JOB MARKET PAPER

The Benefits of Emergency Reserves: Greater Preference and Persistence for Goals having Slack with a Cost

MARISSA A. SHARIF[a] and SUZANNE B. SHU[b]

a. PhD Candidate at UCLA Anderson School of Management

   Anderson School of Management, University of California Los Angeles, Los Angeles, CA

   90095-1481, USA; marissa.sharif.1@anderson.ucla.edu

b. Associate Professor at UCLA Anderson School of Management

   Anderson School of Management, University of California Los Angeles, Los Angeles, CA

   90095-1481, USA; suzanne.shu@anderson.ucla.edu

The Benefits of Emergency Reserves: Greater Preference and Persistence for Goals having

Slack with a Cost

Marketers of programs that are designed to help consumers reach goals face twin challenges of making the program attractive enough to encourage consumer signup while still motivating them to reach desirable goals and thus stay satisfied with the program. We offer a possible solution to this challenge: the emergency reserve, or slack with a cost. We demonstrate how an explicitly defined emergency reserve is not only preferred over other options for goal-related programs, but can also lead to increased persistence. Study 1 demonstrates that consumers prefer programs with emergency reserves to programs that do not have them, and study 2 further clarifies that consumers' preference for an emergency reserve depends on the presence of a superordinate goal. Study 3 reveals that consumers prefer goals with emergency reserves due to increased perceptions of attainability and value. Study 4 demonstrates that reserves can lead to increased goal persistence in a realistic task that involves persistence over time, and, lastly, studies 5 and 6 reveal that consumers persist more with Reserve goals due to a resistance to use the "emergency" reserve.

Keywords: emergency reserve, slack, goals, motivation, preference

Students cheer when they learn that they have extra credit available; dieters love having a possible "cheat day" in their diet; consumers greatly appreciate having a buffer in case they go over their minutes in their mobile plans. Consumers seem to love flexibility, specifically a "just-in-case" type of flexibility. From the marketer's perspective, offering this "just-in-case" type of flexibility may encourage consumers to sign up initially for various programs, such as dieting programs, personal training programs, or phone plans. However, companies not only want to attract consumers to sign up; they also want to ensure that consumers perform well and meet desirable goals (e.g., lose more weight, exercise more, use fewer minutes) so that they will stay satisfied with the program and continue to use it.

How can marketers offer consumers some kind of "just-in-case" flexibility while still encouraging them to reach their original difficult goal? In this paper, we offer a solution to this challenge based on offering flexibility with a cost: the emergency reserve. We define an emergency reserve as pre-defined slack around a goal that can be used if needed but at a small cost. For example, a reserve can be 500 extra emergency calories available in a diet for the week, an emergency skip day for the gym, or an emergency buffer range in a phone program. Small costs associated with these reserves might be purely psychological costs (trying to not use the emergency reserve unless absolutely necessary), opportunity costs (if you use it today, you can't use it tomorrow), or future costs (if you use the reserve today, you might have to do something tomorrow to make up for it).

In this paper, to test how emergency reserves affect both preference and persistence, we will be examining three different types of goals: Reserve goals, Hard Reference Point goals (Hard goals), and Easy Reference Point Goals (Easy goals). Reserve goals have a difficult reference point plus an additional emergency reserve (e.g., a goal of going to the gym 7 days of

the week + 2 "emergency skip" days). Hard goals have the same difficult reference point but without the additional emergency reserve (e.g., going to the gym 7 days of the week). Easy goals have an easier reference point with the additional emergency reserve already incorporated into their goal with no additional cost (e.g., going to the gym 5 days of the week). We propose that including an explicitly defined emergency reserve within a goal will 1) be preferred to both Hard and Easy goals when the consumer has a superordinate goal (e.g., lose weight) due to both the higher expectancy and value of the Reserve goal and 2) result in greater goal persistence than those with Hard and Easy goals due to a resistance to break into the emergency reserve.

We will be investigating the influence of emergency reserves on preference and persistence in six studies throughout this paper. The first three studies will explore when and why people prefer emergency reserves, and the last three studies will investigate how and why emergency reserves impact goal persistence. We first discuss the theoretical basis for why consumers prefer Reserve goals, followed by why they persist more with them.

PREFERENCE FOR RESERVES

According to expectancy-value theories, a consumer's motivation to reach a goal depends on both the expectancy of reaching the goal and the value of the goal (Atkinson, 1957; Tolman, 1955). However, as there are distinct phases within goal pursuit, consumers are motivated diferently depending on how much progress they have made towards their goal (Gollwitzer, 1990; Heckhausen, 1977; Heckhausen & Gollwitzer, 1987). In the initial stages of goal pursuit, consumers primarily focus on the attainability of the goal rather than the value of the goal (Zhang & Huang, 2010). Both the socio-cognitive model (Bandura, 1997) and goal-setting theory (Locke & Latham, 1990) suggests that consumers' willingness to adopt a goal is largely

influenced by how attainable the goal seems. Consistent with this notion, consumers are more motivated with high perceived velocity (versus low perceived velocity) towards reaching a goal in initial goal pursuit (Huang & Zhang, 2011). Additionally, because goals that have multiple means to achieve them are perceived as more attainable (Kruglanski, Pierro, & Sheveland, 2011), consumers are more motivated when there are multiple means to achieve a goal (Huang & Zhang, 2013) or when there is more variety among these means (Etkin & Ratner, 2012). Therefore, this stream of research suggests that making a goal more attainable (or making it seem more attainable) motivates consumers in the initial stages of goal pursuit.

Based on this theorizing, before adopting a goal (or signing up for a program), consumers' preferences for Reserve goals compared to Hard goals and Easy goals may depend on the attainability of these goals. Consumers may initially prefer Reserve goals to Hard goals because they are more attainable than Hard goals. Reserve goals have the same difficult reference point (e.g., going to the gym 7 days of the week) as Hard goals but provide additional flexibility (e.g., 2 emergency skip days), making them more attainable than Hard goals. However, consumers may not initially prefer Reserve goals to Easy goals because they are equally attainable as Easy goals (e.g., consumers with both goals have technically not violated their goal if they go to the gym only 5 days of the week). In some cases, Reserve goals may even be *perceived* as less attainable than Easy goals because they focus on a more difficult reference point than Easy goals (e.g., going to the gym 7 days of the week vs. going to the gym 5 days of the week). In general, these perceptions of attainability may determine preferences between Hard, Easy, and Reserve goals, with Hard goals seen as the least attainable.

However, we expect preferences for these goals to be affected by more than just attainability if there is a salient superordinate goal. We hypothesize that the value of a goal (in

addition to the attainability of the goal) becomes relevant in goal preference if there is a salient superordinate goal. Prior research has demonstrated that people can perform better in tasks with more difficult reference points/goal (Heath, Larrick, & Wu., 1999; Locke & Latham, 1990). When there is a superordinate goal, more difficult goals may be perceived as more attractive (valuable) as they increase the chance of obtaining the superordinate goal. For example, if a person achieves a more difficult goal of going to the gym 7 days of the week instead of an easier goal of going to the gym 5 days of the week, they will also be more likely to achieve their superordinate goal of becoming more fit or losing weight.

Based on this theorizing, how does the existence of a superordinate goal affect preference for Reserve goals over other goals? A Reserve goal focuses consumers on a more difficult reference point than an Easy goal, increasing the chance of performing better at the superordinate goal and thus also increasing the attractiveness (value) of the goal. However, the attainability of both goals will remain the same; individuals with a Reserve goal (e.g., going to the gym 7 days of the week + 2 "emergency skip" days) and an Easy goal (e.g., 5 days of the week) can both meet their goal by going to the gym 5 days of the week. Because attainability of the goals are equal but the Reserve goal has a higher value, we expect consumers will prefer Reserve goals to Easy goals if there is a superordinate goal.

We hypothesize that consumers will still prefer Reserve goals to Hard goals when they are part of a superordinate goal. Both goals have more difficult reference points (e.g., going to the gym 7 days of the week) and thus are equally valuable. However, the Reserve goal has added flexibility (e.g., 2 emergency skip days) that makes it more attainable. Because the value of the goals are equal but the Reserve goal is more attainable, we expect consumers will prefer Reserve goals to Hard goals.

H1: Consumers will prefer Reserve goals to both Easy goals and Hard goals if there is a superordinate goal. Consumers will prefer Reserve goals to Hard goals, but not Easy goals, if there is not a superordinate goal.

PERSISTENCE WITH RESERVES

We propose that consumers will not only predictably prefer Reserve goals to Easy and Hard goals when there is a superordinate goal, but that they will persist more with Reserve goals than Easy goals, Hard goals, and other goals with flexibility. Although we expect the simultaneously higher expectancy and value of the reserve drives preference for the reserve, we expect that when actually pursuing a Reserve goal, consumers will persist more due to an additional element of the reserve: the cost for using it.

Unlike other types of slack[1], the emergency reserve is unique because there is 1) a small cost to use the available flexibility and 2) a pre-defined finite amount available. It is designed to be used in "just-in-case" scenarios. We predict due to this small cost of using the emergency reserve, consumers will try to resist using it, leading to more persistence than those with other goals.

Costs of the Reserve

Costs of using the reserve may be psychological, opportunity, and/or future costs. We will be examining cases when the reserve has only a psychological cost, an opportunity cost, or both. Although we suggest the emergency reserve could be effective with other costs, such as future costs, by examining only psychological and opportunity costs, we do not affect the external incentives for achieving the goal.

---

[1] Emergency reserves, due to their cost, differ from Zauberman & Lynch's (2005) definition of slack (the perceived future surplus of a given resource).

In order to impose a psychological cost for the reserves in our studies, we simply label the reserve an "emergency" reserve, inducing people to try to not use the reserve unless absolutely necessary. Prior research has suggested that people are sensitive to similar labels and the psychological costs for violating them. More specifically, research in mental accounting/budgeting suggests people use their resources differently depending on how they are labeled (Henderson & Peterson,1992; Heath & Soll, 1996; Kahenman & Tversky, 1984; Thaler, 1980; Thaler, 1985). Most relevant to the "emergency reserve," people have "rainy day" funds, where they set aside money just in case of an emergency. They restrict themselves to only use that money if they absolutely need to (Shefrin & Thaler, 1988; Thaler, 1990). In this case, the cost of using the funds is purely psychological due to the "rainy day" labeling. Additionally, as a more tangible example of salient psychological costs, poor residents in India who were given part of their salary in a separate specially designated sealed envelope were highly resistant to breaking it open and spending it relative to those who received the salary all at once (Soman & Cheema, 2011). Thus based on this literature, by labeling the reserve as "emergency only use," we induce a psychological cost of breaking into the emergency reserve. We hypothesize consumers will try to resist using their reserve unless they absolutely need it, avoiding the psychological cost associated with using the emergency reserve.

Additionally, in order to mimic real-life goal environments, we will be examining goal pursuit "over time" or in situations in which there are multiple instances to apply the emergency reserve. In these scenarios, in addition to the psychological cost of using the "emergency reserve," there is an opportunity cost associated with using the emergency reserve early because of the finite, limited amount of reserves available. Using the emergency reserve earlier prevents people from using it later (when they might need it more). Prior research suggests people are

more sensitive to their opportunity costs if their resources are constrained (Spiller, 2011).

Relatedly, people also are more resistant to use their resources with smaller accessible budgets or

mental budgets (Heath & Soll, 1996; Krishnamurthy and Prokopec 2010; Morewedge, Holtzman,

and Epley, 2007; Shefrin and Thaler 1988; Stilley, Inman, and Wakefield 2010).

We thus hypothesize that consumers will be resistant to use their emergency reserve due

to the 1) psychological cost (induced by the "emergency" labeling) and sometimes 2) the

opportunity cost of using their emergency reserve too early, leading to more persistence than

those with other goals. We predict that the underlying process for why consumers persist more

with Reserve goals compared to other goal types is the same, resistance to use the reserve due to

the cost. We will now formally describe our hypotheses and lay out why consumers with Reserve

goals will be more likely to persist than those with Easy goals, Hard goals, and other goals with

flexibility.

Reserve vs. Easy Goals

In addition to the cost of using the reserve, Reserve goals focus on a more difficult

reference point (e.g., goal of going to the gym 7 days of the week + 2 "emergency skip" days)

than Easy goals (e.g., goal of going to the gym 5 days of the week). Prior research has suggested

that people perform better with more difficult goals and more specific goals (Locke, Shaw, Saari,

& Latham, 1981). Using Prospect Theory as a framework (Kahneman & Tversky, 1979), Heath,

Larrick, and Wu (1999) demonstrate that people expect to work much harder if they have not yet

reached their goal (in the losses domain) than if they have already succeeded at their goal (in the

gains domain).

Thus, after succeeding (or being able to succeed later) at reaching this easier reference point (e.g., going to the gym 5 days of the week), we expect those with Easy goals to be less likely to persist. However, we expect consumers with Reserve goals to try to resist using their reserve and thus strive for a more difficult reference point. Therefore, we expect consumers with Reserve goals to be more likely to persist than those with Easy goals because of a dual influence (1) Easy goal consumers will be less likely to persist due to an easier reference point and (2) Reserve goal consumers will be more likely to persist due to a resistance to use the emergency reserve.

H2: Consumers with Reserve goals will be more likely to persist than those with Easy Goals.

Reserve vs. Flexible Goals

In order to ensure that the beneficial effects of the Reserve are not due to simply being a flexible goal, we also compare how Reserve goals compare to other flexible goals. Prior research in both the mental accounting and goal literature has found that flexible goals and flexible mental accounts generally do not result in better performance and can even result in worse performance (compared to less flexible goals and accounts). Consumers exploit malleability and ambiguity in their mental accounting rules in order to justify indulging in temptations, reducing self-control performance (Ainslie, 2001; Cheema & Soman, 2006). They perform worse with goals that have multiple means of achieving them, once they are past the initial stages of goal pursuit (Huang & Zhang, 2013), and consumers with high-low goals (e.g., score 2-4 points) are more likely to pursue their goal again, but they are not more likely to perform better than those with single goals (e.g., score 2 points or score 4 points) (Scott & Nowlis, 2013). Further, consumers with

goals with back-up plans for the superordinate goal perform worse on their primary goal than those without back-up plans (Shin & Milkman, 2016). Lastly, the specificity of goals has different effects on consumers depending on the construal level. Non-specific goals under high construal leads to a lower perception of importance leading to lower success compared to specific goals, but under low construal leads to a reduced sense of difficulty and thus higher success (Ulkumen & Cheema, 2011).

To verify that emergency reserves act differently from flexible goals, we will be comparing the effects of Reserve goals to the effects of other goals with flexibility (what we will term "range goals"). We will be examining 2 different types of Range goals: Range-Easy goals that focus on the easier reference point (e.g., your goal is to go to the gym 5 days of the week; however, you should aim to go to the gym 7 days of the week) and Range-Hard goals that focus on the more difficult reference point (e.g., your goal is to go to the gym 7 days of the week; however, it's okay if you go to the gym 5 days of the week). We hypothesize consumers with Range goals will be less likely than those with Reserve goals to reach the more difficult reference point of this flexibility region because there is no cost (psychological or otherwise) associated with using the flexibility inherent in those goals.

H3: Consumers with Reserve goals will be more likely to persist than those with Range goals.

Reserve vs. Hard goals

Reserve goals and Hard goals both focus on the same difficult reference point (e.g., go to the gym 7 days of the week). However, Reserve goals have some flexibility, with a cost, available (e.g., 2 emergency skip days). We hypothesize consumers with Hard goals will try hard

to reach their goal, but those with Reserve goals will try even harder than those with Hard goals in order to resist using their reserve due to the cost associated with using it. As mentioned earlier, the psychological cost of the reserve is amplified by terming it an "emergency" reserve and people are sensitive to such labeling (Henderson & Peterson,1992; Heath & Soll, 1996; Kahenman & Tversky, 1984; Thaler, 1980; Thaler, 1985; Shefrin & Thaler, 1988; Thaler, 1990). Due to this, the cost of using the Reserve may be perceived as greater than the cost of violating the Hard goal, leading to more persistence with Reserve goals than Hard goals. While participants with Hard goals will try their best to reach their goal, those with Reserve goals will try to not to use their "emergency" reserve unless they absolutely need it.

H4: Consumers with Reserve goals will be more likely to persist than those with Hard goals.

This paper demonstrates that consumers prefer Reserve goals to Hard and Easy goals and also persist more with Reserve goals than with other goals. Studies 1 through 3 test initial preferences for emergency reserves. Studies 1a and 1b demonstrate that consumers prefer Reserve goals to Hard and Easy goals in a weight loss program, and study 2 further clarifies this preference by showing that Reserve goals are preferred to both Easy and Hard goals when they are part of a superordinate goal. Study 3 reveals consumers prefer Reserve goals to Easy and Hard goals because they have a higher perceived value and attainability than many other types of goals. The final three studies examine consumers' persistence with Reserves goals compared to those with Easy, Hard, and Range goals in tasks with superordinate goals. Study 4 demonstrates the beneficial effects of an emergency reserve in a realistic work situation that requires

persistence in a task over multiple days. Lastly, studies 5 and 6 reveal that consumers with Reserve goals persist more because they try to resist using their emergency reserve.

STUDY 1A AND 1B: WEIGHT LOSS STUDY

In Study 1a and Study 1b, we explored consumers' preference for an option with an emergency reserve in a domain with a superordinate goal: a hypothetical point-based weight loss program. We expected that participants would prefer the Reserve option to the Easy option and the Hard option as there is a salient superordinate goal within this domain (i.e., to lose weight).

Method

100 different Amazon Mechanical Turk participants completed each study (Study 1a: $M_{age} = 34.33$; Age Range 19-65; 56 Males; Study 1b: $M_{age} = 32.91$; Age Range: 18-62; 12 Males). They were told to imagine they wanted to lose weight and that they were considering three different point-based weight loss programs. Participants were asked to indicate, "Which program would you be most likely to sign up for?" The Easy option offered 32 points per day. The Hard option offered 30 points per day. In Study 1a, the Reserve option offered 30 points per day with 2 optional emergency points per day. The cost of using the reserve in this scenario was purely psychological by labeling the points as "emergency" [See Web Appendix A for details.] In Study 1b, the Reserve option offered 30 points per day plus 14 optional emergency points per week. This increases the flexibility of the reserve relative to Study 1a but it also generates an opportunity cost, in addition to a psychological cost, for early use of the optional points.

Results

For both studies, a multinomial logistic regression was conducted with the Reserve option as the reference group. In Study 1a, participants were marginally significantly more likely

to choose the Reserve option over the Easy option ($46\%_{Reserve}$ vs. $29\%_{Easy}$, $p = .052$) and significantly more likely to choose the Reserve option over the Hard option ($46\%_{Reserve}$ vs. $25\%_{Hard}$, $p = .014$). In Study 1b, participants were significantly more likely to choose the Reserve option over the over the Easy option ($55\%_{Reserve}$ vs. $22\%_{Easy}$, $p < .001$) and over the Hard option ($55\%_{Reserve}$ vs. $23\%_{Hard}$, $p < .001$).

Discussion

Supporting H1, we found in Studies 1a and 1b that participants preferred Reserve goals to Hard goals and Easy goals when there was a superordinate goal (e.g. lose weight). In Study 1a, the only cost of using the reserve was psychological; in other words, simply labeling some of the points for emergency use was enough to affect preferences. In Study 1b, participants also preferred the reserve if it had an additional cost, an opportunity cost: use of the emergency points today reduces the opportunity to use them tomorrow.

In Study 2, we aimed to explore the boundaries of preference for the Reserve by testing how it is affected by the salience of a superordinate goal. We used a scenario about taking a class and manipulated the presence of a superordinate goal (a career exam). We predicted that participants would only prefer the Reserve option to the Easy option if the class was needed for a larger career exam (superordinate goal) but not if the material would not be needed again in the future (no superordinate goal).

STUDY 2: CLASS STUDY

In this study, we explored consumers' preference for a Reserve option compared to an Easy option and a Hard option within an education scenario when a superordinate goal was present and when it was not. Participants indicated their preference on a Likert scale between

only two options (either Reserve vs. Hard or Reserve vs. Easy).[2] We also begin exploring why consumers may prefer the Reserve option to Easy and Hard options.

Method

200 paid Amazon Mechanical Turk participants (M_{age}=31.07; Age Range: 18-59; 126 males) took part in this study. Participants were asked to imagine that they were required to take a class. Participants were randomly assigned to the Career Exam Condition and the No Career Exam Condition. In the Career Exam Condition, participants were told that the required class was a preparatory class for a separate larger exam that they had to take for their future career (a salient superordinate goal). In the No Career Exam Condition, participants were told that the class material would not be used in their career and they would not be required to take a future related class (no superordinate goal). Therefore, in the Career Exam Condition, studying hard for the class would increase students' likelihood of passing the class and also help them be better prepared for their career (e.g., have a better chance of obtaining their superordinate goal). In the No Career Exam Condition, studying hard for the class would only increase their chances of passing the class.

Participants were told two teachers taught the same exact class in a similar fashion and that they used the exact same final exam at the end of the class. One of the teachers offered an emergency reserve for the test (i.e., the Reserve option): students would have to receive a 20/25 on the exam in order to pass the class but they also could earn 5 "emergency" extra credit points if they received below a 20/25. The Easy option teacher required students to receive a 15/25 on the exam and the Hard option teacher required a 20/25 in order to the pass class without any extra credit available.

---

[2] One could argue from Study 1a/1b that participants were simply choosing at random between the Reserve and non-Reserve goals (Easy and Hard). By using a 7-point Likert scale, we test this alternate explanation.

Participants were randomly assigned to read about and make a comparison between the Reserve option and the Easy option *or* between the Reserve option and the Hard option. They were asked, "Which teacher would you be more likely to choose?" on a Likert scale with 1= *Definitely more likely to choose Teacher A*, 4= *Equally likely to choose Teacher A or Teacher B*, and 7 = *Definitely more likely to choose Teacher B*. Teacher A was either the Hard option or the Easy option and Teacher B was the Reserve option (See Web Appendix B for more details).

After indicating their preference, participants were asked with which teacher they would study harder, have learned more after the final, and be more likely to pass the class on a similar 7-point Likert Scale. Participants then completed the Brief Self-Control Measure (Tangney, Baumeister, & Boone, 2004).

Results

As half of the participants indicated a preference between the Reserve and Easy options and the other half of participants indicated a preference between the Reserve and Hard options, we analyze this data separately (since combining them would not be meaningful). Independent sample t-tests and one-sample t-tests vs. the midpoint of 4 (being indifferent between the teachers) were used to analyze the data.

Preference for Reserve goals to Easy goals. Our superordinate goal salience manipulation (Career Exam vs. No Career Exam) had a significant effect on participant's preferences for the Reserve option to the Easy option. Supporting H1, participants were significantly more likely to prefer the Reserve option to the Easy option in the Career Exam Condition than in the No Career Exam Condition; $M_{CE} = 5.20$ vs $M_{NCE} = 3.89$, $t(100) = -3.04$, $p = .003$. Within the Career Exam Condition, participants were significantly more likely to prefer the Reserve option compared to preferring both options equally; $M_{CE} = 5.20$ vs. 4.0, $t(48) = 4.24$, $p < .001$. However, within the

No Career Exam Condition, participants were not significantly more likely to prefer the Reserve option compared to preferring both options equally; $M_{NCE} = 3.88$ vs. 4.0, $t(52) = -.35$, $p = .73$.

Preference for Reserve goals over Hard goals. There was no significant effect of our superordinate goal salience manipulation on participant's preference between the Hard option and the Reserve option; $M_{CE} = 6.29$ vs. $M_{NCE} = 6.14$, $t(96) = -.58$, $p = .57$. Within both the Career Exam Condition and the No Career Exam Condition, participants were significantly more likely to prefer the Reserve option compared to preferring both options equally; $M_{CE} = 6.29$ vs. 4.0, $t(48) = 16.34$, $p < .001$; $M_{NCE} = 6.14$ vs. 4.0, $t(48) = 10.50$, $p < .001$.

------Insert Figure 1 Here------

Motivation (Easy vs. Reserve). There was no significant effect of our superordinate goal salience manipulation on participant's intuition about their likelihood of passing the class and their motivation to study between the Easy option and the Reserve option. Participants thought they would study harder with the Reserve option, $M_{CE} = 5.25$ vs. 4.0, $t(48) = 5.20$, $p < .001$; $M_{NCE} = 4.91$ vs. 4.0, $t(52) = 3.36$, $p = .001$, and learn more with the Reserve option, $M_{CE} = 5.23$ vs. 4.0, $t(48) = 6.14$, $p < .001$; $M_{NCE} = 4.79$ vs. 4.0, $t(52) = 3.79$, $p < .001$ both in the Career Exam Condition and the No Career Exam Condition. Participants thought they would have similar chances of passing with the Reserve option and the Easy option in both conditions.

Motivation (Hard vs. Reserve). There was no significant effect of our superordinate goal salience manipulation on participant's intuition about their likelihood of passing/learning from the class and their motivation to study between the Hard option and the Reserve option. Participants thought they would study similarly as hard and learn a similar amount with the Reserve option and the Hard option in both the No Career Exam Condition and the Career Exam Condition but be significantly more likely to pass the class with the Reserve option than the Hard

option in both the Career Exam Condition and the No Career Exam Condition, M_{CE} = 5.57 vs.

4.0, t (48) = 6.63, p < .001; M_{NCE} = 5.94 vs. 4.0, t (48) =10.73, p < .001.

Self-control. We used OLS regression in order to examine the effect of individual levels

of self-control on choice. We found that participants with high self-control were overall more

likely to choose the Reserve option over the Easy option (β = .77, p = .014). Self-control did not

significantly affect participants' likelihood of choosing the Reserve option over the Hard option

(β = .10, p = .66). We also did not find a significant 2-way interaction between individual level

self-control and the superordinate goal manipulation (career exam vs. no career exam) (Easy vs.

Reserve x self-control: β = .43, p = .49; Hard vs. Reserve x self-control: β = .10, p = .76).

Discussion

Study 2 demonstrated that consumers prefer the Reserve option to the Easy option only if

they have a superordinate goal and prefer the Reserve option to the Hard option independent of

having a superordinate goal (H1). This study thus reveals the importance of a contextual factor,

the salience of superordinate goal, on preferences for emergency reserves.

Study 2 also allowed us to test the importance of individual factors, such as self-control,

in predicting preference for reserves. We found that participants with higher self-control were

more likely to prefer the Reserve option to the Easy option overall. Participants may consider

the emergency reserve a safe self-control pre-commitment strategy (Milkman, Minson, & Volpp,

2013; Wertenbroch, 1998); those with high self-control are more likely to want to pre-commit

themselves to studying and thus learning more from the course. Thus, both situational and

individual factors are important for predicting preference for reserves.

Lastly, this study revealed why Reserve options might be preferred to Easy and Hard

options. Participants thought they would be more motivated to study harder and would learn

more with the Reserve option than the Easy option, suggesting Reserve goals are perceived to have greater value than Easy goals. They also thought they would be equally likely to pass the class with both teachers, suggesting the attainability of the goals are perceived to be equal.

Participants seemed to prefer the Reserve option to the Hard option for a different reason. Participants thought they would be more likely to pass the class with the Reserve option than with the Hard option, suggesting that the Reserve option is perceived as more attainable. Additionally, they thought they would study equally as hard with both options, suggesting both goals are equally as valuable. In the next study, we will aim to replicate these effects and also examine consumers' preference for other flexible goals within a superordinate domain.

STUDY 3: WORD SEARCH PREFERENCE STUDY

In this study, we further examine consumers' preference for the Reserve goal and intuitions about the attainability (likelihood of succeeding at their goal) and value (likelihood of performing better on the superordinate goal) of Reserve goals, Hard goals, and Easy goals when there is a superordinate goal. Additionally, we introduce two range goals. One range goal focuses on the more difficult, aspirational reference point; we will refer to this range goal as Range-Hard. The other range goal focuses on the easier, more attainable reference point; we will refer to this range goal as Range-Easy. However, both goals are equally attainable as Easy goals, similar to Reserve goals.

Method

200 paid Amazon Mechanical Turk participants (M_{age} = 35.43; Age Range: 18-70; 79 males) completed this survey. Participants were asked to imagine they were completing training for a hard word search test and that they would receive a bonus if they performed very well on

this test. In order to train for this word search test, they would be asked to complete a series of training word searches. The more word searches they practiced, the more likely it was they would do better on the hard word search test at the end. Therefore, the superordinate goal in this scenario is performing well on the word search test. Only participants who successfully completed their training goal could try the hard word search test. Participants were then able to choose which training goal they would prefer.

For each training word search they completed, they were told they would score 1 point in this hypothetical game. Participants were randomly assigned to make a choice between the **Reserve** goal [*Goal to score 3 points. However, you also have one emergency point that you can apply if you fail one word search test*] and **one** of the other goals: **Easy** [*Goal to score 2 points*], **Hard** [*Goal to score 3 points*], **Range-Easy** [*Goal to score 2 points. However, you should aim to score 3 points. You will be able to try the word search test if you score 2 points*], or **Range-Hard** [*Goal to score 3 points, but it's okay if you score 2 points. You will be able to try the word search test if you score 2 points*].

Afterwards, they were asked to choose with which goal they thought they would be more likely to qualify for the word search test (i.e. expectancy) and with which goal they think they would be more likely to perform better on the word search test (i.e. value). Participants saw graphical representations and descriptions of each goal when making their choices. Range-Hard, Reserve, and Hard goals all focus on the more difficult goal of completing all three training word searches, re-enforced by both text and a graphical representation. However, there is flexibility for the Range-Hard and Reserve goals, making them more attainable than the Hard goal. Range-Easy and Easy goals have goals of completing two word-searches, also re-enforced by text and graphical representation. (See Web Appendix C for visual representations of all goals).

Results

    Easy vs. Reserve. Participants were significantly more likely to choose a Reserve goal over an Easy goal; 66.67%$_{Reserve}$ vs. 33.34%$_{Easy;}$ χ^2 (1, N = 48) = 5.33[3], p =.021. Participants thought they would be equally likely to qualify to try the word search test with both goals; 52.1%$_{Reserve}$ vs. 47.9%$_{Easy.}$ Lastly, participants thought they would perform significantly better with the Reserve goal than the Easy goal on the word search test; 64.6%$_{Reserve}$ vs. 35.4%$_{Easy;}$$\chi^2$ (1, N = 48) = 4.08, p =.043.

    Hard vs. Reserve. Participants were significantly more likely to choose a Reserve goal over a Hard goal; 72.5%$_{Reserve}$ vs. 26.5%$_{Hard;}$$\chi^2$ (1, N = 49) = 10.80, p =.001. Participants thought they would be significantly more likely to qualify to try the word search test with the Reserve goal than the Hard goal; 68.1%$_{Reserve}$ vs. 31.9%$_{Hard;}$ χ^2 (1, N = 47) = 6.15, p =.013. Participants thought they would perform equally well on the word search test with the Reserve goal and the Hard goal; 56.3%$_{Reserve}$ vs. 43.8%$_{Hard}$.

    Range-Easy vs. Reserve. Participants were equally likely to choose, 51%$_{Reserve}$ vs. 49%$_{Range-Easy}$, thought they would be equally likely to qualify for the word search test, 51%$_{Reserve}$ vs. 49%$_{Range-Easy,}$ and thought they would perform equally well, 56%$_{Reserve}$ vs. 44%$_{Range-Easy}$, with the Reserve goal and the Range-Easy goal.

    Range-Hard vs. Reserve. Participants were significantly more likely to choose a Range-Hard goal over a Reserve goal; 34%$_{Reserve}$ vs. 66%$_{Range-Hard;}$$\chi^2$ (1, N = 47) = 4.79, p =.029. Participants thought they would be equally likely to qualify for the word search test, 45.1%$_{Reserve}$ vs. 54.9%$_{Range-Hard,}$ and would perform equally well, 48.1%$_{Reserve}$ vs. 51.9%$_{Range-Hard}$, with the Reserve goal and the Range-Hard goal.

---

[3] All chi-square tests compare the number of participants who chose the Reserve option vs. the other option (Easy, Hard, Range-Hard, or Range-Easy depending on condition) to what would be expected by chance (50% vs. 50% of observations).

------Insert Figure 2 Here-------

Discussion

This study replicates the effects of Study 1 and 2, such that participants were more likely to choose a Reserve goal over both an Easy goal and a Hard goal when there was a superordinate goal. Additionally, replicating Study 2, participants seem to choose Reserve goals over Easy goals because they are perceived as having a higher value (greater likelihood of performing well on the superordinate goal) while having the same attainability (equally likely to qualify for the final word search). On the other hand, participants seem to choose Reserve goals over Hard goals because they are perceived as being more attainable, with the same value.

Further, the results of this study suggest that consumers overall prefer flexible goals. Participants had no preference between Reserve and Range-Easy goals, perceiving them to have similar value and attainability. Interestingly, participants preferred Range-Hard goals to Reserve goals but thought they had similar value and attainability. Consumers may prefer Range-Hard goals in order to avoid the psychological cost associated with the reserve. However, we will demonstrate that this cost they may be trying to avoid will end up being a key motivating factor in goal persistence.

In the next section of this paper, we will examine how consumers persist with these goals. In particular, in Study 6, participants from the same population (Amazon Mechanical Turk) will perform a similar task with the same goals that the participants from this study choose among. We begin with a straightforward test of persistence under different goal types.

STUDY 4: DAILY CHALLENGE STUDY

In Study 4, we use an incentive compatible task with real behavior and real consequences

to examine goal persistence. This task requires persistence over multiple days as it requires that participants set aside time each day to complete an annoying task to reach their goals, much like daily gym attendance or other long-term goals. In addition to comparing the persistence of participants with Hard and Easy goals to those with Reserve goals, we begin by exploring how the persistence of participants' with one type of flexible goal, Range-Easy, compares to those with Reserve goals. While our prediction is that it is the cost associated with the emergency reserve that encourages persistence, it may simply be that introducing flexibility is enough to encourage more persistence; the Range-Easy goal thus provides an early test of those possible differences. The persistence of participants with other types of flexible goals will be examined in Studies 5 and 6. Based on hypotheses H2-H4, we predicted that participants with Reserve goals would persist more than those with other goal types, such as Hard, Easy, and Range-Easy goals.

Method

226 paid participants (M_{age} = 22.12; Age Range: 18-53; 60 males) from a large public university in the southwest United States participated in this study. Every morning for seven days a different set of 35 CAPTCHAs was posted online for participants to complete. Participants were randomly assigned to one of four conditions, in which the goal for how many days they should complete the CAPTCHAs was manipulated (Easy, Range-Easy, Reserve, and Hard).

Procedure

Participants in this study were on their university's winter break. A different set of 35 CAPTCHAS was posted every morning then removed at midnight. Participants received one dollar for every day that they completed each set of 35 CAPTCHAs. Participants were informed that there would be no penalty for not completing the task daily.

Participants were randomly assigned to one of four conditions, in which the goal of the task was manipulated. In addition to receiving one dollar per day for completing the task, participants received an additional five-dollar bonus if they completed their goal. In the Easy condition, participants' goal was to complete the task five days out of the week. In the Range-Easy condition, participants' goal was to complete the task five days out of the week but they were also told they "should aim to complete the task every day of the week." In the Reserve condition, participants' goal was to complete the task every day (seven days) of the week. They were also told, "in case you need it, up to two days will be excused" and that they would still receive their bonus if they missed up to two days (but they would not receive the one dollar per day payment for the days they missed). In the Hard condition, participants' goal was to complete the task every day of the week (seven days of the week).

In this study, there is both a psychological and opportunity cost associated with using the reserve. If a participant decides to skip typing the task on Monday and Tuesday, they can't skip the task on Wednesday and still make the goal. Additionally, there is a psychological cost in the framing of the emergency reserve as participants are told to use it "in case they need it." We predicted that participants with Reserve goals would be more likely to complete their goal than participants with Easy, Hard, and Range-Easy goals.

Results

Goal Attainment. Reserve, Range-Easy, and Easy goal participants all received their bonus if they completed the task five days of the week. Hard goal participants received their bonus if they completed the task seven days of the week. We used logistic regression predicting successful goal attainment (1 = successfully attained their goal; 0 = otherwise) from three dummy variables representing the conditions (Easy, Range-Easy, and Hard), with the Reserve

condition as the reference group[4].

A test of the full model against a constant only model was statistically significant, indicating that our predictors as a set (indicators of different goal types) had a significant effect on goal attainment, χ^2 (4, N = 226) = 14.76, p < .001. Reserve participants were significantly more likely to receive their bonus than Easy participants, 52.5%$_{Reserve}$ vs. 25.9%$_{Easy}$, (β = -1.15, χ^2 (1) = 8.07, p =.005), Range-Easy participants, 52.5%$_{Reserve}$ vs. 33.9%$_{Range-Easy}$ (β = -.77, χ^2 (1) = 4.00, p =.046), and Hard participants, 52.5%$_{Reserve}$ vs. 21.1%$_{Hard}$ (β = -.1.42, χ^2 (1) = 11.68, p =.001). Because Hard goal participants did not receive their bonus unless they complete the task seven days a week (more than all of the other conditions), we ran another logistic regression predicting achievement on the easier reference point goal of five days a week from the same three dummy variables representing each condition. Reserve participants were still significantly more likely to complete this lower threshold than Hard participants, 52.5%$_{Reserve}$ vs. 31.6%$_{Hard}$ (β = -.88, χ^2 (1) = 5.13, p =.023).

-------Insert Figure 3 Here------

Preference. On the last day of the task, all of the conditions were described and participants (84 total) were asked to indicate which condition they would prefer if they had to complete the task again. Using a multinomial logistic regression, we found participants chose the reserve option significantly more than each of the other options (62% Reserve, 14% Easy, 14% Hard, and 10% Range-Easy), *ps < .001*

Discussion

This study provides evidence that consumers with emergency reserves persist more than those with other goals (Easy, Hard, and Range-Easy). Reserve participants were more likely to

---

[4] The effects reported below are the Betas and *p*-values for each of these dummy variables from one regression model (not individual pair-wise comparisons).

receive their bonus and reach the easier goal compared to all other conditions.

We also found that participants prefer being in the Reserve condition compared to all of the other conditions after actually experiencing the task. There is a superordinate goal in this study to make as much money as possible since participants can make one dollar per day in all conditions. Therefore, this result is consistent with the preferences expressed in studies 1-3 and with the predictions in H1.[5]

Although this study provides evidence for the basic effect (i.e. consumers with Reserve goals persist more than those with other goals), it does not demonstrate why consumers with Reserve goals persist more. According to expectancy-value theories, Reserve goals may be more motivating by focusing consumers on the value (i.e., the more difficult goal; e.g., complete the task seven days) while maintaining the expectancy (by providing a reserve); under this explanation, the cost of the reserve is an unnecessary part of the process. In order to explore whether the cost of the Reserve is a critical component of the process, we next examine participants' persistence with a Range-Hard goal, which similarly focuses on a more difficult, aspirational goal, while keeping attainability the same as an Easy goal. We expect that if the cost of the reserve is an unnecessary part of the motivational process, participants with Range-Hard goals will persist equally as much as those with Reserve goals. However, if instead participants with Reserve goals persist more, we can conclude that there is an additional motivational benefit of the mentally separate reserve beyond what expectancy-value theories would predict.

Additionally, we examine participants' persistence with a psychological cost-free reserve, by terming it a "bonus" reserve rather than an "emergency" reserve. Although "bonus" reserves may still have an opportunity cost associated with using them, the psychological cost of

---

[5] Only those participants who completed the 7th day completed the preference measure. Thus, our preference results from this study may be not representative of the full sample of participants.

the reserve is reduced. Therefore, if cost is an important motivational component of the reserve, participants with "emergency reserves" should persist more than those with "bonus reserves" due to the increased cost (*emergency reserve*: psychological cost + opportunity cost vs. *bonus reserve*: opportunity cost).

STUDY 5: SPOT-THE-DIFFERENCE STUDY

In Study 5, participants were asked to complete three spot-the-difference "training" games in order to help them prepare for a more difficult spot-the-difference test at the end of the survey. Participants were randomly assigned to one of six training goals to beat a particular number of the three spot-the-difference training games: Easy, Range-Easy, Range-Hard, Emergency Reserve, Bonus Reserve, or Hard

The second game in the training set was very difficult. The number of differences participants found before giving up was our dependent variable of interest and measure of persistence. We expected participants with an emergency reserve would find more differences before giving up than those with other types of goals due to the cost of reserve. As in Study 4, in this study, there were two costs of using their emergency reserve: a psychological cost (e.g., labeling it emergency) and an opportunity cost (e.g., if participants use their emergency reserve on the second game, they can't use it on the third game).

Procedure

601 paid Amazon Mechanical Turk participants (M_{age} = 35.71; Age Range: 18-78; 211 males) completed this study. The experiment began by explaining to participants that they would be completing training for a hard spot-the-difference test at the end of the study. In order to train for this spot-the-difference test, they would be asked to complete a series of training spot-the-

difference games. The more spot-the-difference games they practiced, the more likely it is they would do better on the hard spot-the-difference test. Only participants who successfully completed the training could try to take the hard spot-the-difference test and thus be eligible for a potential survey in the future. Thus, preforming well on this hard spot-the-difference test was the superordinate goal. Before participants were assigned their goal, participants received instructions and completed a practice spot-the-difference task.

Participants were then randomly assigned to one of the training goal conditions (Easy, Range-Easy, Range-Hard, Hard, Emergency Reserve, or Bonus Reserve), in which the goal for how many spot-the-difference games they should complete (out of three) was manipulated. They were told they would receive one point for every spot-the-difference game that they beat. In the Easy condition, participants' goal was to score two points. In the Range-Easy condition, participants were told, "Your goal is to score 2 points. However, you should aim to score 3 points. You will be able to try the spot-the-difference test if you score 2 points." In the Range-Hard condition, participants were told, "Your goal is to score 3 points. However, it's okay if you score 2 points instead. You will be able to try the spot-the-difference test if you score 2 points. " In the Hard condition, participants' goal was to score 3 points. In the Emergency Reserve and Bonus Reserve conditions, participants' goal was also to score 3 points. However, participants in the Emergency Reserve condition were also told: "Throughout these games, you will have one optional "emergency" point available just in case you need it. If you fail one spot the difference game, you can apply this emergency point and receive a point for that failed game." Afterwards, they saw a graphical representation of the emergency reserve with a red "Apply Emergency Point" button. They were informed that if they failed a game, they would click on this button to apply their emergency point if they failed. This description was exactly the same for the Bonus

Reserve condition except the word "emergency" was replaced with the word "bonus."

Additionally, the graphical representation of the reserve button was green rather than red and

said "Apply Bonus Point" rather than "Apply Emergency Point."

After every spot-the-difference game, participants were shown a graphical depiction of

their progress and their goal. In order to focus attention on the easier goal in the Range-Easy and

Easy condition and the harder goal in the Range-Hard, Emergency Reserve, Bonus Reserve, and

Hard conditions, the graphical representation for these goals showed a goal of scoring 2 points

and 3 points, respectively.

----Insert Figure 4 Here---

All participants then completed the very easy first spot-the-difference game. Participants

were asked to find two differences with as much time as they wanted; all participants were

informed that they beat it.

For the second spot-the-difference game, participants were told there are between 10-12

differences (there were actually only 10 differences) between the two pictures. They had as much

time as they needed, but they were informed they could give up at any time. The number of

differences that participants found before giving up was our dependent variable of interest. After

participants gave up (or thought they found all the differences), participants were informed that

they either beat the game or failed the game and thus did/ did not receive a point. If they failed

this game, participants in the reserve conditions were asked if they wanted to apply their

"emergency point" or "bonus point."

------Insert Figure 5 Here------

After the second game, participants completed the third spot-the-difference game. All

participants then took the hard spot-the-difference test. [6] They were given two minutes to find as many differences as they could. After taking this test, participants were asked to imagine they had to complete a similar set of training tasks again. They were presented with all of the different training goals with matching graphical depictions and asked to make a choice between them.

Results

Number of Differences Found. OLS regression was used to predict number of differences found from five dummy variables representing each condition (Easy, Range-Easy, Range-Hard, Hard, and Bonus Reserve), with the Emergency Reserve condition as the reference group[7].

A test of the full model against a constant only model was marginally statistically significant, $F(5, 595) = 2.209$, $p = .052$. Participants in the Emergency Reserve condition found significantly more differences than those in the Easy condition ($M_{EReserve} = 6.98$ vs. $M_{Easy} = 5.93$; $\beta = -1.05$, $p = .004$), the Range-Easy condition ($M_{EReserve} = 6.98$ vs. $M_{Range-Easy} = 6.13$; $\beta = -.85$, $p = .020$), the Range-Hard condition ($M_{EReserve} = 6.98$ vs. $M_{Range-Hard} = 6.21$; $\beta = -.77$, $p = .034$), in the Hard condition ($M_{EReserve} = 6.98$ vs. $M_{Hard} = 5.98$; $\beta = -1.00$, $p = .006$), and marginally significantly more than those in the Bonus Reserve condition ($M_{EReserve} = 6.98$ vs. $M_{BReserve} = 6.34$; $\beta = -.64$, $p = .076$).

-----Insert Figure 6 Here---

Preference. We conducted a multinomial logistic regression with the Emergency-Reserve option as the reference group and found that participants preferred the Emergency Reserve goal significantly more than the Hard and Easy goal (14.3% $_{EReserve}$ vs. 8.2%$_{Hard}$, $p = .002$; 14.3% $_{EReserve}$ vs. 7.8%$_{Easy,}$ $p = .001$), significantly less than the Range-Easy goal (14.3%$_{EReserve}$ vs.

---

[6] Even participants who failed their training goal were asked to take the spot-the-difference test. However, participants who failed their training goal were told they would not qualify for future surveys regardless of their performance.

7 The effects reported below are the Betas and p-values for each of these dummy variables from one regression model (not individual pair-wise comparisons).

21.1%$_{\text{RangeEasy,}}$ $p = .005$), and had no significant preference between it and the Range-Hard goal (14.3%$_{\text{EReserve}}$ vs. 17.3%$_{\text{RangeHard,}}$ $p = .19$). Additionally we conducted a multinomial logistic regression with the Bonus Reserve goal as the reference group, and found that participants preferred the Bonus Reserve goal significantly more than all of the other goals (31.3% $_{\text{BReserve}}$ vs. 8.2%$_{\text{Hard,}}$ $p < .001$; 31.3%$_{\text{BReserve}}$ vs. 7.8%$_{\text{Easy,}}$ $p < .001$; 31.3%$_{\text{BReserve}}$ vs. 21.1%$_{\text{RangeEasy,}}$ $p = .001$; 31.3%$_{\text{BReserve}}$ vs. 17.3%$_{\text{RangeHard,}}$ $p < .001$; 31.3%$_{\text{BReserve}}$ vs. 14.3%$_{\text{EReserve}}$ $p < .001$).

Discussion

Participants with an Emergency Reserve goal found more differences (tried harder) on the second spot-the-difference game than those with all other goal types. Participants in all conditions (except the Hard condition) could try the final spot-the-difference test if they scored 2 points. Because all participants scored one point on the first game, if individuals with these goals gave up on the second difficult game, they could still qualify to try the spot-the-difference test by completing the third game. Despite this similarity among the goals, participants with an Emergency Reserve goal tried the hardest on this second game, resisting using their emergency reserve. Additionally, participants with emergency reserves persisted more on the second game than even those with a Hard goal, suggesting that those with an Emergency Reserve goal want to resist breaking into their emergency reserve more than those with a Hard goal want to accomplish their goal (and try the spot-the-difference test).

In this study, we also examined the persistence of participants with a Range-Hard goal, a range goal that focused on the aspirational goal, to investigate how crucial the cost of the reserve is for increased persistence. We found that participants with an Emergency Reserve goal persisted more than those with a Range-Hard goal. Relatedly, we introduced a psychological cost-free Bonus Reserve. We also found participants persisted more with an Emergency Reserve

goal, a reserve with more cost (psychological + opportunity costs), than with a psychological-cost free Bonus reserve, a reserve with only an opportunity cost. Both of these comparisons suggest that the cost of the reserve is a crucial component of the mechanism of the emergency reserve.

After experiencing the task, participants preferred the Emergency Reserve goal to the Hard goal and the Easy goal and preferred the Bonus Reserve goal the most out of all goals. Since participants had to choose between a Bonus Reserve goal and a Emergency Reserve goal, we expect that they shy away from the greater psychological cost of the Emergency Reserve goal. Nonetheless, this study provides overall evidence that there is strong preference for having a reserve of some kind as part of a difficult goal.

In this study, we demonstrated that participants try to resist using their reserve on game 2 when they have an opportunity to use it later (e.g., on game 3). In Study 6, we will examine if participants try to resist using their reserve even if there is no opportunity to use it later. Thus, this final study examines how effective the reserve is when it only has a psychological cost (by labeling it emergency) rather than when it has both a psychological cost and an opportunity cost as in Studies 4 and 5. Specifically, we will examine how likely participants with a reserve are to persist on a third game even after succeeding at the easier goal (e.g., scoring 2 points out of 3).

Additionally, in Study 5, participants had to successfully complete a training goal in order to try a test at the end of the survey. In the real world, there is not always a strict qualification for achieving a superordinate goal. We often set goals (e.g., going to the gym 7 days a week) in order to help us to be more likely to reach our superordinate goal (e.g., becoming more fit). However, we can often still reach the superordinate goal even if we fail our short-term goal (e.g., we can still lose some weight if we go to the gym only 6 days instead of 7). Therefore,

in Study 6, we relaxed the linkage between the goals to be more aligned with these types of real-world scenarios.

STUDY 6: WORD SEARCH PERSISTENCE STUDY

In Study 5, participants were asked to complete three word search "training" games in order to help them prepare for a more difficult word search test at the end of the survey. Participants were randomly assigned to one of five training goals to beat a particular number of the three word search training games: Easy, Range-Easy, Range-Hard, Emergency Reserve, or Hard.

Participants completed two word search practice games that they were likely to succeed at and then were asked if they would like to try the third word search practice game or move on to the word search test; this is our dependent variable and measure of persistence. We expected that participants with Reserve goals would be more likely to try the third word search practice game than those with other goals.

Procedure

510 participants (M_{age} = 35.85; Age Range: 18-77; 212 males) completed this survey from Amazon Mechanical Turk. The experiment began by explaining to participants that they would be completing training for a hard word search test at the end of the study. If they performed well on this word search test, they could be eligible for a potential survey in the future (the superordinate goal). In order to train for this word search test, they would be asked to complete a series of training word searches. The more word searches they practiced, the more likely it is they would do better on the hard word search test. Participants did not have to successfully complete their training goal in order to try the word search test. However, they were told it was a good indication that they were prepared for the test if they completed their goal.

Participants received instructions and completed a practice word search.

Participants were then randomly assigned to one of the training goal conditions (Easy, Range-Easy, Range-Hard, Hard, or Reserve), in which the goal for how many word searches they should complete (out of three) was manipulated. They were told they would receive one point for every word search that they beat. In the Easy condition, participants' goal was to score two points. In the Range-Easy condition, participants were told, "Your goal is to score 2 points. However, you should aim to score 3 points." In the Range-Hard condition, participants' were told, "Your goal is to score 3 points. However, it's okay if you score 2 points instead." As in Study 5, after every word search, participants were shown a graphical depiction of their progress and their goal. In the Hard and Reserve condition, participants' goal was to score three points. However, participants in the Reserve condition were also told: "Throughout these games, you will have one 'emergency' point available. If you fail to complete one word search, you can apply this 'emergency point. This emergency point does not need to be used. It should only be used if you need it.'"

All participants then completed the very easy first word search. Participants were asked to find four words in three minutes; all participants were informed that they beat it. Participants next completed a slightly more difficult but still easy word search, where they had to find five words in three and a half minutes. Most participants succeeded at both of these timed word search practice games and thus had scored two points by this point in the study.

After succeeding at the second word search, participants were then given a description of the third word search. The third word search did not have a time limit and required participants to find ten words. Without seeing the exact word search, they were asked, "Do you want to try the 3rd word search game described or would you like to move on to the word search test?" If

participants chose to move on to the word search test, participants were asked to confirm that they wanted to move on to the word search test and in the Reserve condition that they wanted to use their emergency point.

All participants then took the hard word search test. They were given three minutes to find as many of the ten words listed as possible. Right before and after taking this test, participants were asked to imagine they had to complete a similar training session again and were asked to make a choice between the different training goals.

Results

29 participants failed one of the first two word searches and were excluded from further analyses. We conducted a logistic regression predicting choice to try the third word search or not (1=Tried the third word search; 0= Did not try the third word search) from four dummy variables representing each of the conditions (Easy, Range-Easy, Range-Hard, and Hard), with the Reserve condition serving as the reference group. We also conducted an additional logistic regression predicting successful completion of the third word search (1=Successfully completed the third word search; 0= Did not successfully complete the third word search) from the same four dummy variables.[8]

Try 3ʳᵈ word Search. A test of the full model against a constant only model was statistically significant; χ^2 (4, N = 481) = 29.61, p <.001. We found that participants with Reserves were more likely to try the third word search compared to those in the Easy condition (86.3%$_{Reserve}$ vs. 51.5%$_{Easy}$; β = -1.78, χ^2 (1) = 24.30, p <.001), the Range-Easy Condition (86.3%$_{Reserve}$ vs. 73.4%$_{RangeEasy}$; β = -.83, χ^2 (1) = 4.76, p =.029), the Range-Hard condition (86.3%$_{Reserve}$ vs. 68%$_{RangeHard}$; β = -1.09, χ^2 (1) = 8.76, p =.003), and the Hard condition

---

[8] The effects reported below are the Betas and *p*-values for each of these dummy variables from one regression model (not individual pair-wise comparisons).

(86.3%$_{\text{Reserve}}$ vs. 73.7%$_{\text{Hard}}$; β = -.81, χ^2 (1) = 4.60, p =.032).

----Insert Figure 7 Here-----

Score 3 points. A test of the full model against a constant only model was statistically

significant; χ^2 (4, N = 481) = 25.74, p <.001. We found that participants with Reserves were

more likely to score three points (complete the third word search game) than those in the Easy

condition (81.1%$_{\text{Reserve}}$ vs. 46.4%$_{\text{Easy}}$; β = -1.60, χ^2 (1) = 23.21, p < .001), the Range-Easy

Condition (81.1%$_{\text{Reserve}}$ vs. 77.1%$_{\text{Range-Easy}}$; β = -.89, χ^2 (1) = 6.84, p =.009), the Range-Hard

condition (81.1%$_{\text{Reserve}}$ vs. 63%$_{\text{Range-Hard}}$; β = -.92, χ^2 (1) = 7.62, p =.006), and the Hard

condition (81.1%$_{\text{Reserve}}$ vs. 64.2%$_{\text{Hard}}$; β = -.87, χ^2 (1) = 6.61, p =.010).

Preference. A multinomial regression was used to analyze the preference data with the

Reserve option as the reference group. Participants preferred the Reserve goal significantly more

than the Easy goal before the word search test (22.2%$_{\text{Reserve}}$ vs. 10.1%$_{\text{Easy}}$, β = -.76, χ^2 (1) = 19.72,

p < .001) and marginally significantly more than the Easy goal after the word search test

(19.3%$_{\text{Reserve}}$ vs. 14.8%$_{\text{Easy}}$, β = -.27, χ^2 (1) = 2.93, p = .087). However, they preferred the Reserve

goal less than the Hard goal (22.2%$_{\text{Reserve}}$ vs. 29.5%$_{\text{Hard}}$, β = .28, χ^2 (1) = 4.89, p = .027) and there

were no differences in preference for the Reserve goal and the other Range goals.

Discussion

We found that participants with Reserve goals were more likely to persist to try the third

word search compared to participants with other goals when there was a psychological cost

associated with using the Reserve. Participants tried to resist using the emergency reserve, even

when there was no future benefit to still having it, leading to persistence after reaching the easier

goal (scoring 2 points). Replicating Study 5, participants with Reserve goals again persisted

more than those with Range-Hard goals, suggesting the psychological cost of the reserve goal is

a crucial component of what makes the Reserve goal motivating. They also persisted more than those with Hard goals, suggesting that participants with Reserve goals try to resist using their reserve even more than those with Hard goals try to reach their goal.

After experiencing the task, we found that participants preferred the Reserve goal to Easy goal but not to Hard goal. In Study 5, we found that participants preferred Reserve goals to both Easy and Hard goals. This difference may be due to the fact that the training goals overall were much easier in this study than in Study 5. In this study, most participants succeeded at the second word search and didn't apply their emergency reserve, while in Study 5, most participants failed to complete the second spot-the-difference game, making the emergency reserve more necessary and valuable. Thus, preferences for the Reserve goal to other goals may depend on how difficult the task is, with reserves becoming more preferred when the task involves some level of perceived difficulty.

GENERAL DISCUSSION

This paper demonstrates that the emergency reserve is both preferred in goal pursuit and highly motivating, leading to more persistence than other goals. The results of this paper suggest that offering emergency reserves can not only encourage consumers to sign up for a program initially but also help them reach desirable goals and keep them satisfied with their outcomes.

We support these claims through six studies. Study 1 demonstrated that consumers prefer weight loss programs (a program with a superordinate goal) with emergency reserves, and study 2 revealed that the emergency reserve is preferred to Hard and Easy options when there is a superordinate goal and is preferred to Hard options (but not Easy options) when there is no superordinate goal. Study 3 further showed that consumers prefer Reserve goals to Easy and

Hard goals when there is a superordinate goal because both the attainability and value are perceived to be greater. Study 4 demonstrated that consumers persist more than those with Easy and Hard goals in an incentive-compatible real-life task. Lastly, studies 5 and 6 demonstrated that consumers persist more with Reserve goals compared to other goal types due to an attempt to resist using the reserve. This paper contributes to the literature on goals by suggesting an innovative strategy to not only initiate goal pursuit but also improve goal persistence. Our findings suggest that pre-defined flexibility *with a cost* can actually be beneficial, rather than maladaptive, in goals and mental budgets.

It is worth noting that programs outside of the lab environment that attempt to help individuals reach superordinate goals use concepts similar to the emergency reserve. For example, Weight Watchers, a very successful point-based weight loss program[9], gives their participants weekly "optional" points and "activity points" that they can earn by doing physical activity that they can use any day throughout the week. Although the points are available if needed, there is an opportunity cost associated with using the optional points and a future/past cost associated with the activity points. In a separate domain, giving children a "bedtime pass," that allows them to leave their bedroom only one time per night, has been shown to be an effective way to get children to go to sleep at bedtime. (Friman et al., 1999; Moore, Friman, Fruzzetti, & MacAleese, 2007). The success of these programs suggests that including emergency reserves can be both a preferred and successful strategy to help consumers reach their goals. Our research additionally suggests that labeling the optional points and bedtime pass as for "emergency use" only may further increase their effectiveness.

---

[9] According to U.S. News and World Report, in 2015 Weight Watchers was ranked number 1 for the fifth consecutive year for "Best Weight Loss Diet" and ranked number 1 as "Easiest Diet to Follow" for the fourth consecutive year.

Implications for Marketers

This set of studies suggests that marketers can be more successful in recruiting consumers to sign up for their programs by offering an emergency reserve. Programs focusing on helping consumers reach superordinate goals (such as weight loss programs) can more easily encourage consumers to sign up for their programs by offering a reserve. However, even companies that may not necessarily focus on superordinate goals can encourage consumers to choose programs with a reserve if they make a superordinate goal more salient. For example, a phone company could emphasize the costs of going over a consumers' allocated data per month (a superordinate goal). Making the overage costs salient should highlight the importance of having a plan with a lower amount of data plus an emergency buffer amount of data compared to simply having more data (with the buffer already included).

Our results also reveal that people persist more if they have Reserve goals compared to other goal types. This increased persistence will lead to better long-term results and thus more satisfied consumers. Further, Study 4 and 5 revealed that participants prefer Reserve goals to Easy goals and after Hard goals after experiencing a difficult task, suggesting that consumers are likely to be more satisfied with programs with emergency reserves. Therefore, emergency reserves have direct implications for marketers by being a method to both encourage consumers to sign up for a program, help them reach their long-term goals, and lead to their higher satisfaction and return.

Future Research

In this paper, we focused only on persistence in tasks with imposed extrinsic superordinate goals (e.g., perform well on the final word search test). Success vs. failure at a sub-goal has been shown to have different effects depending on whether the individual focuses on a

superordinate goal or not (Fishbach, Dhar, & Zhang, 2006). Success of a sub-goal highlights commitment rather than progress when the superordinate goal is primed leading them to continue to pursue the goal (rather than shifting their attention to other goals) (Fishbach & Dhar, 2005; Fishbach et al., 2006). Further, consumers may have more motivation to resist using their emergency reserves when resisting using them helps them reach their superordinate goal (e.g., not using your 2 "emergency skip" days from the gym helps you become more fit.) Relatedly, superordinate goals that are intrinsically motivated rather than extrinsically motivated have been shown to affect people's behavior in pursuing goals (Wang & Mukhopadhyay, 2011). Future research should explore if Reserve goals are as effective with an intrinsic superordinate goal or in the absence of a superordinate goal.

Emergency Reserves may differ in size and type, which may affect how people use them. As the reserve gets too small, it may not provide as much of a needed buffer. However, as it gets too big, people may no longer mentally encode it as a reserve and instead start incorporating it into their goal, encoding it as an Easy goal instead. Additionally, rather than being consumed all at once or not at all (as in our studies), emergency reserves can also be continuous. For example, in a dieting context, people could have a supply of 1,000 emergency calories. Unlike the all-or-nothing reserves, individuals may choose to use some of the reserve, but not all of it, at a given time. Exploring and understanding more about these intricacies of emergency reserves will help us design the most optimal emergency reserves.

Finally, is worth noting that we only explored persistence in situations in which participants succeeded at their goal or could still succeed at their goal in the future. Future research should explore another potential benefit of the emergency reserve: better persistence in the face of a failure. Prior research has shown that violating a goal can have negative

consequences (Cochran & Tesser, 1996; Heath et al., 1999; Polivy, 1976; Soman & Cheema, 2004), such as a deterioration of subsequent performance. This subsequent decrease in performance may be due to negative emotions, or other goal-related emotions, after a failure (Bagozzi & Pieters, 1998; Fishbach, Shah, & Kruglanski, 2004; Heath et al., 1999; Louro, Pieters, & Zeelenberg, 2007; Wilcox, Block, & Eisenstein, 2011). Emergency reserves may alleviate the negative effects of goal violation by reducing the psychological cost, or negative emotions, of failing a goal or a sub-goal, leading to more persistence after a failure than those with other goal types.

Conclusion

This paper provides an innovative strategy of structuring goals in order to provide a sense of flexibility while still maintaining stringency through the addition of an emergency reserve. The emergency reserve has large implications for companies, especially those trying to help consumers reach long-term goals. The emergency reserve can be applied to a variety of different goals, such as saving money in the financial domain, studying for a test in the education domain, or trying to lose weight in the food/exercise domain. These are long-term goals that people are consistently having trouble achieving. By exploring more about the mechanisms and applications of emergency reserves, we can understand more generally about how to help consumers initially pursue a goal as well as help them accomplish many of the long-term goals that they have been struggling to achieve.

REFERENCES

Ainslie, G. (2001). *Breakdown of will*: Cambridge University Press.

Atkinson, J. W. (1957). Motivational determinants of risk-taking behavior. *Psychological review, 64*(6p1), 359-372.

Bagozzi, R. P., & Pieters, R. (1998). Goal-directed emotions. *Cognition & Emotion, 12*(1), 1-26.

Bandura, A. (1997). *Self-efficacy: The exercise of control*: Macmillan.

Cheema, A., & Soman, D. (2006). Malleable mental accounting: The effect of flexibility on the justification of attractive spending and consumption decisions. *Journal of Consumer Psychology, 16*(1), 33-44.

Cochran, W., & Tesser, A. (1996). The "what the hell" effect: Some effects of goal proximity and goal framing on performance. *Striving and feeling: Interactions among goals, affect, and self-regulation*, 99-120.

Etkin, J., & Ratner, R. K. (2012). The dynamic impact of variety among means on motivation. *Journal of Consumer Research, 38*(6), 1076-1092.

Fishbach, A., & Dhar, R. (2005). Goals as excuses or guides: The liberating effect of perceived goal progress on choice. *Journal of Consumer Research, 32*(3), 370-377.

Fishbach, A., Dhar, R., & Zhang, Y. (2006). Subgoals as substitutes or complements: the role of goal accessibility. *Journal of personality and social psychology, 91*(2), 232-242.

Fishbach, A., Shah, J. Y., & Kruglanski, A. W. (2004). Emotional transfer in goal systems. *Journal of Experimental Social Psychology, 40*(6), 723-738.

Friman, P. C., Hoff, K. E., Schnoes, C., Freeman, K. A., Woods, D. W., & Blum, N. (1999). The bedtime pass: An approach to bedtime crying and leaving the room. *Archives of pediatrics & adolescent medicine, 153*(10), 1027-1029.

Gollwitzer, P. M. (1990). Action phases and mind-sets. *Handbook of motivation and cognition: Foundations of social behavior, 2*, 53-92.

Heath, C., Larrick, R. P., & Wu, G. (1999). Goals as reference points. *Cognitive psychology, 38*(1), 79-109.

Heath, C., & Soll, J. B. (1996). Mental budgeting and consumer decisions. *Journal of Consumer Research*, *23(1*), 40-52.

Heckhausen, H. (1977). Achievement motivation and its constructs: A cognitive model. *Motivation and emotion, 1*(4), 283-329.

Heckhausen, H., & Gollwitzer, P. M. (1987). Thought contents and cognitive functioning in motivational versus volitional states of mind. *Motivation and emotion, 11*(2), 101-120.

Henderson, P. W., & Peterson, R. A. (1992). Mental accounting and categorization. *Organizational Behavior and Human Decision Processes*, 51(1), 92-117.

Huang, S.-C., & Zhang, Y. (2011). Motivational consequences of perceived velocity in consumer goal pursuit. *Journal of Marketing Research, 48*(6), 1045-1056.

Huang, S.-c., & Zhang, Y. (2013). All roads lead to Rome: The impact of multiple attainment means on motivation. *Journal of personality and social psychology, 104*(2), 236-248.

Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decisions under risk. *Econometrica, 47*, 263-291.

Kahneman, D., & Tversky, A. (1984). Choices, values, and frames. *American psychologist, 39(4),* 341-350.

Krishnamurthy, P., & Prokopec, S. (2010). Resisting that triple-chocolate cake: Mental budgets and self-control. *Journal of Consumer Research*, *37*(1), 68-79.

Kruglanski, A. W., Pierro, A., & Sheveland, A. (2011). How many roads lead to Rome? Equifinality set‐size and commitment to goals and means. *European Journal of Social Psychology, 41*(3), 344-352.

Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting & task performance*: Prentice-Hall, Inc.

Locke, E. A., Shaw, K. N., Saari, L. M., & Latham, G. P. (1981). Goal setting and task performance: 1969–1980. *Psychological bulletin, 90*(1), 125-152.

Louro, M. J., Pieters, R., & Zeelenberg, M. (2007). Dynamics of multiple-goal pursuit. *Journal of personality and social psychology, 93*(2), 174-193.

Milkman, K. L., Minson, J. A., & Volpp, K. G. (2013). Holding the Hunger Games hostage at the gym: An evaluation of temptation bundling. *Management Science, 60*(2), 283-299.

Moore, B. A., Friman, P. C., Fruzzetti, A. E., & MacAleese, K. (2007). Brief report: Evaluating the bedtime pass program for child resistance to bedtime—A randomized, controlled trial. *Journal of Pediatric Psychology, 32*(3), 283-287.

Morewedge, C. K., Holtzman, L., & Epley, N. (2007). Unfixed resources: Perceived costs, consumption, and the accessible account effect. *Journal of Consumer Research*, *34*(4), 459-467.

Polivy, J. (1976). Perception of calories and regulation of intake in restrained and unrestrained subjects. *Addictive Behaviors, 1*(3), 237-243.

Scott, M. L., & Nowlis, S. M. (2013). The effect of goal specificity on consumer goal reengagement. *Journal of Consumer Research, 40*(3), 444-459.

Shefrin, H. M., & Thaler, R.H. (1988). The Behavioral Life Cycle Hypothesis. *Economic Inquiry, 26(4),* 609-644.

Shin, J. & Milkman, K. (2016). How backup plans can harm goal pursuit: The unexpected downside of being prepared for failure. *Working paper*.

Soman, D., & Cheema, A. (2004). When goals Are counterproductive: The effects of violation of a behavioral goal on subsequent performance. *Journal of Consumer Research, 31*(1), 52-62.

Soman, D., & Cheema, A. (2011). Earmarking and partitioning: Increasing saving by low-income households. *Journal of Marketing Research, 48*(SPL), S14-S22.

Spencer, J. A., & Fremouw, W. J. (1979). Binge eating as a function of restraint and weight classification. *Journal of Abnormal Psychology, 88*(3), 262-267.

Spiller, Stephen A. (2011). Opportunity Cost Consideration. *Journal of Consumer Research, 38(4),* 595-610.

Stilley, K. M., Inman, J. J., & Wakefield, K. L. (2010). Planning to make unplanned purchases? The role of in-store slack in budget deviation. *Journal of Consumer Research*, *37*(2), 264-278.

Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High self‑control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of personality, 72*(2), 271-324.

Thaler, R. (1980). Toward a positive theory of consumer choice. *Journal of Economic Behavior & Organization*, *1*(1), 39-60.

Thaler, R. (1985). Mental accounting and consumer choice. *Marketing science*, *4*(3), 199-214.

Thaler, R. H. (1990). Anomalies: Saving, fungibility, and mental accounts. *The Journal of Economic Perspectives*, *4*(1), 193-205.

Tolman, E. C. (1955). Principles of performance. *Psychological review, 62*(5), 315-326.

Ülkümen, G., & Cheema, A. (2011). Framing goals to influence personal savings: The role of specificity and construal level. *Journal of Marketing Research, 48*(6), 958-969.

Wang, C., & Mukhopadhyay, A. (2012). The dynamics of goal revision: a cybernetic multiperiod test-operate-test-adjust-loop (total) model of self-regulation. *Journal of Consumer Research, 38*(5), 815-832.

Wertenbroch, K. (1998). Consumption self-control by rationing purchase quantities of virtue and vice. *Marketing Science, 17*(4), 317-337.

Wilcox, K., Block, L. G., & Eisenstein, E. M. (2011). Leave home without it? The effects of credit card debt and available credit on spending. *Journal of Marketing Research, 48*(SPL), S78-S90.

Woody, E. Z., Costanzo, P. R., Liefer, H., & Conger, J. (1981). The effects of taste and caloric perceptions on the eating behavior of restrained and unrestrained subjects. *Cognitive Therapy and Research, 5*(4), 381-390.

Zauberman, G., & Lynch Jr, J. G. (2005). Resource slack and propensity to discount delayed investments of time versus money. *Journal of Experimental Psychology: General, 134*(1), 23-37.

Zhang, Y., & Huang, S.-C. (2010). How endowed versus earned progress affects consumer goal commitment and motivation. *Journal of Consumer Research, 37*(4), 641-654.

Figures
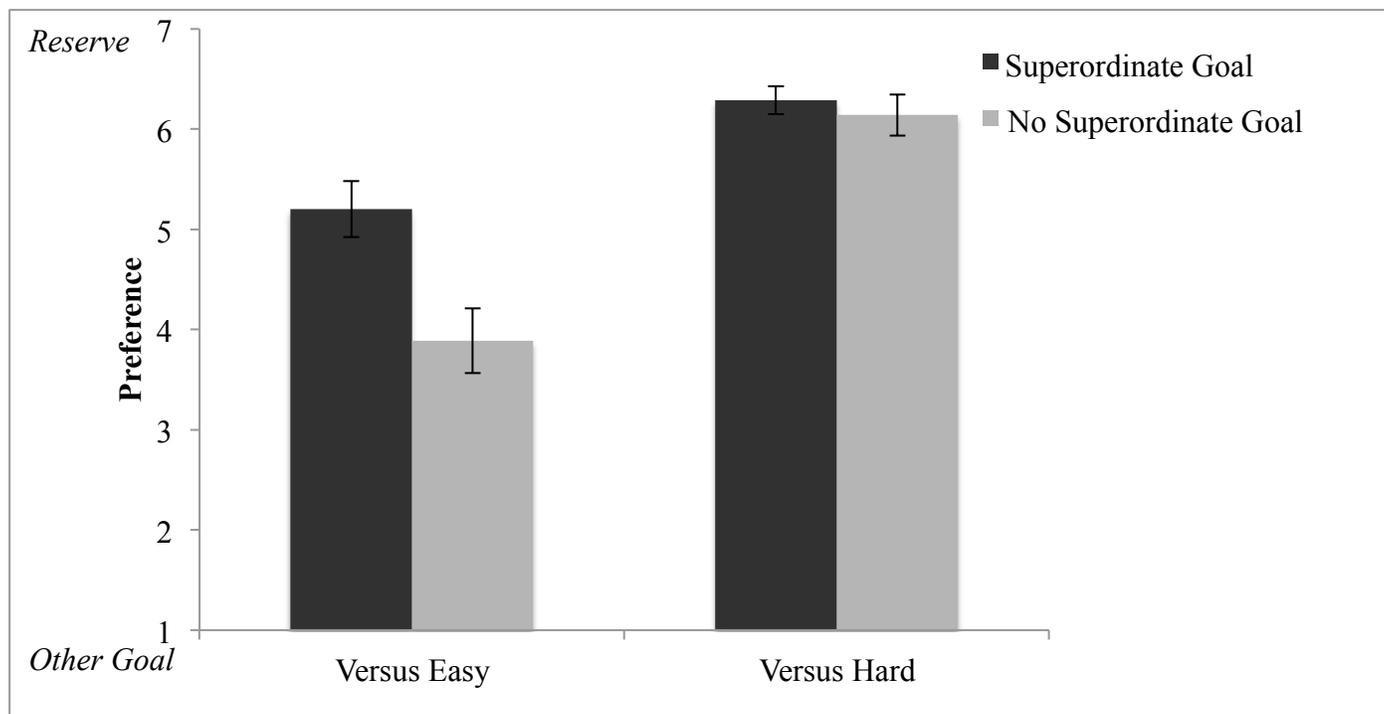
Figure 1. Preference for the Reserve versus Easy (Left) and versus Hard (right) split by condition.
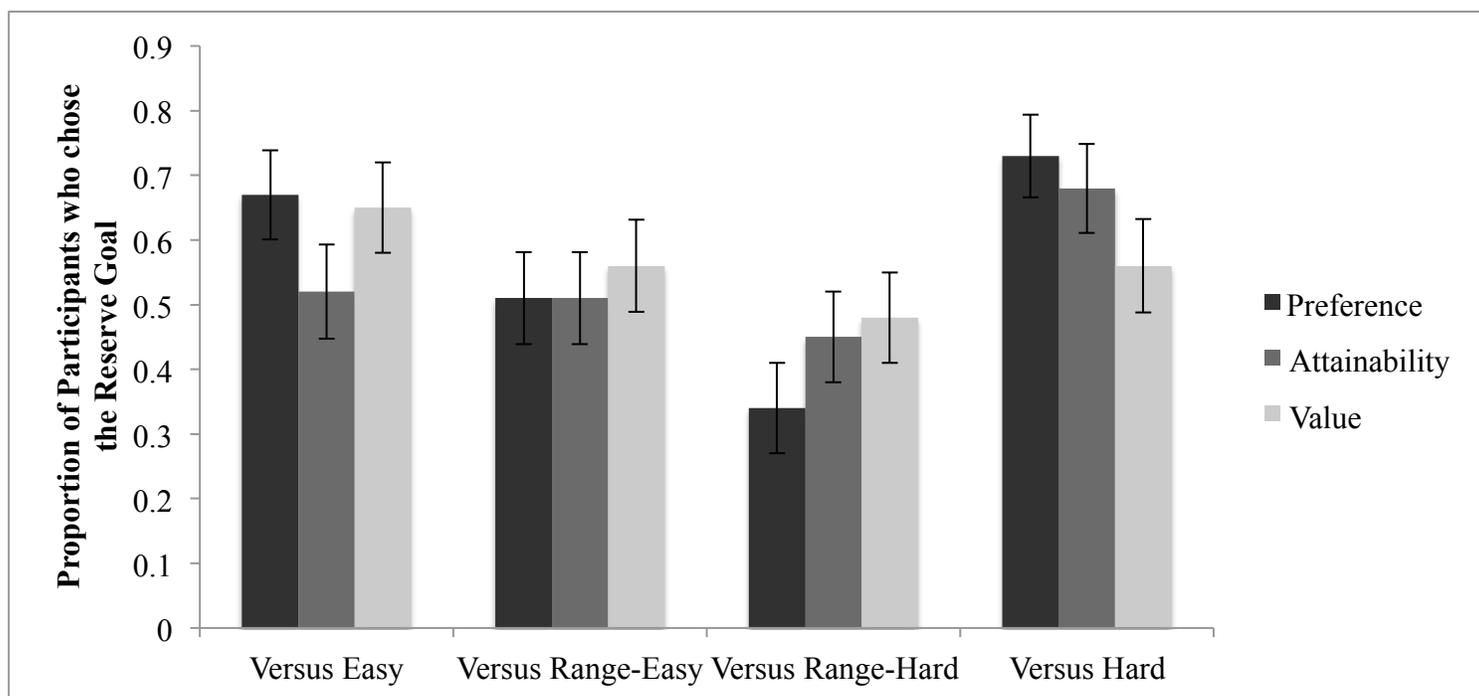

Figure 2. Proportion of participants who preferred the Reserve goal, considered it to be it more attainable, and considered it to have more value over the other goal option (either Easy, Range-Easy, Range-Hard, and Hard).
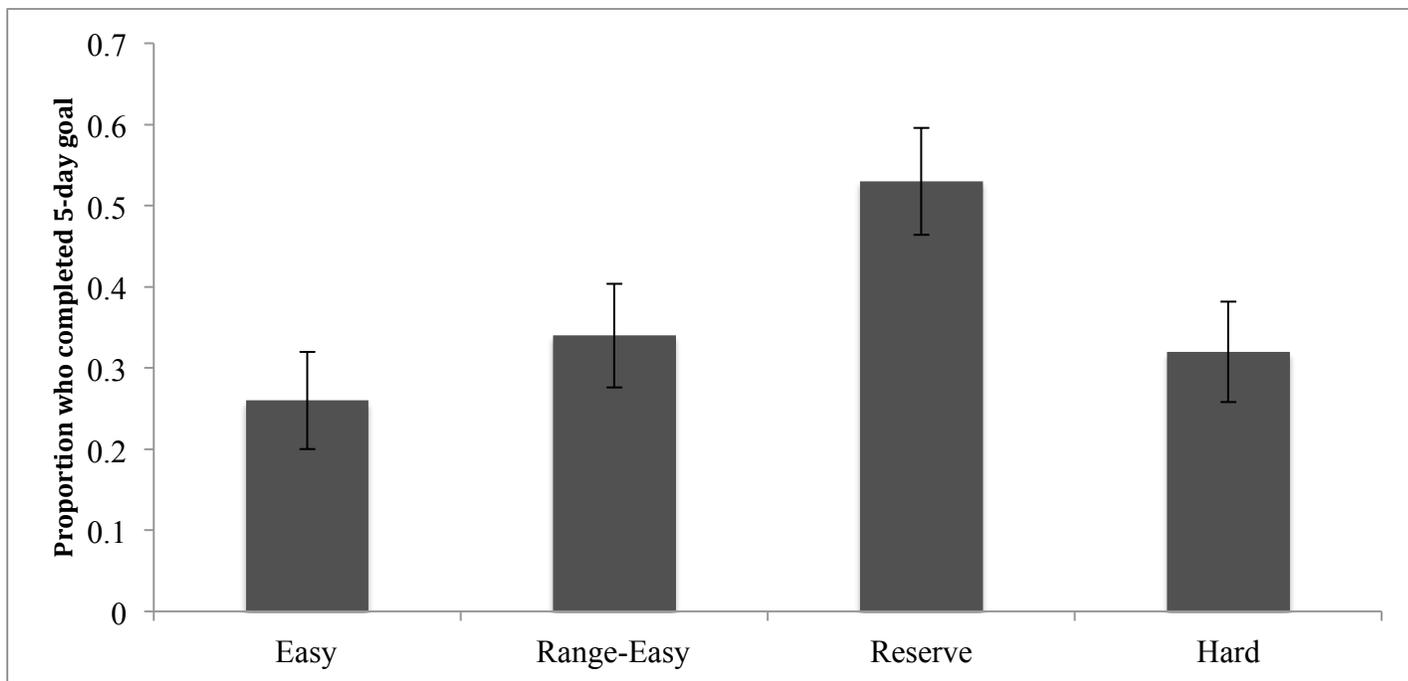
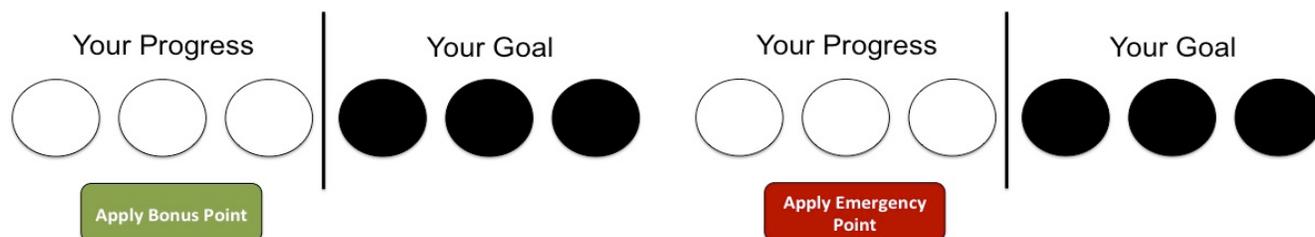*Figure 3*. Proportion of participants who reached the 5-day goal in each condition (Easy, Range-Easy, Reserve, and Hard).

Figure 4. Image for Bonus Reserve vs. Emergency Reserve.

Figure 5. Second Spot-the-difference game.
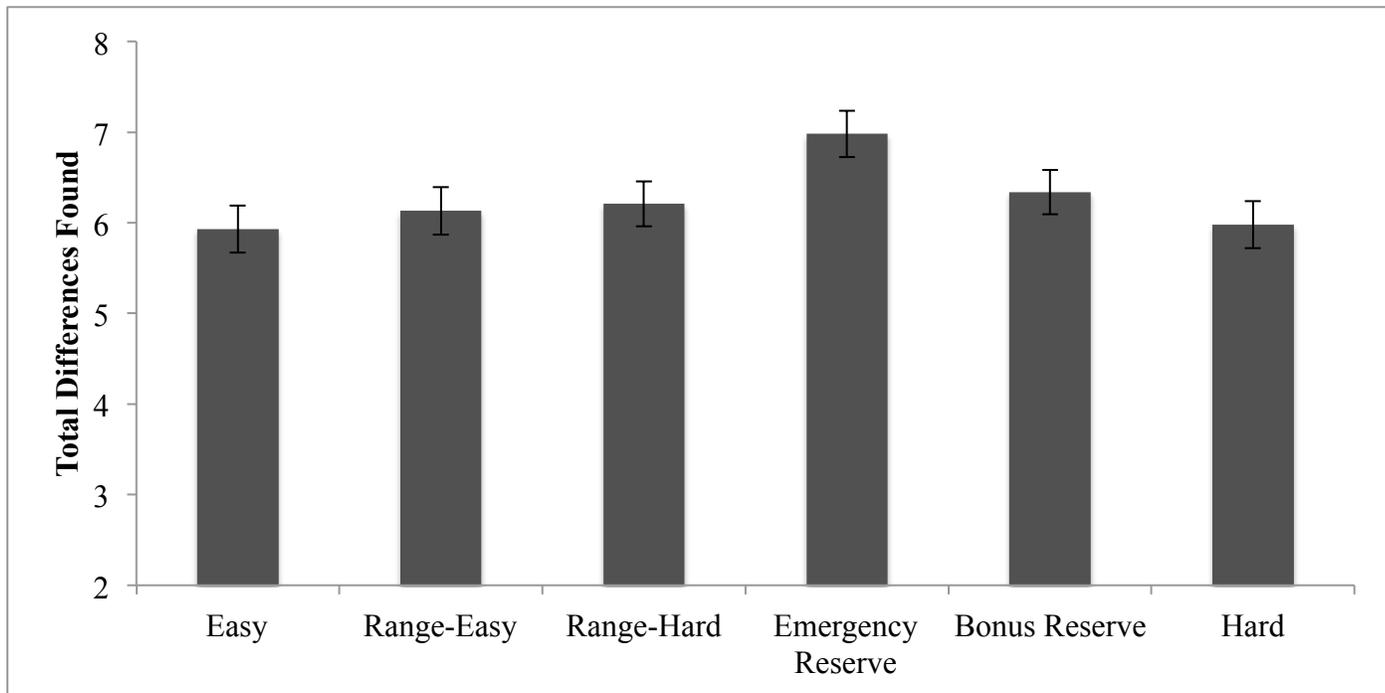
Figure 6. Number of differences found in the second spot-the-difference game, split by condition.
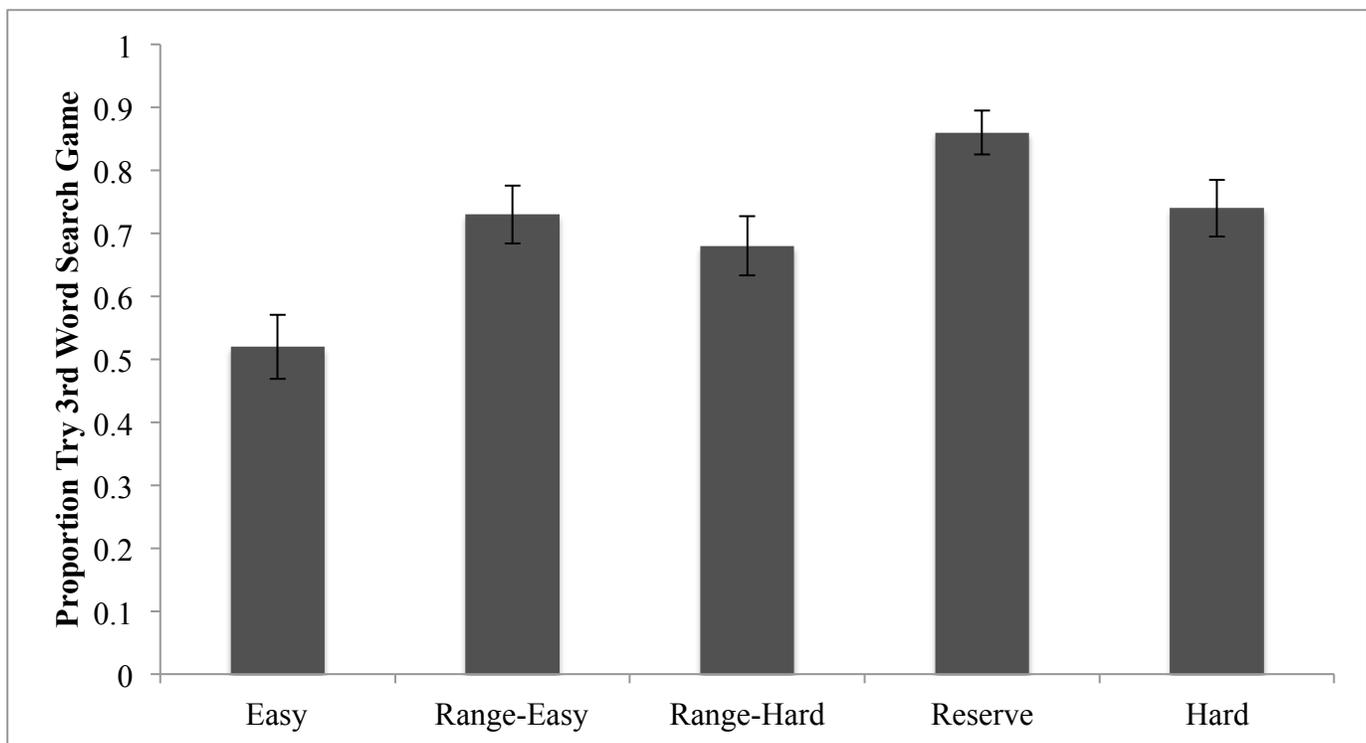
Figure 7. Proportion of participants who tried the third word search practice game, split by condition.

Web Appendix A

Study 1a [Study 1b]

Imagine you want to lose weight. You come across 3 different point-based weight loss program. In these programs, the number of points that are available to you correspond to calories that you can consume. The fewer points that you consume the more weight you are likely to lose. If you chose to join, you would keep a food diary of the foods you consume in order to keep track of your point-use. You would also meet with a nutritionist from the program at the end of the week to show them your food diary.

Program A: You would be able to consume up to **30 points per day (210 points per week)**. You would be assigned 30 points based on your personal demographics (height, weight, age, gender, etc.) Different participants in the program receive different points. The points would **not** roll over to the next day if you did not use them.

Program B: You would be able to consume up to **30 points per day (210 points per week)**. You would be assigned 30 points based on your personal demographics (height, weight, age, gender, etc.). Different participants in the program receive different amounts of points. The points would **not** roll over to the next day if you did not use them. You also would have available up to **2 optional emergency points per day [14 optional emergency points per week]** that you can use anytime throughout the week just in case you need them. These points are also based on your personal demographics. These points would **not** roll over to the next week if you don't use them.

Program C: You would be able to consume up to **32 points per day (210 points per week)**. You would be assigned 32 points based on your personal demographics (height, weight, age, gender, etc.) Different participants in the program receive different points. The points would **not** roll over to the next day if you did not use them.

By consuming the specified number of points in each program, you are likely to meet your weight loss goal.

Web Appendix B

Study 2

Career Exam Condition- Easy [Hard] vs. Reserve:

Imagine you have to take a class. **This class is a preparatory class for a larger exam you will need to take in order to be certified for your future career. The more you learn in this class the better you will do on your larger career exam.**

There are two different teachers that teach the exact same class. The classes are taught similarly and you receive the exact same final test at the end of the class.

The more you study for the exam the better you will score. Therefore, your score is a reflection of how much you have learned in the class.

Teacher A: You need to receive a 15/25 [20/25] on your final exam in order to pass the class.

Teacher B: You need to receive a 20/25 on your final exam in order to pass the class. However, you also have the opportunity to earn 5 emergency extra credit points in case you need them. You can earn these emergency points by completing an extra assignment if you receive below a 20/25 on your final exam.

No Career Exam Condition-Easy [Hard] vs. Reserve:

Imagine you are required to take a class. **This class does not contain material that you will need throughout your career and you will not be required to take another related class in the future.**

There are two different teachers that teach the exact same class. The classes are taught similarly and you receive the exact same final test at the end of the class.

The more you study for the exam the better you will score. Therefore, your score is a reflection of how much you have learned in the class.

Teacher A: You need to receive a 15/25 [20/25] on your final exam in order to pass the class.

Teacher B: You need to receive a 20/25 on your final exam in order to pass the class. However, you also have the opportunity to earn 5 emergency extra credit points in case you need them. You can earn these emergency points by completing an extra assignment if you receive below a 20/25 on your final exam.

Web Appendix C

Different goal options in Study 3. Participants chose between the Reserve option and one of the other goal options (Easy, Range-Easy, Range-Hard, or Hard).
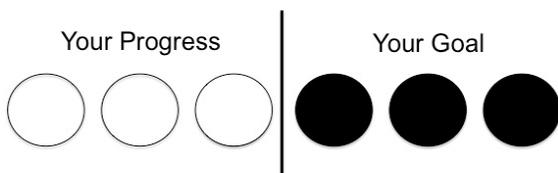
Your goal is to score 2 points. **(Easy)**
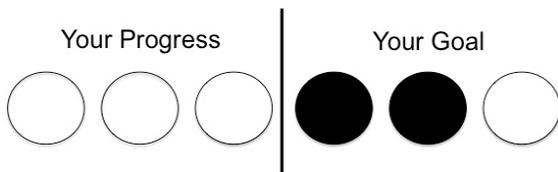
Your Progress | Your Goal

Your goal is to score 2 points. However you should aim to score 3 points. You will be able to try the final word search if you score 2 points. **(Range-Easy)**
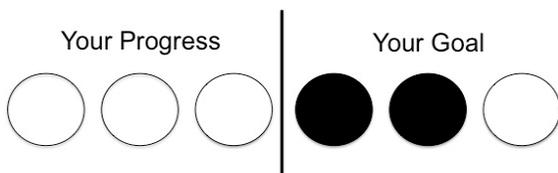
Your Progress | Your Goal

Your goal is to score 3 points. However, it's okay if you score 2 points. You will be able to try the final word search if you score 2 points. **(Range-Hard)**

Your Progress | Your Goal

Your goal is to score 3 points. However, you also have one emergency point that you can apply if you fail one word search test. If you fail to complete one word search test, you can apply this emergency point and receive a point for that failed word search test. **(Reserve)**

Your Progress | Your Goal

Apply Emergency Point
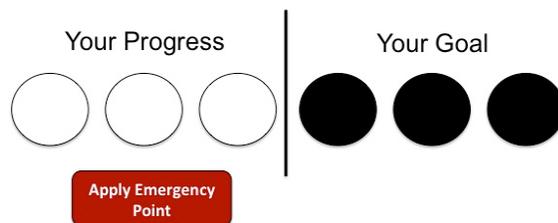
Your goal is to score 3 points. **(Hard)**

Your Progress | Your Goal
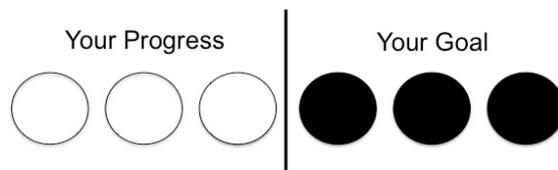
Web Appendix D

The following are further analyses from Studies 4-6. In the main text, the paper presents regression analyses and reports Betas and *p*-values for the dummy variables (representing each condition compared to the Reserve goal) from the regression model (not individual pair-wise comparisons). Below, we present the results for one-way ANOVAs with Dunnett's corrections for one-sided multiple comparisons.

Study 4: Daily Challenge Study

Goal Attainment Results-A one-way ANOVA with Dunnett's correction for one-sided multiple comparisons was also conducted with the Reserve condition being the reference group. The p-values for the differences between each condition follow: Reserve vs. Easy: p =.005; Reserve vs. Range-Easy: p =.047; Reserve vs. Hard: p = .024.

Study 5: Spot-the-Difference Study

Number of Differences Found: A one-way ANOVA with Dunnett's correction for one-sided multiple comparisons was also conducted with the Emergency Reserve condition being the reference group. The p-values for the differences between each condition follow: Emergency Reserve vs. Easy: p =.008; Emergency Reserve vs. Range-Easy: p =.039; Emergency Reserve vs. Range-Hard: p = .064; Emergency Reserve vs. Hard: p = .014; Emergency Reserve vs Bonus Reserve: p = .131.

Study 6: Word Search Persistence Study

Trying 3rd Word Search: A one-way ANOVA with Dunnett's correction for one-side multiple comparisons was also conducted withthe Reserve condition being the reference group. The p-values for the differences between each condition follow: Reserve vs. Easy: p <.001; Reserve vs. Range-Easy: p =.072; Reserve vs. Range-Hard: p = .008; Reserve vs. Hard: p = .079.

Score 3 Points: A one-way ANOVA with Dunnett's correction for one-sided multiple comparisons was also conducted with the Reserve condition being the reference group. The p-values for the differences between each condition follow: Reserve vs. Easy: p <.001; Reserve vs. Range-Easy: p =.042; Reserve vs. Range-Hard: p = .027; Reserve vs. Hard: p = .048.