

EXTENDING THE SELF-REGULATORY MODEL LINKING HIGH GOALS AND
UNETHICAL BEHAVIOR: THE MODERATING EFFECTS OF GOAL
COMMITMENT AND SUBCONSCIOUS PRIMING

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TABLE OF CONTENTS

LIST OF TABLES.....	7
LIST OF FIGURES.....	8
ABSTRACT.....	9
CHAPTER 1	
INTRODUCTION.....	10
CHAPTER 2	
LITERATURE REVIEW.....	15
Goal Setting Theory.....	15
CHAPTER 3	
MODEL AND HYPOTHESES.....	22
Goal-Setting Mechanisms.....	22
A Self-Regulatory Perspective Connecting High Goals and Unethical Behavior.....	23
The Moderating Effect of Goal Commitment.....	29
The Moderating Effect of Subconscious Ethical Priming.....	31
CHAPTER 4	
RESEARCH METHODOLOGY.....	34
Participants and Design.....	34
Manipulations and Measures.....	34
<i>Goal setting</i>	34
<i>Goal commitment</i>	34
<i>Depletion</i>	35
<i>Subconscious ethical priming</i>	35
<i>Unethical behavior</i>	36

TABLE OF CONTENTS – CONTINUED

CHAPTER 5	
RESULTS.....	38
Tests of Hypotheses.....	40
CHAPTER 6	
DISCUSSION.....	48
Summary of Findings and Implications.....	48
Limitations and Directions for Future Research.....	54
APPENDIX A	
QUESTIONAIRES AND MATERIALS.....	58
REFERENCES.....	84

LIST OF TABLES

Table 1: Means, Standard Deviations, and Correlations Among Variables.....	39
Table 2: Coefficient Estimates for the Moderated Mediation Model for Unethical Behavior.....	46
Table 3: Bootstrap Results for the Conditional Indirect Effects.....	47

LIST OF FIGURES

Figure 1: Theoretical Model.....	14
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ABSTRACT

Recent research has demonstrated that over time, consecutive high performance goals can increase unethical behavior by depleting one's self-regulatory resources (Welsh & Ordóñez, 2014). In this study, I extend the mediated model connecting goals, depletion, and unethical behavior. First, I propose that the depleting effects associated with a single goal can increase depletion and facilitate unethicality both in pursuit of the goal and also in unrelated areas. Second, I draw from the goal-setting literature to hypothesize that high levels of goal commitment will moderate the relationship between high performance goals and depletion by strengthening this effect. Third, I integrate research related to information processing to hypothesize that because automatic processing influences behavior more when participants are depleted, subconscious ethical priming will moderate the relationship between depletion and unethical behavior by attenuating this effect. A laboratory study is presented to test the expanded model combining mediation and moderation, adding to our understanding of the factors that influence the strength of the relationship connecting high performance goals and unethical behavior. Results generally did not support the developed model and a number of potential limitations and directions for future research are discussed.

CHAPTER 1

INTRODUCTION

Goal-setting theory has been called the most important theory within the field of organizational behavior (Miner, 2003) with over 400 studies demonstrating that high goals increase performance more than low or “do your best” goals (Locke & Latham, 2006). However, a growing body of research has suggested that goals can also have undesirable consequences (e.g., Cochran & Tesser, 1996; Jensen, 2003; Poortvliet & Darnon, 2010; Soman & Cheema, 2004). The finding that goals can increase unethical behavior has turned scholarly attention to understanding the mechanisms through which this phenomenon occurs (Barsky, 2008; Ordóñez, Schweitzer, Galinsky, and Bazerman, 2009; Schweitzer, Ordóñez, & Douma, 2004; Welsh & Ordóñez, 2014). In this study, I define unethical behavior as “behavior that is subject to (or judged according to) generally accepted norms of behavior” (Reynolds & Ceranic, 2007, p. 1610).

Recent research by Welsh and Ordóñez (2014) provided new insight into the relationship between goals and unethical behavior by drawing on the self-regulation literature. According to goal-setting theory, high goals improve performance by increasing motivation, focus, and persistence (Locke & Latham, 2002). Welsh and Ordóñez (2014) found that across consecutive goal periods, the increased motivation, focus, and persistence induced by high goals led to the depletion of self-regulatory resources. Additionally, depletion was found to mediate the relationship between high goals and unethical behavior suggesting that as high goals reduced self-regulatory resources, individuals had greater difficulty resisting the temptation to cheat in order to

attain the goal. In this study, I seek to extend the mediated model proposed by Welsh and Ordóñez (2014) in several ways.

One limitation of the original model proposed by Welsh and Ordóñez (2014) was that it was limited to contexts in which consecutive performance goals were used. Specifically the depleting effects of high goals were theorized to become manifested over time across a series of consecutive goals as individuals who became depleted in the pursuit of initial goals would cheat to attain later goals. Yet a closer theoretical examination suggests that the depleting effects of high goals are due to the increased levels of motivation, focus, and persistence required over a designated time period rather than the particular number of goals assigned during that period. In this study, I propose that the depleting effects of high goals do not necessarily require a set of consecutive goals as demonstrated by Welsh and Ordóñez (2014), but may occur during the pursuit of a single goal that is difficult enough to require substantial levels of motivation, focus, and persistence thereby broadening the applicability of the findings of Welsh and Ordóñez (2014) to the entire goal-setting literature.

Another limitation of previous research connecting goal setting and unethical behavior is that resulting unethicality has only been considered within the domain of the goal. Integrating the findings of Welsh and Ordóñez (2014) with recent research demonstrating that an initial depleting task can increase unethical behavior on a subsequent unrelated tasks (e.g., Gino, Schweitzer, Mead, & Ariely, 2011; Mead, Baumeister, Schweitzer, Gino, & Ariely, 2009), I propose that the unethical behavior associated with high performance goals may spill over into the commission of unethical

acts that are unrelated to the pursuit of the goal. Specifically, as high performance goals consume self-regulatory resources, a variety of unethical temptations that are not directly related to the initial goal may become harder for depleted individuals to resist.

I also extend the original mediated model proposed by Welsh and Ordóñez (2014) through a consideration of two moderating variables. In terms of the relationship between high goals and depletion, I theorize that goal commitment will play a moderating role. According to goal-setting theory, high goal commitment is essential in order for a goal to be effectively pursued and many studies have examined methods through which goal commitment can be increased (Locke & Latham, 2002). However, because high goal commitment increases the motivation, focus, and persistence of those pursuing a goal (McCaul, Hinsz, & McCaul, 1987), goal commitment may actually exacerbate the relationship between high performance goals and unethical behavior. In contrast, those with low levels of goal commitment may experience little depletion even when given high goals to pursue.

In terms of the relationship between depletion and unethical behavior, I theorize that subconscious priming will play a moderating role. As individuals become depleted, research has shown that they have greater difficulty exerting executive control over their behaviors in order to resist temptations (Gino, et al., 2011; Mead et al., 2009). Recent research has also demonstrated that an increase in depletion leads to the impairment of deliberative thinking and a greater reliance on less effortful automatic processes in decision making (Pocheptsova, Amir, Dhar, & Baumeister, 2009). Thus, those who are depleted may be more susceptible to the influence of subconscious primes which

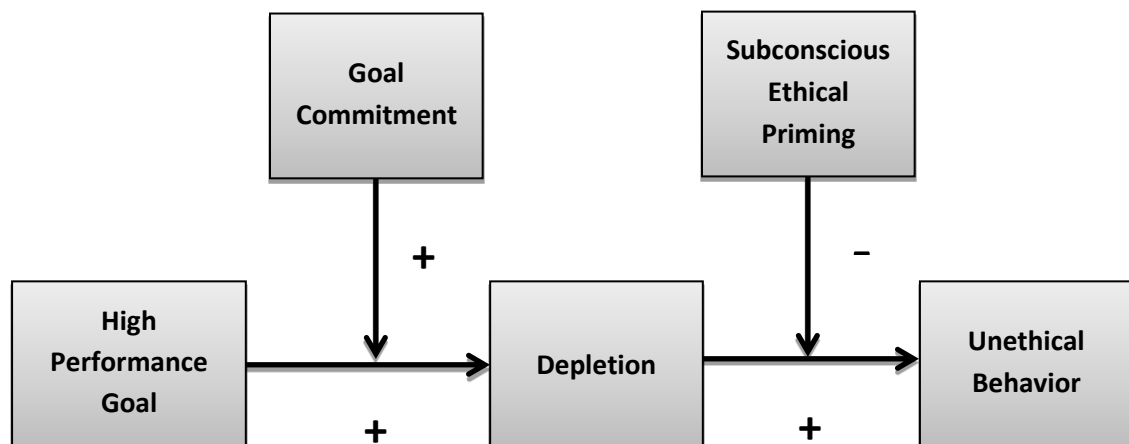
influence behavior through processes that are automatic and implicit. Because subconscious ethical primes can increase ethical behavior (Welsh & Ordóñez, in press), integrating subconscious priming with research connecting depletion and unethical behavior may provide a mechanism through which the relationship between depletion and unethical behavior can be attenuated.

The hypothesized model is pictured in Figure 1. In sum, I expect goal commitment and subconscious ethical priming to moderate the mediated model connecting high performance goals, depletion, and unethical behavior at two different points along the causal sequence. This study contributes to the literature in a number of ways. First, I seek to expand the findings of Welsh and Ordóñez (2014) by demonstrating that even the pursuit of a single goal can significantly deplete one's self-regulatory resources and facilitate unethicality. Second, I seek to add to the literature connecting goal setting and unethical behavior by demonstrating that because depletion makes it harder to resist temptation, the unethical behavior caused by high performance goals is not limited to cheating in pursuit of the goal, but may also spill over into unethicality in other domains. Third, I seek to extend recent research connecting high goals and depletion by demonstrating that high goal commitment can exacerbate this effect. Fourth, I seek to contribute to a growing body of research connecting depletion and unethical behavior by providing evidence that this relationship can be attenuated through the use of subconscious ethical priming.

The remainder of this dissertation unfolds as follows. First, I review the literature related to goal-setting theory and discuss the mechanisms through which high goals are

theorized to increase performance. Second, I propose extending the mediated model connecting goals, depletion, and unethical behavior through a consideration of the depleting effects of a single high performance goal as well as potential unethical spillover into contexts that are not related to the goal. Third, I draw on goal-setting theory to introduce goal commitment as a moderator that may strengthen the relationship between high goals and depletion. Fourth, I introduce subconscious ethical priming as a moderator and argue that it weakens the relationship between depletion and unethical behavior. Finally, I test the developed model using a laboratory study with 209 undergraduate business students and then discuss the potential implications of this research.

FIGURE 1: Theoretical Diagram



CHAPTER 2

LITERATURE REVIEW

Goal-Setting Theory

Goal setting research emerged in the mid-1900s as a theory of employee motivation in the workplace. Goal-setting theory extended a number of motivation-related theories including expectancy theory (Vroom, 1964), need for achievement (McClelland, Atkinson, Clark, & Lowell, 1953), self-efficacy (Bandura, 1986), and intrinsic versus extrinsic motivation (Deci, 1975). Prior to the formulation of goal-setting theory, behaviorists argued that motivation occurred through external rewards and punishments whereas non-behaviorists such as McClelland and colleagues (1953) argued that people possessed internal motivation in the form of need for achievement. The work of Ryan (1970) provided a novel perspective in suggesting that conscious purposes, plans, intentions, and goals motivate behavior. Although some prior research had looked at goals (e.g., Lewin, Dembo, Festinger, & Sears, 1944), scholars generally considered the factors that shaped peoples' goals rather than how goals themselves could influence behavior.

Building on this research, Locke and Latham (1984, 1990, 2002, 2006) introduced goal-setting theory and began to examine the factors through which goals influenced performance. They defined a goal as the aim or object of an action, such as the attainment of a specific standard of proficiency within a certain time period (Locke & Latham, 2002). Goal setting denotes a formal program of establishing quantitative performance expectation levels for either individuals or groups. Locke and Latham (1990) found that

increasing the difficulty of the goal also increased performance with meta-analytic effect sizes for goal difficulty ranging from .52 to .82. Only when the limits of ability were reached or when goal commitment was reduced did this relationship between goal difficulty and performance start to weaken. As a result of these findings related to goal difficulty, goal setting scholars have advocated that high goals be both specific and difficult with the performance level set at the 90th percentile (Latham & Seijts, 1999).

Locke and Latham (2002) identified four key mechanisms through which goals operate. First, goals direct attention toward goal-relevant activities and enhance focus in pursuit of the goal. For example, on a driving task Locke and Bryan (1969) found that participants who were given feedback in multiple areas improved their performance only in the areas for which they had goals and not in other areas. Similarly, Rothkopf and Billington (1975) gave students lengthy written passages and found that those who were assigned specific learning objectives performed better when tested on their knowledge of the relevant material. Thus, a specific goal provides important information about which aspects of the task should be prioritized.

Second, high goals energize people to put forth greater effort. This includes increases in direct physical effort, rate of performance, and output. For example, Bandura and Cervone (1983) found that those with high goals put forth increased physical effort as measured using an ergometer exercise device. Similarly, Latham and Yukl (1976) found that typists given high goals put forth increased effort by increasing their typing output. High goals have also been shown to increase the motivation of those who approach a task with low motivation levels. For example, Bryan and Locke (1967) used differences in

attitude ratings to sort participants into a high-motivation group and a low-motivation group prior to completing an addition task. The low-motivation group was given a high goal whereas the high-motivation group was told to do their best. After two retests on the same task, the low-motivation group with high goals was performing as well as the high-motivation group and low-motivation participants now possessed equally favorable attitudes towards the task.

Third, goals increase persistence. For example, LaPorte and Nath (1976) found that students given a prose passage followed by a set of questions studied longer when given a high goal than when given a low goal or told to do their best. Additionally, on tasks with time deadlines those with high goals generally work at a faster pace (Latham & Locke, 1975).

Fourth, goals can also increase the discovery of task-relevant knowledge as well as the use of task-relevant strategies in order to increase performance. Thus, goals motivate people not only to draw from their existing knowledge, skills, and abilities, but also to creatively seek for new ways to improve performance further. For example, Demmert and Klein (2003) assigned participants either an easy goal or a difficult goal with a nonobvious solution in terms of transferring water from one bucket to another and found that those with the difficult goal developed novel strategies in order to achieve the goal. In an organizational simulation conducted by Smith, Locke, and Barry (1990), those with high goals developed deliberate, creative planning strategies in order to achieve the goal. In the field, Latham and Baldes (1975) found that truck drivers with a goal to increase their truck loads modified their trucks in order to better estimate truck weight

before arriving at the weighing station. However, it is important to note that sometimes the pressure induced by a high performance goal can lead to a failure to learn what strategies are actually effective. For example, Earley, Connolly, and Ekegren (1989) found that for a novel stock market prediction task with multiple alternative strategies, those who were told to do their best performed better than those with high goals.

A number of factors moderate the relationship between high goals and performance. First, feedback is an important moderator because people need to know their degree of progress in relation to the goal. People below the target generally increase their effort (e.g., Matsui, Okada, & Inoshita, 1983); however without feedback there is less of a reason to adjust one's level of effort or the strategy being used to pursue the goal. Goals create a motivation discrepancy that is reduced as one moves towards the goal (Bandura, 1989). However, without feedback people are unaware of their proximity to the goal and are unable to reduce this motivation discrepancy.

Second, task complexity moderates the relationship between high goals and performance. Meta-analytic evidence has suggested that high goals increase performance more on simple tasks than on complex tasks (Wood, Mento, & Locke, 1987). On complex tasks, there are more potential strategies to use and thus using the correct task strategy is often more highly correlated with performance than goal difficulty (Chesney & Locke, 1991). Durham, Knight, and Locke (1997) showed an interaction between goal difficulty and task strategy in which participants performed best when they had both a high goal and used the most effective strategy. On some types of complex tasks, high performance goals can negatively impact learning. For example, Kanfer and Ackerman

(1989) found that high performance goals reduced performance on a complex air traffic controller situation. However, in these types of situations learning goals, as opposed to performance goals, can be used to increase performance (Winters & Latham, 1996).

Third, goal commitment moderates the relationship between high goals and performance. If individuals are not committed to achieving a goal, then goal setting will not increase performance (Locke, Latham, & Erez, 1988). Goal commitment involves a psychological binding to the goal that creates a willingness to devote time and effort towards goal attainment (Naylor & Ilgen, 1984). The importance of goal commitment to the achievement of high performance goals has led to the development of a large literature exploring factors through which goal commitment can be increased (Locke & Latham, 2002). In a meta-analysis of the goal commitment literature, Klein et al. (1999) found that the three important antecedents of goal commitment are the attractiveness of attaining the goal, one's expectancy of achieving the goal, and the motivational force of the goal.

Recent research has pursued a number of new directions related to goal-setting theory. For example, goal setting can be effective both with individuals and groups (Seijts & Latham, 2000). However, organizational goals and individual goals may be at odds leading to goal conflict and reduced performance (Locke, Smith, Erez, Chah, & Schaffer, 1994; Slocum, Cron, & Brown, 2002). Stajkovic, Locke and Blair (2006) demonstrated that goals can be subconsciously activated via priming and that a combination of subconscious and conscious goals increases performance more than a conscious goal alone. Expanding work on goal difficulty, Sitkin, See, Miller, Lawless,

and Carton (2011) introduced stretch goals, a new type of goal that appears impossible when begun, which may be both tempting and risky for organizations in need of a major turnaround.

Additionally, Heath, Larrick, and Wu (1999) proposed an extension of goal-setting theory by integrating the motivational aspects of goals with the cognitive components associated with decision making theories (see Ordóñez & Wu, 2014 for a review). In particular, Heath et al. (1999) draw from prospect theory (Kahneman & Tversky, 1979; Tversky & Kahneman, 1992) to provide new insight into goal-setting mechanisms. First, goals provide a reference point and that divides outcomes into gains and losses. Second, this division of outcomes into gains and losses is related to loss aversion in which losses (in this case the failure to achieve the goal) looms larger than gains. Third, prospect theory indicates that diminishing sensitivity will occur as one moves farther away from the goal (reference point). This perspective provides insight into why those who are closest to achieving the goal will put forth more effort in order to do so. Additionally, those who have met the goal will have little motivation to continue beyond the goal. Because people are more risk seeking in the domain of losses (Kahneman & Tversky, 1979), those with unmet goals will likely take greater risks as compared to those who have achieved the goal.

Although goals have many benefits, recent research has also started to examine a potential dark side associated with goal setting. A number of recent papers have suggested that goals may not only increase performance but may also increase unethical behavior as well (Cadsby, Song, & Tapon, 2010; Schweitzer et al., 2004; Welsh &

Ordóñez, 2014). In the next section, I propose an extension of the literature connecting high performance goals and unethical behavior. Specifically, I integrate goal-setting theory with recent research related to the depletion of self-regulatory resources to develop a mediated model connecting high goals to unethical behavior via depletion that is moderated at two points along this causal sequence.

CHAPTER 3

MODEL AND HYPOTHESES

Goal-Setting Mechanisms

Over 40 years of research has shown that setting specific, difficult performance goals can improve employee performance (Locke & Latham, 2002; 2006). From loggers cutting more trees (Latham & Kinne, 1974) to typists increasing their typing output (Latham & Yukl, 1976), high goals have been shown to boost performance across a variety of tasks and occupations. According to goal-setting theory, as long as a person has the requisite levels of commitment and ability, there is a positive linear relationship between the difficulty of the goal and task performance (Locke & Latham, 2006). The viability of goals as a means of increasing employee performance has made goal setting a widely used organizational practice (Locke & Latham, 2002) and an important part of management education (Ambrose & Kulik, 1999). Goal-setting theory posits that goals promote feelings of success as employees grow to meet the challenges that they are given (Locke & Latham, 2006).

However some research has suggested that goals can also lead to undesirable outcomes for both employees and organizations (e.g., Ordóñez et al., 2009). In some circumstances, high goals can create hypermotivation (Rick & Lowenstein, 2008), reduce self-esteem (Soman & Cheema, 2004), and promote a competitive, individualistic mindset (Poortvliet & Darnon, 2010). Schweitzer et al. (2004) found that individuals were significantly more likely to cheat in order to attain high performance goals and this effect has been replicated in recent studies (e.g., Cadsby, Song, & Tapon, 2010; Welsh &

Ordóñez, in press). Those who were the closest to reaching the goal were the most likely to behave unethically. In these studies, goals were presumed to increase dishonesty by changing individuals' motivational calculus as they grew closer to meeting the goal. However, Welsh and Ordóñez (2014) provided evidence of an alternate process through which high goals can also increase unethical behavior based on the very mechanisms through which goals are theorized to function.

As discussed in my review of the goal setting literature, there are four mechanisms through which goals operate (Lock & Latham, 2002). First, goals direct attention towards goal-relevant activities and focus individuals on the task at hand. Second, goals motivate individuals to put forth greater effort, both cognitively and physiologically. Third, goals increase persistence as individuals are willing to work longer and harder in order to attain the goal. Fourth, goals facilitate the discovery of task-relevant knowledge. Goal-setting scholars advise that high performance goals should be set at the 90th percentile (e.g., Latham & Seijts, 1999) thus requiring very high levels of motivation, focus, and persistence in pursuit of a goal that by definition will only be achievable by a few. Although the exertion required to attain high goals has consistently been found to increase short-term performance, few studies have considered the potential repercussions associated with this large expenditure of energy. In the next section, I draw on self-regulatory resource theories to highlight the connections between high goals and depletion, and between depletion and unethical behavior.

A Self-Regulatory Perspective Connecting High Goals and Unethical Behavior

Self-regulation enables people to control the cognitive processes that govern thoughts, emotions, and behaviors (Hagger, Wood, Stiff, & Chatzisarantis, 2010). Self-regulatory resource theories indicate that individuals have a limited capacity for self-regulation that can be depleted over time by demanding tasks (Baumeister, Bratslavsky, Muraven, & Tice, 1998). According to self-regulatory resource theories, ego depletion occurs when regulatory behaviors draw from a limited psychological resource thereby reducing the capacity for future self-regulatory acts (Baumeister, 2002; Baumeister, et al., 1998).

One way in which many employees become depleted is through sleep deprivation. In recent years, the number of Americans who sleep fewer than six hours per night has increased from 13% to 20% (National Sleep Foundation, 2009) while the number of hours worked has increased (National Institute for Occupational Safety and Health, 2004). Neuroscientific research has demonstrated that sleep deprivation adversely affects the functioning of the prefrontal cortex; a part of the brain involved in self-regulation (Durmer & Dinges, 2005; Jennings, Monk, & Van der Molen, 2003). Barnes, Schaubroeck, Huth, and Ghumman, (2011) found that lack of sleep impaired self-regulation across four studies conducted in both lab and field settings. Similarly, Christian and Ellis (2011) found that sleep deprivation led to a reduction in self-regulatory resources using both survey and behavioral measures of state self-control with a laboratory study of undergraduate students. Building on this research, Welsh, Ellis, Christian, and Mai (in press) demonstrated that sleep deprivation led to depletion, but depleted resources could be partially recovered through the consumption of caffeine.

A large literature has found that a variety of other tasks can deplete self-regulatory resources such as performing under stress (Webb & Sheeran, 2003), suppressing one's emotions (Baumister et al., 1998), engaging in emotional labor (Troughakos, Beal, Green, & Weiss, 2008), giving a counterattitudinal speech (Baumister et al., 1998), and making difficult decisions (Vohs, Baumeister, Schmeichel, Twenge, Nelson, & Tice, 2008). Yet a commonality across the self-regulation literature is that tasks requiring high levels of motivation, focus, and persistence have a depleting effect on self-regulation (Hagger et al., 2010). Thus, by integrating the self-regulation literature with goal-setting theory, Welsh and Ordóñez (2014) theorized and found empirical evidence that the high levels of motivation, focus, and persistence required in the pursuit of high goals can deplete one's self-regulatory resources. In contrast, the pursuit of low and "do your best" goals required lower levels of motivation, focus, and persistence thereby leading to a much lower level of depletion.

Self-regulation allows executive control over one's conduct and as individuals become depleted non-optimal motivational tendencies may become increasingly difficult to resist (Christian & Ellis, 2011). When depleted, temptations become harder to avoid and impulses to gratify needs and desires become more difficult to suppress (Baumeister & Heatherton, 1996). Because resisting temptation requires self-regulatory resources, depleted individuals may become more prone to unethical acts such as lying, cheating, and stealing and may experience increased difficulty in conforming their conduct with personal or organizational standards (Barnes et al., 2011; Christian & Ellis, 2011; Gino et al., 2011). For example, in laboratory studies using sequential tasks, depletion caused by

an initial task has been shown to increase dishonesty on a subsequent task (Gino et al., 2011; Mead et al., 2009). Similarly, individuals who were depleted via sleep deprivation were significantly more likely to subsequently engage in unethical and deviant behaviors (Barnes et al., 2011; Christian & Ellis, 2011). In sum, research has provided evidence of a mediated model in which multiple antecedents of depletion can reduce self-regulatory resources thereby facilitating unethical behavior.

Recent research by Welsh and Ordóñez (2014) built on this model by demonstrating that depletion mediated the relationship between high goals and unethical behavior. Specifically, a multi-round goal-setting task was used to demonstrate that over time, consecutive high goals led to greater levels of depletion thereby increasing unethical behavior. Welsh and Ordóñez (2014) theorized that the negative effects of depletion would be seen over consecutive iterations of a goal as self-regulatory resources are consumed. Results indicated that the mediated relationship between high goals, depletion, and unethical behavior grew stronger during initial rounds as individuals became increasingly depleted and started to weaken in later rounds as some individuals started to experience goal disengagement and started to give up on the goal after repeated failures.

The mediated model proposed by Welsh and Ordóñez (2014) was the first to connect goal-setting, self-regulation, and unethical behavior, yet a limitation of this research is that the context of the study was restricted to the use of a series of consecutive performance goals over time. Specifically, this research considered how the effects of depletion would be manifested across a series of short-but-difficult performance goals

thereby suggesting that self-regulatory problems occur only after repeated exposure to goals that are used consecutively. Yet a closer theoretical examination of the mechanisms connecting high goals, depletion, and unethical behavior reveals that it is not the number of goals, per se, that is theorized to facilitate depletion but rather the increased levels of motivation, focus, and persistence required in pursuit of one or many goals over a certain period of time. For example, consider the pursuit of a single performance goal for five hours versus the pursuit of five consecutive one-hour performance goals. Assuming that levels of motivation, focus, and persistence are equivalent across these two goal structures, levels of depletion experienced should also be similar.

In other words, the depleting effects of high goals found by Welsh and Ordóñez (2014) are likely not a function of the number of goals set, but rather the amount of motivation, focus, and persistence required over a certain period of time. Thus, I extend the original mediated model connecting goal-setting, depletion, and unethical behavior by suggesting that this model is not merely applicable to contexts involving the use of consecutive goals, but can occur during the pursuit of a single high performance goal and thus is relevant to goal-setting theory more broadly. I hypothesize:

Hypothesis 1. A single high performance goal will increase depletion more than a low goal.

Another limitation of the model proposed by Welsh and Ordóñez (2014) is that the unethical behavior that they measured was related exclusively to cheating in order to attain the goal. In fact, across the growing literature connecting high performance goals and unethical behavior, research to date has only considered unethicality that is related to

goal attainment (e.g., Cadsby et al., 2010; Schweitzer et al., 2004; Welsh and Ordóñez, 2014; in press). However, the integration of self-regulatory resource theories with goal setting provides strong theoretical evidence that the negative effects associated with high performance goals may spill over into various types of unethical behaviors in unrelated contexts.

Previous research has shown that because self-regulation is a global resource that allows individuals to resist temptations across a variety of domains, when individuals become depleted they may be more likely to engage in many types of unethical behaviors that require self-control in order to resist. As discussed previously, several studies using sequential tasks have demonstrated that the depletion of self-regulatory resources on an initial task led to increased unethical behavior on subsequent unrelated tasks in different domains (Mead et al., 2009; Gino et al., 2011). If high performance goals have a similar depleting effect, it follows that high goals should also facilitate unethical behavior in contexts that are unrelated to the pursuit of the goal as other forms of temptation become increasingly difficult for depleted individuals to resist. As a result, high goals may produce previously unexamined ethical consequences that occur in areas outside of the domain of the goal. Thus, I extend the original mediated model connecting goal-setting, depletion, and unethical behavior by predicting that the unethical behavior caused by reduced self-regulation will spill over into unethical acts that are unrelated to the pursuit of the goal. I hypothesize:

Hypothesis 2. Depletion of self-regulatory resources will increase unethical behavior in contexts that are unrelated to the goal being pursued.

Hypothesis 3. Depletion will mediate the relationship between a high/low performance goal and unethical behavior.

The Moderating Effect of Goal Commitment

One important moderator between goals and performance is goal commitment. According to goal-setting theory, if individuals are not committed to achieving a goal, then goal setting will not increase performance (Locke, Latham, & Erez, 1988). Whereas goal acceptance merely acknowledges the assignment of a goal by a third party, goal commitment involves a psychological binding to the goal that creates a willingness to devote time and effort towards goal attainment (Naylor & Ilgen, 1984). Goal commitment is most important to the achievement of high goals because these goals require greater effort and are associated with a lower probability of success than low goals (Erez & Zidon, 1984; Locke & Latham, 2002).

The importance of goal commitment to the achievement of high performance goals has led to the development of a large literature exploring factors through which goal commitment can be increased. For example, goal commitment can be increased when goals are communicated by a legitimate authority (Ronan, Latham, & Kinne, 1973), set participatively (Latham, Erez, & Locke, 1988), or accepted publicly (Hollenbeck, Williams, & Klein, 1989). Monetary incentives can also increase goal commitment, particularly when a piece rate, rather than an all-or-nothing compensation system is used (Latham & Kinne, 1974; Latham & Yukl, 1975; Lee, Locke, & Phan, 1997). Providing information that increases self-efficacy can also enhance goal commitment (Bandura, 1997). For example, leaders can use positive communication that expresses confidence in

followers' ability to achieve the goal in order to raise levels of goal commitment (White & Locke, 2000).

Research has demonstrated that those with higher goal commitment exert a greater level of effort in order to achieve the goal (McCaul et al., 1987). Specifically, McCaul et al. (1987) found that those who were highly committed to the goal worked harder, devoted more time to the pursuit of the goal, and were ultimately more successful in attaining the goal. However, the findings of McCaul et al. (1987) suggest that goal commitment improves performance by increasing the amount of motivation, focus, and persistence that individuals are willing to devote towards achieving the goal. Thus, high goal commitment may actually work to exacerbate the depleting effects associated with high performance goals. Building on the findings of Welsh and Ordóñez (2014), it is not the mere presence of a high goal that is depleting but rather the motivation, focus, and persistence that are expended in pursuit of the goal. Thus, an individual who is given a high goal but who has little commitment to achieving the goal will likely expend few self-regulatory resources pursuing the goal. Previous goal-setting research has focused on how to increase performance via enhanced goal commitment without consideration for potential negative side effects associated with high goal commitment. Yet I propose that efforts to increase the motivation, focus, and persistence of those pursuing high goals via higher levels of goal commitment may also simultaneously increase both depletion and unethical behavior. I hypothesize:

Hypothesis 4: The effect of a high goal on depletion will be significantly strengthened when goal commitment is high.

Hypothesis 5: The mediated relationship between a high/low goal, depletion, and unethical behavior will be significantly strengthened when goal commitment is high.

The Moderating Effect of Subconscious Ethical Priming

Information processing involves two distinct cognitive systems that underlie the thinking and reasoning process (Epstein, 1994; Stanovich & West, 2000). According to Stanovich and West (2000), System 1 involves subconscious, automatic, intuitive, and effortless processing whereas System 2 involves conscious, deliberate, logical, and effortful processing. Recent research has demonstrated that as individuals become depleted, their ability to engage in System 2 processing becomes impaired and they are more likely to rely on System 1 (Masicampo & Baumeister, 2008; Pocheptsova et al., 2009). This phenomenon is theorized to occur because System 2 requires effortful processing to override intuitive System 1 responses (Masicampo & Baumeister, 2008; Pocheptsova et al., 2009). However, those whose self-regulatory resources have been depleted lack the executive control to engage in deliberation and consequently tend to rely on automatic and intuitive responses (Pocheptsova et al., 2009). Additionally, interventions that restore depleted resources, such as the ingestion of glucose, have been found to return the ability to engage in effortful System 2 processing (Masicampo & Baumeister, 2008). Following this line of reasoning, those who have been depleted by high performance goals will be more likely to engage in less effortful System 1 processing.

Like other types of information processing, ethical decision making also involves dual processes (Reynolds, 2006). Although most behavioral ethics research has assumed that ethical decision making is conscious, rational, and deliberative (see Kish-Gephart, Harrison, & Treviño, 2010 for a review), some recent research has suggested that it can also be subconscious, automatic, and intuitive (Reynolds, Leavitt, & DeCelles, 2010; Welsh & Ordóñez, in press). Automatic processing frees up cognitive resources by using prototypes that implicitly match incoming stimuli to internal schemas (Reynolds, 2006). When incoming stimuli cannot be matched to a preexisting prototype, this information is processed consciously and deliberatively in order to reach a decision (Reynolds, 2006).

One way in which automatic processes may be influenced is through the use of subconscious priming. Subconscious priming refers to an increased sensitivity to certain stimuli due to prior experience that occurs outside of one's conscious awareness (Bargh & Chartrand, 2000). A large literature has demonstrated that subconscious primes can influence behavior and that they do so via automatic System 1 processing (Chartrand & Bargh, 2002; Latham, Stajkovic, & Locke, 2010). For example, Stajkovic, Locke, and Blair (2006) found that subconsciously priming achievement improved task performance. Recently, Welsh and Ordóñez (in press) developed and tested subconscious ethical primes as a means to increase ethical behavior. Across three studies, participants who were exposed to subconscious ethical priming showed greater moral awareness and behaved more ethically than those who were neutrally primed. Specifically, subconscious ethical priming activated the moral standards of those exposed to the prime by sensitizing them through exposure to moral content.

If those who are highly depleted are also more likely to rely on automatic processing, then they should also be more susceptible to the influence of subconscious ethical priming. Whereas those who have expended few self-regulatory resources may have more willpower available in order to resist temptations, those who are highly depleted may be prone to succumbing to unethical impulses. Subconscious ethical priming may facilitate ethical behavior by directing attention to one's moral standards and away from unethical temptations. As a result, subconscious ethical priming may be most influential for depleted individuals who are more reliant on automatic processing and are more susceptible to unethical impulses. In sum, exposure to subconscious ethical priming may moderate the relationship between depletion and unethical behavior by weakening this effect. I hypothesize:

Hypothesis 6: The effect of depletion on unethical behavior will be significantly weakened when participants are primed with subconscious ethical content.

Hypothesis 7: The mediated relationship between a high/low goal, depletion, and unethical behavior will be significantly weakened when participants are primed with subconscious ethical content.

CHAPTER 4

RESEARCH METHODOLOGY

Participants and Design

This study was conducted in a laboratory setting using 209 undergraduate students from a large public University in the U.S. Southwest. The design was a 2 (high goal, low goal) x 2 (high goal commitment, low goal commitment), x 2 (subconscious ethical priming, neutral priming) with random assignment to conditions. Participants completed a goal-setting task, a measure of depletion, a subconscious priming task, and an ethics task.

Manipulations and Measures

Goal setting. Participants completed a matrix task from Mazar, Amir, and Ariely (2008) which involves solving a series of math problems. This task included a series of matrices, each containing a set of 12 three-digit numbers (e.g., 3.62). Participants had 12 minutes to find and circle the two numbers in each matrix that added up to exactly 10. Consistent with goal-setting theory, in the high goal condition the goal was set equal to the 90th percentile of performance based on pilot testing which was to solve 40 matrices. The low goal was set at the 10th percentile based on pilot testing which was to solve 10 matrices.

Goal commitment. Consistent with previous goal-setting studies, goal commitment was manipulated by offering monetary incentives directed towards goal attainment (Latham & Kinne, 1974; Latham & Yukl, 1975). In both conditions,

participants were able to earn a maximum of \$5. Specifically, a linear piece rate compensation system was used to maximize goal commitment as recommended by Lock and Latham (2002). When participants were given the high goal, in the high goal commitment condition they earned \$1 for solving 10 matrices, \$2 for solving 20 matrices, \$3 for solving 30 matrices, and \$5 for achieving the goal and solving 40 matrices. When participants were given the low goal, in the high goal commitment condition they earned \$1 for solving 2 matrices, \$2 for solving 4 matrices, \$3 for solving 6 matrices, \$4 for solving 8 matrices, and \$5 for achieving the goal and solving 10 matrices. Participants in the low goal commitment (control) conditions were paid a flat fee of \$5 at the beginning of the experiment and were not compensated for their performance on the matrix task. Following this manipulation, participants responded to four goal commitment questions from Hollenbeck, Klein, O'Leary, and Wright (1989) as a manipulation check. A sample item is "I think that this is a good goal to shoot for." Participants responded to these items on a seven-point scale ranging from *strongly disagree* to *strongly agree*.

Depletion. After the goal commitment manipulation and goal-setting task, depletion was measured using four items from the State Ego Depletion Scale (Ciarocco, Twenge, Muraven, & Tice, 2010). A sample item is "I feel mentally exhausted." Participants responded to these items on a seven-point scale ranging from *strongly disagree* to *strongly agree*. The reliability of the scale was .90.

Subconscious ethical priming. Following the measure of depletion, participants were exposed to either subconscious ethical priming or neutral priming consistent with the procedures of Welsh and Ordóñez (in press). Participants unscrambled a total of 20

sentences by using a set of five randomly positioned words to construct grammatically correct four-word sentences. In the subconscious ethical priming condition, 12 of the 20 sentences contained ethics-related words (e.g., “John donated to charity”) and 8 of the sentences contained neutral words. In the neutral priming condition, none of the 20 sentences contained ethics-related words (e.g., “Butter melts when heated”). Participants had seven minutes to unscramble all 20 sentences. At the end of the experiment, participants completed a six-item awareness questionnaire designed specifically for subconscious priming tasks and participants with conscious awareness of the priming were excluded from the study (Bargh & Chartrand, 2000).

Unethical behavior. Following the subconscious priming manipulation, participants completed an ethics task adapted from Heyman and Ariely (2004). This task involved solving a series of five puzzles by selecting the right combination of numbers that added up to 100. Participants were instructed that they would be paid \$1 for each puzzle that they could correctly solve in 3 minutes. Participants compensated themselves out of an envelope in their carrel containing five \$1 bills. However, unknown to participants all of these five puzzles were unsolvable with no possible combination of numbers that could be added to reach 100. Unethical behavior on the puzzles task was operationalized as the amount of money taken by participants ranging from \$0 to \$5.

Participants could also engage in unethical behavior by cheating on the matrix task. Although the primary purpose of this study was to look at unethical behavior on a task unrelated to the initial goal setting task, I also examined unethical behavior on this initial task. Participants threw away their worksheets for the matrix task and thus believed

that they could cheat anonymously. However, unknown to participants a unique coded number appeared in one of the matrices allowing the worksheets to be compared against reported performance to determine whether participants over-reported their performance on this task.

CHAPTER 5

RESULTS

The post-task awareness check for the subconscious priming task removed 11 participants (5%) who indicated some awareness of the priming leaving a final sample size of 198 participants. The final sample was 46% female with a median age of 20. Table 1 provides the means, standard deviations, and correlations between variables. On average, on the initial goal-setting task participants solved 18.51 matrices correctly and over-reported their performance by 2.02 matrices. On the puzzles task, they cheated .90 times on average. The overall mean level of depletion (3.55) was slightly below the midpoint of the seven-point scale, suggesting that, on average, participants were moderately depleted.

Next, I examined the correlations between variables. As expected, there was a significant positive correlation between the high goal and depletion ($r = .28, p < .001$) as well as a significant positive correlation between the high goal and over-reporting one's performance on the matrix task ($r = .28, p < .001$). These results suggesting that high goals can increase depletion and unethical behavior are consistent with the findings of Welsh & Ordóñez (2014). Although there was a positive correlation between the high goal and performance on the matrix task, this correlation was not significant ($r = .12, p = .11$). There was not a significant correlation between having the high goal on the matrix task and cheating on the puzzles task ($r = -.06, p = .41$). However, there was a strong positive correlation between over-reporting on the matrix task and cheating on the puzzles task ($r = .40, p < .001$). There were positive but non-significant relationships

between goal commitment and over-reporting on the matrix task ($r = .12, p = .10$) and between goal commitment and cheating on the puzzles task ($r = .09, p = .19$).

TABLE 1: Means, Standard Deviations, and Correlations Among Variables

Variable	Mean	s.d.	1.	2.	3.	4.	5.	6.	7.	8.
1. High Goal ^a	.50	.50	-							
2. High G.C. ^b	.50	.50	-.03	-						
3. Ethical Prime ^c	.52	.50	.14*	-.10	-					
4. M. Correct ^d	18.51	8.84	.12	-.01	-.06	-				
5. M. Cheat ^e	2.02	4.13	.28**	.12	.12	-.09	-			
6. Depletion	3.55	1.41	.28**	.01	.09	-.24**	.14*	-		
7. Puzzles Cheat ^f	.90	1.46	-.06	.09	.00	-.10	.40**	-.02	-	
8. Gender ^g	.46	.50	.07	-.07	.12	-.04	-.06	.24**	-.09	-
9. Age	21.13	2.35	-.07	-.08	.00	-.07	-.02	-.11	.03	.07

$n = 198$

* $p < .05$

** $p < .01$

^a High Goal coded as 0 = Low goal, 1 = High goal

^b High G.C. coded as 0 = Control, 1 = High goal commitment

^c Ethical Prime coded as 0 = Neutral prime, 1 = Ethical prime

^d M. Correct coded as the number of matrices solved correctly on the matrix task

^e M. Cheat coded as the number of matrices over-reported on the matrix task

^f Puzzles Cheat coded as the number of puzzles participants falsely claimed to have solved

^g Gender coded as 0 = Male, 1 = Female

Depletion had a significant positive relationship with over-reporting on the matrix task suggesting that those who were depleted were more likely to over-report their performance ($r = .14, p = .05$). Depletion also had significant negative relationship with the number of matrices solved correctly indicating that those who performed well on the matrix task tended to be less depleted ($r = -.24, p = .001$). There was also a significant positive relationship between depletion and gender indicating that females reported higher levels of depletion following the matrix task than males ($r = .24, p = .001$). However, on the puzzles task the expected negative relationship between subconscious ethical priming and cheating did not emerge ($r = .00, p = .98$).

Tests of Hypotheses

Hypothesis 1 predicted that a single high performance goal would increase depletion more than a low goal. The results of a t-test indicated that participants in the high goal condition (Mean = 3.94) were significantly more depleted than those in the low goal condition (Mean = 3.16, $t_{196} = 4.04, p < .001$). Thus, Hypothesis 1 was supported.

Hypothesis 2 predicted that depletion would increase unethical behavior on a subsequent task unrelated to the goal. However, there was not a significant positive correlation between depletion and cheating on the puzzles task ($r = -.02, p = .76$). Thus, Hypothesis 2 was not supported.

Hypothesis 3 predicted that depletion would mediate the relationship between a high performance goal (on the matrix task) and unethical behavior (on the subsequent puzzles task). I tested the indirect effect of the high goal on cheating on the puzzles task via depletion using Preacher and Hayes' (2008) approach using Model 4 in SPSS Process

(Hayes, 2013). This procedure is an extension of the Sobel test (Sobel, 1982) and is recommended over Baron and Kenny (1986) because it does not assume a normal sampling distribution of indirect effects. As Preacher and Hayes recommend, I estimated the indirect effects using unstandardized coefficients and utilized bootstrapping procedures with 1,000 resamples to place 95% confidence intervals around the estimates of the indirect effects. Bootstrapping provides evidence of mediation if the bias-corrected 95% confidence interval excludes zero for indirect effects. I excluded the conditions with subconscious ethical priming for this analysis because I hypothesized that the priming would attenuate the effect of depletion on unethical behavior on the puzzles task. I did not find evidence of a significant indirect effect of the high goal on unethical behavior through depletion because the 95% confidence interval included zero (coefficient = $-.02$, 95% CI = $-.33, .19$). Thus, Hypothesis 3 was not supported.

Hypothesis 4 predicted that the effect of the high goal on depletion would be significantly strengthened when goal commitment was high. Although participants in the high goal commitment conditions were financially incentivized to be committed to the goal, the manipulation check indicated that mean goal commitment was generally quite high with all conditions above the scale midpoint and an overall mean of 5.07 on a 7-point scale. The results of the manipulation check indicated that the manipulation of high goal commitment (Mean = 5.07) did not increase reported goal commitment relative to the control condition in which goal commitment was not manipulated (Mean = 5.07, $t_{196} = .02$, $p = .99$). Although the goal commitment manipulation increased goal commitment slightly in the high goal condition (Mean = 4.93) relative to the low goal condition, this

difference was not statistically significant (Mean = 4.67, $t_{97} = 1.40$, $p = .17$). The results of a two-way ANOVA indicated there was not a significant interactive effect between the high goal and high goal commitment on depletion ($F_{(1, 197)} = .00$, $p = .97$). Thus, Hypothesis 4 was not supported.

As a supplemental analysis, I reran the model for Hypothesis 4 using the measure of reported goal commitment taken from the manipulation check in place of the goal commitment manipulation. Because the goal commitment manipulation was unsuccessful, I felt that analyzing reported goal commitment might be more fruitful. However, results of a linear regression indicated that there was not a significant interaction between the high goal and reported goal commitment on depletion ($B = -.02$, $t = -.10$, $p = .92$). Results also indicated a significant negative correlation between the high goal and goal commitment ($r = -.29$, $p < .001$) and a significant negative correlation between depletion and high goal commitment ($r = -.34$, $p < .001$) suggesting that those with high goals and high depletion levels were generally less committed to the goal. I also analyzed the interaction between the high goal and high goal commitment on unethical behavior on the puzzles task. Result of a linear regression excluding the subconscious ethical priming conditions indicated that there was a marginally significant interaction between the high goal and reported goal commitment on cheating on the puzzles task ($B = .64$, $t = 1.89$, $p = .06$).

Hypothesis 5 predicted that the mediated relationship between the high goal, depletion, and unethical behavior would be significantly strengthened when goal commitment was high. Moderated mediation occurs when the strength of the mediated

effect depends on the level of a third variable (Preacher, Rucker, & Hayes, 2007). To test stage one moderated mediation, I used Model 7 in SPSS PROCESS (Hayes, 2013). Specifically, I estimated the conditional indirect effect of the high goal on unethical behavior through depletion both with and without high goal commitment using unstandardized coefficients and bootstrapping with 1,000 resamples to place 95% confidence intervals around estimates of the indirect effects. There is evidence of moderated mediation when the estimates of the indirect effects transmitted through the mediator variable are significantly different across levels of the moderator variable as indicated by a significant interaction (Preacher et al., 2007). As shown in Table 2 and Table 3, the indirect effect of the high goal on unethical behavior through depletion was not significantly strengthened by high goal commitment (coefficient = $-.03$, 95% CI = $-.39, .23$) as compared to the control condition (coefficient = $-.02$, 95% CI = $-.32, .24$) and the interaction between the high goal and high goal commitment was not significant ($B = -.20$, $t = -.37$, $p = .71$). A supplemental analysis substituting reported goal commitment in place of the goal commitment manipulation did not provide evidence of moderated mediation ($B = .12$, $t = .42$, $p = .68$). Thus, Hypothesis 5 was not supported.

Hypothesis 6 predicted that the effect of depletion on unethical behavior would be significantly weakened when participants were primed with subconscious ethical content. However, as noted earlier the expected correlation between depletion and increased unethical behavior was not found ($r = -.02$, $p = .76$). The results of a linear regression indicated that the interactive effect between depletion and subconscious ethical priming

on unethical behavior was not significant ($B = .04, t = .24, p = .81$). Thus, Hypothesis 6 was not supported.

Hypothesis 7 predicted that the mediated relationship between the high goal, depletion, and unethical behavior would be significantly weakened when participants were primed with subconscious ethical content. To test stage two moderated mediation as depicted in the theoretical diagram I used Model 14 in SPSS PROCESS (Hayes, 2013). Specifically, I estimated the conditional indirect effect of the high goal on unethical behavior through depletion both with and without high goal commitment using unstandardized coefficients and bootstrapping with 1,000 resamples to place 95% confidence intervals around estimates of the indirect effects. The indirect effect of the high goal on unethical behavior through depletion was not significantly attenuated (coefficient = .00, 95% CI = -.20, .18) relative to the neutral priming (coefficient = -.02, 95% CI = -.24, .19) and there was not a significant interaction between depletion and subconscious ethical priming ($B = .03, t = .17, p = .86$). Thus, Hypothesis 7 was not supported.

To test the full model with depletion mediating the effects of the high goal on unethical behavior, goal commitment moderating the effects of the high goal on depletion, and subconscious ethical priming moderating the effects of depletion on unethical behavior, I used Model 21 in SPSS PROCESS (Hayes, 2013). Specifically, I estimated the conditional indirect effect of the high goal on unethical behavior through depletion both with and without high goal commitment and with and without subconscious ethical priming using unstandardized coefficients and bootstrapping with

1,000 resamples to place 95% confidence intervals around estimates of the indirect effects. As shown in Table 3, the interactions between the high goal and goal commitment in predicting depletion ($B = -.01, t = -.04, p = .97$), and between depletion and subconscious ethical priming in predicting unethical behavior ($B = .03, t = .17, p = .86$) were not significant. Thus, I did not find evidence of moderated mediation and the hypothesized model was not supported.

TABLE 2: Coefficient Estimates for the Moderated Mediation Model for Unethical Behavior

Variable	First Stage (dependent variable = depletion)						Second Stage (dependent variable = unethical behavior)					
	Step 1			Step 2			Step 1			Step 2		
	<i>B</i>	<i>SE</i>	<i>t</i>	<i>B</i>	<i>SE</i>	<i>t</i>	<i>B</i>	<i>SE</i>	<i>t</i>	<i>B</i>	<i>SE</i>	<i>t</i>
Constant	3.13	.17	18.58**	3.13	.20	15.95**						
High goal	.78	.19	4.04**	.79	.27	2.88**						
Goal commitment	.06	.19	.02	.07	.27	.24						
High goal × goal commitment				-.01	.39	-.04						
Constant							1.00	.30	3.37**	1.05	.41	2.55*
High goal							-.17	.22	-.77	-.17	.22	-.75
Depletion							-.01	.08	-.01	-.02	.12	-.19
Ethical priming							.02	.21	.10	-.07	.58	-.12
Depletion × ethical priming										.03	.15	.17
R^2		.08			.08			.00			.00	
ΔR^2					.00						.00	
ΔF					.00						.03	

Note. $N = 198$. Unstandardized regression coefficients are reported.

* $p < .05$.

** $p < .01$.

TABLE 3: Bootstrap Results for the Conditional Indirect Effects

Condition	Indirect effect	SE	<i>Boot LL</i> 95% <i>CI</i>	<i>Boot UL</i> 95% <i>CI</i>
Low goal commitment, neutral priming	-.02	.11	-.29	.18
Low goal commitment, ethical priming	.00	.10	-.21	.20
High goal commitment, neutral priming	-.02	.11	-.24	.21
High goal commitment, ethical priming	.00	.10	-.21	.19

Note. Unstandardized regression coefficients are reported. Bootstrap sample size 1,000. CI = confidence interval; LL = lower limit; UL = upper limit.

CHAPTER 6

DISCUSSION

The purpose of this study is to extend previous research connecting goals, depletion, and unethical behavior by further developing the original mediated model proposed by Welsh and Ordóñez (2014) and identifying key moderators of this mediated relationship. The developed study suggested a number of potential theoretical and managerial implications. However, the results generally did not support the developed model. In this section, I will discuss the findings of this study, identify the implications for research and practice, and consider why much of the developed model was not supported. I will also discuss potential limitations and directions for future research.

Summary of Findings and Implications

Previous research has demonstrated that consecutive high goals can increase both depletion and unethical behavior (Welsh & Ordóñez, 2014). Additionally, depletion has been shown to mediate the relationship between high goals and unethical behavior in this research. This dissertation was designed to extend the original mediated model proposed by Welsh and Ordóñez (2014) in a number of ways. First, I hypothesized that a single high performance goal, as opposed to consecutive goals, would increase depletion more than a low goal. The results supported this hypothesis because participants in the high goal condition were significantly more depleted than participants in the low goal condition. This finding contributes to the literature by demonstrating that even a single high performance goal can be depleting. In other studies, the depletion of self-regulatory resources on one task has been shown to lead to reduced self-control on subsequent tasks.

Practically, managers should be aware of the depleting effects of high performance goals and recognize that employees' self-regulatory ability may be compromised. Following high goals, opportunities to restore depleted resources through rest breaks may be important for employees. Recent research has also found that substances such as glucose (Masicampo & Baumeister, 2008) and caffeine (Welsh, Ellis, Christian, & Mai, in press) can at least partially restore one's self-regulatory ability.

Second, I hypothesized that depletion would increase unethical behavior on a subsequent task unrelated to the goal. However, participants who reported that they were depleted following the goal-setting task were no more likely to cheat when given a subsequent opportunity to do so. These results are somewhat surprising given that participants who were given a high goal on the matrix task were significantly more depleted and also significantly more likely to cheat on this task. One possible explanation is that the survey questions and subconscious priming task allowed participants to rest and recover some of the resources that were depleted during the initial task. Before proceeding to the puzzles task, the experiment required that sufficient time be given for everyone to complete the measure of depletion as well as the subconscious priming task. In order to ensure that participants were properly exposed to the subconscious priming, they were given enough time (7 minutes) so that most finished the task with several minutes to spare. Thus, many participants may have had an unanticipated rest break between tasks during which they could recover some of their depleted resources.

Additionally, although the high goal was significantly more depleting than the low goal, mean depletion in the high goal condition (3.94) was still less than the mean

depletion level found by Welsh and Ordóñez (2014) during the final round of consecutive high goals with the same measure of depletion (4.57). In future research, a longer goal requiring effort over a more extended time period might induce higher levels of depletion that would be more difficult to quickly recover from. Thus, the relatively lower levels of depletion on the initial task combined with the time between tasks might explain why depletion was not significantly related to increased cheating on the puzzles task.

Another possible explanation might be the occurrence of moral compensation and moral licensing effects across the two ethics-related tasks. Some recent research has found that the commission of an unethical act may damage one's moral self-concept and may require compensatory ethical conduct to reaffirm one's status as an ethical person (e.g., Jordan, Mullen, & Murnighan, 2011; Merritt, Effron, & Monin, 2010; Zhong Ku, Lount, & Murnighan, 2010). For example, Zhong et al. (2010) found that those who responded unethically on an initial dilemma were more likely to respond ethically to a subsequent dilemma than those who had responded ethically to the initial dilemma. Jordan et al. (2011) found that recalling one's previous immoral acts leads to morally compensatory behavior in the form of reduced cheating and increased prosocial intentions. Additionally, moral licensing research has demonstrated that those who behave ethically on an initial task can affirm their moral self-concept and are often less concerned about the consequences of subsequent unethicality (e.g., Effron, Cameron, & Monin, 2009; Mazar & Zhong, 2010). For example, Mazar and Zhong (2010) found that participants who purchased eco-friendly products felt a moral license to cheat more than participants who purchased conventional products. Effron et al. (2009) found that the

opportunity to establish credentials as a non-prejudiced person licensed participants to subsequently express more racially biased views. However, in the current study the significant positive correlation between cheating on the matrix task and subsequently cheating on the puzzles task ($r = .40$) is contrary to what would be predicted by the literature related to moral compensation and moral licensing. Thus, it appears that the majority of those who cheated initially did not feel a need to engage in morally compensatory behavior.

An additional possibility is that depletion did not impact cheating on the puzzles task because the puzzles task did not require participants to exercise high levels of self-control. For example, recent research found that the connection between depletion and unethical behavior was much stronger when social influence was present because it requires self-control to resist social influence (Welsh et al., in press). It is possible that after becoming depleted by high performance goals on the matrix task, many participants were simply unmotivated to complete the puzzles task. However, the puzzles task was selected because it is similar to the matrix task as used by Welsh and Ordóñez (2014) in that both provide a temptation to cheat in order to earn additional compensation and thus this task appears to require a degree of self-control to resist acting unethically. Because none of the puzzles were solvable, it is possible that some participants figured this out during this task. Nevertheless, post-task questions asking participants about the true purpose of the experiment suggested that few participants were aware of the ethical nature of the study or that the puzzles provided were all unsolvable.

Although I predicted an interaction between the high performance goal and high goal commitment in which depletion would be exacerbated, this hypothesis was not supported. This may be because of the ineffectiveness of the goal commitment manipulation in increasing reported goal commitment. During the development of this study, pretesting revealed that having the experimenter attempt to increase goal commitment through encouragement, identifying the goal as a good goal to aim for, and indicating that participants' performance would be compared against students at an in-state rival university was ineffective in significantly increasing reported goal commitment. Thus, a linear piece rate compensation system, as recommended by Lock and Latham (2002), was used to attempt to maximize goal commitment by creating a financial inducement to achieve the goal. However, the goal commitment manipulation had only a slight, nonsignificant increase in goal commitment when participants had high goals ($\text{Mean}_{\text{High G.C.}} = 4.93$ versus $\text{Mean}_{\text{Low G.C.}} = 4.67$) and had no overall effect on goal commitment.

Future studies could consider the effectiveness of different goal commitment manipulations. For example, allowing participants to be involved in the goal setting process can increase goal commitment but this might also make it difficult to hold goal levels constant within conditions. The difficulty in manipulating goal commitment could also be due in part to the goal setting task used. The matrix task is likely not intrinsically motivating for most participants and thus a task with the potential for more intrinsic motivation might also lead to increased variance in goal commitment. However, it should also be noted that goal commitment in all conditions was well above the scale midpoint

and thus one of the problems with the attempted manipulation of goal commitment might have been that participants were already highly committed to the goal. In this study, there were no conditions in which participants reported low levels of goal commitment. Thus, a more effective goal commitment manipulation might attempt not only increase goal commitment in some conditions, but also to reduce goal commitment other conditions.

Another challenge associated with goal commitment is that it appears that participants more readily commit to low goals that are easily achievable than high goals where success is less certain. A supplementary analysis reported a fairly high negative correlation between the high goal and reported goal commitment ($r = -.30, p < .001$). The difficulty of manipulating goal commitment in this study may be one reason why most goal setting studies measure rather than manipulate goal commitment. However, the supplemental analyses substituting reported goal commitment in place of the goal commitment manipulation also failed to yield significant interactive effects. In sum, the ineffectiveness of the goal commitment manipulation and the relatively high levels of goal commitment across all conditions leave open the possibility that the hypothesized model could be supported with a more effective manipulation in which goal commitment is substantially reduced in the low goal commitment conditions.

Although I predicted that the mediated relationship between the high goal, depletion, and unethical behavior would be attenuated by subconscious ethical priming, results indicating the absence of a mediated relationship made it difficult to determine the effectiveness of the subconscious ethical priming. Thus, one reason that subconscious ethical priming was unrelated to unethical behavior might have been due to other parts of

the model not working as hypothesized. Yet, overall there was no relationship found between the subconscious ethical priming and cheating on the puzzles task ($r = .00$, $p = .98$) raising the question as to whether the priming would have reduced cheating even if the rest of the model had worked as predicted.

One challenge associated with subconscious priming is that the manipulation is so subtle that it is not consciously detected by participants. Given that the goal commitment manipulation was ineffective and that the depletion level induced by the high goal was somewhat weaker than in previous research, this combination of relatively weak manipulations may be responsible for the overall lack of support for the hypothesized model. Although future research could examine the effectiveness of more explicit conscious ethical primes (such as being asked to recall the Ten Commandments; e.g., Mazar et al., 2008), the reason for using subconscious primes in this study was based on previous findings that those who are depleted are more reliant on automatic, intuitive processes.

Limitations and Directions for Future Research

In addition to the problems discussed above, this research also possesses a number of limitations. For example, generalizability is often a concern with laboratory studies and it is unclear the extent to which these findings can be generalized to an organizational environment. However, goal-setting studies are often conducted in a laboratory setting with results that generalize to the field. As noted by Colquitt (2008, p. 620), the implications of goal-setting for practitioners are not the product of one grand field study, but rather have influenced management practices “because the effects of

specific and difficult goals were demonstrated in both lab and field settings using puzzles, proofreading, Lego construction, and juggling—not to mention faculty performance, scientific engineering, energy conservation, and safety behavior.”

The laboratory setting also strengthened the design of this study in a number of ways. First, it allowed the inference of causality between variables in testing the relationship between goals, depletion, and unethical behavior. Second, the laboratory design was well suited to manipulating factors such as goal level, goal commitment, and subconscious ethical priming. In a field study, it might be difficult to set the high goal at the 90th percentile as suggested by the goal-setting literature. It would also be challenging to attempt to manipulate both goal commitment and subconscious ethical priming and for these manipulations to occur at the right point in the hypothesized model. The laboratory design also allowed the assessment of actual unethical behavior using a task from the behavioral ethics literature in which participants can cheat by taking unearned compensation. Thus, I believe that the laboratory design was appropriate for testing the developed model and strengthened the potential contribution relative to other research designs.

The relatively short time frame of the experiment and the relatively low stakes associated with the unethical behavior are comparable to previous research (Schweitzer et al., 2004; Welsh & Ordóñez, 2014) but may not reflect the amount of time required to achieve many organizational goals or the severity associated with many instances of workplace dishonesty. However, longer goals would likely have increased depletion even further and thus might have actually strengthened the results. Additionally, the goal

commitment manipulation used in this research might understate the importance of goal commitment in relation to depletion and unethical behavior in an organizational context in which the reasons related to one's level of goal commitment would be much more salient.

Another limitation is that this study relied on perceptions of depletion and did not examine physiological indicators associated with depletion. Research has demonstrated that the subjective experience of depletion is a valid indicator of decrements in brain function (e.g., Jennings et al., 2003). Nevertheless, future research could consider the biological effects of goal-setting on depletion using measures of blood glucose or brain imaging technology. Given that recent research has found effects associated with the subjective aspects of depletion (e.g., Job, Dweck, & Walton, 2010), it would be interesting to see the extent to which the depleting effects of high performance goals are physiological versus psychological.

This study also suggests a number of areas for future research. As mentioned previously, a redesigned study with a stronger manipulation of goal commitment, a more taxing high performance goal, and less potential opportunity for rest between tasks might provide a stronger test of the developed model. In addition, a number of other variables might be interesting to consider. For example, measuring individual differences variables such as self-efficacy and conscientiousness might provide insight into who is likely to be most committed to the goal. However, when a high performance goal is given, high self-efficacy and conscientiousness might also be associated with increased depletion if these individuals tend to work harder towards the achievement of the goal.

It would also be interesting to examine interventions that attenuate the relationship between high performance goals and depletion. For example, future research could compare the effectiveness of rest breaks to alternatives such as consuming glucose or using stimulants such as caffeine. In addition to looking at recovery following depletion, future research could consider whether rest, glucose, and caffeine buffer depletion effects associated with high performance goals that are given later on. This might provide insight into how individuals prepare for difficult upcoming goals in order to remain more resilient. The length of the depleting performance goal could also be examined in conjunction with the duration of the rest break needed to recover from the goal. For example, a 10 minute high performance goal might only require a 5 minute break to recover from whereas a 10 hour goal might require a much longer break. The depleting effects associated with high performance goals could also be compared with other depleting activities. For example, research could consider whether high performance goals of a certain difficulty and duration yield effects similar to being sleep deprived.

In summary, this research underscores the depleting effects of high performance goals although other aspects of the developed model were not supported. This study extends recent research connecting goal setting and depletion and contributes to a growing body of research exploring the connection between self-regulation and unethical behavior. I hope that these findings will encourage future research examining additional mechanisms through which high performance goals influence depletion and unethical behavior.

APPENDIX A
QUESTIONNAIRES AND MATERIALS

Instructions for Adding to 10 Task <High Goal Condition>

In this task you will be presented with a series of matrices filled with numbers. Your task is to find and circle 2 numbers in each matrix that add up to exactly 10. When you find the pair of numbers circle both of them and move to the next matrix. At the end of this task, you will write down how many problems you solved. You will have **12 minutes** to meet the goal.

Your goal is to solve 40 matrices

Sample Matrix:

3.91	0.82	3.75
1.11	1.69	7.94
3.28	2.52	6.25
9.81	6.09	2.01

****Your Goal is to Solve 40 Matrices****

Please read the following statements and circle the response that best fits your thoughts (1=Strongly Agree to 7=Strongly Disagree):

	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Somewhat Disagree</i>	<i>Neutral</i>	<i>Somewhat Agree</i>	<i>Agree</i>	<i>Strongly Agree</i>
1. I am strongly committed to pursuing this goal	1	2	3	4	5	6	7
2. I think this goal is a good goal to shoot for.	1	2	3	4	5	6	7
3. Since it's not always possible to tell how tough this goal will be, it's hard to take this goal seriously.	1	2	3	4	5	6	7
4. It's unrealistic for me to expect to reach this goal	1	2	3	4	5	6	7

****Your Goal is to Solve 40 Matrices****

1

1.69	1.82	2.11
4.67	2.81	5.04
5.82	5.06	4.28
2.91	7.19	4.57

2

3.17	4.83	3.99
5.66	1.86	5.27
6.83	5.95	4.25
7.01	6.28	3.82

3

0.49	0.74	1.13
3.72	2.66	1.22
3.75	5.22	5.67
8.87	8.23	7.28

4

0.47	4.61	2.57
3.17	3.82	4.38
4.94	8.43	5.39
2.15	4.86	7.54

5

6.66	4.98	4.34
1.39	0.72	5.53
8.61	3.57	3.36
6.80	0.53	7.58

6

0.81	6.88	2.09
4.55	3.75	3.12
4.52	9.41	6.48
6.45	8.48	8.51

7

0.17	3.46	2.44
6.02	9.83	2.63
6.05	6.21	6.61
8.22	7.66	7.54

8

4.74	4.78	7.71
1.61	5.97	4.09
5.96	3.29	9.09
4.84	5.16	2.71

9

1.48	2.47	9.57
2.68	9.52	4.52
8.72	7.69	1.47
6.41	4.44	7.32

10

3.08	9.42	5.87
3.94	5.41	3.42
4.02	5.06	4.12
4.13	4.69	7.06

11

3.15	0.95	2.23
4.98	2.90	2.88
6.66	6.73	7.67
9.75	6.85	8.17

12

0.63	0.65	1.51
2.64	9.37	2.12
2.89	5.98	8.89
9.49	2.34	7.98

13

2.22	4.51	7.13
9.33	9.77	7.88
7.04	1.84	5.22
4.24	1.72	8.16

14

0.74	4.55	1.49
8.51	7.91	8.68
5.62	0.81	2.11
3.75	3.72	9.36

15

5.97	9.62	9.41
3.61	7.39	2.61
5.49	5.03	2.62
7.51	5.71	0.49

16

4.73	2.12	8.99
0.63	8.89	7.76
1.02	2.34	4.98
1.11	0.65	2.91

17

0.12	0.71	0.74
4.27	3.07	2.27
5.09	5.83	5.87
9.27	7.03	5.73

18

2.56	1.93	2.76
7.44	5.03	3.14
7.71	6.38	3.19
8.24	9.18	9.48

19

4.88	2.67	2.22
5.96	5.58	5.22
7.04	7.78	9.33
9.77	9.50	8.52

20

4.16	4.51	1.66
8.29	8.05	9.03
4.73	5.84	5.27
5.21	4.49	7.35

****Your Goal is to Solve 40 Matrices****

21

1.72	2.32	8.28
3.72	9.25	4.65
8.38	7.49	0.51
6.24	7.28	7.76

22

3.80	9.42	5.91
3.94	5.41	4.47
4.53	4.59	4.91
3.14	4.21	7.06

23

3.15	0.23	1.31
4.98	2.90	2.88
8.77	6.73	8.79
9.75	6.85	8.10

24

9.55	0.65	1.02
1.64	2.34	2.19
2.89	8.98	8.11
9.88	9.73	9.25

25

2.42	6.63	3.17
2.33	9.77	6.85
4.37	2.21	7.67
2.88	7.83	6.78

26

6.72	4.48	5.90
8.52	8.91	8.62
3.28	3.81	2.10
3.62	3.72	2.48

27

9.75	2.96	8.15
3.61	7.39	7.61
9.45	0.40	2.38
7.62	2.85	1.25

28

0.65	1.06	9.94
3.93	8.89	8.07
1.66	2.34	1.11
7.04	9.34	2.96

29

7.12	5.71	2.74
7.24	6.07	2.32
4.29	7.53	3.76
3.39	7.25	6.59

30

7.24	5.58	0.72
2.24	5.03	8.76
2.72	0.52	4.73
8.28	9.08	9.48

31

4.14	1.74	4.52
5.96	5.58	2.16
7.84	7.98	3.98
9.02	5.96	8.52

32

4.24	9.34	8.66
2.78	8.62	0.78
0.84	5.84	6.76
9.58	0.66	7.52

33

6.19	1.25	2.11
4.22	7.89	3.55
8.25	5.60	4.21
3.11	7.91	4.75

34

7.13	5.82	3.32
6.67	1.26	6.43
9.81	9.17	3.87
1.07	0.28	4.18

35

0.49	0.74	1.13
8.87	2.66	7.25
3.75	5.22	5.67
8.87	8.23	7.71

36

4.70	8.90	2.50
4.18	3.02	3.48
6.42	5.38	7.98
2.20	5.30	5.04

37

6.88	4.92	7.09
1.39	5.08	6.56
8.19	3.67	3.22
2.88	5.43	8.57

38

8.81	1.39	2.56
4.72	4.32	4.21
5.68	3.41	5.89
7.24	8.48	8.09

39

5.17	8.46	2.23
6.62	3.79	3.77
6.43	6.21	3.48
4.97	2.81	7.83

40

5.96	4.78	2.81
1.61	5.97	4.09
3.04	8.76	2.04
7.96	9.22	2.99

Instructions for Adding to 10 Task <Low Goal Condition>

In this task you will be presented with a series of matrices filled with numbers. Your task is to find and circle 2 numbers in each matrix that add up to exactly 10. When you find the pair of numbers circle both of them and move to the next matrix. At the end of this task, you will write down how many problems you solved. You will have **12 minutes** to meet the goal.

Your goal is to solve 10 matrices

Sample Matrix:

3.91	0.82	3.75
1.11	1.69	7.94
3.28	2.52	6.25
9.81	6.09	2.01

Your Goal is to Solve 10 Matrices

Please read the following
7=Strongly Disagree):

Strongly Agree to

	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Somewhat Disagree</i>	<i>Neutral</i>	<i>Somewhat Agree</i>	<i>Agree</i>	<i>Strongly Agree</i>
1. I am strongly committed to pursuing this goal	1	2	3	4	5	6	7
2. I think this goal is a good goal to shoot for.	1	2	3	4	5	6	7
3. Since it's not always possible to tell how tough this goal will be, it's hard to take this goal seriously.	1	2	3	4	5	6	7
4. It's unrealistic for me to expect to reach this goal	1	2	3	4	5	6	7

****Your Goal is to Solve 10 Matrices****

1

1.69	1.82	2.11
4.67	2.81	5.04
5.82	5.06	4.28
2.91	7.19	4.57

2

3.17	4.83	3.99
5.66	1.86	5.27
6.83	5.95	4.25
7.01	6.28	3.82

3

0.49	0.74	1.13
3.72	2.66	1.22
3.75	5.22	5.67
8.87	8.23	7.28

4

0.47	4.61	2.57
3.17	3.82	4.38
4.94	8.43	5.39
2.15	4.86	7.54

5

6.66	4.98	4.34
1.39	0.72	5.53
8.61	3.57	3.36
6.80	0.53	7.58

6

0.81	6.88	2.09
4.55	3.75	3.12
4.52	9.41	6.48
6.45	8.48	8.51

7

0.17	3.46	2.44
6.02	9.83	2.63
6.05	6.21	6.61
8.22	7.66	7.54

8

4.74	4.78	7.71
1.61	5.97	4.09
5.96	3.29	9.09
4.84	5.16	2.71

9

1.48	2.47	9.57
2.68	9.52	4.52
8.72	7.69	1.47
6.41	4.44	7.32

10

3.08	9.42	5.87
3.94	5.41	3.42
4.02	5.06	4.12
4.13	4.69	7.06

11

3.15	0.95	2.23
4.98	2.90	2.88
6.66	6.73	7.67
9.75	6.85	8.17

12

0.63	0.65	1.51
2.64	9.37	2.12
2.89	5.98	8.89
9.49	2.34	7.98

13

2.22	4.51	7.13
9.33	9.77	7.88
7.04	1.84	5.22
4.24	1.72	8.16

14

0.74	4.55	1.49
8.51	7.91	8.68
5.62	0.81	2.11
3.75	3.72	9.36

15

5.97	9.62	9.41
3.61	7.39	2.61
5.49	5.03	2.62
7.51	5.71	0.49

16

4.73	2.12	8.99
0.63	8.89	7.76
1.02	2.34	4.98
1.11	0.65	2.91

17

0.12	0.71	0.74
4.27	3.07	2.27
5.09	5.83	5.87
9.27	7.03	5.73

18

2.56	1.93	2.76
7.44	5.03	3.14
7.71	6.38	3.19
8.24	9.18	9.48

19

4.88	2.67	2.22
5.96	5.58	5.22
7.04	7.78	9.33
9.77	9.50	8.52

20

4.16	4.51	1.66
8.29	8.05	9.03
4.73	5.84	5.27
5.21	4.49	7.35

21

1.72	2.32	8.28
3.72	9.25	4.65
8.38	7.49	0.51
6.24	7.28	7.76

22

3.80	9.42	5.91
3.94	5.41	4.47
4.53	4.59	4.91
3.14	4.21	7.06

23

3.15	0.23	1.31
4.98	2.90	2.88
8.77	6.73	8.79
9.75	6.85	8.10

24

9.55	0.65	1.02
1.64	2.34	2.19
2.89	8.98	8.11
9.88	9.73	9.25

25

2.42	6.63	3.17
2.33	9.77	6.85
4.37	2.21	7.67
2.88	7.83	6.78

26

6.72	4.48	5.90
8.52	8.91	8.62
3.28	3.81	2.10
3.62	3.72	2.48

27

9.75	2.96	8.15
3.61	7.39	7.61
9.45	0.40	2.38
7.62	2.85	1.25

28

0.65	1.06	9.94
3.93	8.89	8.07
1.66	2.34	1.11
7.04	9.34	2.96

29

7.12	5.71	2.74
7.24	6.07	2.32
4.29	7.53	3.76
3.39	7.25	6.59

30

7.24	5.58	0.72
2.24	5.03	8.76
2.72	0.52	4.73
8.28	9.08	9.48

31

4.14	1.74	4.52
5.96	5.58	2.16
7.84	7.98	3.98
9.02	5.96	8.52

32

4.24	9.34	8.66
2.78	8.62	0.78
0.84	5.84	6.76
9.58	0.66	7.52

33

6.19	1.25	2.11
4.22	7.89	3.55
8.25	5.60	4.21
3.11	7.91	4.75

34

7.13	5.82	3.32
6.67	1.26	6.43
9.81	9.17	3.87
1.07	0.28	4.18

35

0.49	0.74	1.13
8.87	2.66	7.25
3.75	5.22	5.67
8.87	8.23	7.71

36

4.70	8.90	2.50
4.18	3.02	3.48
6.42	5.38	7.98
2.20	5.30	5.04

37

6.88	4.92	7.09
1.39	5.08	6.56
8.19	3.67	3.22
2.88	5.43	8.57

38

8.81	1.39	2.56
4.72	4.32	4.21
5.68	3.41	5.89
7.24	8.48	8.09

39

5.17	8.46	2.23
6.62	3.79	3.77
6.43	6.21	3.48
4.97	2.81	7.83

40

5.96	4.78	2.81
1.61	5.97	4.09
3.04	8.76	2.04
7.96	9.22	2.99

Post-Task Questions:

1. How many matrices did you solve? _____

2. What was the goal? (circle)

a. There was no goal

b. The goal was to solve 10 matrices

c. The goal was to solve 40 matrices

3. Did you achieve the goal? (circle) YES / NO

4. How difficult did you perceive the goal to be? (circle one)

Very Easy

Somewhat Difficult

Very Difficult

1-----2-----3-----4-----5-----6-----7

Please respond to the questions below:

	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Somewhat Disagree</i>	<i>Neutral</i>	<i>Somewhat Agree</i>	<i>Agree</i>	<i>Strongly Agree</i>
1. I feel mentally exhausted.	1	2	3	4	5	6	7
2. Right now, it would take a lot of effort for me to concentrate on something.	1	2	3	4	5	6	7
3. I need something pleasant to make me feel better.	1	2	3	4	5	6	7
4. I feel motivated.	1	2	3	4	5	6	7
5. If I were given a difficult task right now, I would give up easily.	1	2	3	4	5	6	7
6. I feel drained.	1	2	3	4	5	6	7
7. I have lots of energy.	1	2	3	4	5	6	7
8. I feel worn out.	1	2	3	4	5	6	7
9. If I were tempted by something right now, it would be very difficult to resist.	1	2	3	4	5	6	7
10. I would want to quit any difficult task I were given.	1	2	3	4	5	6	7
11. I feel calm and rational.	1	2	3	4	5	6	7
12. I can't absorb any more information.	1	2	3	4	5	6	7
13. I feel lazy.	1	2	3	4	5	6	7
14. Right now I would find it difficult to plan ahead.	1	2	3	4	5	6	7
15. I feel sharp and focused.	1	2	3	4	5	6	7
16. I want to give up.	1	2	3	4	5	6	7
17. This would be a good time for me to make an important decision.	1	2	3	4	5	6	7
18. I feel like my willpower is gone.	1	2	3	4	5	6	7
19. My mind feels unfocused right now.	1	2	3	4	5	6	7
20. I feel ready to concentrate.	1	2	3	4	5	6	7
21. My mental energy is running low.	1	2	3	4	5	6	7
22. A new challenge would appeal to me right now.	1	2	3	4	5	6	7
23. I wish I could just relax for awhile.	1	2	3	4	5	6	7
24. I am having a hard time controlling my urges.	1	2	3	4	5	6	7
25. I feel discouraged.	1	2	3	4	5	6	7

Instructions for Sentence Unscrambling Task:

On the next page you will be provided with several word sets. Each word set contains five words. Your task is to make a grammatically correct sentence using **FOUR** of the five words in each set.

In doing so:

- a) You cannot change the tense of the verbs (e.g., "flew" to "fly"), and
- b) The sentence must make sense without any punctuation except the period at the end.

You will have *seven (7)* minutes to complete this task.

An example:

jumped lamp squirrel the up (set of five words)

The squirrel jumped up. (correct **four**-word sentence)

Sentence Unscrambling Task <Ethical Priming Condition>

Please write the four-word sentence down in the space provided below the related set of words. You have seven (7) minutes to complete this task.

1. was Bob visits yesterday married

2. donated John charity book to

3. the lakes candy shares child

4. melts water when butter heated

5. others out for look juiced

6. pet soccer the gently dog

7. a stoves gift gave Thomas

8. children cares Mary mountain for

9. wood eating pie she likes

10. virtuous pencil do things always

11. on sleeping turn the lamp

12. chests by play rules the

13. Francisco hungry the feeds automobile

14. an aspirin Suzie clock took

15. for good fights trampoline Joan

16. a trees fly kite go

17. truth Paul notebook the tells

18. your act heart from globe

19. sang sweetly robin the scratching

20. orange fairly people treats Terry

**THIS IS THE END OF THIS TASK.
PLEASE DO NOT TURN THE PAGE UNTIL INSTRUCTED.**

Sentence Unscrambling Task <Neutral Priming Condition>

Please write the four-word sentence down in the space provided below the related set of words. You have seven (7) minutes to complete this task.

1. was Bob visits yesterday married

2. spicy wind likes he food

3. the push wash well clothes

4. melts water when butter heated

5. somewhat type prepared was I

6. pet soccer the gently dog

7. maintain river to composure try

8. a what worse smile great

9. wood eating pie she likes

10. good likes maintaining deals she

11. on sleeping turn the lamp

12. studies she history her ancient

13. sunshine Joe the guitar plays

14. an aspirin Suzie clock took

15. always she race worried was

16. a trees fly kite go

17. her drives swear car she

18. shoes easy replace old the

19. sang sweetly robin the scratching

20. are try courteous often we

**THIS IS THE END OF THIS TASK.
PLEASE DO NOT TURN THE PAGE UNTIL INSTRUCTED.**

Puzzles Task

For this task, your job is to solve as many of the 5 puzzles as possible in 3 minutes by finding a combination of numbers that adds up to 100. You may solve these puzzles in any order that you like.

You will earn \$1 for every puzzle that you solve.

For example

Select a set of numbers that adds up to 100							
<input type="checkbox"/>	19	<input type="checkbox"/>	20	<input type="checkbox"/>	26	<input type="checkbox"/>	27
<input checked="" type="checkbox"/>	5	<input type="checkbox"/>	10	<input type="checkbox"/>	13	<input checked="" type="checkbox"/>	38
<input checked="" type="checkbox"/>	17	<input checked="" type="checkbox"/>	40	<input type="checkbox"/>	34	<input type="checkbox"/>	31

PLEASE DO NOT TURN THE PAGE UNTIL INSTRUCTED

Puzzle #1

Select a set of numbers that adds up to 100

<input type="checkbox"/>	63	<input type="checkbox"/>	84	<input type="checkbox"/>	19	<input type="checkbox"/>	31
<input type="checkbox"/>	19	<input type="checkbox"/>	23	<input type="checkbox"/>	44	<input type="checkbox"/>	38
<input type="checkbox"/>	71	<input type="checkbox"/>	47	<input type="checkbox"/>	49	<input type="checkbox"/>	61

Puzzle #2

Select a set of numbers that adds up to 100

<input type="checkbox"/>	88	<input type="checkbox"/>	92	<input type="checkbox"/>	22	<input type="checkbox"/>	40
<input type="checkbox"/>	11	<input type="checkbox"/>	58	<input type="checkbox"/>	17	<input type="checkbox"/>	73
<input type="checkbox"/>	7	<input type="checkbox"/>	39	<input type="checkbox"/>	87	<input type="checkbox"/>	68

Puzzle #3

Select a set of numbers that adds up to 100

<input type="checkbox"/>	4	<input type="checkbox"/>	88	<input type="checkbox"/>	86	<input type="checkbox"/>	15
<input type="checkbox"/>	49	<input type="checkbox"/>	53	<input type="checkbox"/>	22	<input type="checkbox"/>	9
<input type="checkbox"/>	71	<input type="checkbox"/>	39	<input type="checkbox"/>	9	<input type="checkbox"/>	86

Puzzle #4

Select a set of numbers that adds up to 100

<input type="checkbox"/>	10	<input type="checkbox"/>	49	<input type="checkbox"/>	86	<input type="checkbox"/>	71
<input type="checkbox"/>	30	<input type="checkbox"/>	39	<input type="checkbox"/>	86	<input type="checkbox"/>	80
<input type="checkbox"/>	9	<input type="checkbox"/>	8	<input type="checkbox"/>	93	<input type="checkbox"/>	86

Puzzle #5

Select a set of numbers that adds up to 100

<input type="checkbox"/>	44	<input type="checkbox"/>	62	<input type="checkbox"/>	7	<input type="checkbox"/>	11
<input type="checkbox"/>	21	<input type="checkbox"/>	30	<input type="checkbox"/>	29	<input type="checkbox"/>	12
<input type="checkbox"/>	86	<input type="checkbox"/>	66	<input type="checkbox"/>	85	<input type="checkbox"/>	90

**THIS IS THE END OF THIS TASK.
PLEASE DO NOT TURN THE PAGE UNTIL INSTRUCTED.**

Post Task Questionnaire

1. What do you think the purpose of this experiment was?
2. What do you think this experiment was trying to study?
3. Did you think that any of the tasks were related in any way?
 - a. (if “yes”) In what ways were they related?
4. Did anything you did on one task affect what you did on any other task?
 - a. (if “yes”) How exactly did it affect you?
5. When you were completing the scrambled sentence task, did you notice anything unusual about the words?
6. Did you notice any particular pattern or theme to the words that were included in the scrambled sentence task?

Lab Setup Checklist

- Have computers loaded with the study survey questions
- Have one page front and back with matrix task (code w/unique #)
- Have one page front and back with puzzles task and 5 puzzles (no unique # required)
- Have a receipt form and a pencil at each carrel
- Have a white envelope with \$1 bills
 - In the high GC condition, it should have \$10 in one dollar bills
 - In the low GC condition, participants receive \$5 when their receipt forms are collected and the envelopes should have \$5 in one dollar bills.
- Bring a stopwatch
- Bring small pencils
- Place recycle bin in back corner of room

Study Script

Welcome to today's session of the study Goals and Performance. This session will last about an hour although I bet we'll have you out a little bit earlier. In just a minute, I'm going to come around and collect the receipt forms that you filled out. These verify that you attended today's session and in the next day or two you will receive an email confirming that you have received credit. The rest of the study is completely anonymous.

For today's session, you will be completing a series of timed tasks as well as some survey questions. Go ahead and read the disclosure form on the computer while I come around and pick up the receipt forms. Wait until I tell you before continuing on.

You can now go to the next page titled "Instructions for Adding to 10 Task." You will use one of the worksheets that has been provided to complete this task. In this task you will be presented with a series of matrices filled with numbers. Your task is to find and circle 2 numbers in each matrix that add up to exactly 10. When you find the pair of numbers circle both of them and move to the next matrix. At the end of this task, you will write down how many problems you solved in your task packet and whether you achieved the goal.

High goal condition:

Your goal is to solve 40 matrices in 12 minutes.

Low goal condition:

Your goal is to solve 10 matrices in 12 minutes.

High goal, High goal commitment condition:

You will earn \$1 for every 10 matrices that you solve. In other words, if you solve 10 matrices you get \$1, if you solve 20 you get \$2, if you solve 30 you get 3, and if you hit the goal and solve all 40, you get a bonus and earn \$5. At the end of this task, you will pay yourself your earnings from the white envelope in your carrel.

Low goal, High goal commitment condition:

You will earn \$1 for every 2 matrices that you solve. In other words, if you solve 2 matrices you get \$1, if you solve 4 you get \$2, if you solve 6 you get \$3, if you solve 8 you get \$4, and if you hit the goal and solve 10, you get \$5. At the end of this task, you will pay yourself your earnings from the white envelope in your carrel.

<These payment instructions are not included in the low goal commitment conditions>

Please answer the set of pre-task questions on the computer. We will wait until everyone has answered these questions before I tell you to begin this task. When you have finished answering these questions, please look up at me.

Wait several minutes, then ask “Can you please raise your hand if you are still working on the pre-task questions.

<Wait until everyone has finished>

You can now flip over the worksheet for the Adding to 10 task and begin. You have 12 minutes to meet your goal of solving 40/10 matrices.

<Time participants for 12 minutes>

Your time is now up. On your computer, you can now go to the page titled “Post-task Questions” and record your performance on this task. Pay yourself out of the white envelope on your desk based on how many matrices you solved and then get up and throw away your worksheet in the recycle bin in the back corner of the room. Then, return to your carrel and answer the post-task questions on your computer until you reach a page where you will need to stop and wait for additional instructions before continuing. We will wait until everyone is finished before we begin this task. When you have finished the post-task questions and reached this page, please look up at me.

Please raise your hand if you are still working on these questions.

You will need to enter the word “test” in order to continue to the next task. Please enter this word and move to the next page titled “Instructions for Sentence Unscrambling Task.” If you have a problem, please raise your hand.

Read the directions at the top of the page and raise your hand if you have any questions. For this computerized task, you will be unscrambling 20 sentences. Please keep in mind that you will use only 4 out of the 5 words that you unscramble to create each sentence. A sentence cannot be created using all 5 words. You will have seven minutes to complete this task. When you are finished reading, please look up at me.

Is everyone ready?

You may now go to the next page and begin this task. You have 7 minutes to unscramble these sentences.

<Time participants for 7 minutes>

Your time is now up. Please record how many of the sentences you unscrambled. You can then move to the next task titled “Puzzles Task.” For this task, your job is to solve as many of the 5 puzzles as you can in 3 minutes by finding a combination of numbers that add up to 100. In your carrel is a worksheet containing the puzzles for this task. You can

solve these puzzles in any order that you like. Additionally, at the end of this task you will pay yourself \$1 for every puzzle that you solved correctly out of the white envelope on your desk. Wait until I tell you before you begin.

Is everyone ready? You may now turn over the worksheet for this task and begin.

<Time participants for 3 minutes>

Your time is now up. Please count how many puzzles you solved and pay yourself \$1 for each puzzle out of the white envelope on your desk. Then, get up and throw your puzzles worksheet away in the recycle bin in the back corner of the room. Back at your computer, you can complete another post-task questionnaire. As soon as you're done, you can get up and leave the lab. Thanks for participating today.

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