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SELF-CONTROL & CONSTRUAL-LEVEL IN FOOD-RELATED DECISIONS
OF FEMALE COLLEGE STUDENTS

by

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Abstract**SELF-CONTROL & CONSTRUAL-LEVEL IN FOOD-RELATED DECISIONS
OF FEMALE COLLEGE STUDENTS**

Seandor Szeles

This study focuses on understanding how construal level theory functions during decision-making recall and in the absence of priming. Participants were 17 female college students aged 18-25 who self-identified as having attempted to change eating behaviors at some point in their lives. Participants were interviewed about two decisions from the past week, one perceived as “good” and one perceived as “poor,” along with a series of broad questions about their goals and values. Thematic analysis focused on how participants construed their goals within the decision-making context and independent of the decision-making context. Participant goals fell into seven distinct themes of weight, healthy lifestyle, self-concept, good/bad dichotomy, convenience, feeling good, and portion control. Of the themes mentioned when discussing context-dependent goals, weight, healthy lifestyle, self-concept, and good/bad dichotomy overlapped with themes discussed when participants were prompted to talk about goals independently of the decision-making context. When recalling “poor” decisions, participant responses fell into three themes: negatively related to goals, the opposite of their goals, and budget. The results suggest that goals, a feature of high construal thinking, were more available when participants were recalling “good” compared to “poor” decisions.

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Introduction

The United States has a multi-billion dollar weight-loss industry, yet research shows that people have difficulty translating good intentions about healthy eating and weight loss into action. Many abandon their attempts to change eating behavior within a few weeks (Lovejoy, 2013; Ridder, Ouweland, Stok, & Aarts, 2009). The majority of people who do engage in dieting interventions for weight loss purposes fail to maintain positive dietary habits beyond the diet period (McKee, Ntoumanis, & Smith, 2013). Research suggests that dieting is also ineffective in the long-term. One study compared individuals who were randomly assigned to one of five formal diets with a control group that was not put on a diet. After 2.5 years, non-dieters did not show a statistically significant weight loss compared to dieters (Mann et al., 2007). For those who successfully lose weight, nearly half of the weight lost during an intervention is regained one-year after the intervention and the remaining weight is regained 3-5 years after the intervention (McKee, Ntoumanis, & Smith, 2013). Generally, there is very little evidence that dieting leads to long-term weight loss (Mann et al., 2007).

Self-Control

The ability to restrain eating is linked to self-control (Kuijjer, Ridder, Ouweland, Houx, & van den Bos, 2008). Self-control is the ability to regulate one's immediate response to stimuli. Self-control has been linked to a wide variety of social and personal problems. The inability to control one's own behavior has been shown to lead to problems such as crime, teen pregnancy, alcoholism, drug addiction, obesity and venereal disease (Baumeister & Heatherton, 1996). In the context of food and eating behaviors, researchers conceptualize self-control failures as making decisions that undermine goals

and values (Fujita & Sasota, 2011). Engaging in self-control involves inhibiting the short-term rewards of food in favor of long-term outcomes such as health, perceived attractiveness, or weight loss. Self-control theories fall into two categories: impulse control models and dual motive models.

The impulse control model of self-control focuses on a person's ability to inhibit impulses. For example, the ego depletion theory holds that self-control relies on a limited energy source and that engaging in acts of self-control impairs subsequent attempts at self-control (Gailliot et al., 2007).

Other self-control theories focus on affect, which is considered by many researchers to be detrimental to impulse control. Theories regarding "hot" and "cold" cognitions hold that thoughts rooted in "cold" mental states associated with low levels of affectivity promote self-control, while "hot" thoughts associated with high levels of affect impede the ability to control impulses (Fujita, 2011). Individuals experiencing "hot" cognitions are more sensitive to immediate environmental cues, interfering with thoughtful decision-making and therefore self-control.

The automatic versus controlled model of self-control also focuses on inhibiting impulses. The theory highlights the ways in which unconscious thoughts, behaviors, and emotions (automatic thoughts) impact self-control compared with thoughts that are reflective, intentional, and conscious (controlled thoughts) (Baumeister & Masicampo, 2010). Automatic thoughts are largely unconscious whereas controlled thinking, which requires effort, allows for conscious decision-making.

The common theme throughout each of these theories is that they focus on factors contributing to conscious, effortful control of impulses. The emphasis is on

saying “no” to a temptation. However, many researchers argue that inhibiting impulses is just one way to understand self-control. Dual-motive theories of self-control expand upon this understanding and shift the focus to motivational factors involved with self-control conflicts in the face of a temptation (Fujita, 2011). According to this model, self-control is not simply saying “no” to a tempting impulse but also saying “yes” to a larger goal or value. For a dieter, the decision to indulge in a piece of chocolate represents not only the inhibition of the immediate reward but also the promotion of a larger, long-term goal or value (Kuijjer et al., 2008).

There are several theories that focus on factors impacting both an individual’s ability to reject an immediate reward and to choose a larger goal. For example, the delay discounting theory holds that rewards that are received at a future time are less reinforcing than rewards that are experienced immediately (Fujita, 2011). Research suggests that individuals tend to choose rewards with less value if they are available immediately, whereas delayed rewards are discounted or devalued based on how long the person has to wait to receive them. For example, \$10 may be worth \$10 today but less than \$1 if the individual has to wait a month to receive it. Discounting the value of a reward based on time has been found to depend largely on the magnitude of the reward. Small rewards are discounted at a faster rate than large rewards. For example, a \$10 reward produces greater delay discounting than a \$100 reward (Fujita, 2011). The delay discounting theory helps to explain why immediate rewards are often valued over long-term values or goals. In light of delay discounting theory, dieting behaviors can be seen as the struggle to choose between the immediate rewards of foods such as chocolate and the delayed rewards of better health, weight loss, or perceived attractiveness.

Dual-motive theorists also focus on unconscious factors impacting self-control decisions. Research suggests that individuals can learn to automatically associate temptations with goals. Fishbach & Myrseth (2009) found that some people successfully control impulses by associating temptations with negativity based on prior goals. In successful dieters, goal-related thoughts were automatically activated in the presence of temptations (Fishbach, Friedman, & Kruglanski, 2003). For example, the word “cake” was found to promote the activation of diet-related goal words such as “slim.” Similarly, cues for sin-related behavior (such as “premarital sex”) elicited goal-related thoughts regarding religious values. Unlike automatic thoughts that are not learned, automatic goal-related thoughts require effortful learning in the early stages of behavior change. Once the link is developed, the relationship between temptation and goals can be activated with little need for cognitive resources. Overlearning allows for the goals to be activated subliminally. The strength of the relationship between temptations and automatic thoughts about goals is moderated by the subjective importance of the goal (Fishbach, Friedman, & Kruglanski, 2003). Learning to associate temptations with goals can lead to an increased ability to say “yes” to a goal and “no” to an impulse, resulting in increased self-control.

Another tool for enhancing self-control is prospectively choosing long-term goals over immediate rewards (Fujita, 2011). Some individuals are able to restrict opportunities to indulge in temptations. For example, the dieter who decides to drive home using a route that does not require passing a fast-food restaurant is proactively making a decision about his or her environment, avoiding temptations associated with direct cues such as sights and smells. In such cases, individuals make decisions about

their environment that allow them to avoid the need to consciously inhibit an impulse.

Dual-motive strategies of self-control focus on enhancing one's ability to say, "yes" to a larger, long-term value or goal in addition to saying "no" to an impulse. Such strategies may prove especially useful for individuals with self-control deficiencies (Fujita, 2014).

Self-Control As a Trait

Self-control is different from person to person. Impulsivity is a personality trait defined by an increased sensitivity to rewards and an inability to inhibit behavior regardless of the possibility of negative consequences (Schag, Teufel, Junne, Preissl, & Hautzinger, 2013). People with impulsive personality traits such as high reward sensitivity and high sensation seeking are more likely to suffer from obesity (Beaton, Abdi, & Filbey, 2014). They are also likely to interpret temptations differently. Action identification theory (AIT) states that some individuals consistently represent actions in high-level terms (high-level agents) in which actions are represented in terms of motivation and larger meaning (such as "eating healthy" or "indulging in everything"). Other individuals represent their actions in low-level terms (low-level agents) in which behaviors are represented in terms of details and means (i.e. "green vegetables smell gross") (Vallacher & Wegner, 1989). Note that high-level agents interpret things, such as food, in broad terms that are fused with meaning whereas low-level agents construe things in terms of specific characteristics and focus on means and immediate details. Vallacher & Wegner (1989) refer to high-level agents as the "why" people due to their tendency to focus on larger meaning and motivation whereas low-level agents are referred to as "how" people due to their tendency to focus on details of

action and context. High-level agents are concerned with the broad significance of an action, whereas low-level agents focus on contextual factors. Low-level agents have been found to be more impulsive than high-level agents.

Construal Level Theory

Building upon AIT, construal level theory (CLT) holds that individuals experience events and objects such as temptations differently based on their subjective interpretations or construals (or how a person “construes,” interprets or understands an object or event). A construal is defined as both the process of conceptualizing an event or object and the result of that process. When constructing a high-level construal, individuals focus on abstract, universal aspects of information and generally emphasize goals or larger meaning. Studies have demonstrated that considering questions of “why” primes individuals to a high-level construal (Chiou, Wu, & Chang, 2012). For example, asking a dieter why he is engaging in a diet is likely to result in an answer focused on larger meaning and long-term goals such as “to remain healthy” or “to feel good about myself.” Note that high-construal thinking deals with long-term goals and that the categories are fewer, broader, and abstract (Fujita, 2014; Fujita, Trope, Liberman, & Levin-Sagi, 2006). When constructing a low-level construal, individuals tend to focus on details that are specific, concrete, and incidental. Studies have demonstrated that considering questions of “how” primes individuals to a low-level construal. For example, when priming participants to low-level construal researchers might ask individuals how they plan to lose weight. Answers typically focus on means, hedonistic qualities, and concrete features, such as “the taste of chocolate” or “counting carbs.” Note that the focus is on immediate temptation, incidental features and discrete actions. Compared to

high-construal categories such as “healthy” and “good,” the words “carbs” and “chocolate” are narrow and concrete.

CLT theorists are aligned with the dual motive approach to self-control. They define self-control as the ability to make decisions based on long-term goals and values rather than short-term impulses. Dieters are not simply saying “no” to a piece of chocolate. They are also saying “yes” to a larger goal about health or some other value or goal. Research has found that high-level construal promotes self-control. For example, Fujita & Han (2009) found that individuals primed towards a high-level construal were more likely to evaluate a tempting stimulus as negative. High-level construal has also been found to increase control over addictive behaviors. Chiou, Wu, & Chang (2012) found that high-level construal related to quitting smoking, that is considering long-term goals associated with smoking cessation rather than means of achieving cessation, led to reduced cigarette smoking.

CLT and Other Frameworks

While CLT draws largely from AIT, it is distinctive in that AIT looks only at actions (going on a diet) whereas CLT also looks at mental construal of objects (a burger), situations (in a bar) and events (Sunday brunch) (Vallacher & Wegner, 1989; Fujita, 2011). AIT focuses on representations of actions in terms of a hierarchy of identities. Therefore, a high-level agent would say that she “tries to be a healthy person,” focusing on long-term goals and using a broad, abstract adjective such as “healthy” to describe larger meaning. Alternatively, a low-level agent might say that she “eats broccoli for dinner each night,” focusing on immediate, concrete aspects of her diet and using a specific, concrete word such as broccoli to describe how she eats. CLT allows for

objects and events, in addition to actions, to be construed in more complicated ways. For example, individuals may consider primary and secondary characteristics of an object or person and how they impact judgments, decision-making, and behavior (Fujita & Han, 2014). These characteristics may be relevant to goals or not relevant to goals. While eating at a restaurant, AIT holds that a person might construe low-level characteristics of a piece of broccoli such as its color and taste against its high level characteristics such its qualities in terms of health or dieting goals. From a CLT perspective, the broccoli can be construed as a “tasteless vegetable” (focusing on immediate, incidental characters), as “healthy body fuel” (incorporating secondary goals), or a “pretty color of green” (goal-irrelevant).

Factors Mediating Construal Level

The relationship between self-control and construal has been established using priming methods. In this research, several factors that moderate the association between construal level and self-control have been identified.

Time & Size of Reward

Delay-discounting theory has been found to correlate closely with CLT. With increased temporal distance, people are more likely to construe objects in a high-level manner that contains fewer, broad categories resulting in greater discounting of rewards. As events get temporally closer, people tend to construe them at a low-level, incorporating incidental details and generally moving from the “why” to the “how” (Fujita & Carnevale, 2012). For example, a piece of chocolate cake that is available ten days from now would likely be conceptualized in a high-construal manner such as “unhealthy” and therefore discounted as a reward, resulting in greater anticipated

self-control. One potential reason for the relationship between temporal distance and construal level is that details about concrete, secondary aspects of future events become available only as one gets close in time to the event. Therefore, an overgeneralized association may be formed between time and level of construal (Trope & Liberman, 2003). As a result, individuals may continue using high-level construal for events in the future even when low-level information is pertinent to decision-making. A high-level construal of food such as “eating healthy foods” is more likely to be used for decisions in the far future whereas a low-construal of food such as “choosing the kale salad over the burger” would be used for near future decisions, despite the fact that high-level features (“healthy foods”) are pertinent in the near future and low-level features of the decision (the specific characteristics of the kale salad vs. the burger) are pertinent for far-future planning.

This over-generalization has been found to impact how individuals construe a temptation. Fujita, Trope, Liberman, and Levin-Sagi (2006) asked college students how much they would pay for four separate products both immediately and in a delayed amount of time. Students primed to a high-level construal were more willing to wait for a better price, suggesting that high-level construal may cause a reduced tendency to favor immediate outcomes. Studies have also explored the impact of construal manipulation on time preferences regarding evaluations of film preferences, time management, and gambling preferences (Trope & Liberman, 2003). Each demonstrated similar results: priming individuals to a high-level construal reduced the tendency to prefer immediate over delayed outcomes.

Goals

Engaging in high-level construal may enhance the accessibility of goal-related thoughts, promoting self-control. Fujita & Han (2009) demonstrated that high-level construal of weight-loss related stimuli made individuals more likely to associate temptations with negativity, promoting self-control without conscious deliberation. In the study, college-aged women who presumably valued a healthy diet were primed towards high and low-level construal. Subjects primed to a high-level construal, as compared to those primed to a low-level construal, were more likely to associate candy bars with negativity and apples with positivity when evaluating food choice. These results suggest that high level goals and values about eating candy bars were more readily available to those primed to a high-level construal. Further, construals were manipulated in a context separate from dieting, leading researchers to conclude that priming caused changes in the process of thoughts about the candy bar rather than the content of the thoughts. Therefore, construal levels are impacted not only by the objective characteristics of a temptation but also by the individual's manner of interpretation. In another study, Chiou, Wu, & Chang (2012) found that construing the desire to quit smoking at a high-level enhanced self-control and led to reduced cigarette consumption among current smokers, suggesting that the effect may be generalized to domains beyond dieting. The strength with which a person values a goal such as health has been found to be an important factor contributing to the relationship between high-level construal and goal-related associations, highlighting the subjectivity of the relationship between construal and self-control (Fujita & Sasota, 2011).

Temptation avoidance

Avoiding temptations is associated with higher-level construals of tempting situations. Fujita (2011) offered people the opportunity to receive useful feedback about their cognitive skills, but scheduled the appointments at an annoying hour in the middle of the night. Foreseeing the temptation to cancel, individuals primed to high-level construal were more likely to agree to pay a higher fee for cancelling, enhancing their ability to demonstrate self-control in the future (Fujita & Carnevale, 2014). This forethought suggests that high-level construal promotes prospective self-control.

Impulsive Traits

Impulsive personality traits have been connected with obesity and substance abuse, among other self-control conflicts. Research suggests that low levels of impulsivity may be linked with high-levels of self-control (Aslan & Blunden, 2012). Studying how individual differences in construal level compare with various dimensions of impulsive traits may help in understanding how individual differences in self-control relate to these constructs. AIT is of particular interest. Due to the emphasis on context, low-level agents are thought to be more sensitive to context-specific factors involved in decision-making. Low-level agents have been found to be more impulsive and less motivated, whereas high-level agents are able to incorporate the long-term implications of their actions into decision-making (Vallacher & Wegner, 1989).

Mindfulness

Mindfulness is a mode of processing information that involves attention and awareness. In a mindful state, attention is focused on the essential elements of a stimulus. As a result, an individual may experience a stimulus “in the moment” rather

than filtered through a series of habitual mental reactions to the stimulus (Brown, Ryan & Creswell, 2008). Masicamp & Baumeister (2008) have called attention to the theoretical overlap between mindfulness and self-control and suggest that mindfulness may be a tool for improving self-control. Brown, Ryan, & Creswell (2008) argue that mindfulness interventions may help to facilitate more adaptive responses to stimuli and may aid in reducing impulsive or habitual reactions by enhancing the individual's capacity to pay attention to multiple aspects of cues. Mindfulness may enhance self-control by distancing automatic behaviors from their automatic learned cues and offering individuals the opportunity to pay attention to long-term values or goals (Brown, Ryan, & Creswell, 2008). For example, mindfulness may present a dieter with the ability to pay attention to both the characteristics of a piece of chocolate and to the impulse to react to that cue. By noticing both features of the decision, the individual may have the opportunity to choose how to act.

The Present Research

Experiments focusing on construal-level and self-control have typically used priming techniques to induce high or low level construal in study participants, allowing researchers to study self-control in the context of a discrete decision or set of decisions. For example, one common and validated method for manipulating construal is to ask individuals to create category labels for objects (inducing high-level construal) or examples of objects (low-level construal). After performing this or a similar task, participants are then asked to engage in a self-control behavior. No studies to our knowledge have explored the extent to which construal levels exist and change in the absence of manipulations such as this.

The current study will integrate AIT and CLT, exploring the extent to which individuals naturally construe decisions about whether or not to eat food. Specifically, participants were asked to discuss two food-related decisions, one about which she felt good and one about which she felt poorly. Our hypothesis was that when asked about “good” food decisions, women would naturally demonstrate high-construal thinking whereas when recalling “poor” choices, women would demonstrate low-construal thinking. We hoped that understanding construal level in this context would serve as a useful tool for identifying those who are likely to experience self-control failures, possibly leading to diagnostic measures or new interventions (Fujita & Carnevale, 2012). This greater understanding of construal level change may empower us to move beyond discreet decision-making scenarios to explore how construal level functions across multiple decisions over time and in the absence of priming manipulations. Further, we hoped that studying construal in this context would enhance our understanding of how construal impacts decisions regarding eating behaviors specifically. It is hoped that some of these findings will be generalizable to other domains of self-control. Finally, researching naturally occurring construal change may allow for exploratory research into which types of goals and emotions enhance self-control and at what level these constructs should be construed in order to maximize their effect.

Participants

Participants were women who self-identified as having engaged in efforts to change eating behaviors at some point in their lives ($N = 17$). The mean age was 21 and the standard deviation was 2.53. Eight participants were white, three were black/African

American, two were Hispanic/Latina, one was bi-racial/multicultural, and one participant reported “other.” Only 14 participants reported their age and ethnicity; data is missing for the other three participants. Participants were recruited via the Towson University research pool or by personal invitation. Participants who were recruited through the psychology department research pool earned 2 research credits toward fulfilling a course requirement; those recruited by personal invitation were not compensated for their participation.

Procedure

The study used a semi-structured, one-on-one interview format lasting fifteen minutes to an hour. Interviews took place in a private room in the College of Liberal Arts building at Towson University. Participants were told that they were participating in an interview about choices, values, and emotions. The researcher explained to participants the requirements of the study, the risks involved (including loss of confidentiality), and their rights as participants. Participants then provided verbal consent for the interviews (written informed consent was waived).

Participants were asked a series of open-ended questions about two food-related decisions from the week prior to the interview. Specifically, each participant was asked to recall one food-related decision about which she felt good and one food-related decision about which she felt poorly. Participants were free to define “good” or “poor” according to their own perception of these terms. For each decision, the participant was asked a series of questions based around topics identified in previous research on construal level such as affect, goals, and time and size of reward. For example, questions about affect included: “How did you feel before the decision?” “How did you feel

directly after the decision?” and “How did you feel thirty minutes after the decision?” We also asked each participant to describe the food with questions such as: “What color was the food?” “What did it smell like?” and “Was the portion large or small?” All participants were asked if they rewarded or punished themselves in any way for making what they perceived as a “good” or “poor” decision. The interview ended with several broad questions about food-related decisions and goals. These questions included: “Do you have any long term goals related to your weight?” “Does weight or eating relate to any of your values” and “What emotions do you associate with healthy foods?”

Coding & Analysis

A thematic analysis is a method for analyzing and reporting patterns (themes) within a set of qualitative data (Braun & Clarke, 2006). A theme captures something important about the data in relation to the research question and represents a pattern of response. The primary researcher identified patterns in the data utilizing a theoretical thematic approach that considered literature related to topics listed above such as goals, time and size of reward. After patterns were identified, a coding schema was developed. Themes were approved by an advisor and an initial coding of the data was implemented. A research assistant served as a second coder. The second coder was familiarized with the coding scheme and coded the data accordingly. The initial inter-rater agreement between the coding pair was 76%. Discrepancies in coding were resolved via a discussion between the primary researcher and the second coder. In addition to coding, percentages were used to analyze the number of participants who focus on avoidant

verses indulgent decisions and whether participants conceptualized their decisions as impulsive or planned.

Thematic Structure

This analysis is focused on two portions of the interview in which participants discussed their goals. Participants were first asked about goals as part of a series of interview questions about the two specific decisions they made in the past week. When describing the decisions, participants were asked the question: “Did the decision relate to any of your goals regarding weight or food and if so how?” When goals were described in relation to specific decisions from the past week they are referred to as context-dependent goals.

Participants were later asked to put their specific decisions from the past week aside and to think about their broader goals outside of the decision-making context. Participants were asked: “What are your long term goals related to food or weight?” When goals were described outside of the context of discrete decisions, they are referred to as context-independent goals.

Initially, a thematic scheme for context-dependent goals was created and coded separately from a thematic scheme for context-independent goals. The researchers then looked at how these separate contexts were related. Some goals were mentioned in both contexts. Exploring how responses from separate parts of the interviews related to one another allowed the researchers to analyze how construal related to the temporal distance of a goal’s outcome and the cognitive availability of context-independent goals during decision-making recall. When goals overlapped, we considered this to be an indicator of high-construal thinking, since high-construal thinking is thought to enhance the ability to

make decisions based on long-term outcomes (identified in context-independent responses) and to enhance the cognitive availability of longer-term goals (Fujita, Trope, Liberman, and Levin-Sagi, 2006; Fujita & Han, 2009). There was some overlap in terms of how participants conceptualized goals. For example, some responses were coded as both “health” and “weight.” Therefore, the total number of all coded themes exceeds one hundred percent.

Results & Discussion

When discussing a “good” decision, 94% of participants ($n = 16$) referred to goals whereas 6% did not ($n = 1$). The goals mentioned reflected the themes of weight, healthy lifestyle, self-concept, good/bad dichotomy, convenience, feeling good, and portion control. Four out of the seven themes identified among context-independent goals were also goals identified while participants discussed decisions perceived as “good” (context-dependent goals). Of the themes mentioned when discussing context-dependent goals, weight, healthy lifestyle, self-concept, and good/bad dichotomy overlapped with themes discussed when participants were prompted to talk about goals independently of the decision-making context (context-independent goals). Participants were less likely to relate goals to decisions perceived as “poor.” When recalling a “poor” decision, 94% of participants ($n = 16$) stated that the decision was negatively related to goals or the opposite of their goals whereas just 6% named a goal ($n = 1$). This suggests that, when making “good” food choices, participants appeared to access their long-term, context-independent goals and therefore appeared to be engaging in high construal thinking. This is consistent with the dual-motive theory in which self-control involves prioritizing longer-term goals over incidental features of a decision (Fujita, 2011).

Good vs. Poor

Our findings demonstrated the differences in how participants construed goals as related to decisions perceived as “good” versus “poor.” When describing decisions perceived as “good,” 82% of participants ($n = 14$) described choosing a food and 18% of participants described avoiding a food. When discussing “poor” decisions, 100% of participants ($n = 17$) described choosing a food rather than avoiding a food. “Good” decisions were variously defined in terms of health, convenience, and timing. Examples of decisions perceived as “good” included choosing to eat a salad instead of going to a vending machine, choosing to avoid Wendy’s on the way home from school after getting a bad test grade, and choosing to prepare an egg sandwich in a timely manner before a busy day. Conceptualizations of “poor” also varied across participants. Specifically, “poor” variously related to the number of calories in the food, the financial cost of the food, and the way that the food made the person feel physically. Examples of “poor” decisions included eating ice cream during a social outing, eating ice cream while feeling sad about a relationship, eating a disappointing take-out meal, and eating an expensive Chipotle dish.

Goals Defined in Context-Dependent and Context-Independent Contexts

TABLE 1: Themes: Context-Dependent (CDG) & Context-Independent Goal (CIG)

Context

Themes	Goal Qualities	CDG (%)	CDG Participants	CIG (%)	CIG Participants
Weight	Response reflects a broad conceptualization of losing weight related to appearance and self-concept rather than as a specific number.	47%	8	65%	11
Healthy Lifestyle	Response reflects a broad conceptualization of health related to lifestyle.	41%	7	71%	12
Self-Concept	Response reflects how the participant feels about her self or her level of confidence	6%	1	29%	5
Good/Bad Dichotomy	Response reflects the individual conceptualized the decision broadly as good or bad.	6%	1	12%	2

Weight. When discussing a “good” decision, 47% of participants ($n = 8$) discussed the theme of weight (see Table 1). Most participants thought of losing weight in a broad sense rather than as a specific number. Of the participants who said that their “good” decision related to weight, just one participant named a specific amount of weight. The remaining participants spoke about weight as related to identity, self-image, or the challenges of the college environment. When discussing long-term goals, 65% of participants ($n = 11$) articulated a context-independent goal related to weight. In this context, four participants named a specific number related to weight or body fat. As with context-dependent goals related to weight, many related concerns about weight to the college environment and fears about the consequences of factors related to being in college.

Two participants related a context-dependent goal of losing weight to the college environment. One participant said:

Well I don't want to like gain a ton of weight at school, definitely not. Cuz like it happened to my sister and I was like I don't want that to happen to me.

Another participant also focused on the challenges of the college environment:

I wanted to start eating healthy cuz in college it's kind of hard to, especially when you're on your own food budget. So eating healthy was one of my goals and then I'm trying to lose weight for a vacation that I have over winter break.

Only one participant simply thought of the decision in terms of weight without relating it to other themes. This participant described her context-dependent goal:

Well I'm currently trying to lose weight so, even one choice I feel like would affect my end goal of trying to lose weight, so definitely I take into account what I eat, so that definitely was a part of it.

Another participant who focused on weight conceptualized it as part of her desire to fit into the ideal figure of what a woman should look like. When discussing a context-independent goal, she said:

I want to weigh 125 pounds. That is my weight goal. Physique-wise, I really want to look 'athletic,' I've never looked athletic in my life, despite being athletic. And pretty much like the ideal female physique, but you know, everybody wants that. You know, being able to see abs, not in a very strong, scary muscular way. I'd like to have the typical like thigh gaps that women seek and just to be slender and pretty I guess.

Many participants seemed to think that weight-loss was not a valuable goal in itself, instead connecting it to a broader conceptualization of health (see "Health" theme). Many participants avoided or spoke negatively about goals associated with dieting and vanity. Instead, they related weight to health and self-concept. For example, one participant described a context-independent goal:

I guess just to maintain that weight, maintain a healthy lifestyle, with the food choices. I believe that you're able to like cheat every once in awhile for sure; you don't have to stay strictly to a certain diet unless that's your goal, but that's not my goal.

The fact that this theme was represented strongly in both contexts suggests that individuals engaged in high construal thinking while making the "good" decision.

Further, more individuals articulated a specific weight when considering context-independent goals. Articulating a number could indicate a low construal due to its specificity. However, in this case the participants were construing a long-term feature of the decision rather than an incidental feature of the decision. Further research could explore how different aspects of construal interact during decision-making. For example, researchers could study how specificity and time interact during decision-making (i.e. is a specific number more available in a long-term, context-independent goal context versus an immediate, context-dependent goal context). If one were to focus on temporal distance in the case of the weight theme, the fact that participants appeared to access specific goals such as a goal that includes a number could lend credibility to the theory that temporal distance increases access to goal-salient rather than incidental features of decision-making.

Healthy Lifestyle. When discussing the “good” decision, 41% of participants ($n = 7$) related good decisions to a goal of overall health. Individuals conceptualized health as related to an overarching “lifestyle” rather than a specific behavior. When discussing long-term, context-independent goals, 71% of participants ($n = 12$) described a goal related to a broad conceptualization of health.

As with the weight theme, participants within the health theme often struggled to reconcile the goal of overall health with issues related to weight. Many participants seemed to consider weight as less important while describing it as a piece of the larger health goal nonetheless. For example, while describing a context-dependent goal, one participant said: “Eat healthy, feel better about myself, if that...I’m not sure if I mean lose weight, but definitely the first two.” When asked the follow-up question: “So is

health for you a goal in itself or do you have a specific goal within that goal?" her response reflected the challenge of reconciling the two goals: "No, kind of a goal within itself. Like it's kind of a weight thing but it's also just like being healthy."

Another participant struggled to reconcile health and vanity while describing a context-independent goal:

It's definitely more health than vanity, but there's definitely the factor of vanity. I mean, I feel like anyone who says they want to lose weight, and there's no vanity involved...so I mean there's obviously the factor of vanity there, but a lot of it relates to health.

Other participants connected health to their self-concept in terms of confidence and weight. These participants also thought about weight but once again with the caveat that they preferred the language of health to the language of weight loss. For example:

Probably, well I've had some recent health issues, so that's definitely contributing to my weight loss, so that and I guess feeling more confident about myself by losing weight. Yeah, altogether I wanted to lose about 20 pounds so I'm like halfway there so. Yeah, that's pretty much my goal. My long-term goals and just being overall more healthier and definitely confident about myself.

When discussing health-related goals, participants utilized broad, values-laden language indicative of a high construal. The emphasis on broad categories rather than incidental features of the decision also suggests that individuals recalled these goals utilizing a high-level construal. The high correlation between goals discussed in both contexts suggests that when making good food choices at least, participants had access to

their long-term goals and therefore appeared to be engaging in high construal thinking.

Self-Concept. When discussing the “good” decision, 6% of participants ($n = 1$) spoke about a goal relating her health to her self-concept. When discussing long-term goals outside of this context, 29% of participants ($n = 5$) described goals related to their self-concept. Responses coded as self-concept included decisions related to how participants feel about themselves, wanting to feel better overall, and goals related to confidence. Two phrases were prominent in this theme: “feel better about myself” and “feeling more confident about myself.” These were often articulated alongside other goals.

One participant conceptualized health and weight in terms of her identity while describing a goal in the decision-making context:

Yeah. I mean like I said before about just these standards I’ve put on myself about wanting to be a certain number. I think it’s a little ridiculous. I mean I shouldn’t define myself in terms of numbers. Or I should just define myself in terms of the characteristics of me. Like, why do I have to be a number? It’s ridiculous.

The participant was asked this follow-up question: “And do you have a goal for a particular number or is it more of a standard that’s just kind of looming in your mind?” She responded:

A little of both, I guess you’re right. But yeah I do have a number and it’s silly. It’s, I guess, 112-115 I feel the best at. And that was the number I was when I was about 16. So that’s a bit neurotic I think.

This same participant connected confidence to societal norms about women in the

context-independent goal context:

I just want to feel good about myself honestly. It's really broad and general but if I do get to this number in my head that would be great but I just want to feel good about myself and be really confident when I'm walking down the street and I know that with women in our society they have this really crazy standard, ideal that's imposed on them but I just want to feel good when I'm walking down the street and I don't want to be cat-called and all this crap but yeah, I wanna feel good.

This participant seemed to be able to connect an abstract understanding of her self (“standards I put on myself”) to the decision-making context with ease. When asked, she was also able to quickly articulate a specific number goal, suggesting that she had access to specific goal-salient features of the decision. Articulating a specific number was rare among other respondents. Once again, the specificity of a number might seem like a low-construal conceptualization, but it also reflects this participant's ability to access goal-salient features rather than incidental features of the decisions. An exploration of the connection between goal specificity and construal should be explored further.

This theme was fairly prominent in context-independent goals but mentioned only once in terms of context-dependent goals. This suggests that individuals were less likely to connect a high-construal understanding of self-concept to the decision-making context. It is unclear why goals related to self-concept were less accessible to individuals in their context-dependent responses compared to the context-independent responses. It may be that self-concept is not as overtly related to food while topics such as health and food are more closely correlated to food-related decisions. This could be explored in

future research.

Good/Bad Dichotomy. When discussing a good decision, 6% of participants ($n = 1$) identified a goal that focused on the goal as related to a good/bad dichotomy. When discussing long-term goals, 12% of participants ($n = 2$) related context-independent goals to a good/bad dichotomy.

In the decision-making context, one participant said: “Yes, always cuz I could’ve ate something worst if I like didn’t care at all. But no cuz it wasn’t the best thing I could have either.” This participant spoke broadly about health when discussing context-independent goals. It is possible that this context-dependent goal was a “quick reference” version of that context-independent goal. In other words, this participant may have been referring to this goal without articulating it specifically. This suggests that the individual was considering the goal automatically without needing to name it. Future research could explore the relationship between goal/temptation associations and construal. In this case, “quick reference” language is abstract, broad, and categorically wide, suggesting a higher-level construal. However, it is also possible that the construal level of a vague reference depends on the goal or feature that the language is referencing. For example, if the participant were discussing a decision as “worse” and focusing on incidental details such as smell or taste, the reference could be considered low construal. Referential language could be explored in future research.

While discussing a context-independent goal, one participant related “better” to a specific goal, suggesting once again that “better” was a “quick” reference to goal-positive behavior:

It’s not so much about my weight as much as what I want to be able to

do with my; like I want to be able to run a half marathon so part of that is that I have to eat better and lose weight.

Another person whose context-independent goal fell within this theme was a unique participant who discussed “better” along with a context-independent goal about education: “I want to eat better and I want to start like growing some of my own food.” There was some discussion about coding this goal response under the health category. However, the researchers decided that this response was unique and worth discussing separately. The participant’s context-dependent and context-independent goals were not aligned. The context-independent goal about education and eating “better” was not related to her context-dependent goal of portion-control. The coding pair felt that “better” does not necessarily mean health but instead depends on what the individual perceives as better. These two participants seemed to assign different meaning to the phrase “better,” with one participant considering a specific athletic goal and the other considering a goal related to portion-control. In both contexts, assigning value based on a good/bad dichotomy seems to be a quick and easy way to reference another goal. The fact that there were slightly more references in the context-independent goal context along with the broadness of the categories of good and bad suggest that this is a high construal way to conceptualize a goal.

Goals Defined in Context-Dependent Decisions (“Good”)

Goals discussed in the context of a decision only varied in terms of content and construal level. Only two participants included a specific number such as a number of pounds or number of days in their context-dependent goal. Only one participant was unable to relate the “good” decision to a context-dependent goal.

TABLE 2: Themes: Goals Defined in Context-Dependent (GDG) “Good” Decisions

Themes	Goal Qualities	CDG (%)	CDG Participants	CIG (%)	CIG Participants
Convenience/ Inconvenience	Goals related to budgeting, price, and immediacy.	29%	5	--	--
Feeling Good	Response reflects how the food made the person feel.	12%	2	--	--
Portion Control	Response is related to portion control or size of food.	6%	1	--	--

Convenience/Inconvenience. When discussing a “good” decision, 29% percent of participants ($n = 5$) identified goals related to factors of convenience and inconvenience such as budget, scheduling issues, or food availability (see Table 2). These individuals connected convenience/inconvenience to the specific challenges of the college environment. One participant discussed dealing with inconvenience in order to make a “good” decision. Her response focused on why she chose to wait in line in the school cafeteria rather than picking up an unhealthy, ready-made meal: “It’s more accessible, it’s easier to get, and it’s cheaper. But because I do want to live a more healthier life I decided to choose the salad.” This participant focused on immediate consequences of making a good decision, suggesting a low-construal conceptualization of the “good” decision.

Another participant also emphasized the importance of having a meal that was convenient for her schedule:

I like guess goals like what am I gonna do today and like I wanna get in the car at a certain time so I need to hurry up with this sandwich so I can make it to campus.

This participant associated the brevity and timing of her meal with accomplishing other, more salient goals. Her response focuses on immediate, short-term aspects of the decision, suggesting a low construal.

Convenience/inconvenience was a context-dependent goal theme that was not mirrored in the context-independent analysis. This is consistent with literature concerning temporal construal (Trope & Liberman, 2013). Time is closely connected to construal (Trope &, 2003). Construal level theory holds that low construal thinking focuses on

immediate rather than long-term rewards. These participants emphasized factors that were relevant in the immediate but not the long-term future. In some cases, participants highlighted immediate factors such as inconvenience and discussed how they had to overcome these immediate negative consequences in order to choose more salient long-term rewards. Low construal thinking is thought to lead to decision-making perceived as “poor.” In this case, some individuals discussed low-construal aspects of decisions perceived as “good.” It is possible that these individuals were able to associate food decisions perceived as “good” with an immediate reward, leading to what was perceived as a “good” outcome. Convenience as an immediate reward should be explored in future research. This research may also look at prospective self-control as a tool for accommodating convenient decisions (see “Temptation Avoidance” under “Mediating Factors.”). For example, the participant who mentioned the convenience and price of the healthier food in the college cafeteria might plan to go at a time when the lines are shorter.

Feeling Good. When discussing a good decision, 12% of participants ($n = 2$) related decisions to how it made them feel. In both cases, this theme was represented alongside another theme such as health or convenience. For example, one participant focused on mental and physical aspects of feeling good and then related it to her schedule:

Yeah, I think I knew that like it would make my body feel good and I knew that I would feel good about eating it and I knew that when I woke up and worked out this morning that that was; that didn't weigh me down. And I felt good about what I had eaten.

It is difficult to analyze exactly what it is that this participant felt good about. However, she connected a vague, abstract conceptualization of “feeling good” to a physical activity. Physical activity was also present in this participant’s context-independent goal, which related to a goal of completing a half marathon. It seems that she may have been feeling good about acting based on her goals. As with the good/bad dichotomy, this may have been a short-handed way of referring to a context-independent goal. Further, this participant’s broad, abstract language may indicate that she was engaged in high construal thinking during this response.

Another participant also focused on how she felt in terms of her other goals:

It directly related to that [goals]. It was the thing I needed to do, but have been dreading, um, and needed to push to do, and then once I started to do it, I started immediately seeing a difference in how I felt, and um, you know, how I looked, and all that. And in my weight, so pretty much in every aspect.

This participant’s context-independent goals were related to weight and appearance, goals that she refers to in this response. It is possible that this participant was connecting feeling good to making decisions with her long-term goals in mind.

The theme was not represented in responses to questions about context-independent goals. However, the broad, abstract language utilized by these participants along with the references to goals suggests that these individuals were engaged in high-construal thinking. The broad language may have been a way to quickly reference their context-independent goals while noting the positive emotion associated with acting upon them.

Portion Control. When discussing a good decision, one participant identified a goal related to portion control. This participant spoke about going to the grocery store and planning ahead for the week:

I'm trying to do portion control. So I portioned it out so I would be able to eat off of it for four days and trying to follow like the hand portion type thing. I kind of don't work with pasta but I tried to eat like not a lot, like a large capacity of it.

This response was unique in that it featured a specific number (four days). Further, the participant related the goal to an unrelated and unique context-independent goal of educating herself about food. This participant had both a unique context-dependent goal and a unique context-independent goal. Therefore, she did not fit into the overall pattern identified among other participants.

Goals Defined in Context-Dependent Decisions (“Poor”)

Overall, participants were less likely to relate “poor” decisions to their goals. Instead, they spoke negatively about their goals or said it did not relate to goals (see Table 3). Just one participant related a “poor” decision directly to a context-dependent goal of spending less money on food.

TABLE 3: Themes: Goals Defined in Context-Dependent (GDG) “Poor” Decisions

Themes	Goal Qualities	CDG (%)	CDG Participants	CIG (%)	CIG Participants
Opposite of Goals	Negatively related to goals or the opposite of a goal.	71%	12	--	--
No Goal	Not able to identify a goal.	24%	4	--	--
Budget	Response related to concerns about financial goals and cost of food.	6%	1	--	--

Opposite of Goals. When discussing a “poor” decision, 71% of participants ($n = 12$) said that the decision was negatively related to goals or the opposite of a goal when asked the initial interview question “Did this decision relate to any of your goals about food or weight and if so which ones and how?” Participants in this theme saw the decision as negatively related to goals but often failed to name the goal unless explicitly asked with a follow-up question. One participant named a context-dependent goal related to health in her initial response. 18% of participants ($n = 3$) named a goal when asked a follow-up question. For example, one participant was asked the follow-up question “So did you think about your goals while you were making the decision?” Her response then included a goal about health:

“No. Actually, yeah. Like I didn’t wanna get the food but I just got it. But I would prefer, ya know cuz, I don’t wanna say you feel guilty. Cuz when you’re hungry you don’t always feel guilty. You just wanna eat. But I did think about the fact that I could be eating something healthier over this.”

The interviewer reflected the participant’s response, saying: “So health was the kind of goal that was there.” The participant then went onto describe how the decision related to her goals with some depth. This response suggests that the participant failed to associate the decision with goals initially but was able to do so with additional questions and prompting. This is consistent with the automatic processing perspective on self-control. Her response to the initial open-ended question reflected automatic and immediate ideas about the decision (i.e. “hunger”). Prompting was needed for her to access context-independent features of the decision. Future research may explore tools for helping individuals to create automatic associations between context-dependent and

context-independent aspects of a decision (i.e. hunger and health).

Most participants were vague, simply focusing on the negative aspects of the decision. For example, one participant said: “I mean it was like the opposite of what I wanted to do. So I knew it would set me back and make it harder to do what I wanted to do.” Another participant said: “No I think it was - like it related but in like a negative way. It kind of went against my goals.”

Some participants conceptualized this negative relationship to goals with guilt. For example:

Did it relate? Well it related in the sense that it was...I view it as like a naughty decision. Or like a poor decision. I have guilt about it. So in that way it relates to all of the other things I mentioned before. It's a little bit of a weakness I think. Whereas the other one [the good choice] was more about control and strength and being a female.

This response reflects the fact that she was able to articulate reasoning for the “good” choice (“control and strength”) but a vague negativity to the “poor” decision, simply conceptualizing it as “naughty” and “poor.”

The extent to which individuals considered their goals consciously or with effort varied. When one participant was asked the follow up question: “So did you think about those goals while you were making the decision?” She responded: “A little bit, but I was kind of like oh I’ll just eat healthy the rest of the week.”

Other participants also thought of their goals in a vague, non-specific way. One participant said: “No absolutely not. It kind of went against my goals in terms of eating.” This participant was asked the follow-up question: “And did you think about

those goals while you were making this decision?” Her response was: “I mean they popped little bits of my mind thinking like well this probably isn’t the right choice but it’s the Super Bowl, it’s Sunday, ya know just go for it.”

This participant’s goals were articulated in the broad, vague language of high construal (“against my goals”). With prompting, incidental aspects of this participant’s decision were articulated with low-construal language (i.e. she was specific about the name of the event and the day of the week). Since the decision was perceived as “poor,” it is possible that these low construal features were more salient. Overall, this participant’s responses mixed high and low construal thinking, though it should be noted that this could be the result of the additional prompting. This participant’s context-independent goals were related to high-construal conceptualizations of health and physical appearance. She was also one of the few participants who connected her context-independent goals to a specific number goal, in her case a goal of having a body fat in the 20-25% range. She was able to connect abstract, value-laden goals about health to specific number and incidental features of a decision. Future research may explore the decision-making outcomes of individuals who are able to blend high and low-construal thinking. Researchers may also want to explore how mixed-construal thinking relates to mindfulness. Theoretical research has noted that mindfulness may empower individuals to pay attention to multiple aspects of a decision (Brown, Ryan & Creswell, 2008). It may be that mindfulness empowers individuals to integrate high and low-level construals of a decision and this should be explored further.

Other responses mirrored the idea that goals were present but not prominent in the individual’s mind:

I thought about it [goals]. It was in the back of my mind. Yeah, it was in the back of my mind, but it wasn't like, calculated. Like 'Okay, I'll go over today and then tomorrow.' I wasn't accounting for it. It was more just like, well, ignore it.

These findings suggest that individuals perceived their goals as less related to "poor" decisions and had more difficulty in articulating how goals related to decisions perceived as poor. While individuals had less access to goals, they did think about them in a broad, vague manner indicative of high-construal thinking but only when prompted by the interviewer to do so.

No Goal. When discussing a poor decision, 24% of participants ($n = 4$) said that they did not relate "poor" decisions to their goals. However, they often followed their response by focusing on immediate goals or rewards. For example one participant said, "No, it was kind of an impulse. I wanna feel better. I'm gonna eat ice cream." Another participant said, "No. Obviously not because I made a poor decision so it didn't relate. I was thinking more just eating and being satisfied." Other participants simply responded that they were unable to relate the decision to goals.

As with the "opposite of goals" theme, these responses may have been limited by the phrasing of the question. Again, these participants avoided discussing goals and instead pivoted to a discussion of the immediate goal or reward such as eating ice cream to feel better or wanting to be satisfied. It is likely that more information can be found in other parts of the interview (see "Limitations and Future Directions"). If individuals engaged in low construal thinking when describing aspects of the decision that caused them to give into temptation, this would be consistent with construal level theory.

Budget. When discussing a poor decision, one participant thought mostly about the financial cost of the food.

I mean I feel bad cuz I know it's like a lot of calories and carbs but I was like I don't care so I just ate it. I feel more about the cost associated with food than like the carbs associated with it... I was thinking that I wish I didn't spend any money on food so much.

This participant later stated that she does not gain weight when she eats unhealthy foods and that other consequences are not immediate enough for her to worry about. This response was not reflected in responses related to context-independent goals. Her context-dependent goals from the “good” decision were also unrelated. It is unclear at what level this individual construed this decision.

Themes: Context-Independent Goal Context

All participants were able to articulate goals independent of the decision-making context. Most were also represented in context-dependent goals. The context-independent goals that were not mirrored in the decision-making context are presented in Table 4.

TABLE 4: Context-Independent (CIG) Context

Themes	Goal Qualities	CDG (%)	CDG Participants	CIG (%)	CIG Participants
Other Physical Goals	Response reflects a goal related to physical appearance, or physical well-being that is not weight (i.e. body fat, a specific physical attribute.).	--	--	29%	5
Education	Response reflects a goal related to the desire to learn more about food.	--	--	6%	1

Other Physical Goals. When discussing context-independent goals, 29% of participants ($n = 5$) indicated a goal related to some physical attribute that was not weight. These goals included wanting to get “toned,” to get “a lot of muscle,” reaching a specific body fat percentage, and wanting to look “athletic.” For example:

I try not to get caught up on the number, so I wouldn't say like I wanna lose five pounds, I just wanna get like tone. I want a four pack. But that's pretty much it.

These goals were articulated next to other goals about health or weight. With the exception of one participant, these were included as more specific details about an overall goal related to health or weight. This suggests that these participants were able to think more specifically about broader goals related to health and weight. Once again, this begs the question of whether or not goal specificity is indicative of low or high-construal thinking. It is also possible that they were able to blend high and low construal thinking.

Education. When discussing context-independent goals, one participant described a goal that involved wanting to learn more about food:

I just want to learn food more. Like I want to learn how to cook better. And I just want to like...I guess I want to eat better and I want to start like growing some of my own food. So I really want to start transitioning into like maybe going to farmer's markets and getting my meat and then like I want to start growing my own herbs and some of my own vegetables. So I really want to learn food.

This participant's goal was unrelated to her context-dependent goal of wanting to

engage in portion control. Further, this participant's context-dependent and context-independent goals were both unique from other participants. The participant seems to be utilizing broad, values-laden language suggestive of high construal. It is unclear if she is able to connect her context-dependent and context-independent goals.

Goals, Construal and Self Control

Most participants described context-independent and context-dependent goals (primarily in the "good" decision-making context) using broad, values-laden language indicative of a high construal. These findings are consistent with the literature associating high-construal thinking with good decision-making in terms of self-control (Fujita & Han, 2009; Chiou, Wu, & Chang, 2012). In the case of these findings, we cannot causally relate high-construal thinking to self-control. Instead, these findings suggest that when recalling decisions perceived as "good" individuals did utilize higher-construal thinking compared to the same individuals recalling decisions perceived as "poor." The prominent themes that emerged when participants related "good" decisions to goals were articulated in a high-construal manner, with values-laden language and broad categories. To a lesser extent, incidental or low-construal features of "good" decisions such as convenience and physical feelings were also reflected in context-dependent goal responses, reflecting a mixture of high and low-level construal.

Individuals who conceptualized their "poor" decisions as negatively related to goals generally did not state which goals were associated with the decision unless a follow-up question was asked. Overall, individuals were less clear on what the goals were in this context and instead focused on guilt or negativity. Some participants were able to articulate goals after being asked follow-up questions. However, most simply stated that

the goals existed but did not name them. For example, participants said that the goals were in the back of their mind or that goals “popped in” but were not calculated. These findings about the salience of goals in decisions perceived as “poor” could be related to the automatic versus controlled model of self-control. Within this framework, controlled effort is thought to enhance self-control and unconscious thoughts and emotions are thought to impede it (Baumeister & Masicampo, 2010). The extent to which individuals planned their decisions may relate to controlled decision-making. When describing “good” decisions, just 35% of participants ($n = 6$) identified the decision as impulsive and unplanned while 59% of participants described “good” decisions as planned ($n = 10$). When describing “poor” decisions, fifteen or 94% of participants ($n = 16$) identified the decision as impulsive and unplanned. One participant did not respond to this question. These results suggest that participants engaged in more effortful, conscious thinking while making “good” decisions compared to “poor” decisions. The relationship between effortful thinking and goals could be explored further in future research.

The literature suggests that, if overlearned, the relationship between goals and temptations may be activated automatically with little need for effortful thought (Fishbach, Friedman, & Kruglanski, 2003). The relationship between temptations and automatic thoughts is moderated by the subjective importance of the goal. The theme of individuals considering goals vaguely or in the “back of their minds” suggests that while associations were formed, they were not strong enough for the individual to consider them in the context of “poor” decisions. In other words, the incidental aspects of the decision (low construal aspects) overcame high construal aspects (longer-term goals) in a manner that is consistent with delay discounting theory. This finding highlights the

subjectivity of the relationship between goals, construal and decision-making. Some individuals were thinking about the same goals in the context of both “good” and “poor” decisions. The content of the thought did not change. Instead, the manner in which they were thinking about the goal changed. This is also consistent with previous research demonstrating that the relationship between goal-temptation associations and decision-making is moderated by how an individual construes a goal rather than the content of the individual’s thoughts (Fujita & Han, 2009). Future research could explore methods for inducing high-construal thinking “in the moment” (i.e. prompting one’s self “why” questions when encountering a temptation or making a decision) as a tool for increasing the availability for goals.

Construal and Time

Construal level studies typically explore how time changes construal in the context of future decisions (Trope & Liberman, 2003; Fujita & Carnevale, 2012). The further away a decision is, the more likely individuals are to construe a decision with high-construal aspects such as goals and values and therefore to engage in self-control (Trope & Liberman, 2003). As a decision becomes more immediate, incidental or low-construal aspects of the decision become more significant to the decision. Our findings are unique in exploring how individuals construe goals in the context of recall rather than planning. Further, participants were also asked about goals outside of the context of discrete decisions within the past week. Comparing how goals were articulated between these two contexts (context-dependent verses context-independent goals) provided some insight into the availability of goals based on temporal distance. Individuals were more likely to connect their context-independent goals to a specific number of pounds or days

compared to context-dependent goals. Twenty-four percent of participants ($n = 4$) named a specific weight, body fat percentage or event (i.e. run a half marathon) as a context-independent goal. This finding suggests that outside of the context of a specific decision, individuals were able to articulate goals in terms of goal-salient features rather than incident features. In this case, the numbers were considered in terms of their goal-salience rather than specificity or concreteness. This is consistent with literature suggesting that temporal distance increases the tendency for individuals to evaluate activities in terms of goal-relevant aspects (high-construal) rather than low-construal, incidental aspects (Trope & Liberman, 2003).

Researcher Reflection

The interviews, thematic analysis and results of this study were impacted by the primary researcher's decisions, experiences and actions during the research process. Three factors were particularly salient in terms of bias: the gender of the researcher, status as a clinician-in-training, and relationship to six of the participants.

First, the researcher identifies as a male and this may have impacted the study in several ways. Larger contextual issues related to gender and social norms may have impacted the interview responses from these participants, all of whom identified as female. For example, women are subjected to different social standards regarding body image and food-related issues due to their gender. It is possible that these women felt less comfortable disclosing their thoughts, feelings, and opinions to someone who does not experience these same social standards. Further, in a college environment, many women are educated about these social standards and encouraged to be aware of how they impact decision-making. In light of the dialogue around this topic on college

campuses, a social desirability bias may be present in this data. For example, participants may have over-reported goals perceived as “good” such as health or self-concept and under-reported goals perceived as “bad” or “vain” such as the desire to lose weight. This bias may have contributed to the pattern of participants’ experiencing difficulty discussing and reconciling goals related to weight with goals related to health or self-concept.

Second, these interviews while the researcher was training to become a clinical counselor. This training impacted the interviewer’s non-verbal presence in the interview room (for example, head nodding), verbal dialogue with participants (for example, verbally reflecting participant responses), and the attitude in which questions were asked. These factors in turn may have impacted participant responses. For example, participants may have felt more comfortable with an interviewer trained to provide a non-judgmental space for listening and responding thereby enhancing participant openness. On the other hand, the presence of a clinician-in-training may have provided inconsistent responses. For example, some participants may have provided responses with more depth after their response was reflected back to them compared to participants whose responses were not reflected verbally.

Finally, six participants were fellow members of the interviewer’s graduate program. The interviewer’s personal relationship with these participants may have impacted their responses. It is likely that these participants felt more comfortable speaking to someone they knew compared to participants who did not know their interviewer. Further, these participants were graduate students in psychology. Their training provided them with a certain amount of self and social awareness that may have

impacted their responses. These factors introduced some bias to the study and may have resulted in responses of a different length or depth.

Limitations & Future Directions

The format of the interviews may have impacted our findings. The ordering of the questions is particularly salient. Participants were asked about context-dependent goals after being asked a series of questions about incidental aspects of the decision such as the color of the food, the taste of the food, and descriptions of the room the food was in. These questions may have induced a low-level construal due to the emphasis on incidental factors. As a result, these individuals may have been “primed” to focus on incidental or low construal features of the decision, resulting in context-dependent goals that were also low construal. This also may have impacted how participants responded to context-independent questions, which were asked after context-specific questions decisions for all participants but one. The first participant was asked broad questions outside of the decision-making context first. The questions were re-ordered (context-independent questions were moved to the end of the interview) to prevent priming to high-construal thinking. This re-ordering may have simply reversed the priming. Still, her responses did not seem to vary widely from other participant responses. Despite this limitation, the fact that there was overlap between context-dependent and context-independent goals in the “good” decision-making context more so than in the “poor” decision-making context suggests that individuals were able to access higher-level construals when making “good” decisions.

It is less clear how salient incidental features were to decisions perceived as “poor.” The language of “good” verses “poor” may have impacted our findings. Asking

about “poor” decisions may have incited participants to discuss the goals they violated rather than incidental, low-construal features of the decision such as the taste of the food. For example, if participants were asked instead about indulgent versus non-indulgent decisions, they may have focused on the positive aspects of making an unhealthy choice. Participants failed to explore their motivations for making “poor” decisions such as immediate rewards in this context but did so in other portions of the interview. These immediate motivations were explored in response to another interview question: “What aspects of the food did you focus on while making the decision?” and “Why did you eat the food?” Participants typically incorporated immediate and incidental features into responses to this question. For example, common responses to the first question often included a description of the food itself (“the rice and the sour cream,” “the snickers part really,” “the cheese and the sriracha,” “this one chili sauce powder thing that I put on”), feeling better (“feeling better,” “the comfort it would bring”), the taste of the food (“I just thought like it was gonna taste really good,” “how good it would taste I didn’t really think about anything else”), and hunger (“how hungry I was,” “the fact that I was hungry”). While participants did not conceptualize immediate rewards such as feeling good or tasting good as goals, these low-construal, incidental factors appear to be heavily involved in motivating “poor” decisions. In the context of “poor” decisions, individuals were less able to relate these immediate rewards to goals, leading to self-control failures. It is worth noting that these descriptions use more specific language indicative of low-construal compared with the high-construal language participants used when describing goals. It is possible that merely asking about goals induced high-construal thinking, whereas asking a broader question such as “which aspects of the food did you

focus on?” allowed the participants to engage in more dynamic thinking that resulted in mixed or low-construal thinking. Mixed construal thinking should be explored further in the context of questions that are more open-ended, including responses to other questions from these interviews.

The need for prompting in the “poor” context-dependent goal response is both a weakness of this study and an area for further exploration. While the phrasing of the question could be reconsidered in future research, it also seems that prompting helped at participants within this theme to access context-independent features of the decision. Future research may focus on interventions that incorporate some form of prompting or question asking into decision-making. Interventions that help decision-makers to associate high-level, context-independent features with low-construal, context-dependent features of a decision may lead to increased self-control. Asking questions may be one such intervention.

Finally, the phrasing of the questions should be revisited in future research. Some of the questions were phrased in such a way as to incite certain responses. For example, participants were asked: “So did this decision relate to any of your goals regarding food or weight and if so how?” The first part of the question incited a yes or no answer that often required follow-up. Inducing a “yes or no” mindset may have reduced the depth of answers and may have impacted the answers to follow-up questions as well (i.e. a follow-up question about how).

Conclusion

Our results demonstrate how individuals construe goals when recalling decisions perceived as “good” or “poor” and when asked questions about context-independent goals. When recalling “good” decisions, participant responses included high-construals of goals along with some low-construal incidental factors such as convenience. Participants had difficulty relating “poor” decisions to goals and often saw goals as broadly related to the decision in a negative way. This suggests that goals, a feature of high-construal thinking, were less available while individuals were making “poor” decisions. This is a reflection of how these seventeen female college students thought while making a decision. This is largely consistent with literature relating temporal distance to high construal and high construal to successful self-control (Fujita & Han, 2009; Chiou, Wu, & Chang, 2012).

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Appendices

Appendix A: Interview Questions

Context-Dependent Questions

1. Imagine a food related choice from the past week that you feel **good/poorly** about.
 - a. What was the food decision?
 - b. Did the choice involve avoiding or indulging in a food item?
 - c. Was the choice about avoiding/indulging in something **now** or avoiding something **later**?
 - d. Describe the food in your own terms.
 - e. What color was the food?
 - f. What did it smell like?
 - g. How many carbs were in the food?
 - h. Describe the portion size.
 - i. How much of the food did you want to eat?
 - j. Describe the taste of the food as you remember it.
 - k. Describe the room you were in while making the decision.
 - l. On a scale of 1 to 10, how much did you want the food?
 - m. Which aspects of the food item did you focus on while making the decision?
 - n. Why did you eat/avoid the food?
 - o. Did the decision relate to any of your goals regarding food or weight and if so how?
 - p. Did you think about any of your goals while making the decisions?
 - q. Did you think about your values while making the decision? Which ones?
 - r. How did you feel before the decision?
 - s. How did you feel directly after the decision?
 - t. How did you feel 30 minutes after making the decision?
 - u. How much time did you spend thinking about the decision?
 - v. Did you reward yourself in any way for making a good decision and if so how? (Alt. Did you punish yourself in any way for making a decision you perceived as poor?)

Context-Independent Questions

1. What are your long term goals related to your weight?
2. How does weight or eating relate to your values?
3. What if any emotions do you associate with healthy food?
4. What emotions do you associate with indulgent foods?

Appendix B:

September 25, 2015

Dear Participant,

My name is Seandor J. Szeles and I am a graduate student in the Counseling Psychology MA program at Towson University. I am conducting a research project for my MA thesis that is designed to determine how different people think about decisions related to food. You are eligible to participate in this study if you are female, between the ages of 18 and 30, and have been trying to lose weight in the past.

What am I required to do?

If you agree to participate in the study, I will interview you about some decisions you have made about eating over the past week. The interview will be audiorecorded; recordings of the interview will be transcribed for later analysis. After the interview, you will be asked to complete several short surveys. These surveys ask about dieting and weight history, eating behaviors, decision-making and impulsiveness, attention, and awareness. The study should take between 30-45 minutes.

What are the benefits of participation?

There are no direct benefits to you if you participate in the study. Your participation will help us better understand how women who are actively engaged in attempts to change eating behaviors make decisions about food. It is hoped that this will inform future research and treatment related to food choices.

What are the risks of participation and how will those risks be minimized?

There are two main risks from participating in this study. The first is loss of confidentiality. We are taking a number of steps to protect your confidentiality. All of your data will be coded using a unique identification number; do not write your name on any of the questionnaires you complete. A master list linking your name and unique identification number will be stored separately from your responses in a secured location. In audio recordings of the interview, only your first name will be used. In addition your name will be replaced with a pseudonym in any transcriptions of the recordings. Audiotapes of the interviews will be stored in a locked file cabinet in the faculty advisor's research lab. Those recordings will be destroyed after three years or completion of the study, whichever is latest. Any reports or presentations based on this research will present data in aggregate form; if direct quotations are used, pseudonyms will be used in place of names to ensure your confidentiality.

Second, you may become upset from answering some of the research questions. If this is the case, you may choose not to answer any questions. We may also discontinue your involvement in the study. The interviewer is earning his MA in Counseling Psychology and is available to speak to you should you become upset. You are also encouraged to seek services at the TU Counseling Center should you become upset whether it is due to the study or not. The counseling center is located on the second floor of The Health & Counseling Centers at Ward West. You can get more information about the Counseling

Center by visiting the website: <http://www.towson.edu/counseling/>. You can make an appointment at the counseling center by calling 410-704-2512.

Will I be compensated for my participation?

If you are recruited through the psychology department research pool, you will earn one credit toward the fulfillment of your course research participation requirement. If you are recruited through other means, you will not be compensated for your participation.

What are my rights as a research participant?

Your participation in this study is voluntary which means it is up to you to decide whether or not to complete the study. If you choose to participate, it is not necessary to answer every question, and you may discontinue your participation in the project at any time. Your decision whether or not to participate or to withdraw from the project will in no way affect your relationship with Towson University and will not affect any compensation to which you are already entitled.

What should I do if I have questions or concerns about the study?

If you have any questions about the project, you may contact me at (717) 798-1623, my faculty advisor, Dr. Elizabeth Katz at 410-704-3702, or the Chairperson of Towson University's Institutional Review Board for the Protection of Human Participants, Dr. Debi Gartland, at (410) 704-2236. A copy of the results of the survey, reported in aggregate form, will be available to you upon completion of my project, if you would like to see it.

Thank you for your time.

Sincerely,

Seandor J. Szeles
Graduate Student

THIS PROJECT HAS BEEN REVIEWED BY THE INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN PARTICIPANTS AT TOWSON UNIVERSITY.

Appendix C

**EXEMPTION NUMBER: 16-X021**

To: Seandor Szeles
 From: Institutional Review Board for the Protection of Human
 Subjects, Debi Gartland, Chair
 Date: Tuesday, September 25, 2015 (25)
 RE: Application for Approval of Research Involving the Use of
 Human Participants

Office of Sponsored Programs
 & Research

Towson University
 8000 York Road
 Towson, MD 21252-0001

t. 410 704-2236
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www.towson.edu/ospr

Thank you for submitting an application for approval of the research titled,
Self Control and Construal Level in Female Eating Behaviors

to the Institutional Review Board for the Protection of Human Participants
 (IRB) at Towson University.

Your research is exempt from general Human Participants requirements
 according to 45 CFR 46.101(b)(2). No further review of this project is
 required from year to year provided it does not deviate from the submitted
 research design.

If you substantially change your research project or your survey
 instrument, please notify the Board immediately.

We wish you every success in your research project.

CC: Elizabeth Katz
 File

Curriculum Vita

Name: Seandor Szeles



Program of Study: Counseling Psychology

Degree: Master of Arts, 2016

Education:

Towson University (2014-2016) Towson, MD	M.A., 2016
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Saint Joseph's University (2004-2008) Philadelphia, PA	B.A., 2008
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Professional positions:

The Office of Civic Engagement & Leadership Graduate Assistant for Leadership Initiative 8000 York Road Towson, MD 21252	August 2014 – July 2016
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NOVA's The Secret Life of Scientists Editor 20 Jay Street Suite MO2 Brooklyn, NY 11201	September 2012 – Present
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