examines the interplay between goal framing and self-construal on behavioral intention in a recycling context, and whether message persuasiveness serves as the facilitating mechanism in this relationship. Study 2 seeks to replicate these effects and examine autonomous motivation as an additional mediator to the interplay between goal framing and self-construal in the context of exercise and health promotion. Study 3 demonstrates the generalizability of these findings by examining these relationships in a more traditional advertising context. This work offers theoretical contributions to the motivation and consumer behavior literature streams by identifying a boundary condition to the superior effects of intrinsic goal framing and mediators that explain these effects. Additionally, this work offers practical implications for social marketers and advertisers.

2. Theoretical background

2.1. Self-determination theory

Self-Determination Theory (SDT), a seminal theory of human motivation, differentiates the content of goals and the regulatory processes through which goals are pursued (Deci & Ryan, 2000). According to SDT, a critical component of the effects of goal pursuit concerns the degree to which people are able to satisfy their innate psychological needs, such as autonomy (Deci & Ryan, 2000). One critical supposition of SDT is that goal outcomes are influenced by both “why” a goal is pursued (i.e., motives) and “what” goal is being pursued (i.e., goal contents) (Deci & Ryan, 2000). Prior work has primarily focused on the “why” and has revealed that motivation can be classified on a continuum ranging from autonomous motivation to controlled motivation. Autonomous motivation refers to engaging in a behavior volitionally with experience of self-endorsement and ownership of the behavior (Deci & Ryan, 2000). Autonomous motivation is the base for self-

determined behaviors and accompanies a strong sense of volition and choice (Deci & Ryan, 2000). In contrast, controlled motivation refers to engaging in a behavior to attain an outcome other than the activity itself. Thus, controlled motivation is associated with behaviors that are characterized by a means-end structure and a separable outcome (Deci & Ryan, 2000).

A large body of research has demonstrated that autonomous motivation (vs. controlled motivation) is associated with more positive goal outcomes. For example, for the goal of weight loss, autonomous motivation was more positively related to weight loss program attendance, actual weight loss, and the maintenance of the weight loss, compared to controlled motivation (Williams, Grow, Freedman, Ryan, & Deci, 1996). In addition, autonomous motivation has been shown to result in a wide array of pro-social behaviors including recycling and charitable donations (Gagné, 2003; Weinstein & Ryan, 2010). In sum, research on “why” a goal is pursued has concluded that autonomous motivation (vs. controlled motivation) is associated with more positive goal-directed activities and behaviors (Deci & Ryan, 2000).

Research related to motivation has also focused on “what” goal is being pursued, which the goal literature often refers to as “goal contents.” The seminal work by Kasser and Ryan (1993, 1996) suggests that goal pursuit processes are differentiated by goal contents: intrinsic versus extrinsic goals. The distinction between the two is derived primarily from the focus of goals (Patrick & Hagtvedt, 2012). Intrinsic goals are associated with an internal focus because they are satisfying in their own right and provide satisfaction with the inherent psychological needs, such as autonomy (Deci & Ryan, 2000). For example, intrinsic goals come from an internal drive to satisfy one's own “right,” such as health, personal growth, and community contribution.

On the contrary, extrinsic goals have an outward orientation and refer to goals that are pursued for an external cause, such as physical appearance, wealth, and fame (Williams et al., 2000). As such, external goals are associated with a “having” orientation (Williams et al., 2000). When people pursue extrinsic goals, they tend to emphasize toward interpersonal comparisons (Patrick, Neighbors, & Knee, 2004), contingent approval (Kernis, 2003), and attaining self-worth (Kasser, Ryan, Couchman, & Sheldon, 2004). Additionally, prior research showed that people tend to be more autonomous when pursuing intrinsic goals whereas people tend to feel controlled when pursuing extrinsic goals (Deci & Ryan, 2000).

2.2. Intrinsic and extrinsic goal framing

Recently, research on goal contents (what goal is being pursued) has begun to examine the effects of pursuing goals (intrinsic vs. extrinsic) through goal framing. That is, research has started to examine if a goal frame, or how information about a goal is presented, influences goal-related outcomes. For example, Vansteenkiste et al. (2004) investigated whether different goal framing in the context of reading about recycling would yield different learning outcomes. Specifically, the intrinsic goal frame condition stated: “Reading materials about recycling will help you contribute to the community,” whereas the extrinsic goal frame stated: “Reading materials about recycling will help you attain monetary benefits from recycling.” Findings from this study revealed that intrinsic goal framing led to deeper information processing and higher academic performance on the topic of recycling, compared to extrinsic goal framing. Consistent results were also found in subsequent studies that demonstrated intrinsic goal framing (e.g., personal development and being physically fit) significantly increased learning outcomes compared to extrinsic goal framing (e.g., a well-paying job and being physically attractive). In sum, prior work on goal framing suggests that intrinsic goal framing is associated with more positive outcomes than extrinsic goal framing. These findings have been mainly attributed to the relationship between intrinsic goals and autonomous motivation (Vansteenkiste et al., 2004; Vansteenkiste, Lens, & Deci, 2006).

However, prior research in a cultural context suggests autonomous

motivation may not always produce superior effects. One of the basic tenets of SDT is that autonomy is a universal psychological need. Nonetheless, there is significant variability in the values and goals held in different cultures, suggesting that some of the avenues to basic need satisfaction may differ extensively across cultures (Cross, Hardin, & Gercek-Swing, 2011). For example, individuals in a collectivistic culture may adopt group norms, and so acting in congruence with these norms may result in these individuals experiencing autonomy, as they have fully internalized the collectivist values of their culture.

This supposition is elucidated in the study conducted by *Iyengar and Lepper (1999)* who examined the effects of decision choice. They examined the effects of autonomous motivation for Americans and Asians of (1) making choices individually, (2) accepting the choices made by trusted in-group members, and (3) having the choice imposed by distant or non-trusted others. Findings demonstrated that the third choice (having the choice made by distant others) resulted in the lowest level of autonomous motivation for both groups. However, for the American sample, the individual choice decision led to the highest level of autonomous motivation, while for the Asian sample, the second choice, accepting choices made by in-group members, resulted in the highest level of autonomous motivation. These findings have been interpreted to suggest that the means through which autonomy is experienced and expressed can vary across culture (*Deci & Ryan, 2000*). Therefore, we expect that self-construal, which refers to the extent to which the self is defined independently or interdependently with others, will interact with goal framing effects.

2.3. The influence of self-construal

A large body of work has demonstrated a relationship between self-construal and goal striving (*Cross et al., 2011; Markus & Kitayama, 1991*). Self-construal refers to the way people view themselves and make meaning about the self in relation to others (*Cross et al., 2011*). Research on self-construal draws a distinction between an independent and interdependent self-construal (*Markus & Kitayama, 1991*). An independent self-construal emphasizes independence, prioritizes the self over others, and seeks autonomy. In contrast, an interdependent self-construal prioritizes social groups and goals over the self and puts greater emphasis on interpersonal relationships (*Markus & Kitayama, 1991*).

Although the initial work on self-construal posited self-construal to be an individual difference trait based on one's cultural background (*Markus & Kitayama, 1991*), later work has shown that both self-construals coexist within the same person, and that one can be situationally induced to make one more accessible than the other (*Aaker & Lee, 2001; Gardner, Gabriel, & Lee, 1999*). Further, prior research has revealed that external factors can alter one's accessible self-construal situationally (*Kleine, Kleine, & Kernan, 1993*). Such external factors include viewing self- or family-oriented ads (*Pounders, Lee, & Mackert, 2015*) and reading self-focused or family-related messages (*Aaker & Lee, 2001; Gardner et al., 1999*). These findings fortify the concept of the malleable self, indicating that a specific self-view can be temporarily activated (or suppressed) by external factors (*Aaker, 1999; Lee & Lee, 2016*).

An individual's accessible self-construal may also have considerable influence on an individual's values and perceived importance of specific goals. A previous study demonstrated that participants with an accessible independent self-construal placed significantly more weight on personal values compared to those with an interdependent self-construal. In contrast, participants with an accessible interdependent self-construal placed significantly more weight on group-related values (e.g., social norms) than did the participants with an independent self-construal (*Verplanken, Trafimow, Khusid, Holland, & Steentjes, 2009*). Furthermore, the weighted values of goals by one's accessible self-construal significantly predicted participants' subsequent decisions and behavior (*Verplanken et al., 2009*). Thus, these findings suggest that a

situationally accessible self-construal can impact the values of goals that individuals prioritize, which can influence subsequent decisions and behaviors (*Verplanken & Holland, 2002*).

The current study proposes that an individual's accessible self-construal moderates the effects of goal framing. Prior research on goal framing has shown that intrinsic goal framing yields more positive outcomes (*Vansteenkiste et al., 2004*). However, studies on self-construal suggest a different possibility. Research has shown that personal goals, such as autonomy, are more important for those with an independent self-construal, compared to those with an interdependent self-construal (*Markus & Kitayama, 2004*). Contrarily, people with an accessible interdependent self-construal place more importance on goals that help them fulfill obligation(s) to close others (e.g., family) (*Markus & Kitayama, 2004*). They place greater value on goals that create and maintain harmonious relationship(s) with close others, compared to personal goals (*Cross et al., 2011; Heine, Lehman, Markus, & Kitayama, 1999*). Therefore, we expect that the positive effects of intrinsic goal framing (vs. extrinsic goal framing) will be more pronounced when an independent self-construal is more accessible, compared to an interdependent self-construal. This is because an individual with an accessible independent self-construal is focused on the self and his or her personal goals, which is consistent with what intrinsic goal framing purports (i.e., autonomy). Thus, the positive effects of intrinsic goal framing will be more pronounced when one has an accessible independent self-construal (vs. interdependent self-construal). To examine this prediction, message persuasiveness and behavioral intention are used to evaluate the outcomes of goal framing in the context of social marketing.

Additionally, it is expected that message persuasiveness will mediate the relationship between goal framing and self-construal on behavioral intention. Message persuasiveness refers to how effective the message is in terms of being credible, helpful, and informative (*Chandran & Menon, 2004*) and prior work has found that message persuasiveness impacts one's inclination to follow the behaviors encouraged in an ad (*Cesario, Grant, & Higgins, 2004*). Further, message persuasiveness has been identified as a mediator to message framing effects in prior literature (*Pounders et al., 2015*). Therefore, we expect that the interplay between intrinsic goal framing and an independent self-construal will enhance message persuasiveness, and in turn, increase behavioral intention. More formally, we hypothesize:

H1. The positive effect of intrinsic goal framing on (a) message persuasiveness and (b) behavioral intention will be more pronounced when an independent self-construal is accessible, compared to an interdependent self-construal.

H2. For those with an accessible independent self-construal, the effect of goal framing on behavioral intention will be mediated by message persuasiveness. No such mediation will occur for those with an accessible interdependent self-construal.

3. Study 1

3.1. Design, participants, and procedure

A 2 (goal framing: intrinsic vs. extrinsic) × 2 (self-construal: independent vs. interdependent) between-subjects experimental design was employed. Four fictitious advertisements were created in the context of social marketing (see *Appendix II*). A social marketing context was deemed appropriate to for two reasons. First, messages in social marketing often convey information with the intent to change an individual's behavior – either to engage in healthy/safe behaviors or to stop engaging in unhealthy/unsafe behavior. Although intrinsic goal framing is most commonly used, social marketing campaigns can also emphasize extrinsic goal framing. Secondly, in conveying the goal of behavior change, many social marketing campaigns highlight the

benefit of behavioral change for the benefit of the self versus others. For example, a social marketing campaign may highlight the importance of heart healthiness to benefit the self versus one's family (Pounders et al., 2015).

Specifically, the context of recycling was chosen because it has been used in prior research that has examined goal framing (Vansteenkiste et al., 2004). Consistent with prior work, goal framing was manipulated through the ad copy that emphasized either the attainment of intrinsic goals (e.g., contributing to the community) or extrinsic goals (e.g., save money) (Kasser & Ryan, 1993, 1996). Self-construal (independent vs. interdependent) was manipulated through both the ad copy and imagery. Participants in the independent self-construal condition viewed a picture of a single individual and read the ad copy "you can go green for yourself." In contrast, participants in the interdependent self-construal condition viewed a picture of a family and read the ad copy "you can go green for your family" (Aaker & Lee, 2001; Pounders et al., 2015).

One hundred twenty-one undergraduate students participated in Study 1 (69% female; average age 20). Participants were randomly assigned to one of the four experimental conditions. After being exposed to the stimuli, participants completed an online survey which included the dependent variables, manipulation checks, and demographic variables.

3.2. Measures

Message persuasiveness was measured using the following five items on a seven-point scale (1 = "strongly disagree" to 7 = "strongly agree"): "how much they had learned from the message," "how much the message would affect their future behavior," "how persuasive it was," "how relevant it was," and "how applicable it was to them" ($\alpha = 0.89$) (Chandran & Menon, 2004).

Behavioral intention was measured using three items on a seven-point scale (1 = "strongly disagree" to 7 = "strongly agree"). The three items were borrowed from a previous study and modified to the context of recycling (Chandran & Menon, 2004). The items included, "I will recycle regularly," "I will sign up for the recycling program," and "I will plan to collect glass, cans, and plastic separately" ($\alpha = 0.81$). The scale intercorrelations are reported in Table 1.

3.3. Results

3.3.1. Manipulation checks

To evaluate the success of the goal framing manipulation, the following single item was used: "What is the focus of motivation for recycling?" on a seven-point scale anchored by 1 = "save money" through 7 = "help the environment". A 2 (goal framing: intrinsic vs. extrinsic) \times 2 (self-construal: independent vs. interdependent) ANOVA showed a successful manipulation of goal framing. Participants in the intrinsic goal framing condition reported that the focus of motivation

Table 1
Scale interrelations for Study 1, 2, and 3.

	1	2	3
Study 1			
Autonomous motivation	–	0.44**	
Message persuasiveness		–	
Study 2			
Autonomous motivation	–	0.35**	0.39**
Message persuasiveness		–	0.61**
Behavioral intention			–
Study 3			
Autonomous motivation	–	0.38**	0.39**
Attitude toward the ad		–	0.35**
Purchase intention			–

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

for recycling is to help the environment (as opposed to saving money) ($M = 5.59$) compared to those in the extrinsic goal framing condition ($M = 4.90$), $F(1, 117) = 6.83, p < .05$.

To assess the manipulation of self-construal, two items were averaged to create an independent-self index: "while reading the ad, I focused on myself" and "while reading the ad, I thought about myself" ($\alpha = 0.87$). In addition, two items were averaged to create an interdependent-self index: "while reading the ad, I focused on my family" and "while reading the ad, I thought about my family" ($\alpha = 0.87$) (Aaker & Lee, 2001; Pounders et al., 2015). A 2 (goal framing: intrinsic vs. extrinsic) \times 2 (self-construal: independent vs. interdependent) multivariate analysis of variance (MANOVA) showed a significant main effect for self-construal, Wilks's $\lambda = 0.51, F(2, 116) = 54.30, p < .001$. Specifically, participants in the independent self-construal condition reported a significantly higher independent-self index score ($M = 4.72$) compared to those in the interdependent self-construal condition ($M = 3.18$), $F(1, 117) = 41.61, p < .001$. In contrast, participants in the interdependent self-construal condition showed a significantly higher interdependent-self index score ($M = 4.93$) than those in the independent self-construal condition ($M = 2.73$), $F(1, 117) = 86.46, p < .001$. Thus, the manipulation for participants' accessible self-construal was successful.

3.3.2. Hypothesis testing

To examine H1a, a 2 (goal framing: intrinsic vs. extrinsic) \times 2 (self-construal: independent vs. interdependent) ANOVA was conducted using message persuasiveness as the dependent variable. As predicted, there was a significant interaction effect for message persuasiveness, $F(1, 117) = 4.34, p < .05, \eta = 0.04$. When participants' independent self-construal was more accessible, they perceived the message to be more persuasive when goal framing was intrinsic ($M = 4.44$) than extrinsic ($M = 3.94, p = .08$). However, when participants' interdependent self-construal was more accessible, there was no difference between intrinsic ($M = 3.61$) and extrinsic goal framing ($M = 3.94$), $p > .05$. Thus, H1a was supported.

To assess H1b, a 2 (goal framing: intrinsic vs. extrinsic) \times 2 (self-construal: independent vs. interdependent) ANOVA was conducted using behavioral intention as the dependent variable. The results showed a significant interaction effect between goal framing and self-construal on behavioral intention, $F(1, 117) = 6.87, p < .05, \eta = 0.06$. Specifically, when participants' independent self-construal was more accessible, they reported significantly higher behavioral intention when exposed to the intrinsic goal framing ($M = 4.10$) compared to extrinsic goal framing ($M = 3.46, p < .05$). However, when participants' interdependent self-construal was more accessible, there was no significant difference between intrinsic ($M = 3.15$) and extrinsic goal framing ($M = 3.59$) for participants' behavioral intention, $p > .05$ (see Table 2). In sum, H1b was supported.

To test the proposed mediation posited in H2, the PROCESS SPSS macro for bias-corrected bootstrapping (Model 8, Hayes, 2012; Preacher & Hayes, 2004) was used with goal framing as the independent variable (0 = extrinsic, 1 = intrinsic), self-construal as the moderator (0 = interdependent, 1 = independent), message persuasiveness as the mediator, and behavioral intention as the dependent

Table 2
Descriptive statistics and univariate analysis of variance results: Study 1.

	Independent		Interdependent	
	Intrinsic	Extrinsic	Intrinsic	Extrinsic
Message persuasiveness	4.44 (0.20)	3.94 (0.21)	3.61 (0.20)	3.94 (0.19)
Behavioral intention	4.10 (0.21)	3.46 (0.20)	3.15 (0.21)	3.59 (0.20)

Note. Values in the table are means (standard error).

variable. Bootstrapping was used to generate a 95% confidence interval (CI) around the indirect effect of the mediators where a significant mediation occurs if the CI does not contain zero (Preacher, Rucker, & Hayes, 2007).

Conditional indirect effects showed that there was a significant moderated mediation (effect = 0.34, SE = 0.18, 95% CIs: 0.03 to 0.74). Specifically, for those with an independent self-construal, intrinsic goal framing (vs. extrinsic goal framing) significantly increased message persuasiveness, which in turn increased behavioral intention (95% CIs: 0.01 to 0.51). In contrast, for those with an interdependent self-construal, increased message persuasiveness did not mediate the relationship goal framing and behavioral intention (95% CIs: -0.39 to 0.09). Thus, H2 was supported.

3.4. Study 1 discussion

The purpose of Study 1 was to investigate whether an accessible self-construal moderates the effects of goal framing, and whether message persuasiveness mediates this relationship. Prior research has suggested that intrinsic goal framing leads to more desirable goal-related outcomes. However, findings from Study 1 suggest a boundary condition to prior work: one's accessible self-construal seemingly enhances or attenuates the positive outcomes of intrinsic goal framing. Findings from this study show that intrinsic goal framing (vs. extrinsic goal framing) increased message persuasiveness and behavioral intention when an independent self-construal was accessible. However, when one's interdependent self-construal was accessible, the positive outcomes of intrinsic goal framing were diminished. Thus, Study 1 findings contribute to extant literature by identifying a boundary condition of intrinsic goal framing. Further, findings reveal that message persuasiveness mediates the relationship between goal framing and self-construal on behavioral intention. Accordingly, this work sheds light on the persuasion process for messages that feature goal framing and activate an individual's self-construal. Finally, Study 1 findings also contribute to the SDT literature stream by investigating goal framing-effects in the context of persuasion and consumer behavior, as prior work on goal framing has largely concentrated on academic performance (e.g., information processing, test performance, and academic behavioral persistence) (Vansteenkiste et al., 2004; Vansteenkiste et al., 2005).

In sum, Study 1 findings show that an individual's accessible self-construal moderates goal framing effects in persuasion. Also, this work demonstrates that message persuasiveness explains this process. However, further work is needed to better understand how the match between intrinsic goal framing and independent self-construal influenced message persuasiveness and behavioral intention. Accordingly, there remains a need to investigate the underlying mechanism that may explain the superior effect of intrinsic goal framing (vs. extrinsic goal framing) among those with an independent self-construal. Study 2 addresses this issue by examining autonomous motivation as a mediator to the interplay between goal framing and self-construal. Additionally, a limitation of Study 1 was that we did not account for the potential impact of one's chronic self-construal. That is, there is a possibility that one's chronic self-construal may influence consumer response to the manipulated self-construal factor in the experiment. Thus, Study 2 also accounts for the potential impact of one's chronic self-construal.

4. Study 2

The purpose of Study 2 is threefold. The first objective is to replicate Study 1 findings in the context of health promotion. The second objective is to explore autonomous motivation as a potential mediator to explain the moderating effects between goal framing and self-construal. The final objective is to examine what, if any, affect, one's chronic self-construal plays on the asserted predictions.

Autonomous motivation is a willing or volitional engagement in an

activity, and is associated with self-endorsement and ownership of the behavior (Deci & Ryan, 2000). As autonomous motivation refers to an individual's subjective experience of autonomy, it has been also often referenced as relative autonomy (Vansteenkiste et al., 2004). As noted earlier, prior research in the domain of SDT has shown that the positive effects of intrinsic goal framing may be derived from increased autonomous motivation (Vansteenkiste et al., 2006). Intrinsic goal framing leads to a higher level of autonomous motivation, thus people become more engaged with the given activity, which result in more positive goal outcomes (Vansteenkiste et al., 2004). However, as observed in Study 1, intrinsic goal framing does not always lead to positive persuasion effects. We expect this is because intrinsic goal framing does not increase an individuals' autonomous motivation when an interdependent self-construal is accessible.

According to SCT, the concept of autonomy differs depending on one's accessible self-construal; accordingly, autonomy, and corresponding autonomous motivation can also be experienced differently (Cross et al., 2011; Markus & Kitayama, 1991). Specifically, for people with an independent self-construal, the feeling of autonomy or the sense of agency is experienced "as an effort to express one's internal needs, rights, and capacities and to withstand undue social pressure" (Markus & Kitayama, 1991, p. 240). In contrast, for those with an interdependent self-construal, the feeling of autonomy or the sense of agency is experienced "as an effort to be receptive to others, to adjust to their needs and demands, and to restrain one's own inner needs or desires" (Markus & Kitayama, 1991, p. 240). This suggests autonomy can be experienced differently depending on an individual's accessible self-construal. When an individual's independent self-construal is more accessible, intrinsic goal framing that emphasize one's innate psychological need of autonomy and personal growth is congruent with the values of an independent self-construal. Thus, autonomous motivation is expected to increase for those with an accessible independent self-construal. However, this pattern is not expected for those with an accessible interdependent self-construal as they experience autonomy differently and prioritize different goals and values. In sum, we expect autonomous motivation resulting from intrinsic goal framing will be greater for those with an accessible independent self-construal (compared to an accessible interdependent self-construal). Therefore, the following hypothesis is proposed:

H3. Autonomous motivation derived from intrinsic goal framing will be greater when an independent self-construal is accessible, compared to when an interdependent self-construal is accessible.

Further, one's accessible self-construal may explain the inconsistency in prior literature that autonomous motivation does not always mediate the goal framing effects on goal outcomes (Vansteenkiste et al., 2004). Intrinsic goal framing is known to enhance one's autonomous motivation because it directly satisfies the basic psychological need of autonomy. However, cultural studies have demonstrated (e.g., Iyengar & Lepper, 1999), the way the self is defined – independently of others or interdependently with others – can influence the extent by which autonomy is experienced. Intrinsic goal framing is expected to increase one's experience of autonomy and this is consistent with the values and goals of an independent self-construal. Thus, when an independent self-construal is accessible, intrinsic goal framing, which supports one's innate desire for autonomy, should increase their autonomous motivation. In turn, this increased autonomous motivation should then enhance the persuasive outcomes of goal framing. In contrast, for those with an interdependent self-construal, intrinsic goals are not as closely aligned with the goals they value, and thus autonomous motivation is less likely to be increased. Accordingly, we expect that the persuasion effects driven by autonomous motivation will be present for those with an accessible independent self-construal (vs. an accessible interdependent self-construal). Thus, the following hypothesis is offered:

H4. For those with an accessible independent self-construal, the effect

of goal framing on (a) message persuasiveness and (b) behavioral intention will be mediated by autonomous motivation. No such mediation will occur for those with an accessible interdependent self-construal.

4.1. Design, procedure, and participants

A 2 (goal framing: intrinsic vs. extrinsic) \times 2 (self-construal: independent vs. interdependent) between-subjects experimental design was employed. Consistent with prior research on goal framing (Vansteenkiste et al., 2004), goal framing was manipulated in the context of weight management. A set of four fictitious PSAs that promote exercise and healthy eating were created (see Appendix III). Similar to Study 1, goal framing was manipulated through the ad copy. The intrinsic goal frame emphasized attaining intrinsic goals such as being physically fit, remaining healthy, and avoiding illness. In contrast, the extrinsic goal frame emphasized attaining extrinsic goals including being physically attractive, looking appealing to others, and avoiding weight gain (Vansteenkiste et al., 2004).

Participants' self-construal was manipulated by using visual imagery and ad copy (Aaker & Lee, 2001; Pounders et al., 2015). To prime an independent self-construal, participants viewed a picture of a single individual and the ad-copy stated "Do it just for you. You will be proud of yourself." In contrast, to prime an interdependent self-construal, participants viewed a picture of a group of people and the ad-copy stated "Do it for your friends and family. They will be so proud of you."

Participants were recruited from Amazon's Mechanical Turk (MTurk), a Web-based platform. This sample was chosen in conjunction with the goal of extending Study 1 findings to the general population. Amazon.com's Mechanical Turk is established to be more representative of the general population than convenience samples (Buhrmester, Kwang, & Gosling, 2011; Goodman, Cryder, & Cheema, 2013). Participants were randomly assigned to one of the four experimental conditions. After being exposed to the stimuli, participants completed an online survey containing the dependent measures, manipulation checks, and demographic information. Participants who did not pass two screening questions were excluded from the study to secure the quality of the data ($n = 4$) (e.g., the ad I just saw was about weight management; please check false regardless of your answer) (Goodman et al., 2013). As a result, a total of 159 subjects participated in Study 2 (54.1% female; average age of 32.7 between 19 and 69.)

4.2. Measures

Message persuasiveness was measured using the same items from Study 1. To measure participants' behavioral intention to pursue the advocated goal, four items were used on a seven-point scale, ranging from 1 = "strongly disagree" to 7 = "strongly agree." The items included, "I will exercise regularly," "I will try to manage my weight," "I will plan a healthy diet," and "I will start eating healthier food" ($\alpha = 0.90$).

To measure autonomous motivation, participants were asked to rate a set of possible reasons why they would pursue a given goal (i.e., weight management) and were informed that multiple reasons could apply to the goal using the Self-Regulation Questionnaire (SRQ; Ryan & Connell, 1989). The SRQ consists of four subscales (i.e., intrinsic, identified, introjected, and external reasons), and prior research has averaged the intrinsic and identified subscales to create the index of autonomous motivation (Vansteenkiste et al., 2004). Thus, consistent with prior work, this study also averaged the intrinsic and identified subscales to create an autonomous motivation index and the items included, "I will manage my weight, because of the enjoyment or fun that this goal provides me (intrinsic)" and "because I believe it is an important goal (identified)," ranging from 1 = "strongly disagree" to 7 = "strongly agree" ($\alpha = 0.92$).

4.3. Covariates

Even though prior studies suggest that temporary accessibility of a specific self-construal can override the chronic self-construal (Aaker & Lee, 2001), Study 2 measured participants' chronic self-construal and included them as covariates to eliminate the possibility that chronic self-construal competes with the self-construal manipulation (Dean & Fles, 2016). Thus, the chronic self-construal scale (Singelis, 1994) assessed participants' chronic self-construal. Examples of items include, "I enjoy being unique and different from others in many respects" (independent) and "It is important for me to maintain harmony within groups I belong to" (interdependent). The scale is seven-point and anchored from 1 (strongly disagree) to 7 (strongly agree). Two different independent ($\alpha = 0.75$) and interdependent ($\alpha = 0.78$) indexes were created.

4.4. Results

4.4.1. Manipulation checks

To evaluate the success of the goal framing manipulation, the following single item was used: "What is the focus of motivation for your weight-loss goal?" on a seven-point scale anchored by 1 = "to be healthy for yourself" through 7 = "to impress others" (Patrick & Hagtvedt, 2012). A 2 (goal framing: intrinsic vs. extrinsic) \times 2 (self-construal: independent vs. interdependent) ANOVA was conducted. As predicted, the main effect for goal framing was significant, $F(1, 155) = 5.33, p < .05$. Participants in the intrinsic goal framing condition focused on being healthy for themselves ($M = 2.94$) significantly more than those in the extrinsic goal framing condition ($M = 3.53, p < .05$). Thus, the goal framing manipulation was successful.

To assess the manipulation of self-construal, the same four items from Study 1 were used. A 2 (goal framing: intrinsic vs. extrinsic) \times 2 (self-construal: independent vs. interdependent) MANOVA was conducted the independent-self index ($\alpha = 0.90$) and interdependent-self index ($\alpha = 0.87$). As predicted, the results showed a significant multivariate main effect for self-construal, Wilks's $\lambda = 0.86, F(2, 154) = 12.78, p < .01$. Specifically, participants in the independent self-construal condition reported a significantly higher independent-self index score ($M = 5.36$) compared to those in the interdependent self-construal condition ($M = 4.57$), $F(1, 155) = 10.87, p < .01$. In contrast, participants in the interdependent self-construal condition showed a significantly higher interdependent-self index score ($M = 4.10$) than those in the independent self-construal condition ($M = 2.80$), $F(1, 155) = 25.26, p < .001$.

4.4.2. Hypotheses tests

A series of 2 (goal framing: intrinsic vs. extrinsic) \times 2 (self-construal: independent vs. interdependent) ANOCOVAs were conducted to assess if findings replicated Study 1. The results demonstrated that Study 2 findings did indeed replicate Study 1 findings.

More specifically, there was a significant interaction effect for message persuasiveness, $F(1, 153) = 5.32, p < .05, \eta = 0.03$. Specifically, when participants' independent self-construal was more accessible, they perceived the message to be more persuasive when goal framing was intrinsic ($M = 4.70$) than extrinsic ($M = 3.73; p < .01$). However, when participants' interdependent self-construal was more accessible, there was no difference between intrinsic ($M = 3.79$) and extrinsic goal framing ($M = 3.85; p > .05$) for message persuasiveness.

Also, a 2 (goal framing: intrinsic vs. extrinsic) \times 2 (self-construal: independent vs. interdependent) ANCOVA was conducted for behavioral intention. The results showed a significant interaction effect between self-construal and goal framing on behavioral intention, $F(1, 153) = 13.44, p < .001$. Specifically, when participants' independent self-construal was more accessible, they reported significantly higher behavioral intention with intrinsic goal framing ($M = 5.10$) compared to extrinsic goal framing ($M = 4.12; p < .001$). However, when

participants' interdependent self-construal was more accessible, intrinsic goal framing ($M = 4.35$) did not significantly increase participants' behavioral intention compared to extrinsic goal framing ($M = 4.73$) for those with an interdependent self-construal, $p > .05$. Table 2 demonstrates the summary of the results.

Finally, message persuasiveness was examined as a mediator to the interplay between goal framing and self-construal on behavioral intention. Study 1 findings were replicated. The same PROCESS SPSS macro was used with a 95% confidence interval (CI) (Model 8, Hayes, 2012; Preacher & Hayes, 2004). Conditional indirect effects showed that there was a significant moderated mediation (effect = 0.57, $SE = 0.23$, 95% CIs: 0.14 to 1.04). Specifically, for those with an independent self-construal, intrinsic goal framing (vs. extrinsic goal framing) significantly increased message persuasiveness, which in turn increased behavioral intention (95% CIs: 0.25 to 0.86). In contrast, for those with an interdependent self-construal, increased message persuasiveness did not mediate the relationship between goal framing and behavioral intention (95% CIs: -0.38 to 0.31).

To test H3, a 2 (goal framing: intrinsic vs. extrinsic) \times 2 (self-construal: independent vs. interdependent) ANCOVA was conducted and the results showed a significant interaction effect for autonomous motivation, $F(1, 153) = 4.67$, $p < .05$, $\eta = 0.03$. Specifically, when participants' independent self-construal was more accessible, intrinsic goal framing ($M = 5.23$) led to a significantly higher autonomous motivation than extrinsic goal framing ($M = 4.79$; $p < .05$). However, when participants' interdependent self-construal was more accessible, there was no significant difference between intrinsic ($M = 5.01$) and extrinsic framing ($M = 5.23$) for autonomous motivation, $p > .05$ (Table 2). Thus, H3 was supported.

To test the proposed mediation posited in H4s, we used the same PROCESS SPSS macro (Model 8, Hayes, 2012; Preacher & Hayes, 2004). Conditional indirect effects showed that there was a significant moderated mediation for message persuasiveness (effect = 0.22, $SE = 0.15$, 95% CIs: 0.02 to 0.58). Specifically, for those with an independent self-construal, intrinsic goal framing (vs. extrinsic goal framing) significantly increased participants' autonomous motivation, and in turn increased their attitude toward the ad (95% CIs: 0.02 to 0.39). In contrast, for those with an interdependent self-construal, autonomous motivation did not mediate the relationship goal framing and attitude toward the ad (95% CIs: -0.32 to 0.06).

The second moderated mediation analysis with behavioral intention as the dependent variable revealed that there was a significant moderated mediation (effect = 0.25, $SE = 0.14$, 95% CIs: 0.03 to 0.62). For those with an independent self-construal, intrinsic goal framing (vs. extrinsic goal framing) significantly increased participants' autonomous motivation, and in turn increased message persuasiveness (95% CIs: 0.04 to 0.38). In contrast, for those with an interdependent self-construal, autonomous motivation did not mediate the relationship goal framing and message persuasiveness (95% CIs: -0.32 to 0.07).

4.4.3. Study 2 discussion

The purpose of Study 2 was to provide ecological validity by replicating the interaction of goal framing and self-construal on persuasion effects. As predicted, the same pattern of effects found in Study 1 was observed in Study 2 in a different social marketing context; the superior effects of intrinsic goal framing (vs. extrinsic goal framing) were pronounced when an independent self-construal was accessible. Further, as we expected, autonomous motivation served as a mediator of the interplay between goal framing and self-construal. The findings provide initial empirical supports that the extent to which people are autonomously motivated by intrinsic goal framing can be varied depending on one's accessible self-construal.

In addition, the inclusion of participants' chronic self-construal in the model further supports the significant moderating effects of one's accessible self-construal. The moderating effects of an accessible self-construal remained significant after controlling for one's chronic self-

construal. However, the findings of Study 1 and Study 2 were limited to a social marketing context, where message persuasiveness and behavioral intentions are often the outcomes of persuasion. Thus, while findings from Study 1 and Study 2 offer theoretical contributions and practical implications for social marketers, findings are limited for more general marketing and advertising practitioners. Thus, there is a need to demonstrate the generalizability of these findings. Study 3 accomplishes this objective.

5. Study 3

The purpose of Study 3 is to replicate Study 2 findings in a more traditional advertising context. While Study 1 and 2 demonstrate that pairing an intrinsic goal frame message with an independent self-construal resulted in greater message persuasiveness and compliance to engage in advocated behaviors, there were limitations to practical implications in the broader advertising arena. Thus, to demonstrate generalizability, Study 3 focused on ads for a toothpaste brand. The same pattern of predictions in Study 2 were assessed in Study 3, but the dependent variables were attitude toward the ad and purchase intention, which have been commonly used to assess advertising effectiveness (Bang, Yoo, & Choi, 2017; Brown & Stayman, 1992; MacKenzie, Lutz, & Belch, 1986).

5.1. Design, procedure, and participants

A 2 (goal framing: intrinsic vs. extrinsic) \times 2 (self-construal: independent vs. interdependent) between-subjects experimental design was employed. A set of four ads for a fictitious brand of toothpaste (Pure Fresh) were created (see Appendix IV). Similar to the prior studies, goal framing was manipulated by focusing on what can be attained as a result of using the toothpaste brand featured in the ad. The intrinsic goal frame emphasized attaining the intrinsic goal of improved health (e.g., healthier teeth), while the extrinsic goal frame emphasized attaining the extrinsic goal of improved physical appearance (e.g., brighter smile) (Kasser & Ryan, 1993, 1996). Similar to Study 1 and 2, participants' self-construal was manipulated by using visual imagery and ad copy. For the independent self-construal condition, participants viewed a picture of a single individual and the ad-copy including "for you" whereas participants in the interdependent self-construal condition viewed a picture of a family and the ad-copy including "for your family."

A total of 130 participants were recruited from Amazon's MTurk and randomly assigned to one of the four experimental conditions. After being exposed to the stimuli, participants completed an online survey containing the dependent measures (attitude toward the ad and purchase intention), manipulation checks, and demographic information. A total of 8 participants were removed for failing attention checks, leaving a sample size of 122. The sample was 55.7% male and the average age was 36.

5.2. Measures

Attitude toward the ad was measured with three items the ad on a seven-point semantic differential scale (Kees, Burton, & Tangari, 2010). The items ranged from 1 = "negative, unfavorable, bad" to 7 = "positive, favorable, good" ($\alpha = 0.84$). Purchase intention was measured with four items on a seven-point scale, ranging from 1 = "strongly disagree" to 7 = "strongly agree." The items included, "If I were going to purchase a toothpaste, I would consider buying this brand," "If I were shopping for a toothpaste, the likelihood I would purchase this brand is high," "My willingness to buy this brand would be high if I were shopping for a toothpaste," and "The probability I would consider buying this brand is high" ($\alpha = 0.94$) (Table 1).

Similar to Study 2, three items were used to create autonomous motivation based on the Self-Regulation Questionnaire (SRQ; Ryan &

Connell, 1989). The items were modified in accordance with the context of the advertisements and include, “I value the benefit of brushing my teeth,” “It is important to me to brush my teeth,” and “Brushing my teeth is personally meaningful to me” ($\alpha = 0.92$). The items were anchored on a seven-point scale ranging from 1 = “strongly disagree” to 7 = “strongly agree.”

5.3. Results

5.3.1. Manipulation checks

To evaluate the success of the goal framing manipulation, participants were asked what is the focus of the ad and answered on a seven-point scale anchored by 1 = “healthier teeth/health” through 7 = “brighter smile/physical appearance” ($\alpha = 0.90$). A 2 (goal framing: intrinsic vs. extrinsic) \times 2 (self-construal: independent vs. interdependent) ANOVA was conducted. As predicted, the main effect for goal framing was significant, $F(1, 118) = 82.10, p < .001$. Participants in the intrinsic goal framing condition perceived the focus of the ad to be about health ($M = 2.97$), whereas those in the extrinsic goal framing condition perceived the focus of the ad to be on physical appearance ($M = 5.79$). Thus, the goal framing manipulation was successful.

To assess the manipulation of self-construal, the same four items from Study 1 were used. A 2 (goal framing: intrinsic vs. extrinsic) \times 2 (self-construal: independent vs. interdependent) MANOVA was conducted the independent-self index ($\alpha = 0.83$) and interdependent-self index ($\alpha = 0.93$). The results showed a significant multivariate main effect for self-construal, Wilks's $\lambda = 0.67, F(2, 117) = 28.34, p < .05$. Participants in the independent self-construal condition reported a significantly higher independent-self index score ($M = 4.60$) compared to those in the interdependent self-construal condition ($M = 3.10$), $F(1, 118) = 27.30, p < .001$. In contrast, participants in the interdependent self-construal condition showed a significantly higher interdependent-self index score ($M = 4.72$) than those in the independent self-construal condition ($M = 2.93$), $F(1, 118) = 31.01, p < .001$.

5.3.2. Hypotheses tests

In Study 3, two ANOVAs were conducted, with one using attitude toward the ad as the dependent variable, and the other using purchase intention as the dependent variable. As hypothesized, there was a significant interaction for the attitude toward the ad, $F(1, 118) = 4.98, p < .05, \eta = 0.04$. When participants' independent self-construal was accessible, intrinsic goal framing ($M = 5.66$) led to a more favorable attitude toward the ad than extrinsic goal framing ($M = 4.80$; $p < .001$). However, when participants' interdependent self-construal was more accessible, there was no significant difference between intrinsic ($M = 5.02$) and extrinsic framing ($M = 4.87$) for attitude toward the ad, $p > .05$ (Table 4).

Also, as predicted, findings showed a significant interaction for purchase intention, $F(1, 118) = 12.17, p < .01, \eta = 0.09$. Specifically, when participants' independent self-construal was more accessible, purchase intention was significantly higher when goal framing was intrinsic ($M = 5.05$) than extrinsic ($M = 3.59$; $p < .001$). However, when participants' interdependent self-construal was more accessible, there was no difference between intrinsic ($M = 4.37$) and extrinsic goal framing ($M = 4.63$; $p > .05$) for purchase intention (Table 4).

Similar to Study 2, there was a significant interaction effect for autonomous motivation, $F(1, 118) = 4.92, p < .05, \eta = 0.04$. When participants' independent self-construal was more accessible, intrinsic goal framing ($M = 6.10$) led to a significantly higher autonomous motivation than extrinsic goal framing ($M = 5.10$; $p < .01$). However, when participants' interdependent self-construal was more accessible, there was no significant difference between intrinsic ($M = 5.43$) and extrinsic framing ($M = 5.44$) for autonomous motivation, $p > .05$ (Table 3).

To test the proposed moderated mediation, the same PROCESS SPSS macro for bias-corrected bootstrapping (Model 8, Hayes, 2012;

Table 3

Descriptive statistics and univariate analysis of covariance results: Study 2.

	Independent		Interdependent	
	Intrinsic	Extrinsic	Intrinsic	Extrinsic
Autonomous motivation	5.23 (0.15)	4.79 (0.15)	5.01 (0.15)	5.23 (0.16)
Message persuasiveness	4.70 (0.23)	3.73 (0.23)	3.79 (0.23)	3.85 (0.23)
Behavioral intention	5.10 (0.19)	4.12 (0.19)	4.35 (0.19)	4.73 (0.19)

Note. Values in the table are means (standard error).

Table 4

Descriptive statistics and univariate analysis of variance results: Study 3.

	Independent		Interdependent	
	Intrinsic	Extrinsic	Intrinsic	Extrinsic
Autonomous motivation	6.10 (0.24)	5.10 (0.23)	5.43 (0.22)	5.44 (0.23)
Attitude toward the Ad	5.66 (0.17)	4.80 (0.16)	5.02 (0.16)	4.87 (0.16)
Purchase intention	5.05 (0.26)	3.59 (0.24)	4.37 (0.24)	4.63 (0.24)

Note. Values in the table are means (standard error).

Preacher & Hayes, 2004) used in Study 2 was also employed. The models include goal framing as the independent variable (0 = extrinsic, 1 = intrinsic), self-construal as the moderator (0 = interdependent, 1 = independent), autonomous motivation as the mediator, and the two dependent variables (attitude toward the ad and purchase intention).

Conditional indirect effects showed that there was a significant moderated mediation for attitude toward the ad (effect = 0.23, SE = 0.15, 95% CIs: 0.03 to 0.67). Specifically, for those with an independent self-construal, intrinsic goal framing (vs. extrinsic) significantly increased participants' autonomous motivation, and in turn increased their attitude toward the ad (95% CIs: 0.06 to 0.62). In contrast, for those with an interdependent self-construal, autonomous motivation did not mediate the relationship goal framing and attitude toward the ad (95% CIs: -0.17 to 0.14).

The second moderated mediation analysis with purchase intention as the dependent variable also revealed that there was a significant moderated mediation (effect = 0.37, SE = 0.19, 95% CIs: 0.07 to 0.88). For those with an independent self-construal, intrinsic goal framing (vs. extrinsic) significantly increased participants' autonomous motivation, and in turn increased message persuasiveness (95% CIs: 0.11 to 0.79). In contrast, for those with an interdependent self-construal, autonomous motivation did not mediate the relationship goal framing and message persuasiveness (95% CIs: -0.24 to 0.25).

6. General discussion

This work investigated the effects of goal framing and consumers' accessible self-construal in the context of both social marketing and traditional advertising. Findings revealed a boundary condition to the superior effects of intrinsic goal framing. Specifically, one's accessible self-construal can attenuate or pronounce the positive effects of intrinsic goal framing; the positive effects of intrinsic goal framing dissipate for those with an accessible interdependent self-construal and are more pronounced for those with an accessible independent self-construal. That is, this work demonstrated that pairing intrinsic goal framing with an accessible independent self-construal resulted in more favorable persuasion effect. In Study 1, which took place in a social marketing context, pairing intrinsic goal framing with an accessible

independent self-construal led to greater perceptions of message persuasiveness and greater behavioral intentions. Further, message persuasiveness was identified as the underlying mechanism that explains the interplay between goal-framing and self-construal on behavioral intention. Study 2 replicated these findings and demonstrated that autonomous motivation mediated the relationship between goal framing and self-construal on both message persuasiveness and behavioral intention – shedding more light into the persuasion process. Study 3 was conducted in the context of traditional advertising for a consumer product, and findings reveal that the match effect resulted in more favorable attitude toward the ad as well as greater purchase intention. To the author's knowledge, the current work is the first to investigate intrinsic and extrinsic goal framing in a marketing persuasion context. Theoretical contributions and practical implications are provided below.

6.1. Theoretical contributions

This work makes theoretical contributions in the literature on SDT and goal striving. First, this work reveals that an individual's accessible self-construal moderates the effect of goal framing in the context of persuasion. Intrinsic goal framing resulted in more favorable goal outcomes only when one's independent self-construal was accessible. When one's interdependent self-construal was accessible, the positive effect of intrinsic goal framing was attenuated. As such, these findings identify a boundary condition of the superior effects of intrinsic goal framing that prior research has not revealed. These findings extend theory rooted in SDT by demonstrating that the superior effects of intrinsic goal framing (vs. extrinsic goal framing) are more pronounced with an accessible independent self-construal.

Further, this work contributes theoretically by identifying the psychological mechanisms underlying the interaction between goal framing and self-construal. Message persuasiveness was revealed to mediate the interplay between goal framing and self-construal on behavioral intention. For those with an independent self-construal who viewed intrinsic goal framing, the congruity between the goal highlighted in the PSA and their accessible self-construal enhanced message persuasiveness. This is consistent with prior work that has identified message persuasiveness as a mediator to message match effects (Pounders et al., 2015).

Study 2 sought to dig deeper in terms of understanding the persuasion process for the match between intrinsic goal framing and an accessible independent self-construal. Prior research on goal framing has investigated autonomous motivation as a mediator that could potentially explain the positive effects of intrinsic goal framing. While this work found that sometimes autonomous motivation did explain these effects, these findings have not been consistent. Perhaps, the findings of this work can help to bridge this gap in prior literature. The results of Study 2 demonstrated that intrinsic goal framing increased participants' autonomous motivation, and in turn, enhanced persuasion effects. Yet, this pattern of findings was evident only when one had an accessible independent self-construal. When an individual had an accessible interdependent self-construal, intrinsic goal framing did not increase autonomous motivation nor facilitate the positive persuasion effects. These findings may be attributed to the fact that autonomy can be experienced differently depending on one's accessible self-construal (Markus & Kitayama, 1991). Specifically, when an interdependent self-construal is accessible, pursuing intrinsic goals may not increase one's autonomous motivation. In sum, this work offers theoretical contributions to the literature streams of SDT and SC by identifying a boundary condition to the superior effects of intrinsic goal framing and autonomous motivation – one's accessible self-construal – and autonomous motivation as the facilitator of these effects.

6.2. Managerial implications

The findings of the current study also provide advertisers with meaningful implications. Specifically, this work offers practical insights in regard to implementing effective message strategies by identifying message elements that can facilitate or thwart the effects of goal framing. The appropriate use of terms, phrases, and images can have significant consequences on consumer behavior in persuasion. This work suggests that focusing on how a goal is framed, rather than the goal itself, can be significantly important. Findings from three studies demonstrated these effects in both social marketing and traditional advertising.

The role of goal framing is particularly relevant in the realm of social marketing, which commonly advocates behaviors to achieve various goals. Findings of this work suggest that when promoting intrinsic goals (e.g., health, community contribution), message elements that encourage an individual's independent self-construal such as an image of a single person and the use of the ad copy “you”, will warrant more effective marketing persuasion. For example, a PSA that advocates getting tested for sexually transmitted diseases *to maintain good health* (intrinsic goal) should focus on the self rather than one's partner. Similarly, a PSA that focuses on getting the flu vaccination *to maintain health* (intrinsic goal) may focus on benefits to the self as opposed to society at large.

Study 3 extended this pattern of results to a traditional advertising context. When promoting toothpaste, intrinsic goal framing (improving health), relative to extrinsic goal framing (promoting physical attractiveness), resulted in more positive persuasion outcomes when paired with an accessible independent self-construal, while there were no differences for those with an accessible interdependent self-construal. Thus, these findings offer implications beyond social marketing. When advertising products (e.g., vitamins, green products, exercise equipment) and services (e.g., gym memberships, education) associated with intrinsic goals, ads should use ad copy and imagery associated with an accessible independent self-construal to produce greater persuasion outcomes. These findings are particularly useful as activating an accessible self-construal can be accomplished easily in marketing communication through words and imagery.

In sum, this work suggests marketers and advertisers can use intrinsic goal framing and cues that activate an accessible independent self-construal to produce more favorable persuasion outcomes in the form of attitudes, behavioral intention to change behaviors, and purchase intentions.

7. Limitations and future research

This research has limitations that should be noted. Study 1 was conducted with a student sample. Although prior research has primarily used student samples (Vansteenkiste et al., 2004), it is possible the findings may differ when applied to the general population. Given that students are generally on a path of self-discovery, the interdependent self-construal condition may perform poorer than the independent self-construal condition. However, findings from Study 2 and Study 3 replicate the same pattern of findings using a non-student sample.

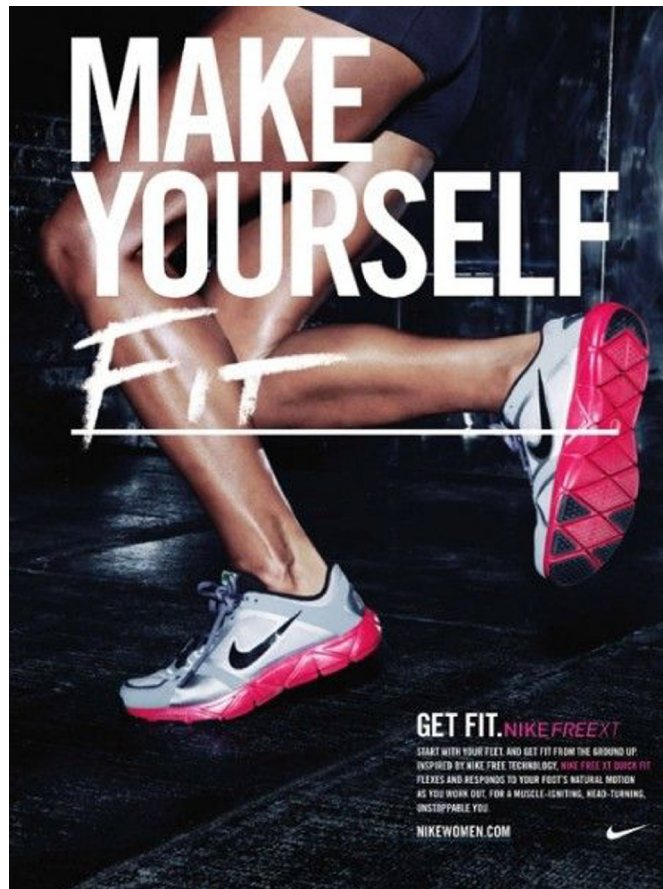
In addition, only Study 3 examined the predicted effects in a traditional advertising context. Future work should continue to build on these findings. For example, this work assessed predictions in the context of advertising a brand of toothpaste – a utilitarian product. Future work should examine if the same effects hold for hedonic products. Further, as observed across three studies, extrinsic goal framing was as effective as intrinsic goal framing when an interdependent self-construal was accessible. This indicates that an accessible interdependent self-construal might be one solution that can increase persuasion effects when promoting extrinsic goals. Particularly in a product advertising context, extrinsic goals are commonly promoted to demonstrate a higher social status or a material possession with an

external orientation (e.g., luxury fashion brands and cosmetic products). Future research may delve into the possibility that the activation of an interdependent self-construal can a potentially influence persuasion effects in the promotion of extrinsic goals.

Lastly, although the stimuli for the studies were developed based on prior research, they might seem less realistic in order to test the

theoretical suppositions. While Study 3 did utilize more realistic and commonly used ad stimuli, future research may expand the realm of intrinsic and extrinsic goals and conduct additional studies to further strengthen the findings of the current work. Also, a field study that actually measures actual behaviors would offer more rigor and additional evidence for these findings.

Appendix I. Real-life example ad



Appendix II. Study 1

Intrinsic Goal Framing/
Independent Self-Construal

You can make the world a better place by recycling!



Yes, you CAN go green for yourself. You can contribute to your community as well as help the environment. We ASK you to start the program in 3 easy steps!

1. **Convenient** - Just submit a form online, and we will bring a recycling bin to you
2. **Sustainable** - When the bin gets full, we will replace it for you
3. **Conserve** - You will help save the environment and make the world a better place for the next generation

1.888.500.8000 For more information, please visit our website www.GreenRecycling.org



Extrinsic Goal Framing/
Independent Self-Construal

You can save money by recycling!



Yes, you CAN go green for yourself. You can save money as well as help the environment. We ASK you to start the program in 3 easy steps!

1. **Convenient** - Just submit a form online, and we will bring a recycling bin to you
2. **Sustainable** - When the bin gets full, we will replace it for you
3. **Savings** - You will see money deducted from your trash bill depending on the amount you recycle

1.888.500.8000 For more information, please visit our website www.GreenRecycling.org



Intrinsic Goal Framing/
Interdependent Self-Construal

You can make the world a better place for your FAMILY by recycling!



Yes, you CAN go green for your FAMILY. You can contribute to your community as well as help the environment. We ASK you to start the program in 3 easy steps!

1. **Convenient** - Just submit a form online, and we will bring a recycling bin to you
2. **Sustainable** - When the bin gets full, we will replace it for you
3. **Conserve** - You will help save the environment and make the world a better place for the next generation

1.888.500.8000 For more information, please visit our website www.GreenRecycling.org



Extrinsic Goal Framing/
Interdependent Self-Construal

You can save money for your FAMILY by recycling!



Yes, you CAN go green for your FAMILY. You can save money for your family as well as help the environment. We ASK you to start the program in 3 easy steps!

1. **Convenient** - Just submit a form online, and we will bring a recycling bin to you
2. **Sustainable** - When the bin gets full, we will replace it for you
3. **Savings** - You will see money deducted from your trash bill depending on the amount you recycle


1.888.500.8000 For more information, please visit our website www.GreenRecycling.org



Appendix III. Study 2

Intrinsic Goal Framing/
Independent Self-Construal

You want to look at yourself in the mirror three months from now and **feel happy** about how you look and feel!




Now your goal is to manage your weight!

Regular exercise and eating right will help you attain the goals of:

- Being physically fit
- Remaining healthy
- Avoiding illness


Do it just for you.
You will be so proud of yourself.

For more information, please visit our website
www.inthreemonths.org



Extrinsic Goal Framing/
Independent Self-Construal

Your best friend is getting married in three months and you want to **look attractive** and **impress others** at the wedding!




Now your goal is to manage your weight!

Regular exercise and eating right will help you attain the goals of:

- Being physically attractive
- Looking appealing to others
- Avoiding weight gain

Do it just for you.
You will be so proud of yourself.

For more information, please visit our website
www.inthreemonths.org



Intrinsic Goal Framing/
Interdependent Self-Construal

You want to look at yourself in the mirror three months from now and **feel happy** about how you look and feel!



Now your goal is to manage your weight!

Regular exercise and eating right will help you attain the goals of:

- Being physically fit
- Remaining healthy
- Avoiding illness


Do it for your friends and family.
They will be so proud of you.

For more information, please visit our website
www.inthreemonths.org



Extrinsic Goal Framing/
Interdependent Self-Construal

Your best friend is getting married in three months and you want to **look attractive** and **impress others** at the wedding!




Now your goal is to manage your weight!

Regular exercise and eating right will help you attain the goals of:

- Being physically attractive
- Looking appealing to others
- Avoiding weight gain

Do it for your friends and family.
They will be so proud of you.

For more information, please visit our website
www.inthreemonths.org



Appendix IV. Study 3

Intrinsic Goal Framing/
Independent Self-ConstrualExtrinsic Goal Framing/
Independent Self-ConstrualIntrinsic Goal Framing/
Interdependent Self-ConstrualExtrinsic Goal Framing/
Interdependent Self-Construal

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