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Customers' Goal-Related Behavior in Loyalty Programs

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CUSTOMERS' GOAL-RELATED BEHAVIOR IN LOYALTY PROGRAMS

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ABSTRACT

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Old Dominion University, 2019

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Goal plays a vital role in the purposive behavior of consumers, and goal pursuit represents an important psychological mechanism under loyalty programs. The purpose of my dissertation is to understand loyalty program members' goal pursuit behavior and uncover the underlying psychological mechanisms.

The first essay examined how success or failure to achieve a tier goal affects consumers' subsequent goal pursuit behavior. Specifically, utilizing two lab experiments and 5,719 customers' flight activities data from a major airline's multi-tiered frequent flyer program, this essay studied the effect of goal completion magnitude on individuals' effort toward achieving subsequent goals, and how goal type moderates this relationship. I found that, when individuals failed to reach their preset goal, those failed an attainment goal put more effort in pursuing their subsequent goal than those who failed a maintenance goal. The opposite was true when individuals were highly successful in achieving their goals. In addition, when goal pursuit was successful, goal achievement magnitude and subsequent goal pursuit effort showed a positive linear relationship for individuals with a maintenance goal but an inverted U-shaped relationship for those with an attainment goal. For individuals with an attainment goal, high goal achievement created a surprising hampering effect on subsequent goal pursuit effort, which I termed the "close-but-no-cigar effect". Two subsequent lab experiments explored the underlying psychological

mechanisms. In the goal failure situation, negative self-efficacy mediated the effect of goal type on subsequent goal pursuit effort; in the goal success situation, negative emotion and counterfactual thinking were found to be the key drivers.

The second essay investigated loyalty program members' reactions to email messages as a function of their program status. Applying construal level theory to two different distance dimensions, this essay showed that goal distance and tier level jointly moderate the relative effectiveness of abstract vs. concrete framing and cognitive vs. emotional appeals in email marketing messages. I analyzed 240 email campaigns that were sent to 19,281 loyalty program members from September 2016 to December 2016. I found that when goal distance is large, cognitive appeal is more persuasive than emotional appeal, and abstract message framing is more persuasive than concrete framing. In contrast, when consumers are close to their goals, emotional appeal is more effective than cognitive appeal, while abstract and concrete message framings are equally effective. In addition, these moderating effects of goal distance are stronger at lower tier levels than at higher tiers. Tiers served as a vertical dimension in forming one's mental construal level. The insights from this research can help loyalty program managers optimize marketing communication to individual members.

I dedicate this dissertation to my parents, my parents-in-law, and my wife.

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ABSTRACT

Goal pursuit represents an important psychological mechanism under loyalty programs. Although academic research on loyalty programs has examined the extent to which consumers succeed or fail in reward-goal pursuit, insufficient attention has been paid to the consequences of such successes or failures. Addressing this gap, I draw upon research on goal pursuit and counterfactual thinking to examine the effect of goal completion magnitude on individuals' effort toward achieving subsequent goals, and how maintenance versus attainment goal types moderate this relationship. Analyzing flight activities from 5,719 members of a major airline's frequent flyer program, I found that (1) individuals who failed (vs. succeeded) at achieving an attainment goal will put more (vs. less) effort into subsequent goal pursuit than individuals who failed (vs. succeeded) at fulfilling a maintenance goal, (2) a linear effect of goal achievement magnitude on future goal pursuit effort under the maintenance goal, such that the more one completed his/her previous goal, the more effort he/she will invest in the subsequent goal cycle and (3) a reverse U-shaped effect of goal achievement magnitude under the attainment goal, such that substantial goal achievement in the previous goal cycle creates a surprising hampering effect (i.e., close-but-no-cigar effect) on subsequent goal pursuit. Instead, moderate achievement of the previous goal leads to the most effort invested in subsequent goal pursuit. These results and the proposed underlying processes are further explored in a lab experiment. Our research provides new insights for marketing scholars and managers with regard to goal pursuit and loyalty programs.

INTRODUCTION

Consumer behavior is often influenced by the goals consumers hold (Bagchi and Li 2010; Fishbach and Dhar 2005; Lee and Ariely 2006), which represent one's internal desired states (Austin and Vancouver 1996; Baumgartner, Pieters, and Bagozzi 2008). One marketing tool that makes goal pursuit especially salient is loyalty programs, in which consumers engage in the required purchase or other behavior to reach reward or tier status goals. The loyalty program literature has examined goal pursuit in such programs, mostly focusing on the factors that contribute to consumers' success or failure at achieving a single reward goal (Kivetz, Urminsky, and Zheng 2006; Koo and Fishbach 2012). While investigating the pursuit of a single goal is insightful in describing consumer behavior under loyalty programs, most long-term loyalty programs represent the pursuit of recurring goals (Dreze and Nunes 2011). That is, consumers repeatedly pursue either the same goal or tiered goals that are increasingly challenging. In this multi-cycle goal pursuit context, how one does in the previous cycle is likely to influence one's subsequent goal pursuit. Existing research has paid very limited attention to this aspect of recurring goal pursuit (see Dreze and Nunes 2011 for an exception).

Addressing the gap in the literature, I examine the effect of goal completion magnitude on individuals' effort at pursuing subsequent goals. In particular, I draw upon research on counterfactual thinking (Kahneman and Miller 1986; Medvec, Madey, and Gilovich 1995; Roese 1997) to propose that consumers' response to their goal pursuit outcome depends on whether they were previously trying to achieve an aspirational goal higher than historical achievements (i.e., an attainment goal) or a maintenance goal aimed at avoiding the loss of historical achievements. Such reactions in turn drive the amount of effort consumers devote into subsequent goal pursuit. Analyzing data from 5,719 members of a major airline's frequent flyer program, I find that

individuals who failed at achieving an attainment goal put more effort into subsequent goal pursuit than individuals who failed at fulfilling a maintenance goal. In contrast, those who succeeded at achieving an attainment goal devoted less effort in the next cycle than those who successfully obtained a maintenance goal. In addition, our results suggest a linear effect of goal achievement magnitude on subsequent goal cycle effort under the maintenance goal but a reverse U-shaped effect under the attainment goal, such that substantially exceeding one's attainment goal in the previous goal cycle created a surprising hampering effect on subsequent goal pursuit. Instead, moderate achievement of the previous goal attainment goal led to the most effort invested in subsequent goal pursuit. A lab experiment was conducted to replicate these findings and to explore the underlying processes.

Our research contributes to marketing research and practice in several ways. First, although the relationship between goal progress and motivation in current goal pursuit has been well documented in the literature (Hull 1932; Louro, Pieters, and Zeelenberg 2007), I extend that research stream by investigating the impact of goal completion outcome on motivation and behavior in the *subsequent* goal pursuit cycle. In doing so, our research answers Dreze and Nunes (2011)'s call for more research on the consequences of achieving reward goals in loyalty programs. Second, our study deepens the understanding of goal pursuit theory. It extends the existing literature on maintenance and attainment goals and sheds new light on the interplay between goal type and goal completion magnitude on future goal pursuit. Third, most studies of goal pursuit have been conducted in the laboratory or a small-scale field environment (Campbell and Warren 2014; Scott and Nowlis 2013; Wallace and Etkin 2017; Woolley and Fishbach 2016). I supplement these experimental studies with large-scale observational data from a major airline's loyalty program and hence provide real-world validations to previous findings. Our research provides

practical insights into how to manage customer expectations and goals in loyalty programs and other recurrent goal pursuit contexts.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Goal plays a vital role in the purposive behavior of consumers (Bagozzi and Dholakia 1999) and reflects a "wished-for end" with an attainable belief by consumers (Geen 1995). A broad literature suggests that goals motivate individuals and make them strive harder to accomplish a task and that individuals who set goals perform better than others who set no goals (Brendl, Markman, and Messner 2003; Heath, Larrick, and Wu 1999). Pursuing a goal includes two distinct stages: goal setting and goal striving (Bagozzi and Dholakia 1999). In the goal setting stage, a person identifies a goal he or she would like to pursue (Lawrence, Carver, and Scheier 2002). This is followed by goal striving, which puts the chosen goal into action. A large body of existing studies have investigated how goal content and goal structure such as challenge level (Drèze and Nunes 2011; Locke and Latham 2002; Winters and Latham 1996) , goal specificity (Scott and Nowlis 2013; Wallace and Etkin 2017), goal distance (Huang and Zhang 2011; Kivetz, Urminsky, and Zheng 2006), implementation sequence (Jin, Huang, and Zhang 2013; Jin, Xu, and Zhang 2015), sub-goal progress (Campbell and Warren 2014; Woolley and Fishbach 2016) and goal framing (Bagchi and Li 2010; Förster, Higgins, and Idson 1998; Koo and Fishbach 2012) influence goal striving behavior and subsequently goal fulfillment. For example, researchers have consistently found that individuals' performance is highest for specific and moderately difficult goals (Locke and Latham 2002; Scott and Nowlis 2013). An overview of select goal-related studies is presented in Table 1.

Insert Table 1 about Here

While research on the effect of different goal characteristics on goal completion (i.e., treating goal completion as a dependent variable) is abundant, limited attention has been paid to what happens after goal fulfillment or goal failure, that is, how goal completion outcome influences individuals' subsequent goal behavior (i.e., treating goal completion as an independent variable). On the negative side, failure to fulfill a goal can result in demotivation, negative emotions, and a poorer subsequent performance (Soman and Cheema 2004; Wagner, Hennig-Thurau, and Rudolph 2009). On the positive side, individuals are found to become more motivated and choose more challenging goals following a successful prior goal fulfillment, which is explained by the relationship between performance and self-esteem (Lewin et al. 1944; Locke et al. 1981) . In a loyalty program context, where consumers pursue reward goals in multiple cycles, success or failure to achieve a previous goal may affect how much consumers are motivated to pursue subsequent goals. Insufficient attention has been paid to the consequences of such successes or failures (Dreze and Nunes 2011; Wang et al. 2016). Our research aims to address this gap. While one may naturally expect goal fulfillment to have a positive effect on subsequent motivation and goal failure to have a negative effect, I believe that the effect is not as straightforward. Specifically, I argue that how previous goal fulfillment or failure affects subsequent effort is dependent on the type of goal the individual was previously pursuing.

Maintenance versus Attainment Goals

Maintenance and attainment goals are two common types of goals that have been studied in social psychology (Bosmans and Baumgartner 2005; Brodscholl, Kober, and Higgins 2007;

Yang, Stamatogiannakis, and Chattopadhyay 2015). Attainment goals are those for which the current state differs from the desired state (e.g., wanting to be promoted from the current silver tier status to a gold tier status in a multi-tiered loyalty program). Maintenance goals are those for which the current and the desired states coincide, but there is a time difference between the present and the goal's time horizon (e.g., trying not to lose one's current silver tier status at a future time point) (Jiraporn and Desai 2011; Stamatogiannakis, Chattopadhyay, and Chakravarti 2011; Yang, Stamatogiannakis, and Chattopadhyay 2015). Goal attainment usually calls for the use of eager approach strategies, whereas goal maintenance calls for the use of vigilant avoidance strategies (Brodscholl, Kober, & Higgins, 2007).

Existing studies suggest that, in the goal setting stage, people perceive maintenance goals as more difficult than modest attainment goals, and perceive attainment goals as more attractive (Kruglanski et al. 2002), easier and more achievable than maintenance goals (Stamatogiannakis, Chattopadhyay, and Chakravarti 2011). In the goal striving stage, individuals with maintenance goals tend to choose more practical and easier-to-implement goal pursuit strategies (Jiraporn and Desai 2011). In contrast, individuals with attainment goals are less constrained by reality and tend to choose less practical and more challenging strategies with "instrumentality heuristics", which is a naïve belief that higher effort leads to better outcomes regardless of the effectiveness of the invested effort and implementability of the chosen strategies (Jiraporn and Desai 2011; Labroo and Kim 2009).

Consequently, when individuals fail their goal, those with a maintenance goal are likely to be more discouraged in terms of self-efficacy as they failed even though they adopted concrete and practical strategies in the goal striving stage. Those with an attainment goal, however, are less likely to be discouraged as the failure may help them realize the problems in their approach (i.e.,

overoptimistic strategies), which have no bearing on their self-efficacy. Therefore, I expect that, when people fail their goal, those with an attainment goal will remain more motivated and will put more effort into subsequent goal pursuit than individuals with a maintenance goal.

In the meantime, when individuals are fortunate to have fulfilled their goal, those with a maintenance goal are likely to feel a higher level of satisfaction and perceive stronger self-efficacy than those with an attainment goal, as they have fulfilled a subjectively harder goal. As the popular quote by Brazilian footballer Pele states, "The more difficult the victory, the greater the happiness in winning". This enhanced sense of satisfaction and self-efficacy motivates them to work harder toward subsequent goals. In contrast, people who have fulfilled their attainment goal are likely to have started with an overoptimistic attitude (Dunning 2007), which elevates their reference point and decreases subsequent satisfaction from the gain. Compared with individuals with a maintenance goal, those with an attainment goal may not experience as strong a boost from goal fulfillment, and the positive effect of goal fulfillment on subsequent goal pursuit may not be as strong. The above discussion suggests that, in the case of goal failure, previously holding a maintenance goal is more motivating in the subsequent goal cycle than previously holding an attainment goal, but the opposite is true in the case of goal success. This is summarized in the first two hypotheses:

> H1: Individuals will put more effort into subsequent goal pursuit if they previously failed at achieving an attainment goal than if they failed at fulfilling a maintenance goal.

> H2: Individuals will put less effort into subsequent goal pursuit if they were previously successful at fulfilling an attainment goal than if they were successful at achieving a maintenance goal.

Goal Completion Magnitude

Apart from the direct effect of goal type on subsequent goal pursuit, goal type can also exert a moderating effect on the relationship between goal completion magnitude and subsequent goal effort. So far I have treated goal pursuit as a binary state of fulfillment or not. In reality, there are different degrees of success and failure. One can succeed "by a mile" or just barely pass the goal threshold. Similarly, one can fail the goal miserably or just miss it. Put differently, individuals can end up at very different distances (positive or negative) from the goal that they set out to achieve. To further complicate matters, people's goals often take the form of a "goal ladder" in which each goal is a step toward another more challenging goal (Koo and Fishbach 2010), such as in the case of a ranked competition or a multi-tiered loyalty program. Unless one has climbed to the top rung in the goal ladder, there is always a higher-level goal that can be achieved. Hence one who exceeds a lower level goal by a large amount may in reality be close to the next tier goal in the goal ladder.

I believe that the magnitude of goal success in such a goal ladder setting can lead to different counterfactual thinking and subsequently behavioral patterns. Counterfactual thinking (Kahneman and Miller 1986; Medvec, Madey, and Gilovich 1995; Roese 1997) refers to mental comparisons of reality with its imagined alternatives (Kokkinaki and Sevdalis 2015). It focuses on how the past might have been, or the present could be, different (Medvec, Madey, & Gilovich, 1995). Existing studies suggest that counterfactual thoughts have a variety of effects on emotions, beliefs, and behavior (Celuch and Saxby 2013; Landman and Petty 2000; Page and Colby 2003; Roese 2000).

Counterfactual thoughts can be classified into upward or downward counterfactuals in terms of direction (Roese and Olson 1997). Upward counterfactuals focus on thoughts of how

things could have been better. The typical alternative thought starts with "if only" suggesting a better-than-reality alternative scenario. Downward counterfactuals think about how things could be worse. The typical alternative thought starts with "well at least" suggesting a worse-than-reality alternative scenario (Page & Colby, 2003). Existing studies suggest that upward counterfactuals tend to generate negative emotion such as disappointment, whereas downward counterfactuals tend to elicit positive emotion such as relief (Markman et al. 1993; McConnell et al. 2000; Page and Colby 2003). For example, Medvec, Madey, & Gilovich (1995) studied the emotional reactions of bronze and silver Olympic medalists and found that bronze medalists were surprisingly happier than silver medalists. They suggest that, for silver medalists, the most compelling counterfactual alternative is to win the gold medal (i.e., upward counterfactual), which silver medalists failed to achieve and hence could result in negative emotions such as disappointment; but for bronze medalists, it is the possibility of finishing without a medal (i.e., downward counterfactual), which they succeeded at avoiding, that brings about positive emotions such as relief.

I extend existing research by considering the type of goal individuals were pursuing (i.e., maintenance versus attainment goals) as an important influencer on their counterfactual thinking regarding a goal pursuit outcome. Individuals with a maintenance goal have been found to think retrospectively and pay special attention to their past actions. In contrast, individuals with an attainment goal tend to think prospectively and focus more on future actions (Jiraporn and Desai 2011). Connecting these findings with downward and upward counterfactual thinking, I argue that individuals with a maintenance (vs. attainment) goal are more likely to be engaged in downward (vs. upward) counterfactual thinking.

To illustrate how goal type can affect counterfactual thinking about the outcome of a goal pursuit, imagine the aforementioned case of the Olympic medalists from Medvec, Madey, & Gilovich (1995). Suppose an athlete had formerly won a bronze medal. Under a maintenance goal, the athlete would be aiming to not lose the bronze medal in the current competition, which carries a backward-looking focus. In the end if the athlete successfully fulfills his/her goal with a bronze or silver medal, whether with a close call to silver or gold, the athlete will still feel happy as he/she successfully averted a potentially negative outcome (i.e., downward counterfactuals of "well at least I got the bronze medal"). In contrast, if the athlete is instead pursuing an attainment goal aiming for a silver medal in the current competition, he/she will be forward-looking in the goal pursuit process. If the athlete successfully obtains a silver medal but with performance far from that of the gold medalist, the upward counterfactuals of "if only I had gotten the gold medal" does not pose a serious threat as the plausibility of the counterfactual would be rather low. However, if he/she wins a silver medal with moderate to high progress and feels that gold is within reach, the "if only gold" upward counterfactual comes into play and becomes salient, creating what I call the close-but-no-cigar effect[1]. This leads to negative emotions such as disappointment and regret despite successful goal attainment. The closer the athlete is to the gold medalist, the more plausible the upward alternative reality would appear, and the stronger the close-but-no-cigar effect would be.

Taken together, the above discussion suggests that goal achievement magnitude is likely to have a monotonically positive effect on how individuals feel about the goal pursuit outcome if that goal was a maintenance goal. But the effect would be nonlinear if that goal was an attainment goal, such that low to moderate goal achievement elicits positive reactions whereas high goal

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[1] Close-but-no-cigar is a popular idiom which was first recorded in the script of the 1935 film version of Annie Oakley, meaning falling just short of a successful outcome and getting nothing for your effort.

achievement may actually cause negative reactions. As goal pursuit outcome and counterfactual thoughts can significantly affect individuals' subsequent emotions, beliefs, and behavior (Celuch and Saxby 2013; Page and Colby 2003; Soman and Cheema 2004; Wagner, Hennig-Thurau, and Rudolph 2009), the above differences in counterfactual thinking and goal outcome assessment can translate into varying levels of motivation to engage in future goal pursuit. That is, I expect a linear relationship between goal completion magnitude and subsequent behavior under a maintenance goal but a reverse U-shaped effect under an attainment goal. This leads to the following two hypotheses:

H3: For individuals previously pursuing a maintenance goal, goal completion magnitude will have a linear effect on their effort toward the subsequent goal, such that the more they completed their previous maintenance goal, the more effort they will invest in the subsequent goal cycle.

H4: For individuals previously pursuing an attainment goal, goal completion magnitude will have a reverse U-shaped effect on their effort toward the subsequent goal, such that moderate achievement of the previous attainment goal will result in higher effort in the subsequent goal cycle than both low and high prior goal achievement.

I test the hypotheses in two studies. In the first field study, I analyze customer data from a major airline's frequent flyer program to examine how previous year's tier goal pursuit outcome affects the following year's purchase effort within the program. Then in the second study, I conduct a lab experiment to validate the findings and explore the underlying psychological process in a more controlled setting.

STUDY 1: FIELD DATA

The Data

This study utilized data from a major airline's multi-tiered frequent flyer program. For purpose of confidentiality, the name of the firm is not disclosed here. This loyalty program features five membership tiers, including a base tier without special status and four premium tiers. Premium tiers entitle members to special privileges such as higher miles earning ratio, priority boarding, preferential access, fee waivers, and upgrades. Tier status determination follows a calendar year cycle, and members' tier status for the following year (i.e., 2017) is determined by how many total miles and flight segments were accumulated in the previous year (i.e., 2016). Our data included detailed flight activities of program members over 28 months from 2015 to April 2017. I used tier achievement in 2016 to define goal completion magnitude, and flight activities from January to April 2017 as effort toward subsequent goal pursuit. I used each member's 2016 tier goal relative to his/her tier status in 2015 to help identify the goal type, as described in more detail in the next section.

Variable Operationalization

Goal and goal type. I defined consumers' 2016 goals as the immediate next higher tier based on their existing miles and segments accumulated by the end of the third quarter (Q3) of 2016. For example, if a consumer had surpassed the second tier threshold by the end of Q3 2016, I defined the consumer's goal tier as the third tier. I then defined 2016 goal type by comparing this goal tier with the end status consumers achieved in 2015. Specifically, if a consumer's goal tier was above the previously achieved tier, the consumer was considered to hold an attainment goal, as the consumer would be aspiring to achieve something more than he/she was able to achieve previously. In contrast, if the consumer's goal tier was at or lower than the previously achieved

tier, the consumer was deemed to hold a maintenance goal, as the consumer's focus would be to avoid going down in tier status. I created a dummy variable *AttainmentGoal$_i$* that equaled 1 if consumer *i* held an attainment goal in 2016 and 0 if he/she held a maintenance goal. In defining tier goal and goal status, I excluded three types of individuals: (1) individuals who had already accumulated enough to achieve the highest (5th) tier in the program by the end of Q3 2016, as there was no further tier goal for these individuals to pursue for the rest of that year; (2) individuals who did not achieve any premium tiers in 2015, as it was not possible for these consumers to hold a maintenance goal in 2016 since one cannot lose one's base membership; and (3) in a similar vein, individuals who achieved the highest possible tier in 2015, as these consumers could not have held an even higher attainment goal to reach in 2016. These latter two groups would have confounded goal type classifications, as they would have skewed attainment goals toward higher tiers and maintenance goals toward lower tiers. After filtering out these customers, our final sample consisted of 5,719 members.

Goal completion magnitude. Given the definition of 2016 tier goals as described above, I calculated 2016 goal completion magnitude (*GoalCompletionMagnitude$_{ij}$*) based on how far each member ended up relative to their goal by the end of 2016, positive for those exceeding their goals and negative for those failing their goals. As each tier could be achieved by either accumulated miles or flight segments, I defined goal completion magnitude as the larger of mile-based distance and flight segment-based distance, as shown in Equation (1). Following previous loyalty program research (Kivetz et al. 2006) and to address the scale difference between mile and segment requirements, I calculated each distance as a percentage of goal length.

(1) $GoalCompletionMagnitude_i$

$$= \max \left\{ \frac{(Total2016Miles_i - MileThreshold_{i,j,})}{(MileThreshold_{i,j} - MileThreshold_{i,j-1})}, \frac{(Total2016Segments_i - SegmentThreshold_{i,j,})}{(SegmentThreshold_{i,j} - SegmentThreshold_{i,j-1})} \right\},$$

where *GoalCompletionMagnitude$_i$* represents consumer *i*'s 2016 goal completion magnitude; *Total2016miles$_i$* and *Total2016Segments$_i$* are consumer *i*'s total accumulated miles and flight segments in 2016 respectively; *MileThreshold$_{i,j}$* and *SegmentThreshold$_{i,j}$* represent the mile-based and segment-based thresholds for the *jth* tier; and finally *j* is consumer *i*'s goal tier in 2016, *j*-1 is the tier immediately below the goal tier, and the differences in thresholds between these two tiers reflect the total number of miles or segments needed to move from the lower tier to the higher tier (i.e., goal length).

Flights. I calculated the total number of flights each member flew from Jan. 1st, 2017 till the end of our available data period (Apr. 30th, 2017) as a measure of his/her effort toward the subsequent year's goal. This was used as the outcome variable (*FlightCount2017$_i$*). Meanwhile, I calculated each member's total flight count during the same time period in 2016 (*FlightCount2016$_i$*) to control for previous activity levels.

Redemption. I further controlled for the reward effect well-documented in the loyalty program literature, where receiving a reward can boost consumers' purchases (Taylor and Neslin 2005). In the context of the current program, members can redeem their frequent flyer miles for free flights or upgrades. I created a dummy variable (*RedemptionFlag$_i$*) that takes on the value of 1 if consumer *i* redeemed his/her miles in 2016 and 0 otherwise.

The Model

I modeled subsequent goal pursuit effort (i.e., *FlightCount2017$_i$*) as a function of 2016 goal completion magnitude in both first-order and quadratic forms, goal type, interactions between goal type and the goal completion magnitude terms, and finally redemption behavior and lagged same-period flight count as control variables. As the dependent variable was a count variable that showed

over-dispersion[2], I used a negative binomial distribution model (NBD). Negative binomial regression models the number of occurrences (counts) of an event when the event has extra-Poisson variation (Cameron and Trivedi 2013), which was consistent with our outcome variable. Our full model is shown in equation (2)[3] below:

(2) $E(FlightCount2017_i|\mathbf{X}_i) =$
$\exp(\beta_0 + \beta_1 * GoalCompletionMagnitude_i + \beta_2 * GoalCompletionMagnitude^2_i + \beta_3 * AttainmentGoal_i + \beta_4 * FlightCount2016_i + \beta_5 * RedemptionFlag_i + \beta_6 * GoalCompletionMagnitude_i * AttainmentGoal_i + \beta_7 * GoalCompletionMagnitude^2_i * AttainmentGoal_i + \varepsilon_i),$

Where $\mathbf{X}_i$ represents the vector of independent variables and control variables for customer *i* as listed in the equation.

The Results

Table 2 reports the descriptive statistics of and correlations among the key variables. Figure 1 visually depicts the effect of goal completion magnitude on subsequent goal pursuit effort under each goal type. In general, I see that individuals who failed at achieving an attainment goal (i.e., goal completion magnitude < 0) put more effort into subsequent goal pursuit than individuals who failed at fulfilling a maintenance goal. The opposite was true on the right side of the curves, for cases of goal successes (i.e., goal completion magnitude ≥ 0). In addition, goal completion magnitude had a monotonically increasing effect on subsequent goal pursuit effort for individuals previously pursuing a maintenance goal. In contrast, individuals previously pursuing an attainment goal exhibited a reverse U-shaped relationship between goal completion magnitude and subsequent behavior. These visual non-statistical outcomes are in line with our proposed hypotheses.

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[2] Overdispersion test (Cameron and Trivedi 1990) suggested a significant overdispersion issue (z =23.161, p<0.01).
[3] I conducted the analysis with individual demographic variables such as gender and age, which showed different significance level between main model and robust model and did not change the overall results. Therefore, I excluded these individual demographic variables in the final model.

Insert Table 2 about Here

Insert Figure 1 about Here

Table 3 reports the full model estimation results. The analysis revealed a significant effect of attainment goal type (β=.485; z=14.975, p<.01), a significant negative interaction between attainment goal type and goal completion magnitude (β=-1.162; z=-17.816, p<.01), and a significant negative interaction between attainment goal type and the quadratic goal completion magnitude term (β=-.426; z= -3.622, p<.01). To help interpret the interactions and to statistically test hypotheses 1 and 2, I conducted floodlight analysis (Spiller et al. 2013) to identify the effect of goal type across the entire range of goal completion magnitude (i.e., both successes and failures). Figure 2 plots the results from the floodlight analysis. I found that an attainment goal led to more effort in subsequent goal pursuit than a maintenance goal for all ranges of goal failures (goal completion magnitude < 0), consistent with H1. For the non-negative range of goal completion magnitude (i.e., members who succeeded in their goal), the results showed a significantly positive effect of attainment goal type on subsequent goal pursuit effort for goal completion magnitude ranging from 0 to .32 (i.e., consumers exceeded their goal by no more than 32%) and a significant negative effect at goal completion magnitude ranging from .43 to 1. Therefore H2 was partially supported. That is, succeeding in a maintenance goal was indeed more motivating in subsequent goal pursuit than succeeding in an attainment goal but only when the success was fairly substantial at 43% above the goal. When the goal achievement was relative mild

to moderate, an attainment goal was more motivating than a maintenance goal instead, similar to the case of goal failures.

Insert Table 3 about Here

Insert Figure 2 about Here

To test H3 and H4, I ran separate NBD regressions for members with maintenance goals and those with attainment goals, using the same two goal completion magnitude terms and lagged same-period usage level and redemption behavior as controls. Table 4 shows the analysis results. For the maintenance goal sample, goal completion magnitude had a significant positive effect on 2017 flight activities (β=1.325; z=19.342, p<.01), and the quadratic goal completion magnitude term showed a marginally significant positive effect (β=.193; z=1.651, p<.10). Although this suggests an overall U-shaped pattern, the turning point in the curve was -3.432, which was far below the lowest possible value of -1 based on the variable's definition. Within its meaningful value range, goal completion magnitude showed a marginally accelerating positive effect on individuals' subsequent goal pursuit effort, providing overall support for H3.

For the attainment goal sample, the first-order goal completion magnitude term was significantly positive (β=.230; z=9.842, p<.01), and the quadratic goal completion magnitude term was significantly negative (β=-.308; z=-7.256, p<.01), suggesting an overall reverse U-shaped pattern as hypothesized in H4. The turning point in the curve was .373, which suggests that under an attainment goal, moderate achievement of the previous goal (37.3% above and beyond the goal

length) led to the most effort invested in the next goal. Past this point, more substantial goal achievement in the previous goal cycle created a hampering effect on subsequent goal pursuit. Therefore, H4 was supported.

Insert Table 4 about Here

For the control variables, the results in Table 3 show that both *FlightCount2016$_i$* (β=.122; z=27.795, p<.01) and *RedemptionFlag$_i$* (β=.123; z=5.733, p<.01) had a significantly positive effect on an individual's subsequent goal pursuit effort, suggesting that higher flight activities and having redeemed rewards in the previous year can increase consumers' flight activities in the current year.

Robustness Checks

To check the robustness of our results, I estimated our model using an alternative outcome variable. Instead of using the number of flights between January 1, 2017 and April 30, 2017, I calculated total accumulated miles for each member during that time period (*FlightMiles2017$_i$*) as an indicator of subsequent goal pursuit effort. This was log-transformed to reduce skewness and was used as the outcome variable. The same set of independent variables were used except that now I control for log-transformed total accumulated miles from the previous year (*FlightMiles2016$_i$*) instead of flight count to control for previous activity levels.

I ran OLS regression with the alternative outcome variable, and the results are shown in Table 5. The model showed consistent results as the main model. Specifically, attainment goal type has a significantly direct effect (β= 1.523; t=12.222, p<.01). The interaction between attainment goal type and goal completion magnitude was significant and negative (β=-3.765; t=-13.297, p<.01), and the interaction term between attainment goal type and the quadratic goal completion

magnitude term was significant and negative (β=-2.522; t= -5.678, p<.01). The results are consistent with previous flight count model in terms of direction and significance of the coefficients.

Insert Table 5 about Here

Figure 3 plots the results from the floodlight analysis. For loyalty program members who failed their goals, an attainment goal led to significantly more effort in subsequent goal pursuit than a maintenance goal for all ranges of goal failures (goal completion magnitude < 0). In contrast, for program members who succeeded in their goals, the results showed a significantly positive effect of attainment goal on subsequent goal pursuit effort for goal completion magnitude ranging from 0 to .27 and a significant negative effect at goal completion magnitude ranging from .40 to 1. The results are in line with the main model, again suggesting full support of H1 and partial support of H2.

Insert Figure 3 about Here

Separate analysis results for members with maintenance goals and members with attainment goals are reported in Table 6. The direction and significance of the coefficients were consistent with the results of the flight count model. The results showed an overall U-shaped pattern of goal achievement magnitude effect for members with maintenance goals and a reverse U-shaped pattern for members with attainment goals, in line with the flight count model. The turning point was -1.154 for members with maintenance goals, which was still below the lowest

possible value of -1 based on the variable's definition. The turning point was .394 for members with attainment goal, which is very close to the value of .373 obtained from previous flight count model. In conclusion, within meaningful value ranges, a linear relationship between goal completion magnitude and subsequent behavior was found under a maintenance goal, and a reverse U-shaped effect was found under an attainment goal, which confirmed hypothesis 3 and 4. This alternative analysis using flight miles showed robustness of our findings from the main flight-count based model.

Insert Table 6 about Here

STUDY 2: EXPERIMENT DATA

Study 1 found general support for the hypotheses. However, it has two important limitations. First, I did not know what each consumer's actual goal was. This necessitated the inference of their goals based on their behavior, which may or may not reflect their true goals. Second, given the secondary nature of the data, I was not able to test the underlying mechanisms such as counterfactual thinking. Two lab experiments were designed to address these limitations. Study 2a manipulated goal type and examined subsequent goal pursuit effort as a result of failing to achieve a previous maintenance goal versus an attainment goal (H1). Study 2b manipulated both goal type and goal completion magnitude to investigate their joint effects on subsequent goal pursuit when previous goal pursuit was successful (H2, H3 and H4).

STUDY 2a: GOAL FAILURE

METHODOLOGY

Participants and Procedures

Eighty participants were recruited from a large US university's undergraduate marketing student subject pool (mean age = 21.6, 43% female). Each participant was randomly assigned to one of the two experimental conditions (goal type: maintenance vs. attainment). The study started with a description of a fictitious hotel company's loyalty program, which introduced the program's tiered structure and membership benefits (See Appendix A). After viewing the description, participants were asked to imagine that they joined the loyalty program last year and earned a silver level membership. They were then exposed to the goal type manipulation (See Appendix B). Those in the maintenance goal condition were asked to imagine that they were a few nights away from the silver level and that they aimed to maintain the silver level in this calendar year. In contrast, participants in the attainment goal condition were asked to imagine they were a few nights

away from the gold level and that their goal this year was to achieve the gold level. I used the abstract expression of "a few nights away" to indicate goal distance to make sure that the current challenge level of the goals are similar between the two conditions, following the manipulation of goal type in Yang, Stamatogiannakis, and Chattopadhyay (2015). Following the manipulation, participants were asked a few questions about their perceived goal difficulty and their planned goal achievement strategy.

On the next page, participants in both conditions were informed that unfortunately they had failed to achieve their goal this year (See Appendix C). They were then asked questions regarding their possible negative emotions and self-efficacy. The negative emotions scale measured how upset, sad and unhappy participants felt about their failure to reach their goal. The negative emotion variable was created by averaging the three emotion items (Cronbach α values were .876, .879, and .875 respectively). The self-efficacy scale was adopted from Chen, Gully and Eden (2001) and contained three items measured on seven-point scales anchored at strongly disagree and strongly agree. Each participant's self-efficacy score was created by averaging the three self-efficacy items (Cronbach α values were .888, .867, and .829 respectively), with a higher score representing a more negative effect on the participant's self-efficacy. Following the emotion and self-efficacy questions, participants were offered an opportunity to review a list of tips for making the most of loyalty programs. They were asked to choose if they wanted to review the list. If their answer was yes, the tip page was displayed and the amount of time they spend reading the tips were captured. Whether each participant chose to read the tips and how long they spent reading the tips served as the two future effort measures.

Finally, participants answered a few manipulation check and demographic questions. To check the success of goal type manipulation, I asked participants what was the goal specified for

this year, using a 7-point semantic differential scale anchored at "maintain the same level as last year" and "achieve a higher level than last year". At the end, participants were asked a few demographic questions including age, gender and race.

RESULTS

To check the goal type manipulation, I compared participants' goal type ratings between the two experimental conditions using a t-test. Confirming successful manipulation, participants in the attainment goal condition gave a significantly higher rating (i.e., closer to "achieve a higher level than last year") than participants in the maintenance goal condition (M $_{attainment\ goal}$ =5.98, M $_{maintenance\ goal}$ =2.50; t = 8.84, p < .01).

To replicate the results related to H1 from study 1, I first conducted a logistic regression with whether or not participants chose to view the tips as the dependent variable (1 = yes; 0 = no) and goal type as the independent variable (1 = maintenance goal; 0 = attainment goal). The model showed a moderately good fit (AIC = 115.22, McFadden's pseudo-R^2 = .069). The effect of goal type was significantly negative (β = -.979, p = .049), suggesting that participants with a maintenance goal were less likely to choose to view the tips than those with an attainment goal. I also ran a tobit regression with the amount of time spent reading the tip sheet as the dependent variable and goal type as the independent variable. Goal type showed a similar negative effect (β = -1.170, p = .049), suggesting that participants in the maintenance goal condition spent less time reading the tips than participants in the attainment goal condition. Both models confirmed that individuals who failed to achieve an attainment goal would exert more effort in their subsequent goal pursuit than those who previously failed to achieve an attainment goal, in support of H1.

The rationale for H1 suggests that failure to achieve a maintenance goal should discourage future efforts from individuals more than failing to achieve an attainment goal due to the negative

emotions the failure elicits and due to a decrease in self-efficacy. To see if such negative feelings and self-efficacy impact indeed mediated the goal type effect, I ran mediation tests for the logistic regression of tip reading choice and the tobit model of tip reading time respectively (Preacher, Rucker, and Hayes 2007). The results were presented in Figure 4 and Figure 5. Bootstrapping analyses (1,000 replications) showed that the indirect effect of goal type on tip reading choice through negative emotion was insignificant (β = -.005, 95% CI= (-.545, .566)), but the indirect effect through self-efficacy reduction was significantly negative (β = -.400, 95% CI= (-1.322, -.009)). The direct effect of goal type was not significant (β = -1.292, 95% CI= (-2.561, .276)), indicating a mediation-only effect of goal type through the negative effect on self-efficacy. The bootstrapping analyses using tip reading time as the dependent variable in a tobit regression showed a similar pattern. The indirect effect of goal type on tip reading time through negative emotion was insignificant (β = -.171, 95% CI= (-.910, .378)), while the indirect effect through self-efficacy impact was significantly negative (β = -.392, 95% CI= (-1.079, -.017)). The direct effect of goal type was insignificant (β = -1.138, 95% CI= (-1.692, .549)). Together, the results from both mediation tests suggest that the negative impact on self-efficacy, rather than negative emotions, mediated the effects of goal type on participants' subsequent goal pursuit efforts.

Insert Figure 4 about Here

Insert Figure 5 about Here

DISCUSSION

      Study 2a replicated the findings in study 1 and showed that individuals who failed at fulfilling a maintenance goal put less effort into subsequent goal pursuit than those who failed at achieving an attainment goal. The mediation analyses uncovered the underlying psychological mechanisms and showed that the negative impact on one's self-efficacy was the key reason behind the goal type effect. Interestingly, individuals in the maintenance goal condition did also experience significantly more negative emotions ($M_{attainment\ goal} = 3.27$, $M_{maintenance\ goal} = 4.62$; $t = -3.72$ and $p < .001$) than those in the attainment goal condition. However, this experience of negative emotions did not mediate the effect of goal type on future goal pursuit. It is possible that such negative emotions were more short-lived and did not have longer-term impact on future behavior as did self-efficacy.

STUDY 2b: GOAL SUCCESS

METHODOLOGY

Participants and Procedures

      Study 2b featured a 2 (goal type: maintenance vs. attainment) x 3 (goal completion magnitude: low vs. moderate vs. high) between-subjects factorial design. Two hundred and five participants were recruited from Amazon Mechanical Turk (mean age = 36.42, 53% female). Participants were randomly assigned to one of the six experimental conditions. The first part of the study was the same as study 2a in terms of introduction and goal type manipulation. But in lieu of goal failures, the participants saw successful goal outcomes instead. Those in the low completion magnitude condition were either told that they stayed 10 nights and successfully achieved the silver level (for the maintenance goal group) or that they stayed 20 nights and successfully achieved the gold level (for the attainment goal group). Both of these represented just

reaching the threshold of the respective goal tier. The corresponding numbers for the moderate magnitude condition were either 14 nights for the maintenance goal group or 24 nights for the attainment goal group, which were 4 nights above the respective goal tier threshold and approximately half way toward the next higher tier. Finally, 19 nights (for the maintenance goal group) and 29 nights (for the attainment goal group) were used in the high magnitude condition, which were far above the goal tier threshold and just one night away from the next higher tier.

After viewing the goal pursuit outcome, participants were asked questions regarding their counterfactual thinking and regret toward failing the immediate next higher tier. Counterfactual thinking asked participants' thought by using a 7-point semantic differential scale anchored at "I did not fail to reach my goal" and "I could have done better to achieve an even higher tier". Following these process measures, participants were offered the same opportunity to review some loyalty program tips as in Study 2a. Their choice of whether or not to view the tips and how long they spent reading the tips were recorded. Finally manipulation check and demographic questions were asked. These questions were the same as Study 2a, with the exception of an additional manipulation check question for goal completion magnitude. Participants rated the extent to which they succeeded in achieving their goal for this year on a 7-point scale anchored at "just reached my goal" and "reached my goal a lot".

Manipulation Check

I first checked the goal type manipulation. I performed an ANOVA with participants' goal type ratings as the dependent variable, and goal type, goal completion magnitude, and their interaction as independent variables. The results showed a significant main effect of goal type ($F_{1,199} = 361.400$, $p < .001$). Participants in the attainment goal condition gave higher ratings (i.e., closer to "achieve a higher level than last year") than those in the maintenance goal condition (M

attainment goal $= 6.22$, M maintenance goal $=1.41$). Neither the main effect of goal completion magnitude ($F_{1,199} = .043$, p $= .958$) nor its interaction with goal type ($F_{1,199} = .263$, p $= .770$) were insignificant.

To check the goal completion magnitude manipulation, I repeated the ANOVA with participants' success magnitude rating as the dependent variable and the same set of independent variables as earlier. The analysis revealed a significant effect of goal completion magnitude ($F_{1,199} = 5.306$, p $< .01$). Further planned contrasts show that participants in the high goal completion magnitude condition rated their success magnitude as significantly higher (M high magnitude $= 5.96$) than those in the low- (M low magnitude $=4.19$; t $= -5.901$, p $< .01$) and medium-magnitude conditions (M moderate magnitude $=4.98$; t $= -3.242$, p$< .01$). The ratings also differed significantly between the low- and medium-magnitude conditions (t $= -2.494$, p $= .036$). No other effect was significant from the ANOVA. Overall, the goal completion magnitude manipulation was successful.

RESULTS FOR TIP READING LIKELIHOOD

To test H2, H3 and H4, I first conducted a logistic regression with the binary tip reading choice variable (1 = yes; 0 = no) as the dependent variable, and goal type (1 = maintenance goal; 0 = attainment goal), two goal completion magnitude dummies (low magnitude as the baseline), and the interactions between goal type and the two magnitude dummies as independent variables. The overall model showed a moderately good fit (AIC $= 281.7$, McFadden's pseudo-$R^2 = .042$). As shown in Table 7, the interaction between maintenance goal and high completion magnitude was significantly positive ($\beta = 1.816$, p $= .013$). Given the significant interaction, I tested H2 by examining the effect of goal type at low, moderate and high magnitude respectively (Spiller et al. 2013). The simple slope of goal type was marginally significant negative under low magnitude success ($\beta = -.906$, p $= .088$), insignificant under moderate magnitude success ($\beta = -.168$, p $= .752$) and marginally significant positive under high magnitude success ($\beta = .931$, p $= .072$). These

results suggest that under low completion magnitude, individuals who succeeded in achieving an attainment goal were marginally more likely to view the tips than those with a maintenance goal, while the opposite was true under high magnitude. There was no significant difference between the two goal types under moderate magnitude success. The results provided partial support for H2, when goal completion magnitude was sufficiently high. This was consistent with the pattern of results in study 1.

To test H3 and H4, I examined the simple slopes for the goal completion magnitude dummies under each goal type. When the previous goal was a maintenance goal, the likelihood of choosing to read the tips was marginally significant higher for those in the high-magnitude condition than those in the low-magnitude condition ($\beta = .885$, $p = .079$), whereas the likelihood was not significantly different between the low-magnitude condition and the medium-magnitude condition ($\beta = .338$, $p = .553$) or between the medium-magnitude condition and the high-magnitude condition ($\beta = .547$, $p = .316$). In comparison, under the attainment goal condition, low and medium completion magnitudes ($\beta = -.400$, $p = .415$) or medium and high completion magnitudes ($\beta = -.532$, $p = .262$) did not differ significantly in tip reading likelihood, but the high-magnitude condition marginally reduced the likelihood compared with the low-magnitude conditions ($\beta = -.931$, $p = .072$). These results suggest that high success magnitude reduced the likelihood of reading tips under the attainment goal but had a positive effect under the maintenance goal, consistent with H3 and H4. However, the low- and medium-magnitude conditions did not differ significantly from each other in terms of future effort under either goal type. It is possible that with the hypothetical scenario and no real stake involved, the low- versus medium-magnitude outcomes were not perceived as very different from each other. Therefore, H3 and H4 were partly supported.

Insert Table 7 about Here

RESULTS FOR TIP READING TIME

I further conducted a tobit regression with the same independent variables and the amount of time spent reading the tip sheet as the dependent variable. As shown in Table 8, the interaction between maintenance goal and high completion magnitude was significantly positive ($\beta = 71.089$, $p < .01$). With the significant interaction, I then examined the effect of goal type at low, moderate and high magnitude respectively. The simple slope of goal type was marginally significant negative under low magnitude success ($\beta = -36.360$, $p = .081$), insignificant under moderate magnitude success ($\beta = -14.812$, $p = .483$) and marginally significant positive under high magnitude success ($\beta = 34.729$, $p = .071$), partly in support of H2 as in the above logistic regression model.

To test H3 and H4, I examined the simple slopes for the goal completion magnitude dummies under each goal type. Under a maintenance goal condition, tip reading time was marginally significant higher for those in the high-magnitude condition than those in the low-magnitude condition ($\beta = 34.073$, $p = .086$), whereas the tip reading time was not significantly different between the low-magnitude condition and the medium-magnitude condition ($\beta = 11.582$, $p = .613$) or between the medium-magnitude condition and the high-magnitude condition ($\beta = 22.491$, $p = .295$). In contrast, when the previous goal was an attainment goal, low and medium completion magnitudes ($\beta = -9.966$, $p = .596$) or medium and high completion magnitudes ($\beta = -27.051$, $p = .151$) did not differ significantly in tip reading time, but participants in the high-magnitude condition marginally spent less time reading the tips compared with those in the low-

magnitude condition (β = -37.017, p = .069). The results are consistent with the logistic regression model.

Insert Table 8 about Here

COUNTERFACTUAL THINKING

To see whether participants' goal type and goal completion magnitude indeed triggered different types of counterfactual thinking, I conducted an ANOVA with participants' counterfactual thinking rating as the dependent variable, and goal type, goal completion magnitude, and their interaction as independent variables. Since the interaction term was insignificant, I dropped the interaction term from the analysis. The main effects of goal type ($F_{1,201}$ = 13.208, p <.01) and goal completion magnitude ($F_{1,201}$ = 6.354, p <.01) were both significant. Additional contrast analyses showed that participants with an attainment goal were more likely to report upward counterfactual thinking than those with a maintenance goal (M $_{attainment\ goal}$ =4.78, M $_{maintenance\ goal}$ =3.71), consistent with a more forward-looking nature of an attainment goal. Furthermore, participants in the high goal completion magnitude condition had significantly higher upward counterfactual thinking rating (M $_{high\ magnitude}$ =4.57) than those in the low- (M $_{low\ magnitude}$ =3.99, t = -3.038, p <.01) and medium-magnitude conditions (M $_{medium\ magnitude}$ =3.98, t = -3.049, p <.01). This is consistent with the idea that the close proximity to the next tier under high completion magnitude triggers a more upward counterfactual thinking. It is surprising that this effect was experienced even by those in the maintenance goal condition. Combined with the same direction of effects on counterfactual thinking under the two goal types but opposite effects on future effort, these results suggest that the upward counterfactual thinking either impacted the two

groups of individuals' future effort differently, or some other mechanism was also at work besides counterfactual thinking.

I repeated the ANOVA with regret toward failing the immediate next higher tier as the dependent variable, and goal type and goal completion magnitude as the independent variables (the interaction term was excluded as it was insignificant). The effects of goal type ($F_{1,201} = 16.161$, $p < .001$) and goal completion magnitude ($F_{1,201} = 12.040$, $p < .001$) were both significant. Planned contrast analyses suggest that participants with an attainment goal experienced significantly more regret toward failing the immediate next higher tier than those with a maintenance goal ($M_{\text{attainment goal}} = 4.30$, $M_{\text{maintenance goal}} = 3.18$). Participants in the high goal completion magnitude condition had significantly higher regret ($M_{\text{high magnitude}} = 4.76$) than those in the low- ($M_{\text{low magnitude}} = 3.47$, $t = -3.854$, $p < .01$) and medium-magnitude conditions ($M_{\text{medium magnitude}} = 3.26$, $t = -4.465$, $p < .01$). Overall, the results suggest that goal completion magnitude had a significant impact on both counterfactual thinking and regret emotion.

DISCUSSION

This study aimed to replicate the findings in study 1 with regard to individuals who succeed in achieving their goal (H2, H3, and H4). The results were largely consistent with Study 1. In particular, participants who had an attainment goal exerted lower effort in pursuing subsequent goals under high goal success magnitude than under low goal success magnitude. In contrast, participants who had a maintenance goal showed higher effort in pursuing subsequent goals under high success magnitude than under low success magnitude. Furthermore, participants' counterfactual thinking and experienced regret emotion varied significantly as a result of goal type and goal completion magnitude. Participants with an attainment goal and participants with higher goal success magnitude were more likely to engage in upward counterfactual thinking and to

experience regret emotion than those with a maintenance goal and those with lower success magnitude respectively.

GENERAL DISCUSSION

Through one field study and two lab experiments, this paper investigated how goal type and goal completion magnitude jointly impact consumer's post-goal-completion behavior. Specifically, the first study utilized data from a major airline's multi-tiered loyalty program and found that, when previous goal pursuit fails, individuals who were aiming for an attainment goal put more effort in pursuing their subsequent goal than individuals previously aiming for a maintenance goal. This effect was reversed when previous goal pursuit was highly successful. In addition, in the goal success situation, goal achievement magnitude had a linear effect on subsequent goal pursuit effort for individuals with a maintenance goal but a reverse U-shaped effect for individuals with an attainment goal. For these latter individuals, previous high goal achievement created a surprising hampering effect on subsequent goal pursuit effort. I termed this "close-but-no-cigar effect".

Two lab experiments were conducted to explore the underlying psychological mechanisms. Study 2a focused on the goal failure situation and successfully replicated the failure outcomes in study 1. The findings of study 2a suggest that the negative impact on self-efficacy due to goal failure mediated the effect of goal type on subsequent goal pursuit effort. Study 2b focused on the goal success situation and largely replicated the success-related findings of the field study. It showed that regret emotion and counterfactual thinking differed significantly for individuals with different goal types and different goal success magnitudes. Interestingly, combining studies 2a and 2b, I found that individuals who were assigned an attainment goal perceived it easier in achieving their goal than those with a maintenance goal ($M_{\text{attainment goal}} = 5.51$, $M_{\text{maintenance goal}} = 5.02$; $F_{1,283} = 6.901$, $p < .01$). Meanwhile, individuals in the maintenance goal condition showed a higher tendency to adopt practical and easy-to-implement goal pursuit strategies than individuals in the

attainment goal condition (M $_{\text{attainment goal}}$ =3.75, M $_{\text{maintenance goal}}$ =2.94; $F_{1,283}$ = 12.698, p <.01). These findings are consistent with previous research showing a more down-to-earth and hard-working attitude of individuals with maintenance goals (Stamatogiannakis, Chattopadhyay, and Chakravarti 2011; Jiraporn and Desai 2011).

THEORETICAL IMPLICATIONS

The present paper provides several important contributions to the goal behavior literature. First, much of the existing research on goal pursuit has treated goal completion as a dependent variable, examining the effect of different goal structures and goal pursuit strategies on goal completion. The literature with respect to how goal pursuit outcome influences individuals' future goal behavior is scarce (Dreze and Nunes 2011). The current study extends this research stream by focusing on post-goal behavior in a loyalty program context. It shows that the outcomes from previous goal pursuits indeed have a significant impact on how hard individuals work toward their future goals.

Second, goal pursuit research frequently differentiates between maintenance and attainment goals (Bosmans and Baumgartner 2005). However, the effect of these goal types on consumers' subsequent goal pursuit behavior is still under-researched (Tamatogiannakis et al. 2011; Yang et al. 2015). The current research deepens the understanding of goal pursuit theory and sheds new light on how goal types both directly influence individuals' post-goal-completion behavior and moderate the effect of goal completion magnitude on individuals' effort toward their subsequent goals.

Third, while the majority of previous goal pursuit studies have involved only lab experiments, the current paper built on both large-scale real-world behavioral data and lab experiments to uncover the effects and underlying psychological mechanisms. The multi-pronged

approach helps ensure the internal *and* external validity of the findings and supplement the insights derived from lab experiments.

MANAGERIAL IMPLICATIONS

Consumers' goal related behaviors are prevalent in different business contexts such as weigh loss programs, debt management programs and loyalty programs. For example, companies can leverage consumers' reward goal pursuit in loyalty programs to motivate the purchase of their products and services. However, limited evidence suggests that the long-term effectiveness of such loyalty programs (Liu 2007) and the financial impact of such programs are uncertain (Ferguson and Hlavinka 2007). The existing literature suggests that loyalty program providers may fail to understand program members' expectations and behavioral patterns (Gómez, Arranz, and Cillán 2012; Watson et al. 2015), which leads to ineffective management of the programs (Xie and Chen 2013).

The current research addresses the above issue by identifying observable goal-related characteristics that can be leveraged to better market to loyalty program members. For example, I found that program members with maintenance versus attainment goals exhibited opposite behavioral patterns in their subsequent goal pursuit when previous goal pursuit was a failure versus a success. Furthermore, goal type determines how individuals translate the magnitude of their previous successes into future efforts. The current research findings provide marketers a new set of segmentation criteria based on their goal-related expectations and behavioral patterns rather than traditional demographics. By implementing this, loyalty program managers can better customize marketing communications to program members and enhance customer satisfaction and lifetime value through such programs. Companies can potentially improve the effectiveness of their loyalty programs from both marketing and financial perspectives.

LIMITATIONS AND FUTURE RESEARCH

This paper has a few limitations that lead to promising future research questions. First, in the field study, it was necessary to infer individuals' goals based on their previous and current tier status, which may or may not accurately reflect their actual goals. This was remedied in the lab experiments by explicitly manipulating the goal for each participant. However, individuals may differ in their general tendency to set certain types of goals, which could affect how they respond to goal successes and failures. Other personality characteristics such as "Big Five" personality dimensions (Barrick and Mount 1991) can also influence how program members perceive goal related outcomes. Future research is needed to examine these individual differences.

Second, although the two lab experiments in this paper helped explore the underlying psychological mechanisms, they involved only a static experimental scenario. In reality, program members' goal pursuit in a loyalty program is a dynamic process. How the psychological mechanisms discovered in this research change over time is not well understood. Future research needs to uncover the dynamics of goal pursuit using a longer time window. Such an investigation may require some qualitative research and a series of experiments with a longitudinal design.

Third, I only analyzed program members' goal pursuit behavior in the airline industry and hotel industries. Although these are common contexts for loyalty programs, the results may not generalize to other industry contexts. Further research needs to examine loyalty programs in other industries such as retail and restaurant loyalty programs as well as non-loyalty-program contexts. Meanwhile, investigating loyalty program members' goal related behaviors in different cultures may also yield interesting insights, as individuals from differ cultures may perceive goal pursuits differently. Extending this research to other cultural settings can help extend the current findings.

Finally, with a focus on individuals' goal pursuit behaviors, this research did not differentiate between leisure and business travelers in either the field study or the lab experiments. However, for both airline and hotel industries, trip purpose can play a key role in individuals' goal-related behavior(Kim and Park 2017). Future research needs to investigate the differences and similarities in terms of goal pursuit behavioral patterns between different type travelers.

REFERENCES

Austin, James T. and Jeffrey B. Vancouver (1996), "Goal constructs in psychology: Structure, process, and content.," *Psychological bulletin*, 120 (3), 338.

Bagchi, Rajesh and Xingbo Li (2010), "Illusionary progress in loyalty programs: magnitudes, reward distances, and step-size ambiguity," *Journal of Consumer Research*, 37 (5), 888–901.

Bagozzi, Richard P. and Utpal Dholakia (1999), "Goal setting and goal striving in consumer behavior," *The Journal of Marketing*, 19–32.

Barrick, Murray R. and Michael K. Mount (1991), "The big five personality dimensions and job performance: a meta-analysis," *Personnel psychology*, 44 (1), 1–26.

Baumgartner, Hans, Rik Pieters, and Richard P. Bagozzi (2008), "Future-oriented emotions: conceptualization and behavioral effects," *European Journal of Social Psychology*, 38 (4), 685–696.

Bosmans, Anick and Hans Baumgartner (2005), "Goal-relevant emotional information: When extraneous affect leads to persuasion and when it does not," *Journal of Consumer Research*, 32 (3), 424–434.

Brendl, C. Miguel, Arthur B. Markman, and Claude Messner (2003), "The devaluation effect: Activating a need devalues unrelated objects," *Journal of Consumer Research*, 29 (4), 463–473.

Brodscholl, 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), 628–648.

Cameron, A. Colin and Pravin K. Trivedi (1990), "Regression-based tests for overdispersion in the Poisson model," *Journal of econometrics*, 46 (3), 347–364.

——— and ——— (2013), *Regression analysis of count data*, Cambridge university press.

Campbell, Margaret C. and Caleb Warren (2014), "The progress bias in goal pursuit: When one step forward seems larger than one step back," *Journal of consumer research*, 41 (5), 1316–1331.

Celuch, Kevin and Carl Saxby (2013), "Counterfactual thinking and ethical decision making: A new approach to an old problem for marketing education," *Journal of Marketing Education*, 35 (2), 155–167.

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 (2), 268–281.

Drèze, Xavier and Joseph C. Nunes (2011), "Recurring goals and learning: The impact of successful reward attainment on purchase behavior," *Journal of Marketing Research*, 48 (2), 268–281.

Dunning, David (2007), "The inside view," *Social psychology: Handbook of basic principles*, 2, 69–90.

Ferguson, Rick and Kelly Hlavinka (2007), "The COLLOQUY loyalty marketing census: sizing up the US loyalty marketing industry," *Journal of Consumer Marketing*, 24 (5), 313–321.

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 (3), 370–377.

Förster, Jens, E. Tory Higgins, and Lorraine Chen Idson (1998), "Approach and avoidance strength during goal attainment: Regulatory focus and the" goal looms larger" effect.," *Journal of personality and social psychology*, 75 (5), 1115.

Geen, Russell G. (1995), *Human motivation: A social psychological approach.*, Thomson Brooks/Cole Publishing Co.

Gómez, Blanca García, Ana M. Gutiérrez Arranz, and Jesús Gutiérrez Cillán (2012), "Drivers of customer likelihood to join grocery retail loyalty programs. An analysis of reward programs and loyalty cards," *Journal of Retailing and Consumer Services*, 19 (5), 492–500.

Heath, Chip, Richard P. Larrick, and George Wu (1999), "Goals as reference points," *Cognitive psychology*, 38 (1), 79–109.

Huang, Szu-Chi and Ying Zhang (2011), "Motivational consequences of perceived velocity in consumer goal pursuit," *Journal of Marketing Research*, 48 (6), 1045–1056.

Hull, Clark L. (1932), "The goal-gradient hypothesis and maze learning.," *Psychological Review*, 39 (1), 25.

Jin, Liyin, Szu-Chi Huang, and Ying Zhang (2013), "The unexpected positive impact of fixed structures on goal completion," *Journal of Consumer Research*, 40 (4), 711–725.

———, Qian Xu, and Ying Zhang (2015), "Climbing the Wrong Ladder: The Mismatch Between Consumers' Preference for Subgoal Sequences and Actual Goal Performance," *Journal of Marketing Research*, 52 (5), 616–628.

Jiraporn, Napatsorn and Kalpesh Kaushik Desai (2011), "Maintenance Versus Attainment Goals: Influence of Self-Regulation Goal Type on Goal Pursuit Behaviors," *ACR North American Advances*.

Kahneman, Daniel and Dale T. Miller (1986), "Norm theory: Comparing reality to its alternatives.," *Psychological review*, 93 (2), 136.

Kim, Dohee and Byung-Jin Robert Park (2017), "The moderating role of context in the effects of choice attributes on hotel choice: A discrete choice experiment," *Tourism Management*, 63, 439–451.

Kivetz, Ran, Oleg Urminsky, and Yuhuang Zheng (2006), "The goal-gradient hypothesis resurrected: Purchase acceleration, illusionary goal progress, and customer retention," *Journal of Marketing Research*, 43 (1), 39–58.

Kokkinaki, Flora and Nick Sevdalis (2015), "Effect of motivational goals on the causal realism of counterfactual thoughts," *The Journal of psychology*, 149 (7), 643–664.

Koo, Minjung and Ayelet Fishbach (2010), "Climbing the goal ladder: How upcoming actions increase level of aspiration.," *Journal of personality and social psychology*, 99 (1), 1.

——— and ——— (2012), "The small-area hypothesis: Effects of progress monitoring on goal adherence," *Journal of Consumer Research*, 39 (3), 493–509.

Kruglanski, Arie W., James Y. Shah, Ayelet Fishbach, Ron Friedman, Woo Young Chun, and David Sleeth-Keppler (2002), "A theory of goal systems."

Labroo, Aparna A. and Sara Kim (2009), "The 'instrumentality' heuristic: Why metacognitive difficulty is desirable during goal pursuit," *Psychological Science*, 20 (1), 127–134.

Landman, Janet and Ross Petty (2000), "'It could have been you': How states exploit counterfactual thought to market lotteries," *Psychology & Marketing*, 17 (4), 299–321.

Lawrence, John W., Charles S. Carver, and Michael F. Scheier (2002), "Velocity toward goal attainment in immediate experience as a determinant of affect," *Journal of Applied Social Psychology*, 32 (4), 788–802.

Lee, Leonard and Dan Ariely (2006), "Shopping goals, goal concreteness, and conditional promotions," *Journal of Consumer Research*, 33 (1), 60–70.

Lewin, Kurt, Tamara Dembo, Leon Festinger, and Pauline S. Sears (1944), "Level of aspiration."

Liu, Yuping (2007), "The long-term impact of loyalty programs on consumer purchase behavior and loyalty," *Journal of marketing*, 71 (4), 19–35.

Locke, Edwin A. and Gary P. Latham (2002), "Building a practically useful theory of goal setting and task motivation: A 35-year odyssey.," *American psychologist*, 57 (9), 705.

———, Karyll N. Shaw, Lise M. Saari, and Gary P. Latham (1981), "Goal setting and task performance: 1969–1980.," *Psychological bulletin*, 90 (1), 125.

Louro, Maria J., Rik Pieters, and Marcel Zeelenberg (2007), "Dynamics of multiple-goal pursuit.," *Journal of personality and social psychology*, 93 (2), 174.

Markman, Keith D., Igor Gavanski, Steven J. Sherman, and Matthew N. McMullen (1993), "The mental simulation of better and worse possible worlds," *Journal of experimental social psychology*, 29 (1), 87–109.

McConnell, Allen R., Keith E. Niedermeier, Jill M. Leibold, Amani G. El-Alayli, Peggy P. Chin, and Nicole M. Kuiper (2000), "What if I find it cheaper someplace else?: Role of prefactual thinking and anticipated regret in consumer behavior," *Psychology & Marketing*, 17 (4), 281–298.

Medvec, Victoria Husted, Scott F. Madey, and Thomas Gilovich (1995), "When less is more: counterfactual thinking and satisfaction among Olympic medalists.," *Journal of personality and social psychology*, 69 (4), 603.

Page, Christine M. and Patricia M. Colby (2003), "If only I hadn't smoked: The impact of counterfactual thinking on a smoking-related behavior," *Psychology & Marketing*, 20 (11), 955–976.

Preacher, Kristopher J., Derek D. Rucker, and Andrew F. Hayes (2007), "Addressing moderated mediation hypotheses: Theory, methods, and prescriptions," *Multivariate behavioral research*, 42 (1), 185–227.

Roese, Neal J. (1997), "Counterfactual thinking.," *Psychological bulletin*, 121 (1), 133.

——— (2000), "Counterfactual thinking and marketing: Introduction to the special issue," *Psychology & Marketing*, 17 (4), 277–280.

——— and James M. Olson (1997), "Counterfactual thinking: The intersection of affect and function," in *Advances in experimental social psychology*, Elsevier, 1–59.

Scott, Maura L. and Stephen M. Nowlis (2013), "The effect of goal specificity on consumer goal reengagement," *Journal of Consumer Research*, 40 (3), 444–459.

Soman, Dilip and Amar Cheema (2004), "When goals are counterproductive: The effects of violation of a behavioral goal on subsequent performance," *Journal of Consumer Research*, 31 (1), 52–62.

Spiller, Stephen A., Gavan J. Fitzsimons, John G. Lynch Jr, and Gary H. McClelland (2013), "Spotlights, floodlights, and the magic number zero: Simple effects tests in moderated regression," *Journal of Marketing Research*, 50 (2), 277–288.

Stamatogiannakis, Antonios, Amitava Chattopadhyay, and Dipankar Chakravarti (2011), "Attainment Versus Maintenance Goals: Differences in Cognitive Processing and Goal Attractiveness.," *ACR North American Advances*.

Taylor, Gail Ayala and Scott A. Neslin (2005), "The current and future sales impact of a retail frequency reward program," *Journal of Retailing*, 81 (4), 293–305.

Wagner, Tillmann, Thorsten Hennig-Thurau, and Thomas Rudolph (2009), "Does customer demotion jeopardize loyalty?," *Journal of Marketing*, 73 (3), 69–85.

Wallace, Scott G. and Jordan Etkin (2017), "How Goal Specificity Shapes Motivation: A Reference Points Perspective," *Journal of Consumer Research*, 44 (5), 1033–1051.

Wang, Yanwen, Michael Lewis, Cynthia Cryder, and Jim Sprigg (2016), "Enduring effects of goal achievement and failure within customer loyalty programs: A large-scale field experiment," *Marketing Science*, 35 (4), 565–575.

Watson, George F., Joshua T. Beck, Conor M. Henderson, and Robert W. Palmatier (2015), "Building, measuring, and profiting from customer loyalty," *Journal of the Academy of Marketing Science*, 43 (6), 790–825.

Winters, Dawn and Gary P. Latham (1996), "The effect of learning versus outcome goals on a simple versus a complex task," *Group & Organization Management*, 21 (2), 236–250.

Woolley, Kaitlin and Ayelet Fishbach (2016), "For the fun of it: Harnessing immediate rewards to increase persistence in long-term goals," *Journal of Consumer Research*, 42 (6), 952–966.

Xie, Karen L. and Chih-Chien Chen (2013), "Progress in loyalty program research: Facts, debates, and future research," *Journal of Hospitality Marketing & Management*, 22 (5), 463–489.

Yang, Haiyang, Antonios Stamatogiannakis, and Amitava Chattopadhyay (2015), "Pursuing attainment versus maintenance goals: The interplay of self-construal and goal type on consumer motivation," *Journal of Consumer Research*, 42 (1), 93–108.

TABLES AND FIGURES

TABLE 1: STUDY 1 - SELECT GOAL-RELATED STUDIES

Study	Topic	Goal outcome used as DV or IV	Study focus	Study contexts	Method	Key Findings
Scott & Nowlis, 2013	goal specificity	DV	Pre- goal motivation	Weight loss	Field and lab experiments	consumers are more likely to reengage a goal when they have set a high-low range goal than when they have set a single number goal.
Wallace & Etkin, 2017	goal specificity	DV	Pre- goal motivation	Proofreading; debt repayment; weight loss	Lab experiments	for specific goals, the end state tends to be more salient, but for nonspecific goals, the initial state should be more salient.
Huang & Zhang, 2011	goal distance	DV	Pre- goal motivation	Volunteering; Performance test	Field and lab experiments	explore the interplay between consumers' progress levels toward attaining a goal and the perceived velocity in progressing toward the goal to determine consumers' motivation for further goal pursuit.
Kivetz et al., 2006	goal distance	DV	Pre- goal effort	Café Reward program	Field experiments	people working toward future rewards would accelerate their effort as they near the reward. This acceleration also predicts loyalty and future engagements.
Jin, Huang, Zhang. 2013;	goal structure: fixed sequence vs. flexible sequence	DV	Pre- goal motivation	yogurt shop loyalty program; Trip planning	Field and lab experiments	although the requirement to complete all goal-related actions following a fixed sequence discourages consumers from adopting the goal, this rigidity turns out to be more effective in inducing actual goal completion.
Jin, Xu, Zhang 2015	sub-goal sequence: easy-to-difficult vs. difficult-to-easy	DV	Pre- goal motivation	Exercise; yogurt shop loyalty program	Field and lab experiments	consumers are actually more successful when they follow an easy-to-difficult sequence when completing sub-goals
Campbell & Warren, 2014;	progress bias in goal monitoring	DV	Pre- goal motivation	Exercise, eating, saving money	Lab experiments	goal-consistent behaviors help progress more than goal-inconsistent behaviors of the equivalent size hurt it.

Bagchi & Li, 2010	goal framing	DV	Pre- goal motivation	Grocery store; Restaurant	Lab experiments	when ambiguity is high, only reward distance affects inferences. When ambiguity is lower, consumers integrate step size with reward distance, but in a biased manner.
Koo & Fishbach, 2012	goal framing	DV	Pre- goal motivation	Restaurant/Coffee loyalty program; word completion task	Field and lab experiments	individuals striving toward a goal end state exhibit greater motivation when their attention is directed to whichever is smaller in size—their accumulated or remaining progress.
Woolley & Fishbach, 2016	immediate/delayed rewards	DV	Pre- goal motivation	Exercise; eating	lab experiments	immediate rewards are stronger predictors of activity persistence than delayed rewards.
Zhang, Xu, Jiang, Huang, 2011	goal type: autonomous vs. imposed	DV	consumers' initial effort investment in pursuing a goal	Essay reading; environmental issues; choosing movies	lab experiments	consumers' initial effort investment in pursuing a goal may increase or decrease the value of the goal and the consumer's subsequent motivation, depending on whether the pursuit of the goal is perceived to be one's autonomous choice.
Yang, Stamatogiannakis, & Chattopadhyay, 2015	goal type: attainment vs. maintenance	DV	Pre- goal motivation	Saving money; Learning; Website use	Field and lab experiments	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.
Soman & Cheema, 2004	Post- goal-completion	IV	goal failure	Saving money; Proofreading task	Lab experiments	violating one's goal may cause a deterioration of subsequent performance as compared to individuals who have no goals.
Wagner, Hennig-Thurau, & Rudolph, 2009	Post- goal-completion	IV	Status Demotion	Loyalty program of retail company	Field and lab experiments	changes in customer status have an asymmetric negative effect, such that the negative impact of customer demotion is stronger than the positive impact of status increases.
Dreze and Nunes 2011	Post- goal-completion	DV and IV	Post- goal effects	Loyalty program of airline company	Field and lab experiments	examine the impact of successfully attaining a goal on future effort directed at attaining the same goal. Goal progress enhances perceptions of self-efficacy and self-learning is the principle mechanism.

Wang, Lewis, Cryder, & Sprigg, 2016	Post- goal-completion	IV	Goal success or goal failure	Loyalty program of hotel company	Field experiment	goal attainment significantly increased post-promotion purchasing whereas goal failure significantly reduced post-promotion purchasing. Customers in a high status tier are most affected by goal failure whereas customers in a low status tier are most affected by goal success.
This study	Goal type: attainment vs. maintenance; Post-goal-completion magnitude	IV	Goal success magnitude under different goal type	Loyalty program of airline company	Field and lab experiments	(1) individuals who failed (vs. succeeded) at achieving an attainment goal will put more (vs. less) effort into subsequent goal pursuit than individuals who failed (vs. succeeded) at fulfilling a maintenance goal; (2) a linear effect under the maintenance goal, such that the more one completed his/her previous goal, the more effort he/she will invest in the subsequent goal cycle; (3) a reverse U-shaped effect under the attainment goal, such that substantial goal achievement in the previous goal cycle creates a surprising hampering effect on subsequent goal pursuit. Instead, moderate achievement of the previous goal leads to the most effort invested in subsequent goal pursuit;

TABLE 2: STUDY 1 - DESCRIPTIVE STATISTICS AND RESULTS

	Mean	S.D.	Min	Max	1	2	3	4
1: AttainmentGoal	.664	.473	0	1				
2: GoalCompletionMagnitude	-.208	.489	-1	1	.105* * *			
3: RedemptionFlag	.390	.488	0	1	.170* * *	.134* * *		
4: FlightCount2016	2.974	2.398	0	23	.352* * *	.314* * *	.334* * *	
5: FlightCount2017	3.041	2.910	0	21	.325* * *	.336* * *	.248* * *	.527* * *

*p<.1; **p<.05; ***p<.01

TABLE 3: STUDY 1 - ESTIMATION RESULTS OF FLIGHT COUNT FOR INTERPLAY
BETWEEN GOAL TYPE AND GOAL COMPLETION MAGNITUDE

	Dependent variable:
	Flight Count 2017
Intercept	.389*** (.331, .447)
	[13.041]
GoalCompletionMagnitude	1.382*** (1.261, 1.502)
	[22.500]
AttainmentGoal	.485*** (.422, .549)
	[14.975]
GoalCompletionMagnitude^2	.125 (-.090, .340)
	[1.142]
FlightCount2016	.122*** (.113, .130)
	[27.795]
RedemptionFlag	.123*** (.081, .165)
	[5.733]
AttainmentGoal*GoalCompletionMagnitude	-1.162*** (-1.290, -1.034)
	[-17.816]
AttainmentGoal*GoalCompletionMagnitude^2	-.426*** (-.657, -.196)
	[-3.622]
Observations	5,719
Log Likelihood	-11,392.870
theta	4.660*** (.235)
Akaike Inf. Crit.	22,801.740

*p<.1; **p<.05; ***p<.01;
Notes: Confidence intervals appear in (). z-values appear in []. Results are from NBD model with fight
count as dependent variable.

TABLE 4: STUDY 1 - ESTIMATION RESULTS OF FLIGHT COUNT FOR GOAL COMPLETION MAGNITUDE UNDER MAINTENANCE GOAL AND ATTAINMENT GOAL

	Dependent variable:	
	Flight Count 2017	
	Under maintenance goal:	Under attainment goal:
	(1)	(2)
Intercept	.260*** (.177, .343)	.915*** (.864, .967)
	[6.147]	[34.968]
GoalCompletionMagnitude	1.325*** (1.191, 1.460)	.230*** (.184, .276)
	[19.342]	[9.842]
GoalCompletionMagnitude^2	.193* (-.036, .422)	-.308*** (-.391, -.225)
	[1.651]	[-7.256]
FlightCount2016	.170*** (.148, .191)	.112*** (.103, .121)
	[15.299]	[23.667]
RedemptionFlag	.100** (.001, .200)	.126*** (.080, .172)
	[1.973]	[5.335]
Observations	1,924	3,795
Log Likelihood	-3,003.459	-8,374.253
theta	3.400*** (.349)	5.061*** (.291)
Akaike Inf. Crit.	6,016.917	16,758.510

*p<.1; **p<.05; ***p<.01;
Notes: Confidence intervals appear in (). z-values appear in []. Results are from NBD model with fight count as dependent variable.

TABLE 5: STUDY 1 - ESTIMATION RESULTS OF FLIGHT MILES FOR INTERPLAY BETWEEN GOAL TYPE AND GOAL COMPLETION MAGNITUDE

	Dependent variable:
	Flight Miles 2017
Intercept	5.150^{***} (4.856, 5.444)
	[34.316]
GoalCompletionMagnitude	4.308^{***} (3.788, 4.827)
	[16.255]
AttainmentGoal	1.523^{***} (1.279, 1.767)
	[12.222]
GoalCompletionMagnitude^2	1.835^{***} (1.047, 2.623)
	[4.562]
FlightMiles2016	$.231^{***}$ (.201, .260)
	[15.459]
RedemptionFlag	$.485^{***}$ (.313, .657)
	[5.520]
AttainmentGoal*GoalCompletionMagnitude	-3.765^{***} (-4.319, -3.210)
	[-13.297]
AttainmentGoal*GoalCompletionMagnitude^2	-2.522^{***} (-3.392, -1.651)
	[-5.678]
Observations	5,719
Adjusted R^2	.251
Residual Std. Error	3.123 (df = 5711)
F Statistic	274.635^{***} (df = 7; 5711)

*p<.1; **p<.05; ***p<.01;
Notes: Confidence intervals appear in (). t-values appear in []. Results are from OLS model with fight miles as dependent variable.

TABLE 6: STUDY 1 - ESTIMATION RESULTS OF FLIGHT MILES FOR GOAL COMPLETION MAGNITUDE UNDER MAINTENANCE GOAL AND ATTAINMENT GOAL

	Dependent variable:	
	Flight Miles 2017	
	Under maintenance goal:	Under attainment goal:
	(1)	(2)
Intercept	5.002*** (4.588, 5.417)	6.909*** (6.498, 7.321)
	[23.633]	[32.934]
GoalCompletionMagnitude	4.222*** (3.587, 4.858)	.559*** (.380, .738)
	[13.032]	[6.119]
GoalCompletionMagnitude^2	1.829*** (.879, 2.780)	-.709*** (-1.035, -.384)
	[3.773]	[-4.269]
FlightMiles2016	.240*** (.195, .285)	.209*** (.167, .252)
	[10.554]	[9.735]
RedemptionFlag	.708*** (.316, 1.101)	.405*** (.227, .584)
	[3.535]	[4.455]
Observations	1,924	3,795
Adjusted R^2	.231	.064
Residual Std. Error	3.765 (df = 1919)	2.741 (df = 3790)
F Statistic	145.018*** (df = 4; 1919)	65.476*** (df = 4; 3790)

*p<.1; **p<.05; ***p<.01;
Notes: Confidence intervals appear in (). t-values appear in []. Results are from OLS model with fight miles as dependent variable.

TABLE 7: STUDY 2B - LOGISTIC REGRESSION RESULTS

	Dependent variable:
	ViewTip
MaintenanceGoal	-.906* (.531)
ModerateGoalCompletion	-.400 (.491)
HighGoalCompletion	-.931* (.518)
Age	-.029** (.015)
GenderMale	.383 (.294)
MaintenanceGoal* ModerateGoalCompletion	.737 (.755)
MaintenanceGoal* HighGoalCompletion	1.816** (.727)
Constant	.952 (.697)
Observations	205
Log Likelihood	-132.852
Akaike Inf. Crit.	281.704

Note: *p<.1; **p<.05; ***p<.01

TABLE 8: STUDY 2B - TOBIT REGRESSION RESULTS

	Dependent variable:
	TimeOnTip
MaintenanceGoal	-36.358[*] (20.510)
ModerateGoalCompletion	-9.966 (18.477)
HighGoalCompletion	-37.014[*] (19.852)
Age	-1.050[*] (.554)
GenderMale	5.290 (11.315)
MaintenanceGoal* ModerateGoalCompletion	21.548 (29.105)
MaintenanceGoal* HighGoalCompletion	71.089[**] (28.075)
Constant	20.499 (31.454)
Observations	205
Log Likelihood	-535.271
Akaike Inf. Crit.	1088.541

FIGURE 1: STUDY 1 - VISUALIZATION OF GOAL COMPLETION MAGNITUDE EFFECT
BASED ON STUDY 1 MAIN MODEL ESTIMATES
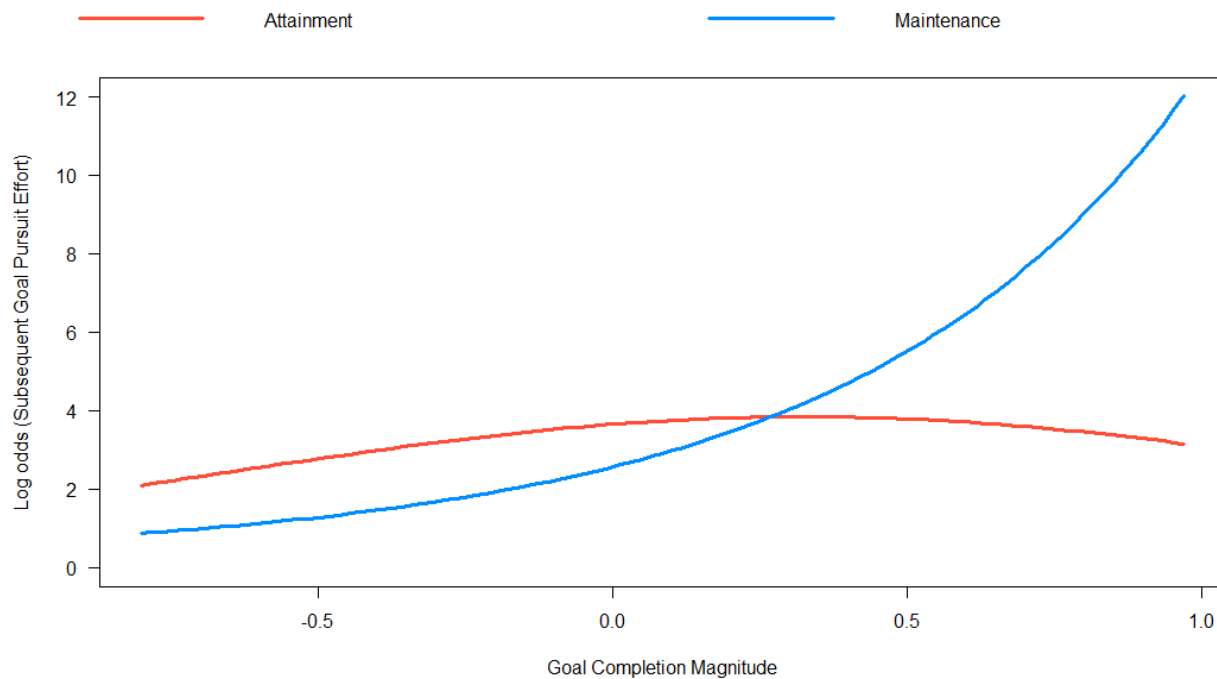
Notes: This graph is based on the predicted effects from the main model in Study 1 (i.e., NBD model with fight count as
dependent variable). The red line represents the effect of goal completion magnitude under the attainment goal while the blue line
represents the effect under the maintenance goal.

FIGURE 2: STUDY 1 - FLOODLIGHT ANALYSIS BASED ON FLIGHT COUNT
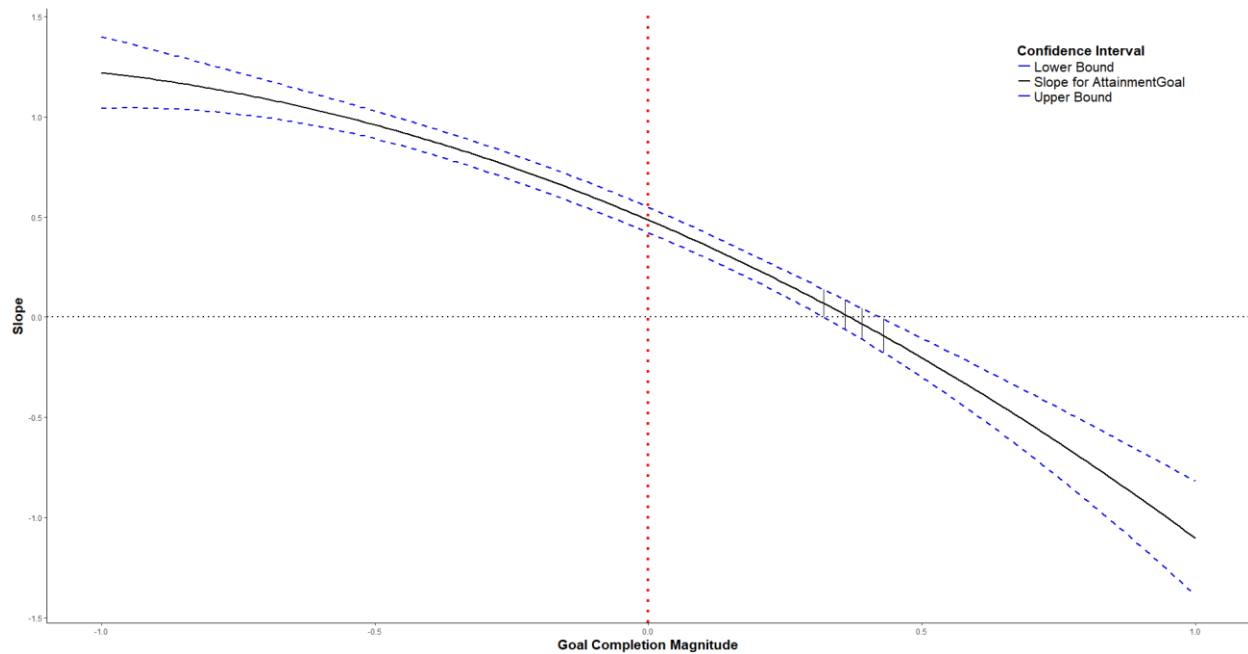
Notes: This graph is based on the slope of attainment goal from the main model in Study 1 (i.e., NBD model with fight count as dependent variable). Maintenance goal is used as reference group. The left part reflects goal failure (i.e., goal completion magnitude < 0) and the right part reflects goal success (i.e., goal completion magnitude ≥ 0). The shading area ranging from .33 to .42 in the right part suggests non-significant regions.

FIGURE 3: STUDY 1 - FLOODLIGHT ANALYSIS BASED ON FLIGHT MILES
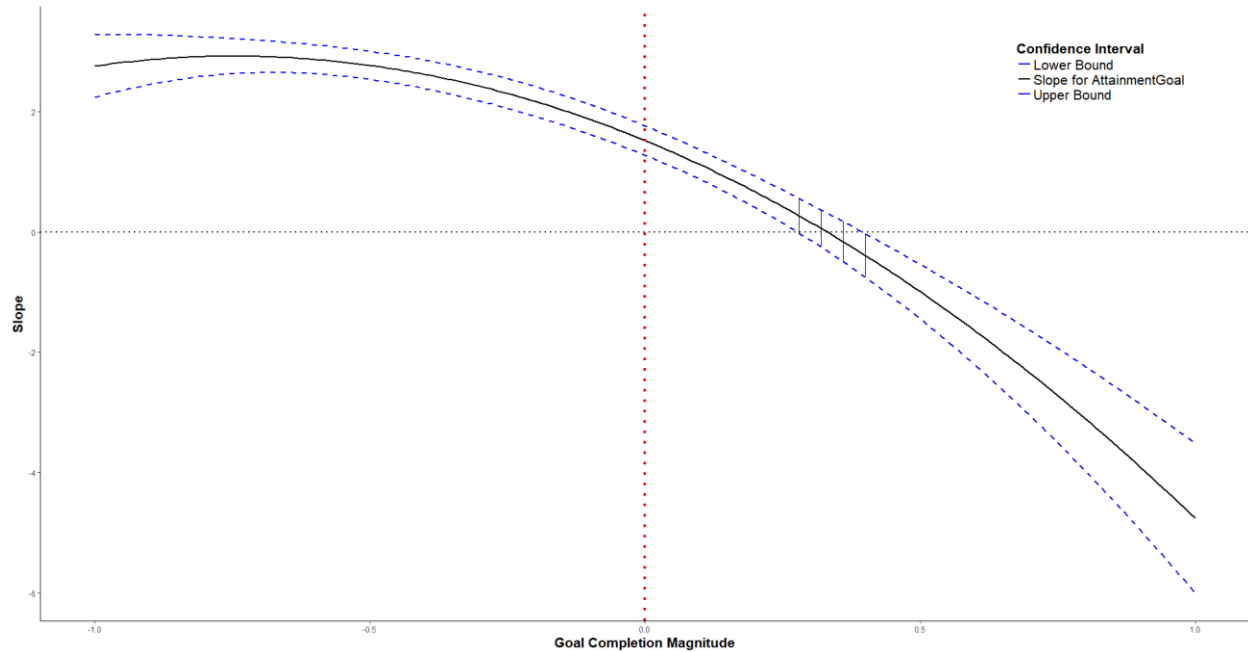
Notes: This graph is based on the slope of attainment goal from the robustness check model in Study 1 (i.e., OLS model with fight miles as dependent variable). Maintenance goal is used as reference group. The left part reflects goal failure (i.e., goal completion magnitude < 0) and the right part reflects goal success (i.e., goal completion magnitude ≥ 0). The shading area ranging from .28 to .39 in the right part suggests non-significant regions.

FIGURE 4: STUDY 2A - THE MEDIATION EFFECT OF NEGATIVE EMOTION AND
SELF-EFFICACY FROM GOAL TYPE TO TIP READING CHOICE
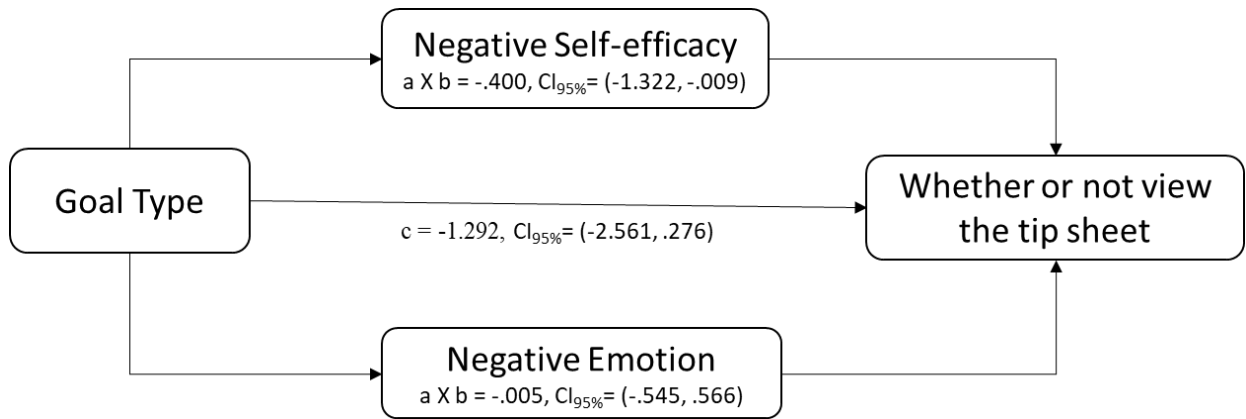
FIGURE 5: STUDY 2A - THE MEDIATION EFFECT OF NEGATIVE EMOTION AND SELF-EFFICACY FROM GOAL TYPE TO TIP READING TIME
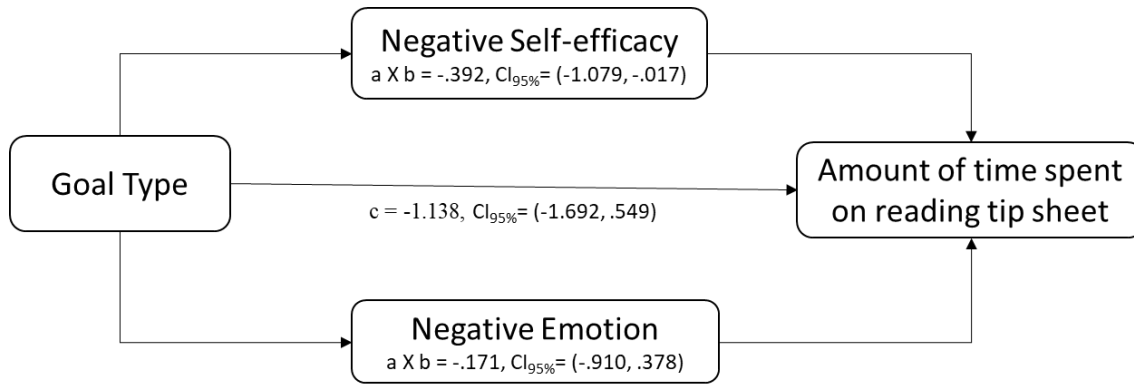
APPENDICES

APPENDIX A - INTRODUCTION

Imagine you are a member of the loyalty program for XYZ Hotels, a multinational diversified hospitality company. Its loyalty program offers various benefits depending on the member's tier level as shown in the table below. Your membership level is determined by the number of qualified nights at the end of each calendar year.

Member Levels	Basic level	Silver level	Gold level	Platinum level
Qualified nights	At enroll-ment	>=10 nights per calendar year	>=20 nights per calendar year	>=30 nights per calendar year
Member Benefits				
Free Wi-Fi	☑	☑	☑	☑
Late check-out	✘	☑	☑	☑
Early check-in	✘	✘	☑	☑
Free breakfast	✘	✘	☑	☑
In-room welcome gift	✘	✘	✘	☑
Free room upgrade upon available	✘	✘	✘	☑
Birthday free night	✘	✘	✘	☑
Access to Executive lounge	✘	✘	✘	☑

APPENDIX B - GOAL MANIPULATION

Based on the number of nights you stayed at XYZ Hotels, you qualified for the <u>Silver Level</u> last year.

Goal Framing (attainment goal in [square brackets]):

Suppose it is now the end of September, with three more months to go in the year. Your stays during this year so far puts you in the <u>Basic</u> [Silver] Level, and you are a few nights away from reaching the <u>Silver</u> [Gold] Level.

Before the year is over, you would like to try your best to <u>keep the same membership tier as last year</u> [reach as high of a membership level as possible] in order to enjoy the same [higher] benefits. That is, you want to <u>maintain the Silver Level</u> [achieve at least the Gold Level] as shown in the graph below:
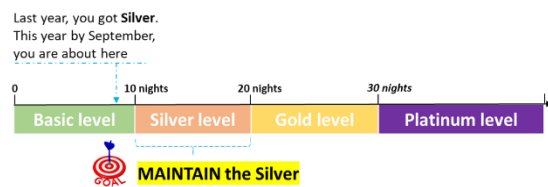
APPENDIX C - GOAL PURSUIT OUTCOME

Study 2a: Goal failure (attainment goal in [square brackets]):

Now imagine, at the end of this year, you stayed 9[19] nights eventually, which was not quite

enough to get you to the Silver [Gold] Level you were aiming for.

Study 2b: Goal Success (attainment goal in [square brackets]):

Goal Type* Low success: Now imagine, at the end of this year, you stayed 10 [20] nights

eventually, which won you the Silver [Gold] level.

 Goal Type * Moderate success: Now imagine, at the end of this year, you stayed 14 [24] nights

eventually, which won you the Silver [Gold] level.

Goal Type * High success: Now imagine, at the end of this year, you stayed 19 [29] nights

eventually, which won you the Silver [Gold] level.

ESSAY 2

PERSONALIZATION OF EMAIL MARKETING IN LOYALTY PROGRAM

ABSTRACT

Although personalization of email marketing has many advantages to business practice, how to operate personalization and further improve the marketing message persuasiveness is challenging. In particular, limited attention has been paid to how consumers' behavior within a loyalty program can be leveraged to design effective personalized messages. Applying construal level theory to two different distance dimensions, the present research examines how goal distance (i.e., construal level owing to a horizontal dimension) and tier level (i.e., construal level owing to a vertical dimension) jointly moderate individuals' behavioral responses to different types of email messages during their goal pursuit process in a major airline's multi-tiered loyalty program. Specifically, I analyzed 240 email campaign messages that were sent to 19,281 loyalty program members from September 2016 to December 2016. Through these messages, the present study attempts to investigate the relative effectiveness of using cognitive vs. emotional appeals and abstract vs. concrete framing contingent on each member's goal distance and tier level. The present research enriches persuasion theory and deepens the understanding of goal-related behaviors and mental construal level formation in the goal pursuit process. It also sheds light on how loyalty program managers can better personalize communications with program members based on their position within the program.

INTRODUCTION

Advances in information technology have significantly reduced the cost of information dissemination, acquisition, and processing for both firms and consumers (Alba et al. 1997; Kulkarni 2000; Stewart 1995). The increasing availability of digitized data makes personalization of promotional campaigns easier and more affordable to businesses (Aguirre et al. 2015; Chung, Rust, and Wedel 2009; Chung and Wedel 2014; Wedel and Kannan 2016). Personalized marketing messages have the potential to provide consumers with improved products and services (Aguirre, Mahr, Grewal, de Ruyter, & Wetzels, 2015), reduce consumers' cognitive overload (Ansari and Mela 2003), and generate a better preference match (Vesanen 2007). These in turn translate into higher customer satisfaction and loyalty (Rust and Chung 2006). When personalization is done properly, the effectiveness of the marketing message can double that of non-personalized versions (Tucker 2014).

Personalization of marketing messages can be particularly important in the loyalty program context for a few reasons. First, as loyalty programs aim to maintain and improve long-term relationships between customers and firms (Kumar and Shah 2004; Wagner, Hennig-Thurau, and Rudolph 2009), the ability of personalized communications to increase customer loyalty is particularly conducive to such objectives. Second, the vast amount of data captured through loyalty programs give firms the background information needed to design effective personalized messages. Finally, personalization through a loyalty program context can alleviate the "personalization paradox" (Aguirre et al. 2015), which refers to personalization's ability to increase messaging effectiveness and yet simultaneously evoke consumers' privacy concerns (Goldfarb and Tucker 2012; Tucker 2012). Loyalty program members have been found to exhibit higher willingness to share their personal information with the company and allow the company

to use their personal information to communicate (Jai and King 2016). This high level of trust can help render the personalization tactic more effective (Awad and Krishnan 2006; Stathopoulou and Balabanis 2016).

Although personalized marketing messages are particularly suitable in the loyalty program context, limited attention has been paid to *how* consumers' behavior within a loyalty program can be leveraged to design effective personalized messages. This research aims to address this gap. I utilized email campaign data from a major airline's multi-tiered loyalty program to examine members' behavioral responses to different types of email messages during their goal pursuit process, and further investigate how goal distance (i.e., how far one is from reaching a tier goal) and tier level jointly moderate this relationship (see Figure 1). Specifically, (1) drawing on construal level theory (Liberman, Sagristano, and Trope 2002; Trope and Liberman 2003), I propose that goal distance, which reflects temporal and spatial distance, serves as a horizontal dimension in forming one's mental construal level; (2) drawing on research on grounded cognition (Asch 1958; Lakoff and Johnson 1999), I propose that tier level in a hierarchical loyalty program reflects a program member's psychological height and hence serves as a vertical dimension in forming one's mental construal level. These two dimensions take effects simultaneously and generate an individual's final mental construal level that subsequently influences the persuasiveness of a marketing message. In particular, the type of appeal (cognitive versus emotional) and abstract versus concrete framing of the message will be differentially effective depending on the mental representational state owing to horizontal goal distance and psychological height induced by the vertical tier level in a hierarchical structure.

Insert Figure 1 about Here

The present study contributes to marketing research and practice in several ways. First, this study extends research stream in terms of email marketing and email message personalization, echoing Sahni, Wheeler and Chintagunta (2018)'s call for more research with regard to personalization in email marketing. Specifically, this study serves as the first of its kind to unveil how email message type influences loyalty program members' responses contingent on the members' goal distance and tier level in the program. This enriches the understanding of how to leverage goal-relevant behaviors to design effective personalized email messages. Second, this study integrates goal pursuit theory, construal level theory and research on grounded cognition into one framework and takes into account contextual, situational, and individual difference aspects respectively. This extends construal level theory and deepens the understanding of email-based persuasion in a multifaceted environment. Finally, by analyzing large-scale observational data from a major airline's loyalty program, the research complements previous lab-experiment based investigations in relevant domains and provides practical insights into effective personalization of email marketing campaigns in loyalty programs.

LITERATURE REVIEW

Personalization refers to adaptation of the marketing mix such as product/service offerings and promotion to reflect an individual customer's needs based on the marketer's existing knowledge of the customer, aiming to maximize immediate and future business opportunities (Khan, Lewis, and Singh 2009; Montgomery and Smith 2009; Tam and Ho 2006). Wedel and Kannan (2016) summarized three main methods of personalization including (1) pull personalization (i.e., provides a personalized product or service to respond to a customer's explicit request), (2) passive personalization (i.e., displays personalized information on the product or service) and (3) push personalization (i.e., sends a personalized product or service directly to the customer without his or her explicit request). The authors further divided each type of personalization into three levels including (1) mass personalization (i.e., personalize marketing mix based on customers' average taste and all customers receive the same offering), (2) segment-level personalization (i.e., personalize marketing mix based on groups of consumers with homogeneous preferences and all consumers in one segment receive the same offering) and (3) individual-level personalization (i.e., personalize marketing mix based on each customer's tastes and behaviors).

Prior to the Internet age, personalization already existed in practice through forms such as personalized cover letters and follow-up post reminders in mailings and surveys (Cox III, Anderson Jr, and Fulcher 1974; Petrison, Blattberg, and Wang 1997). Today researchers still show considerable interest in the effect of personalization tactics in direct mails (Bertrand et al. 2010; Sudhir, Roy, and Cherian 2016). In the meantime, the Internet has greatly enhanced the convenience and affordability of personalization for companies and has made tailored communication and offerings to consumers easier than ever (Thorbjørnsen et al. 2002). Among

different Internet-based tools, email marketing has been widely used owing to its significant advantages such as low cost (Rettie and Chittenden 2003), low preparation efforts and time, faster response, and interactive communication opportunities (Zhang, Kumar, and Cosguner 2017). Email marketing has also proven to be financially profitable. Companies with an effective email marketing program have been found to generate drastic ROI improvement over time (Zhang, Kumar, and Cosguner 2017).

Although personalization plays an undoubtedly important role in email marketing, how to operate the personalization and further improve the message persuasiveness is challenging (Sahni, Wheeler and Chintagunta 2018). Existing persuasion theories such as dual-process models aim to answer how marketing messages influence consumers' judgments and preferences and thereby improve persuasion (Petty and Cacioppo 1986). However, no single theory or existing framework can explain the varied and even conflicting persuasion findings (Meyers-Levy and Malaviya 1999). Persuasion is believed to be a complex process contingent on contextual, situational, and individual differences (Forgas 1995; MacInnis and Jaworski 1989). From the perspective of situational factors, marketing scholars increasingly apply construal level theory to investigate the persuasiveness of marketing message (see e.g., Agrawal and Wan 2009; Han, Duhachek, and Agrawal 2016; Hernandez, Wright, and Ferminiano Rodrigues 2015; Kim, Rao, and Lee 2008; Septianto and Pratiwi 2016; Ülkümen and Cheema 2011; White, MacDonnell, and Dahl 2011). Construal level theory (Liberman, Sagristano, and Trope 2002; Trope and Liberman 2003) describes the effect of psychological distance on the extent to which individuals' thinking is abstract or concrete toward the focal object or event. As psychological distance increases, construal level becomes higher. The different mental construal levels further lead to differences in processing information. Specifically, a high construal level is often associated with abstract

thinking. People with a high construal level tend to focus on central features and highlight the bigger picture of the situation in their mind. On the contrary, a low construal level is often associated with concrete thinking, focusing on details and the present situation. At a low construal level, people tend to pay close attention to peripheral or secondary features (Trope and Liberman 2011). For example, applying construal-level theory, White, MacDonnell, and Dahl (2011) suggest a match between loss- versus gain-framed message and individual' construal level state is more effective in influencing consumer recycling behaviors.

Beyond the research on how one's mental construal level influences his or her information processing behavior, several studies have examined how one's mental construal level can be influenced (Aggarwal and Zhao 2015; Lee et al. 2014; Van Kerckhove, Geuens, and Vermeir 2014). For example, Van Kerckhove, Geuens, and Vermeir (2014) found that looking up or down could affect individuals' construal level. The downward head and eye movements were found to evoke more concrete information processing behavior while upward head and eye movements evoke more abstract information processing behavior. Aggarwal and Zhao (2015) investigated the effect of physical height on individuals' mental construal levels. They found that individuals with a higher physical height perception adopt a higher construal level whereas individuals with a lower physical height perception adopt a lower construal level.

Although construal level theory has been extensively studied in both social psychology and consumer research, few studies apply construal level theory in the goal pursuit process, except for a few studies that linked construal level theory with goal framing (Lee, Keller, and Sternthal 2009; Ülkümen and Cheema 2011). The goal theory suggests that one's goal pursuit process typically involves mentally imagining the steps that are required to achieve the end goal (Bayuk, Janiszewski, and Leboeuf 2010; Gollwitzer 1999), which naturally reflects psychological distance

changes as one moves along the goal pursuit process. Therefore, in the goal pursuit process, situational factors may affect an individual's mental construal level and subsequently play an important role in how the individual processes marketing messages. In addition, a few existing studies investigated how physical body movements or physical height perception could affect individuals' mental construal level. However, factors related to psychological height such as status, privilege and priority are relatively under-researched. I argue that these psychological height factors can also significantly affect individuals' mental construal level and consequently influence persuasion effectiveness. Integrating goal pursuit theory, construal level theory and research on grounded cognition, I investigate how goal distance and tier level jointly moderate individuals' behavioral responses to email messages during their goal pursuit in a major airline's multi-tiered loyalty program. Specifically, I investigate the relative effectiveness of (1) cognitive vs. emotional appeals and (2) abstract vs. concrete message framing as one gets closer to one's goal and when one reaches different tier levels.

HYPOTHESIS DEVELOPMENT

Abstractness vs. Concreteness framing

Previous research on persuasion suggests that messages that fit individuals' mental representational state tend to be more persuasive (Lee and Aaker 2004; Schwarz and Clore 1983; Thompson and Hamilton 2006). As individuals encounter messages that are consistent with their mental representational state, they are more likely to experience a sense of "feeling right", which enhances persuasion (Reber, Schwarz, and Winkielman 2004). One important aspect of this mental representational state is the relative focus on the abstract versus the concrete. According to action identification theory (Vallacher and Wegner 2014; Wegner et al. 1984), any action can be represented in memory at either an abstract, high level (i.e., specifies why one acts), or a concrete, low level (i.e., specifies how one acts). For example, driving can be interpreted either abstractly as a means of transportation or concretely as a sequence of mechanical activities such as engaging the gear and tapping on the gas pedal (Kim, Rao, and Lee 2008).

According to construal-level theory, the psychological distance from a future event may impact whether the event is interpreted in people's mind in abstract or concrete manner (Trope and Liberman 2003). When psychological distance increases (vs. decreases), the importance of the superordinate "why" (vs. subordinate "how") increases (Sagristano, Trope, and Liberman 2002). Correspondingly, messages that focus on the abstract "why" (vs. the concrete "how") become more appropriate (Freitas, Salovey, and Liberman 2001; Fujita et al. 2006; Kim and John 2008; Vallacher and Wegner 1989). For example, Kim, Rao, and Lee (2008) examined the interaction between message type and temporal distance on the persuasiveness of political candidates. They found that messages framed with abstract themes are more persuasive when voting is temporally

distant, while messages framed with concrete issues are more persuasive when voting is temporally close.

Cognitive vs. Emotional Appeals

Another message element that may work differently depending on individuals' mental representational state is the use of cognitive versus emotional appeals. Both cognitive and emotional appeals have been widely used in marketing messages to induce attitude change and improve persuasiveness (Clarkson, Tormala, and Rucker 2011; Fabrigar and Petty 1999; Maio and Haddock 2007). An emotional appeal generally highlights the affective experiences of owning or using the advertised product or service, whereas a cognitive appeal often highlights the utilitarian and functional values of the advertised product or service itself (DeBono 2006; Snyder and DeBono 1985). A company's offering can be presented using either cognitive or emotional appeals (Clarkson, Tormala, and Rucker 2011). For example, an automobile advertisement can highlight an exciting driving experience with a focus on emotional appeals or an efficient fuel system with a focus on cognitive appeals.

The persuasiveness of cognitive vs. emotional appeals depends on whether there is a match between the appeal type and the recipient's affective or cognitive state (Maio and Haddock 2007). Existing studies suggest that people with a closer psychological distance are more likely to generate emotional responses (Trope and Liberman 2010; Van Boven et al. 2010; Van Boven and Ashworth 2007). Consequently individuals are more likely to respond to emotional stimulus when the focal event is closer to them than when it is far (Trope and Liberman 2010). Furthermore, existing research suggests that individuals with a low-level construal can feel emotion more intensely than those with a high-level construal, and they subsequently evaluate an emotionally

framed message more favorably than they do a cognitively framed message (Septianto and Pratiwi 2016).

Goal Distance

Goal theory suggests that one needs to go through two stages to achieve his or her end goal: goal setting and goal striving (Bagozzi and Dholakia 1999). Goal setting is a pre-decisional appraisal process leading to the establishment of goal intention (Lawrence, Carver, and Scheier 2002). Goal striving includes goal implementation processes in which individuals conduct instrumental acts to attain and maintain their goals. During the goal pursuit process, an individual would keep a mental image of the steps needed as he or she gets closer to the goal (Bayuk, Janiszewski, and Leboeuf 2010; Gollwitzer 1999).

Goal distance has been widely studied in terms of the goal-gradient hypothesis (Brown 1948; Kivetz, Urminsky, and Zheng 2006; Losco and Epstein 1977) or the goal-looms-larger effect (Brendl and Higgins 1996; Förster, Higgins, and Idson 1998), referring to the phenomenon where people increase their motivation as they get closer to the end goal. For example, in the context of a coffee-shop frequent-buyer program, Kivetz, Urminsky and Zheng (2006) found that consumers shorten their purchase intervals as they get closer to the reward, suggesting a stronger purchase motivation. This phenomenon has a number of theoretical explanations such as Gestalt psychology (i.e., people desire for closure more when they are close to the end goal [Schiffman & Greist-Bousquet, 1992]), prospect theory (i.e., the closer consumers are to the end goal, the greater marginal value they allocate to the goal outcome [Heath, Larrick, & Wu, 1999]), and goal-looms-larger effect (Brendl and Higgins 1996; Förster, Higgins, and Idson 1998). These theories consistently suggest that an individual is occupied with different mental states as he or she gets closer to the goal.

Applying construal level theory, I argue that goal distance serves as a horizontal dimension to construct individuals' mental construal level in their goal pursuit process. When goal distance is large, people tend to adopt a high construal level, whereas a low construal level is likely to be adopted when goal distance is small. In conjunction with the earlier discussion regarding the matching between emotional (vs. cognitive) appeals and low (vs. high) construal level and between concrete (vs. abstract) message framing and low (vs. high) mental construal level, I propose the following two hypotheses:

H1: *The persuasiveness of abstract vs. concrete framing in email marketing message is moderated by goal distance, such that a concrete message framing is more persuasive when goal distance is small whereas an abstract message framing is more effective when goal distance is large.*

H2: *The persuasiveness of cognitive vs. emotional appeals in email marketing messages is moderated by goal distance, such that a message focusing on emotional appeals is more persuasive when goal distance is small whereas a message focusing on cognitive appeals is more effective when goal distance is large.*

Tier Level

Most studies of construal level theory have focused on a single dimension of psychological distance, and the influence of multiple dimensions is under-researched (see Chandran and Menon, 2004; Kim, Zhang, and Li 2008; Maglio, Trope, and Liberman 2013; Zhao and Xie 2011 for exceptions). During one's goal pursuit process in a hierarchical loyalty program, the determination of construal level is complex and involves multiple dimensions. I argue that tier level can serve as an additional important vertical dimension in shaping up one's mental construal level. Tier

hierarchy is an important feature of loyalty program. Such a hierarchical structure reflects "patterned inequalities" among a group of people (Ridgeway and Walker 1995) and a verticality nature in terms of status, privilege and priority. The differentiated benefits offered to higher tier members can include hard, tangible benefits such as free upgrades, larger rewards and lower prices, or soft, intangible benefits and special privileges such as priority boarding, preferential access and individually tailored communications (Dreze and Nunes 2008).

Previous research shows that the perception of physical height can affect one's mental construal level. For example, Aggarwal and Zhao (2015) found that individuals who perceive themselves as physically "high" tend to have a higher construal level and adopt a global perceptual processing. In contrast, individuals who perceive themselves as physically "low" tend to have a lower construal level and adopt a local perceptual processing. Applying this logic, one's position in a vertical hierarchical structure can reflect a sense of psychological height and may also influence the individual's mental state. Supporting this view, a few existing studies on verticality characteristics suggest that people tend to perceive "up" as more powerful and "down" as less powerful (Meier and Dionne 2009), and that individuals associate "high" and "low" with higher and lower judgement ability respectively (Sun, Wang, and Li 2011). In addition, individuals at a higher tier level in a loyalty program are often provided with more intangible soft benefits (Henderson, Beck, and Palmatier 2011), which can further elicit a sense of psychological height as intangible attributes have been found to be associated with a high construal level and tangible attributes with a low construal level (Ding and Keh 2017). Based on the preceding discussion, I expect that loyalty program members at a higher tier level are more likely to adopt a high level of mental construal and those at a lower tier level are more likely to adopt a low level of mental construal.

While goal distance and tier level can individually affect an individual's construal level, they can also interact with each other and jointly determine the individual's final mental construal level during his or her goal pursuit in a loyalty program. One challenge associated with having such multidimensional determinants of construal level is that different dimensions may conflict with each other, with some leading to a high construal level while other dimensions eliciting a low construal level (Kim, Zhang, and Li 2008). My previous discussion suggests that loyalty program members tend to adopt a high (vs. low) construal level when goal distance is large (vs. small) and when they are in a high (vs. low) tier. However, members at a low tier level with a large goal distance and members at a high tier level with a small goal distance will have a conflict regarding the final construal level.

Existing studies suggest that when two dimensions of construal level operate simultaneously, people adopt a low overall mental construal level only when both dimensions are low, while all other combinations lead to a high overall mental construal level (Kim, Zhang, and Li 2008; Maglio, Trope, and Liberman 2013; Zhao and Xie 2011). For example, studying the joint effect of social and temporal distance on consumer evaluation, Kim, Zhang, and Li (2008) found that consumer evaluations are influenced more by attributes associated with a low-level construal when both dimensions are proximal. In contrast, consumer evaluations are influenced more by attributes associated with a high-level construal when either or both dimensions are distal. Following this line of thinking, I expect that the construal level effect from goal distance as hypothesized in H1 and H2 will be moderated by one's tier level. When tier level is low and hence also elicits a low construal level, small goal distance will lead to an overall low construal level as expected. In contrast, a high tier level, which leads to a contradictory high construal level, will

weaken the effect of goal distance such that a small goal distance will no longer lead to an overall low construal level. This leads to the hypothesis below.

> **H3a**: *The moderating effect of goal distance as hypothesized in H1 is further moderated by tier level, such that the moderating effect of goal distance on abstractness vs. concreteness framing message is weaker when the individual's tier level is high compared with when the individual's tier level is low.*

> **H3b**: *The moderating effect of goal distance as hypothesized in H2 is further moderated by tier level, such that the moderating effect of goal distance on cognitive vs. emotional appeal message is weaker when the individual's tier level is high compared with when the individual's tier level is low.*

METHODOLOGY

The Data

The data used in this study came from a major airline's multi-tiered frequent-flier program. For the purpose of confidentiality, the name of the firm is not disclosed here. This loyalty program features five membership tiers, including a bottom membership tier without special status and four premium tiers. Members' tier status for the following year (i.e., 2017) was determined by how many total miles and flight segments were accumulated in the previous year (i.e., 2016). Premium tiers entitle members to both hard and soft benefits such as higher miles earning ratio, fee waivers, upgrades, priority boarding, and preferential access. The data included 240 email campaign messages delivered to a total of 19,281 program members, which occurred on 52 different days between September 2016 and December 2016. Figure 2 depicted the distribution of email campaign messages over time. As this four-month time period was close to the end of the annual program cycle, program members were likely to possess a strong motivation toward their goal tier before time ran out.

Insert Figure 2 about Here

Variable Operationalization

Email Message Related Variables. Two judges coded the email messages to minimize the risk of subjective misinterpretation. Each coder coded all 240 email campaign messages in terms of (1) message framing (abstractness = 1; concreteness = 0), (2) message appeal (cognitive = 1; emotional = 0), (3) whether the email was a regular program account statement or not (yes = 1; 0 = no), and (4) whether the email was focused on promoting a program partner (coded as 1) or

the airline itself (coded as 0). Overall agreement was greater than 85%, and disagreement was resolved through discussion (Palmatier et al. 2006; Szymanski and Henard 2001). Besides the four variables above, a few other message characteristics were captured such as day of week and time of day when the message was delivered (Ellis-Chadwick and Doherty 2012) to control for the potential impact from these other message characteristics.

Goal Distance. I defined consumers' goal distance as their distance to the immediate next higher unreached tier at the time an email campaign message was sent. For example, if a consumer had surpassed the second tier threshold on September 8th, 2016 when he or she received an email campaign message, I defined the consumer's goal distance as the distance to the third tier. In addition, the program members who had already accumulated enough to achieve the highest tier (i.e., tier level five) at the beginning of September 2016 were excluded from the analysis, as these individuals had no further tier goal to pursue for the rest of that year. Following previous loyalty program research (Kivetz et al. 2006), I calculated each distance as a percentage measure equal to the difference between the current progress and the goal threshold divided by the total goal length (i.e., the threshold difference between the tier immediately below the goal tier and the goal tier). As the goal threshold can be reached by either accumulated miles or flight segments, I calculated goal distance as the larger of mileage-based distance and flight segment-based distance, as shown in Equation (1).

$$(1)\quad GoalDistance_{i,t}$$
$$= \max\left\{\frac{(ToDateMiles_{i,t} - MileThreshold_{i,t,j})}{(MileThreshold_{i,t,j} - MileThreshold_{i,t,j-1})}, \frac{(ToDateSegments_{i,t} - SegmentThreshold_{i,t,j})}{(SegmentThreshold_{i,t,j} - SegmentThreshold_{i,t,j-1})}\right\},$$

where *GoalDistance*$_{i,t}$ represented consumer *i*'s 2016 goal distance at the *t*th email campaign the consumer receives; *ToDateMiles*$_{i,t}$ and *ToDateSegments*$_{i,t}$ were consumer *i*'s total accumulated miles and segments in 2016 at *t*th email campaign respectively; *MileThreshold*$_{i,t,j}$ and

SegmentThreshold$_{i,t,j}$ represented the mile-based and segment-based threshold for the *j*th tier at the *t*th email campaign; and finally *j* was consumer *i*'s goal tier at the *t*th email campaign, *j*-1 was the tier immediately below the goal tier, and the differences in thresholds between these two tiers reflected the total number of miles/segments needed to move from the lower tier to the higher tier (i.e., goal length).

Tier Level and Other Customer Characteristics. Lastly, I extracted program members' tier level in the system at the time of receiving each email message. I also collected program members' individual information such as gender, age, preferred communication language, the channel through which they signed up for the program (airline website, airline mobile app, or a credit card partner), and how long they had been in the loyalty program as control variables.

The Model

The dataset featured an unbalanced panel data structure as different program members received different numbers of email messages. I employed a binary logit model with random-effects to test the hypotheses. The model is shown in equation (2) below:

(2) $\Pr(OpenFlag_{i,t} = 1 | \mathbf{X}_{i,t})$

$$= P(\beta_0 * MessageTypeAbstract_{i,t} + \beta_1 * MessageTypeCognitive_{i,t} + \beta_2$$

$$* GoalDistance_{i,t} + \beta_3 * TierLevel_{i,t} + \beta_4 * MessageTypeAbstract_{i,t}$$

$$* GoalDistance_{i,t} + \beta_5 * MessageTypeCognitive_{i,t} * GoalDistance_{i,t}$$

$$+ \beta_6 * MessageTypeAbstract_{i,t} * TierLevel_{i,t}$$

$$+ \beta_7 * MessageTypeCognitive_{i,t} * TierLevel_{i,t} + \beta_8 * GoalDistance_{i,t}$$

$$* TierLevel_{i,t} + \beta_9 * MessageTypeAbstract_{i,t} * GoalDistance_{i,t}$$

$$* TierLevel_{i,t} + \beta_{10} * MessageTypeCognitive_{i,t} * GoalDistance_{i,t}$$

$$* TierLevel_{i,t} + \sum_{j=1 \, to J} \gamma_j * X_{1j,t} + \sum_{k=1 \, to \, K} \delta_k * X_{2k} + \mu_i + \varepsilon_{i,t})$$

Where $P(z) = \{1 + \exp(-z)\}^{-1}$; $OpenFlag_{i,t}$ is a dummy variable indicating whether customer i opened the tth received email message; $MessageTypeAbstract_{i,t}$, $MessageTypeCognitive_{i,t}$, $GoalDistance_{i,t}$ and $TierLevel_{i,t}$, along with the interaction terms, represent the focal variables of interest. $X_{1j,t}$ represents the control variables related to the email message, including whether the email was a regular program account statement or not, whether the email was focused on promoting a program partner or the airline itself, day of week and time of day when the message was delivered; X_{2k} represents the control variables concerning customer i's characteristics, including gender, age, preferred communication language, the channel through which they signed up for the program, and how long they had been in the loyalty program; μ_i represents customer-specific random effects; and $\varepsilon_{i,t}$ represents the error term.

The Results

Table 1 shows the key variable definitions and descriptive statistics. The results from the panel logit model regression are displayed in Table 2. The analysis revealed a significantly positive interaction between goal distance and message framing (β=.128, p<0.01). To help illustrate the interaction, I looked at the simple slope (Spiller et al. 2013) for message framing under high vs. low goal distance. To avoid potential interference from membership tier, I conducted this analysis assuming the base tier, which represents the largest percentage (46%) of program members. The simple slope analysis showed that at zero goal distance, abstract framing versus concrete framing were equally effective in terms of email open rate (β = -.045; p=.186). In contrast, when goal distance was at the maximum possible distance of one, abstract framing was significantly more effective than concrete framing (β= .271, p<0.01). Therefore, H1 was partially supported.

Insert Table 1 about Here

Insert Table 2 about Here

Regarding message appeal type, the interaction between goal distance and message appeal type was positive and significant (β=.196, p<0.01). Again, I looked at the simple slope for appeal type under high vs. low goal distance for the lowest tier. At zero goal distance, the effect for appeal type was significantly negative (β= -.165, p<0.01), suggesting that emotional appeal was significantly more persuasive than cognitive appeal. The opposite was true at maximum goal

distance, where cognitive appeal was significantly more effective than emotional appeal (β=.133, p<0.01). Therefore, H2 was fully supported.

To test H3, I looked at the two three-way interactions in the model. Consistent with H3a, the three-way interaction among goal distance, tier level and message framing was significantly negative (β= -.171, p<0.01). In order to interpret the interaction, I looked at the moderating effect of goal distance under the lowest vs. the highest tiers. At the base tier, the two-way interaction between goal distance and message framing was significantly positive (β= .316, p<0.01), as hypothesized in H1. However, at the highest tier level, this two-way interaction was no longer significant (β= -.045, p=.662). That is, the ability of goal distance to moderate the effect of abstract vs. concrete message framing was significantly weakened at higher tiers, which provides full support for hypothesis 3a.

The three-way interaction among goal distance, tier level and message appeal type was also significantly negative (β= -.120, p<0.01). At the lowest tier level, the interaction between goal distance and appeal type was significantly positive (β=.299, p<.01). However, at the highest tier level, the two-way interaction between goal distance and appeal type became significantly negative (β= -.215, p=.027). In order to examine this in more detail, I further looked at this two-way interaction for the two middle tiers. At tier 2 (the tier right above the base tier), the two-way interaction was still significantly positive but smaller than at base tier (β= .128, p<.01). At tier 3 (the second highest tier), the two-way interaction between goal distance and message appeal type was no longer significant (β= -.043, p=.474). It appears that up to tier 3, higher tier did weaken the moderating effect of goal distance, consistent with H3b. But at the highest tier level, the moderating effect of goal distance was reversed. Simple slope analyses suggested that at the highest tier, cognitive and emotional appeals were equally effective at small goal distance (β= .023,

p=.609), but emotional appeal was more effective at large goal distance (β= -.191, p<.01), opposite to the results at lower tiers. This reversal at the highest tier may be caused by individuals' more emotion-driven needs such as aesthetic and self-actualization near the top of a hierarchy than at lower tiers (Maslow 1970), making emotional messages generally more effective at this level. The exact cause for the reversal effect is an interesting area for future research. Overall, H3b was partly supported.

For the message-related control variables, program members were more likely to open program account statement emails than non-statement messages (β= .231, p<.01), and were less likely to open emails promoting a program partner than emails focusing on the airline itself (β= -.221, p<.01). Furthermore, individuals were more likely to open emails sent out on Tuesdays (β= .231, p<.01) and Wednesdays (β= .673, p<.01) compared with the baseline of Mondays. Emails sent out in the evening (between 5:00 pm and 8:00 pm; β= .102, p<.01) and night time (between 8:00 pm and 5:00 am; β= .306, p<.01) were more likely to be opened by program members compared to messages sent in the afternoon (between 12:00 pm and 5:00 pm). No emails were sent in the morning. For the individual characteristic variables, males were significantly more likely to open emails than females (β= .166, p<.01). Members who signed up for the loyalty program through the Internet were more likely to open emails than those who signed up through offline channel (β= .355, p<.01). Members preferring non-English and non-Spanish languages had significantly higher odds of opening emails (β= .232, p<.01). Finally, older consumers were more likely to open emails than younger consumers (β= .004, p<.01), while membership length had no significant effect.

Robustness Check

To check the robustness of the results above, I estimated the model using an alternative outcome variable. Instead of using a dummy variable of whether a program member opened each email or not, I calculated the total number of times an individual opened each email during the observation window. This was regressed on the same set of independent and control variables from the main model. As this alternative dependent variable was a count variable that showed over-dispersion, I used a negative binomial distribution model (Cameron and Trivedi 2013) with individual random effects. Table 3 shows the results, which were consistent with the main model. Specifically, the two-way interaction between goal distance and message framing and between goal distance and message appeal type were both significantly positive (abstract vs. concrete message framing: β= .161, p<.01; cognitive vs. emotional message appeal: β= .093, p<.01). The two three-way interactions among goal distance, tier level and each of the two focal message design factors were significantly negative (abstract vs. concrete message framing: β= -.097, p<.01; cognitive vs. emotional message appeal: β= -.141, p<.01). These results were consistent with the main model, suggesting robustness of the findings.

Insert Table 3 about Here

GENERAL DISCUSSION

By analyzing email campaign data from a major airline's multi-tiered loyalty program, this paper shows that individuals' goal pursuit progress and position in a hierarchical tiered structure play a joint role in determining the effectiveness of different types of email messages. Specifically, consistent with construal level theory, goal distance serves as a horizontal dimension in shaping one's mental construal level. When goal distance is large, cognitive message appeal is more persuasive than emotional appeal, and abstract message framing is more persuasive than concrete framing. In contrast, when goal distance is small, emotional appeal is more effective than cognitive appeal, while abstract and concrete message framings are equally effective. The results are partly in line with Kim, Rao, and Lee (2008), who investigated how temporal distance moderates the effect of message framing on the persuasiveness of political candidates and found that abstract (vs. concrete) message framing is more persuasive when voting is temporally distant (vs. close).

My research further shows that the moderating effects of goal distance are contingent on the tier level, which serves as a vertical dimension in forming one's mental construal level. The moderating effect of goal distance is weaker at high tier levels than at low tier levels. For message framing, goal distance no longer moderates the effect of message framing at highest tier levels. For message appeal, higher tier levels also weakened the moderating effect of goal distance, but only up to the second highest tier level. At the highest tier level, the direction of the goal distance moderating effect was unexpectedly reversed. This surprising finding suggests that the existing boolean-based two-dimensional construal level mechanism (Kim, Zhang, and Li 2008) can only partially explain the present research findings. The boolean-based mechanism may work well for two similar dimensions such as both horizontal dimensions or both vertical dimensions. However, when it comes to two dimensions with largely different attributes such as one horizontal and the

other vertical, the boolean mechanism may no longer be fully valid. A revised mechanism may need to be devised through future research to interpret two-dimensional construal levels with varying natures.

THEORETICAL IMPLICATIONS

The current study provides several important contributions to the marketing literature. First, this study answers Sahni, Wheeler and Chintagunta (2018)'s call for more research on personalization in email marketing. Although personalization has played a critical role in email marketing to loyalty program members, limited attention has been paid to how program members' goal pursuit behavior can be used to create more effective marketing messages. The current study broadens this research stream and deepens the understanding of how individuals' goal-related attributes such as goal distance and tier level can be leveraged in designing effective marketing communications.

Second, existing research on persuasion theories has yielded conflicting findings under different contexts. Persuasion is a complex process influenced by factors at different contextual, situational and individual levels. The current study integrates goal pursuit theory (Bagozzi and Dholakia 1999), construal level theory (Trope and Liberman 2003) and research on grounded cognition (Lakoff and Johnson 1999) into one framework and takes into account contextual, situational, and individual influences simultaneously. The results suggest that an individual's construal level may be determined in a more complex fashion than the typical temporal or physical distance. When two or more factors jointly determine construal level, they can have significant implications for the effectiveness of persuasion messages. The current framework extends construal level theory and offers important insights into persuasion theory and goal-relevant behaviors in a multifaceted environment.

Finally, most studies of construal level theory have been conducted in the laboratory environment (Agrawal and Wan 2009; Han, Duhachek, and Agrawal 2016; Hernandez, Wright, and Ferminiano Rodrigues 2015). The present study provides real-world validations to these experimental studies by analyzing large-scale observational data from a major airline's loyalty program. The research findings provide theoretical and practical insights into how construal level differences can be leveraged to personalize email marketing campaigns in a loyalty program.

MANAGERIAL IMPLICATIONS

The present study has important implications for loyalty program managers. Email marketing has various advantages such as low cost and low preparation efforts (Rettie and Chittenden 2003). It has also been proven to elicit faster response, foster interactive communication, and be financially profitable (Zhang, Kumar, and Cosguner 2017). Personalization of email messages through a loyalty program has the further advantage of alleviating the "personalization paradox" problem (Aguirre et al. 2015), as loyalty program members typically have a high level of trust in the company, exhibit stronger willingness to share their personal information, and allow more personal communication (Awad and Krishnan 2006; Stathopoulou and Balabanis 2016). Although personalization of marketing messages in a loyalty program is promising, the full benefits of personalized email marketing in loyalty programs are often not realized in practice. It is important to understand how to improve the effectiveness of loyalty program communications (Breugelmans et al. 2015). By considering individuals' goal-related attributes and tier status, the current study provides an opportunity for loyalty program managers to leverage customers' goal-related information to create actionable marketing personalizations and improve customer satisfaction and loyalty.

LIMITATIONS AND FUTURE RESEARCH

Although I found overall support for the proposed hypotheses, this study has several limitations that need to be addressed in future research. First, this study only used secondary data and hence was not able to verify the underlying mechanisms such as the construal level formation process. Controlled experiments are needed in the future to trace program members' psychological state changes and confirm the underlying psychological mechanisms, especially from a longitudinal perspective.

Second, in the data analysis, I chose a fixed time period as the focal time window and used a specific date as the cutoff to define program members' goal tier. However, this inferred goal tier based on program members' behavior in reality may or may not reflect their true goals. Future research can define goal tier from a different perspective or use other goal related variables. Lab experiments that explicitly manipulate tier goals may also be helpful.

Third, the spotlight analysis in this study suggests that the three-way interaction among tier level, goal distance, and message appeal type cannot be fully explained by the existing two-dimensional boolean-based construal level mechanism. Designed for two similar dimensions, this boolean mechanism loses its effectiveness when the two dimensions contributing to construal level are more distinct, such as in the case of one being horizontal while the other being vertical. Future research needs to examine the process through which construal level is determined in such a setting.

REFERENCES

Aggarwal, Pankaj and Min Zhao (2015), "Seeing the big picture: The effect of height on the level of construal," *Journal of Marketing Research*, 52 (1), 120–133.

Agrawal, Nidhi and Echo Wen Wan (2009), "Regulating risk or risking regulation? Construal levels and depletion effects in the processing of health messages," *Journal of Consumer Research*, 36 (3), 448–462.

Aguirre, Elizabeth, Dominik Mahr, Dhruv Grewal, Ko de Ruyter, and Martin Wetzels (2015), "Unraveling the personalization paradox: The effect of information collection and trust-building strategies on online advertisement effectiveness," *Journal of Retailing*, 91 (1), 34–49.

Alba, Joseph, John Lynch, Barton Weitz, Chris Janiszewski, Richard Lutz, Alan Sawyer, and Stacy Wood (1997), "Interactive home shopping: consumer, retailer, and manufacturer incentives to participate in electronic marketplaces," *The Journal of Marketing*, 38–53.

Ansari, Asim and Carl F. Mela (2003), "E-customization," *Journal of marketing research*, 40 (2), 131–145.

Awad, Naveen Farag and Mayuram S. Krishnan (2006), "The personalization privacy paradox: an empirical evaluation of information transparency and the willingness to be profiled online for personalization," *MIS quarterly*, 13–28.

Bagozzi, Richard P. and Utpal Dholakia (1999), "Goal setting and goal striving in consumer behavior," *The Journal of Marketing*, 19–32.

Bayuk, Julia Belyavsky, Chris Janiszewski, and Robyn A. Leboeuf (2010), "Letting good opportunities pass us by: Examining the role of mind-set during goal pursuit," *Journal of Consumer Research*, 37 (4), 570–583.

Bertrand, Marianne, Dean Karlan, Sendhil Mullainathan, Eldar Shafir, and Jonathan Zinman (2010), "What's advertising content worth? Evidence from a consumer credit marketing field experiment," *The Quarterly Journal of Economics*, 125 (1), 263–306.

Brendl, C. Miguel and E. Tory Higgins (1996), "Principles of judging valence: What makes events positive or negative?," in *Advances in experimental social psychology*, Elsevier, 95–160.

Breugelmans, Els, Tammo HA Bijmolt, Jie Zhang, Leonardo J. Basso, Matilda Dorotic, Praveen Kopalle, Alec Minnema, Willem Jan Mijnlieff, and Nancy V. Wünderlich (2015), "Advancing research on loyalty programs: a future research agenda," *Marketing Letters*, 26 (2), 127–139.

Brown, Judson S. (1948), "Gradients of approach and avoidance responses and their relation to level of motivation.," *Journal of comparative and physiological psychology*, 41 (6), 450.

Cameron, A. Colin and Pravin K. Trivedi (2013), *Regression analysis of count data*, Cambridge university press.

Chung, Tuck Siong, Roland T. Rust, and Michel Wedel (2009), "My mobile music: An adaptive personalization system for digital audio players," *Marketing Science*, 28 (1), 52–68.

——— and Michel Wedel (2014), "18 adaptive personalization of mobile information services," *Handbook of Service Marketing Research*, 395.

Clarkson, Joshua J., Zakary L. Tormala, and Derek D. Rucker (2011), "Cognitive and affective matching effects in persuasion: An amplification perspective," *Personality and Social Psychology Bulletin*, 37 (11), 1415–1427.

Cox III, Eli P., W. Thomas Anderson Jr, and David G. Fulcher (1974), "Reappraising mail survey response rates," *Journal of Marketing Research*, 413–417.

DeBono, Kenneth G. (2006), "Self-monitoring and consumer psychology," *Journal of Personality*, 74 (3), 715–738.

Ding, Ying and Hean Tat Keh (2017), "Consumer reliance on intangible versus tangible attributes in service evaluation: the role of construal level," *Journal of the Academy of Marketing Science*, 45 (6), 848–865.

Dreze, Xavier and Joseph C. Nunes (2008), "Feeling superior: The impact of loyalty program structure on consumers' perceptions of status," *Journal of Consumer Research*, 35 (6), 890–905.

Ellis-Chadwick, Fiona and Neil F. Doherty (2012), "Web advertising: The role of e-mail marketing," *Journal of Business Research*, 65 (6), 843–848.

Fabrigar, Leandre R. and Richard E. Petty (1999), "The role of the affective and cognitive bases of attitudes in susceptibility to affectively and cognitively based persuasion," *Personality and social psychology bulletin*, 25 (3), 363–381.

Forgas, Joseph P. (1995), "Mood and judgment: the affect infusion model (AIM).," *Psychological bulletin*, 117 (1), 39.

Förster, Jens, E. Tory Higgins, and Lorraine Chen Idson (1998), "Approach and avoidance strength during goal attainment: Regulatory focus and the" goal looms larger" effect.," *Journal of personality and social psychology*, 75 (5), 1115.

Freitas, Antonio L., Peter Salovey, and Nira Liberman (2001), "Abstract and concrete self-evaluative goals.," *Journal of Personality and Social Psychology*, 80 (3), 410.

Fujita, Kentaro, Marlone D. Henderson, Juliana Eng, Yaacov Trope, and Nira Liberman (2006), "Spatial distance and mental construal of social events," *Psychological Science*, 17 (4), 278–282.

Goldfarb, Avi and Catherine Tucker (2012), "Privacy and innovation," *Innovation policy and the economy*, 12 (1), 65–90.

Gollwitzer, Peter M. (1999), "Implementation intentions: Strong effects of simple plans.," *American psychologist*, 54 (7), 493.

Han, Dahee, Adam Duhachek, and Nidhi Agrawal (2016), "Coping and construal level matching drives health message effectiveness via response efficacy or self-efficacy enhancement," *Journal of Consumer Research*, 43 (3), 429–447.

Heath, Chip, Richard P. Larrick, and George Wu (1999), "Goals as reference points," *Cognitive psychology*, 38 (1), 79–109.

Henderson, Conor M., Joshua T. Beck, and Robert W. Palmatier (2011), "Review of the theoretical underpinnings of loyalty programs," *Journal of Consumer Psychology*, 21 (3), 256–276.

Hernandez, José Mauro da Costa, Scott A. Wright, and Filipe Ferminiano Rodrigues (2015), "Attributes versus benefits: The role of construal levels and appeal type on the persuasiveness of marketing messages," *Journal of Advertising*, 44 (3), 243–253.

Jai, Tun-Min Catherine and Nancy J. King (2016), "Privacy versus reward: Do loyalty programs increase consumers' willingness to share personal information with third-party advertisers and data brokers?," *Journal of Retailing and Consumer Services*, 28, 296–303.

Khan, Romana, Michael Lewis, and Vishal Singh (2009), "Dynamic customer management and the value of one-to-one marketing," *Marketing Science*, 28 (6), 1063–1079.

Kim, Hakkyun and Deborah Roedder John (2008), "Consumer response to brand extensions: Construal level as a moderator of the importance of perceived fit," *Journal of consumer psychology*, 18 (2), 116–126.

———, Akshay R. Rao, and Angela Y. Lee (2008), "It's time to vote: The effect of matching message orientation and temporal frame on political persuasion," *Journal of Consumer Research*, 35 (6), 877–889.

Kim, Kyeongheui, Meng Zhang, and Xiuping Li (2008), "Effects of temporal and social distance on consumer evaluations," *Journal of Consumer Research*, 35 (4), 706–713.

Kivetz, Ran, Oleg Urminsky, and Yuhuang Zheng (2006), "The goal-gradient hypothesis resurrected: Purchase acceleration, illusionary goal progress, and customer retention," *Journal of Marketing Research*, 43 (1), 39–58.

Kulkarni, Subodh P. (2000), "The influence of information technology on information asymmetry in product markets," *The Journal of Business and Economic Studies*, 6 (1), 55.

Kumar, VISWANATHAN and Denish Shah (2004), "Building and sustaining profitable customer loyalty for the 21st century," *Journal of retailing*, 80 (4), 317–329.

Lawrence, John W., Charles S. Carver, and Michael F. Scheier (2002), "Velocity toward goal attainment in immediate experience as a determinant of affect," *Journal of Applied Social Psychology*, 32 (4), 788–802.

Lee, Angela Y. and Jennifer L. Aaker (2004), "Bringing the frame into focus: the influence of regulatory fit on processing fluency and persuasion.," *Journal of personality and social psychology*, 86 (2), 205.

———, Punam Anand Keller, and Brian Sternthal (2009), "Value from regulatory construal fit: The persuasive impact of fit between consumer goals and message concreteness," *Journal of Consumer Research*, 36 (5), 735–747.

Lee, Hyojin, Xiaoyan Deng, H. Rao Unnava, and Kentaro Fujita (2014), "Monochrome forests and colorful trees: The effect of black-and-white versus color imagery on construal level," *Journal of Consumer Research*, 41 (4), 1015–1032.

Liberman, Nira, Michael D. Sagristano, and Yaacov Trope (2002), "The effect of temporal distance on level of mental construal," *Journal of experimental social psychology*, 38 (6), 523–534.

Losco, Jean and Seymour Epstein (1977), "Relative steepness of approach and avoidance gradients as a function of magnitude and valence of incentive.," *Journal of abnormal psychology*, 86 (4), 360.

MacInnis, Deborah J. and Bernard J. Jaworski (1989), "Information processing from advertisements: Toward an integrative framework," *The Journal of marketing*, 1–23.

Maglio, Sam J., Yaacov Trope, and Nira Liberman (2013), "Distance from a distance: Psychological distance reduces sensitivity to any further psychological distance.," *Journal of Experimental Psychology: General*, 142 (3), 644.

Maio, Gregory R. and Geoffrey Haddock (2007), "Attitude change."

Meier, Brian P. and Sarah Dionne (2009), "Downright sexy: Verticality, implicit power, and perceived physical attractiveness," *Social Cognition*, 27 (6), 883–892.

Meyers-Levy, Joan and Prashant Malaviya (1999), "Consumers' processing of persuasive advertisements: An integrative framework of persuasion theories," *The Journal of Marketing*, 45–60.

Montgomery, Alan L. and Michael D. Smith (2009), "Prospects for Personalization on the Internet," *Journal of Interactive Marketing*, 23 (2), 130–137.

Palmatier, Robert W., Rajiv P. Dant, Dhruv Grewal, and Kenneth R. Evans (2006), "Factors influencing the effectiveness of relationship marketing: A meta-analysis," *Journal of marketing*, 70 (4), 136–153.

Petrison, Lisa A., Robert C. Blattberg, and Paul Wang (1997), "Database marketing: Past, present, and future," *Journal of Interactive Marketing*, 11 (4), 109–125.

Petty, Richard E. and John T. Cacioppo (1986), "The elaboration likelihood model of persuasion," in *Communication and persuasion*, Springer, 1–24.

Reber, Rolf, Norbert Schwarz, and Piotr Winkielman (2004), "Processing fluency and aesthetic pleasure: Is beauty in the perceiver's processing experience?," *Personality and social psychology review*, 8 (4), 364–382.

Rettie, Ruth and Lisa Chittenden (2003), *Email marketing: Success factors*, Kingston Business School, Kingston University.

Ridgeway, Cecilia L. and Henry A. Walker (1995), "Status structures," *Sociological perspectives on social psychology*, 281–310.

Rust, Roland T. and Tuck Siong Chung (2006), "Marketing models of service and relationships," *Marketing science*, 25 (6), 560–580.

Sagristano, Michael D., Yaacov Trope, and Nira Liberman (2002), "Time-dependent gambling: Odds now, money later.," *Journal of Experimental Psychology: General*, 131 (3), 364.

Sahni, Navdeep S., S. Christian Wheeler, and Pradeep Chintagunta (2018), "Personalization in Email Marketing: The Role of Noninformative Advertising Content," *Marketing Science*.

Schwarz, Norbert and Gerald L. Clore (1983), "Mood, misattribution, and judgments of well-being: Informative and directive functions of affective states.," *Journal of personality and social psychology*, 45 (3), 513.

Septianto, Felix and Loren Pratiwi (2016), "The moderating role of construal level on the evaluation of emotional appeal vs. cognitive appeal advertisements," *Marketing Letters*, 27 (1), 171–181.

Snyder, Mark and Kenneth G. DeBono (1985), "Appeals to image and claims about quality: Understanding the psychology of advertising.," *Journal of personality and Social Psychology*, 49 (3), 586.

Spiller, Stephen A., Gavan J. Fitzsimons, John G. Lynch Jr, and Gary H. McClelland (2013), "Spotlights, floodlights, and the magic number zero: Simple effects tests in moderated regression," *Journal of Marketing Research*, 50 (2), 277–288.

Stathopoulou, Anastasia and George Balabanis (2016), "The effects of loyalty programs on customer satisfaction, trust, and loyalty toward high-and low-end fashion retailers," *Journal of Business Research*, 69 (12), 5801–5808.

Stewart, Thomas A. (1995), "What information costs?," *Fortune*, 132 (1), 119–21.

Sudhir, K., Subroto Roy, and Mathew Cherian (2016), "Do sympathy biases induce charitable giving? The effects of advertising content," *Marketing Science*, 35 (6), 849–869.

Sun, Yan, Fei Wang, and Shu Li (2011), "Higher height, higher ability: Judgment confidence as a function of spatial height perception," *PloS one*, 6 (7), e22125.

Szymanski, David M. and David H. Henard (2001), "Customer satisfaction: A meta-analysis of the empirical evidence," *Journal of the academy of marketing science*, 29 (1), 16–35.

Tam, Kar Yan and Shuk Ying Ho (2006), "Understanding the impact of web personalization on user information processing and decision outcomes," *MIS quarterly*, 865–890.

Thompson, Debora Viana and Rebecca W. Hamilton (2006), "The effects of information processing mode on consumers' responses to comparative advertising," *Journal of Consumer Research*, 32 (4), 530–540.

Thorbjørnsen, Helge, Magne Supphellen, Herbjørn Nysveen, and Per Egil (2002), "Building brand relationships online: A comparison of two interactive applications," *Journal of interactive marketing*, 16 (3), 17–34.

Trope, Yaacov and Nira Liberman (2003), "Temporal construal.," *Psychological review*, 110 (3), 403.

——— and ——— (2010), "Construal-level theory of psychological distance.," *Psychological review*, 117 (2), 440.

——— and ——— (2011), "Construal level theory," *Handbook of theories of social psychology*, 1, 118–134.

Tucker, Catherine E. (2012), "The economics of advertising and privacy," *International journal of Industrial organization*, 30 (3), 326–329.

——— (2014), "Social networks, personalized advertising, and privacy controls," *Journal of Marketing Research*, 51 (5), 546–562.

Ülkümen, Gülden and Amar Cheema (2011), "Framing goals to influence personal savings: The role of specificity and construal level," *Journal of marketing research*, 48 (6), 958–969.

Vallacher, Robin R. and Daniel M. Wegner (1989), "Levels of personal agency: Individual variation in action identification.," *Journal of Personality and Social psychology*, 57 (4), 660.

——— and ——— (2014), *A theory of action identification*, Psychology Press.

Van Boven, Leaf and Laurence Ashworth (2007), "Looking forward, looking back: Anticipation is more evocative than retrospection.," *Journal of Experimental Psychology: General*, 136 (2), 289.

———, Joanne Kane, A. Peter McGraw, and Jeannette Dale (2010), "Feeling close: emotional intensity reduces perceived psychological distance.," *Journal of personality and social psychology*, 98 (6), 872.

Van Kerckhove, Anneleen, Maggie Geuens, and Iris Vermeir (2014), "The floor is nearer than the sky: How looking up or down affects construal level," *Journal of Consumer Research*, 41 (6), 1358–1371.

Vesanen, Jari (2007), "What is personalization? A conceptual framework," *European Journal of Marketing*, 41 (5/6), 409–418.

Wagner, Tillmann, Thorsten Hennig-Thurau, and Thomas Rudolph (2009), "Does customer demotion jeopardize loyalty?," *Journal of Marketing*, 73 (3), 69–85.

Wedel, Michel and P. K. Kannan (2016), "Marketing analytics for data-rich environments," *Journal of Marketing*, 80 (6), 97–121.

Wegner, Daniel M., Robin R. Vallacher, Gary Macomber, Russell Wood, and Kevin Arps (1984), "The emergence of action.," *Journal of Personality and Social Psychology*, 46 (2), 269.

White, Katherine, Rhiannon MacDonnell, and Darren W. Dahl (2011), "It's the mind-set that matters: The role of construal level and message framing in influencing consumer efficacy and conservation behaviors," *Journal of Marketing Research*, 48 (3), 472–485.

Zhang, Xi, V. Kumar, and Koray Cosguner (2017), "Dynamically managing a profitable email marketing program," *Journal of Marketing Research*, 54 (6), 851–866.

Zhao, Min and Jinhong Xie (2011), "Effects of social and temporal distance on consumers' responses to peer recommendations," *Journal of Marketing Research*, 48 (3), 486–496.

TABLES AND FIGURES

TABLE 1 DESCRIPTIVE STATISTICS

Variables	Definition	Mean	St. Dev.	Min	Max
OpenFlag	Whether the member opened the email before the end of the observational period. 1 = Yes, 0 = No.	0.500	0.500	0	1
TierLevel	Member's tier level in the company's loyalty program	0.997	0.955	0	3
GoalDistance	Distance to the immediate next higher unreached tier at the time an email campaign message was sent	0.565	0.258	0.021	1.000
MessageTypeCognitive	Cognitive framing email is coded as 1 while emotion framing email is coded as 0	0.531	0.499	0	1
MessageTypeAbstract	Abstract framing email is coded as 1 while concrete framing email is coded as 0	0.515	0.500	0	1
MessageTypeStatement	Statement email is coded as 1 while promotion email is coded as 0	0.148	0.355	0	1
MessageTypePartnership	Email related to partners is coded as 1 while email focusing on company itself is coded as 0	0.277	0.447	0	1
Age	How old is the member by years	43.803	11.763	3	106
EnrollMonthLength	How many months does a member enroll the program	14.284	4.715	0.000	19.733

TABLE 2 PANEL LOGIT REGRESSION RESULTS

Variables	Level	Hypothesis with Expected Sign	OpenFlag	z-value
Main Effects				
TierLevel			0.183***	(10.59)
GoalDistance			-0.031	(-0.51)
MessageTypeCognitive			-0.030*	(-2.51)
MessageTypeAbstract			0.152***	(13.81)
Interaction Effects				
TierLevel X GoalDistance			0.421***	(7.11)
TierLevel X MessageTypeCognitive			-0.034**	(-3.27)
GoalDistance X MessageTypeCognitive		H1 (+)	0.128***	(3.49)
TierLevel X GoalDistance X MessageTypeCognitive		H3b (-)	-0.171***	(-4.16)
TierLevel X MessageTypeAbstract			0.018	(1.69)
GoalDistance X MessageTypeAbstract		H2 (+)	0.196***	(4.97)
TierLevel X GoalDistance X MessageTypeAbstract		H3a (-)	-0.120**	(-2.79)
Controls: Message				
MessageTypeStatement			0.231***	(16.49)
MessageTypePartnership			-0.221***	(-17.06)
	Monday(base)			
	Friday		0.040**	(2.71)
	Saturday		0.075***	(5.25)
WeekDays	Sunday		-0.113***	(-4.43)
	Thursday		0.136***	(11.07)
	Tuesday		0.231***	(12.41)
	Wednesday		0.673***	(17.33)
	Afternoon(base)			
TimeOfDay	Evening		0.102***	(4.39)
	Night		0.306***	(21.12)
Controls: Individual				
Age			0.004***	(4.32)
EnrollMonthLength			0.002	(0.62)
Gender	Female(base)			
	Male		0.166***	(6.67)
Language	English(base)			
	Spanish		0.003	(0.12)
	Other		0.232**	(2.72)
RegisterChannel	Offline channel(base)			
	Mobile app		0.133	(1.83)
	Internet		0.355***	(7.18)
Constant			-0.908***	(-11.33)
	Observations		173607	

z statistics in parentheses; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

TABLE 3 PANEL NEGATIVE BINOMIAL MODEL REGRESSION RESULTS

Variables	Level	Hypothesis with Expected Sign	OpenCounts	z-value
Main Effects				
TierLevel			0.142***	(10.44)
GoalDistance			0.006	(0.12)
MessageTypeCognitive			-0.040***	(-3.74)
MessageTypeAbstract			0.158***	(15.86)
Interaction Effects				
TierLevel X GoalDistance			0.364***	(7.47)
TierLevel X MessageTypeCognitive			-0.027**	(-2.93)
GoalDistance X MessageTypeCognitive		H1 (+)	0.093**	(2.80)
TierLevel X GoalDistance X MessageTypeCognitive		H3b (-)	-0.141***	(-3.82)
TierLevel X MessageTypeAbstract			-0.009	(-0.99)
GoalDistance X MessageTypeAbstract		H2 (+)	0.161***	(4.79)
TierLevel X GoalDistance X MessageTypeAbstract		H3a (-)	-0.097**	(-2.62)
Controls: Message				
MessageTypeStatement			0.103***	(8.97)
MessageTypePartnership			-0.225***	(-20.39)
	Monday(base)			
	Friday		0.159***	(11.65)
	Saturday		0.166***	(13.63)
WeekDays	Sunday		-0.033	(-1.35)
	Thursday		0.197***	(18.44)
	Tuesday		0.389***	(26.19)
	Wednesday		0.909***	(33.87)
	Afternoon(base)			
TimeOfDay	Evening		0.046*	(2.17)
	Night		0.185***	(14.23)
Controls: Individual				
Age			0.007***	(10.22)
EnrollMonthLength			-0.002	(-1.15)
Gender	Female(base)			
	Male		0.055**	(3.23)
Language	English(base)			
	Spanish		0.024	(1.39)
	Other		0.202**	(3.17)
RegisterChannel	Offline channel(base)			
	Mobile app		0.100	(1.96)
	Internet		0.232***	(6.37)
Constant			-0.806***	(-14.00)
	Observations		173607	

z statistics in parentheses; $^{*}\,p < 0.05$, $^{**}\,p < 0.01$, $^{***}\,p < 0.001$
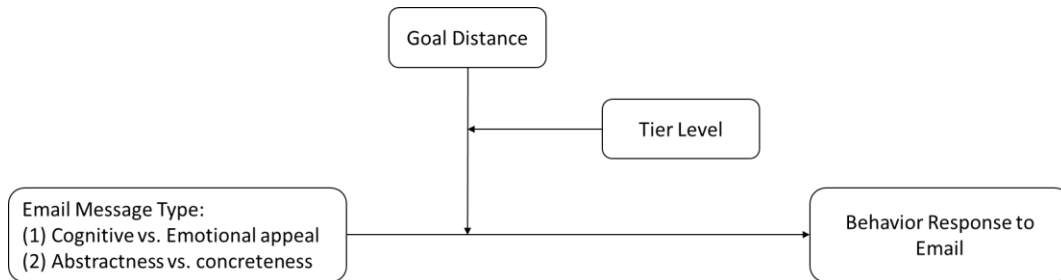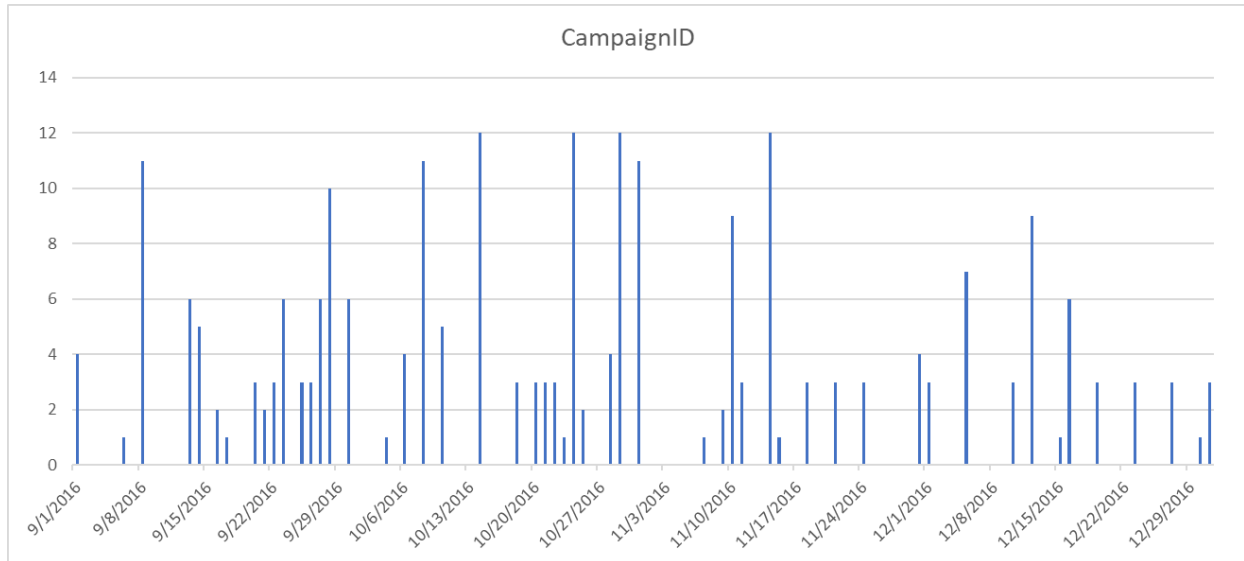
FIGURE 1 THEORETICAL FRAMEWORK

FIGURE 2. DISTRIBUTION OF EMAIL CAMPAIGN MESSAGE OVER TIME

VITA

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EDUCATION

8/2015 – 5/2019	PhD in Business Administration - Marketing, Old Dominion University, Norfolk, VA
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9/2012 – 9/2014	PhD candidate, Tourism management, Xiamen University, China
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SELECT PUBLICATIONS

Junzhou Zhang, Chuanyi Tang, Lin Guo, and Hangjun Xu (2018), "A Longitudinal Investigation of Customer Compliance: The Role of Appraisal Toward Compliance Behaviors" _Psychology and Marketing_, 2018;1–11**.**

Junzhou Zhang and Lei Huang (2018). "Loss or gain? The impact of Chinese local celebrity endorser scandal on the global market value of the endorsed brands*" Journal of Marketing Analytics, 6(1), 27-39.*

Maxwell Hsu, **Junzhou Zhang**, and Ahmad Yamin (2017). ''Government Digital Information Discovery and Exploration: The Case of Unraveling Tourism-Led-Growth Paradox in China" _Information Discovery and Delivery,_ 45(4), 212-219.

Jamie Chen, **Junzhou Zhang**, and Peter Nijkamp (2016). "A regional analysis of willingness-to-pay in Asian cruise markets" _Tourism Economics_ 22, no. 4: 809-824.

CONFERENCE PRESENTATIONS

Junzhou Zhang and Yuping Liu-Thompkins (Aug. 2018). _The interplay between goal type and goal completion status on consumer' post-goal behavior in multi-tiered loyalty programs._ Paper was presented at 2018 summer AMA conference. Boston, MA

Junzhou Zhang, Chuanyi Tang, and Harry Zhang (Aug. 2018). _An Empirical Examination of WIC Participants' Time Pressure Redemption Behavior._ Paper was presented at 2018 summer AMA conference. Boston, MA

Junzhou Zhang and Yuping Liu-Thompkins (Jun. 2018). _Close but No Cigar: The Joint Impact of Goal Type and Goal Completion Status on Consumer' Post-goal-completion Behavior._ Paper was presented at 40th ISMS Marketing Science Conference.

Junzhou Zhang, Chuanyi Tang, Lin Guo, and Hangjun Xu (Feb. 2017). _A Longitudinal Investigation of Customer Compliance: The Role of Appraisal Toward Compliance Behaviors_. Paper was presented at Feb. 2017 winter AMA conference, Orlando, FL.

Junzhou Zhang, Chuanyi Tang, and Harry Zhang (Feb. 2017). _Exploring WIC Participants' Fruits and Vegetables Redemption Behavior: An Empirical Examination of Virginia's Electronic Benefit Transfer (EBT) Transaction Data._ Paper was presented at Feb. 2017 winter AMA conference, Orlando, FL