BACK TO THE FUTURE: THE EFFECT OF TIME ORIENTATION ON UNETHICAL BEHAVIOR

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Abstract: This research project examines why people choose to behave unethically in their organization. Two types of unethical behavior have been examined in the literature: self-interested unethical behavior (SUB) and unethical pro-organizational behavior (UPB). In three studies, I investigated how cultural differences in relational mobility shape people's focus on the present (short-term orientation) versus their focus on the future (long-term orientation), and subsequently their decisions to act unethically. I also examined the role of bottom-line mentality in explaining the relationship between time orientation and unethical behaviors. Finally, I discovered how one's calculative mindset – a cognitive predisposition to analyze and convert social values into monetary or numeric values – influenced these relationships.

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CHAPTER I

INTRODUCTION

Unethical behaviors, which "violate widely accepted (societal) moral norms" (Kish-Gephart, Harrison, & Treviño, 2010, p. 2), are found within the spectrum of organizational hierarchy (Aquino, Freeman, Reed, Lim, & Felps, 2009), occurring from the lower-levels within the organization (e.g., stealing, cheating, sabotage) to upper echelons of management (e.g., embezzlement, money-laundering, lobbying, bribing, false bookkeeping). Increased attention has been given to this line of work over the past three decades (Treviño, Weaver, & Reynolds, 2006), with the basic assumption that unethical behaviors are motivated by the desire to benefit the self, i.e., self-serving unethical behaviors (SUBs) (Greenberg, 2002; Kish-Gephart et al., 2010; Sonenshein, 2007; Treviño & Youngblood, 1990).

The recent conceptualization of unethical pro-organizational behavior (UPB) (Umphress & Bingham, 2011) sheds light on unethical behaviors that are intended to benefit the group and/or organization (Thau, Derfler-Rozin, Pitesa, Mitchell, & Pillutla, 2015; Umphress, Bingham, & Mitchell, 2010; Wiltermuth, Bennett, & Pierce, 2013). Contemporary research has based explanations for UPB on fear of social exclusion (O'Reilly, Robinson, Berdahl, & Banki, 2014a; Scott & Thau, 2013), organizational identification, and negative reciprocity beliefs (Umphress et al., 2010).

Although this literature suggests that social identity and social exchange concerns drive UPBs, they may also arise via a self-interested component, albeit distinct from the type of self-interest that motivates SUBs. While the motivation of SUBs comes from an immediate gratification of receiving self-benefits, UPBs may be more motivated by the promise of benefits in the future. To illustrate, in 2008, Samsung executives laundered money using their personal accounts and bribed politicians at their own risk to benefit the organization. Even though these executives were indicted, they were able to return to Samsung and even received lucrative long-term benefits (e.g., honorable return, promotion, and life-time job security) following their imprisonment (Kim, 2010).

In my dissertation, I draw from an inter-temporal choice framework and suggest that people's *time orientation* (short-term vs. long-term) influences their choices to partake in SUB and UPB. I argue that SUB and UPB will be shaped by one's time orientation because long-term oriented individuals, who are less likely to discount the value of future benefits, may be more willing to bear risks that bear potential future benefits (i.e., UPB). However, short-term oriented individuals who discount the value of future benefits may instead perform risky behavior that results in immediate gains (i.e., SUB).

With this proposition in mind, I seek to gain clarity on two compelling research questions. First, I plan to outline *why* time orientation may influence the choice to partake in SUB and UPB. I suggest that time orientation affects unethical behaviors by changing one's bottom-line mentality, or one's singular focus on securing bottom-line outcomes (BLM; Greenbaum, Mawritz, & Eissa, 2012). Moreover, I propose a boundary condition that amplifies the effects of time orientation on unethical behavior – calculative mindset.

Calculative mindset is a relatively new concept that captures individuals' cognitive predisposition to analyze and transform non-quantifiable social values and relationships into monetary or numeric metrics (Wang, Zhong, & Murnighan, 2014).

Second, to provide a comprehensive understanding of what motivates individuals to act unethically, I go beyond individual-level antecedents by considering a potential socio-ecological antecedent to time orientation, namely *relational mobility*. Relational mobility is defined as the degree to which people perceive or believe they can selectively establish new relationship with others (Falk, Heine, Yuki, & Takemura, 2009; Yuki, Maddux, & Masuda, 2007). The relational mobility within a given environment may influence the levels of long-term orientation people hold, and subsequently, their decisions to act unethically.

To test my theoretical model (see Figure 1), I employed multi-method designs (Study 1 and Study 2a) and utilized multi-source data (Study 1). The first three studies explored why time orientation may differentially affect SUB and UPB. Study 1 explored the effect of time orientation on each type of unethical behaviors, and the explanatory role of bottom-line mentality. Study 2a and 2b introduced an important boundary condition, calculative mindset. Specifically, Study 2a experimentally manipulated peoples' calculative mindset to see how it influenced the relationship between time orientation and SUB and UPB decisions. Study 2b validated a new scale of calculative mindset by following Hinkin's (1995, 1998) scale development procedure. Finally, utilizing the newly-developed calculative mindset scale, Study 3 examined the role of relational mobility in shaping one's time orientation and their subsequent unethical behaviors.

The present dissertation provides several contributions toward the business ethics and unethical behavior literature. First, the present research provides a novel perspective of why individuals take part in different types of unethical behavior. This research is the first to utilize an inter-temporal choice framework to theorize that differences in time orientation plays a central role in enacting different types of "self-interest" (*present* self-interest vs. *future* self-interest). Second, by exploring key antecedents (relational mobility), mediators (bottom-line mentality), and moderators (calculative mindset), I provide a comprehensive perspective that allows people to more fully understand the central predictors of unethical behavior, and the motivations that underlie the decisions to act unethically.

The rest of this dissertation follows this outline. Chapters 2 and 3 examine how one's time orientation influences BLM and the engagement of SUB and UPB. Chapters 4 and 5 examine the full model, testing how relational mobility shapes time orientation, BLM, and unethical behaviors. Chapters 6 and 7 discuss the theoretical and practical implications of this dissertation and its limitations and future directions.

Insert Figure 1 about here

CHAPTER II

2.1. PHASE I: THEORETICAL DEVELOPMENT

2.1.1. Different types of unethical behaviors

Self-serving unethical behavior (SUB). The study of unethical behavior gained academic attention in the past two decades, with research attempting to identify specific forms of unethical behavior (Aquino & Thau, 2009; Griffin & Lopez, 2005; Hershcovis, 2011).

More recently, research has attempted to understand why people engage in unethical behavior. Although there are cases in which people engage in unethical behaviors without the intention to harm others (Caruso & Gino, 2011; Gino, Schweitzer, Mead, & Ariely, 2011; Mazar, Amir, & Ariely, 2008; Tenbrunsel & Messick, 2004), the consensus is that unethical behaviors are detrimental (e.g., causing coworkers harm, wasting organizational resources), reduces productive organizational functioning, and contradicts the interests of organizations (Treviño, Brown, & Hartman, 2003; Treviño, den Nieuwenboer, & Kish-Gephart, 2014; Treviño, den Nieuwenboer, Kreiner, & Bishop, 2014).

For example, Gino and Pierce (2009) found that employees engage in stealing of organizational resources for their own benefit, and even exerting considerable effort to

justify their behaviors (Batson, 1997; Batson, Chang, Orr, & Rowland, 2002; Epley & Caruso, 2004; Loewenstein, Issacharoff, Camerer, & Babcock, 1993; Shalvi, Eldar, & Bereby-Meyer, 2012). Parks, Ma, and Gallagher (2010) showed that employees cut corners (e.g., "MQE"; for review, Greenbaum, 2009) to reduce job overload. They even harm their organization and its members (e.g., coworkers, followers, leaders) to meet their retaliatory needs (Mitchell & Ambrose, 2007). Thus, as people tend to behave unethically to benefit themselves (Brief, Buttram, & Dukerich, 2001), in my dissertation, I specifically define self-serving unethical behaviors (SUBs) as intentional morally unacceptable behaviors that are used to benefit the actor at the expense of harming others.

Unethical pro-organizational behavior (UPB). Whereas researchers have primarily investigated SUBs, recent attention has been given towards situations in which actors behave unethically for their groups or organizations. To capture this phenomena, Umphress et al. (2010) conceptualized and developed a measure of unethical pro-organizational behavior (UPB) that is defined as employees' unethical behaviors that are beneficial for the organization and/or its members. Although the concept of UPB still falls under the generally accepted definition of unethical behavior that violates social norms and values (Jones, 1991), it differs because it involves an employee's intention to help the organization.

Scholars have outlined key antecedents and boundary conditions of UPB. Drawing on social identity theory (Tajfel & Turner, 1979) and social exchange theory (Blau, 1964), Umphress and Bingham (2011) found that organizational identification is positively associated with UPB engagement, with positive reciprocity beliefs strengthening this relationship. Additionally, Matherne and Litchfield (2012) found that

individuals who have high affective organizational commitment were more likely than those with low affective organizational commitment to engage in UPB when they have a low moral identity.

Furthermore, researchers have examined how leadership constructs shape subordinates' UPBs. For example, Graham, Ziegert, and Capitano (2013) found the role of different types of leadership styles (transactional, transformational and charismatic leadership) and regulatory focus in predicting unethical pro-organizational behaviors. Kalshoven, van Dijk, and Boon (2013) demonstrated that ethical leadership increases UPB only when employees' job autonomy was high. The same pattern of results was also found in different cultural settings. Effelsberg and Solga (2013) discovered a relationship between transformational leadership and followers' UPBs in Germany. In addition, Miao, Newman, Yu, and Xu (2013) reported that moderate levels of ethical leadership predict a higher likelihood of followers' UPBs in a Chinese context.

Currently, research has examined the effects of relational factors (e.g., ethical norms, leadership style, loyalty, need for belonging, reciprocal relationships with others) on UPB (e.g., Hildreth, Gino, & Bazerman, 2016; Thau et al., 2015). However, a few studies investigated how individual factors (e.g., time orientation) influence employees to engage in UPB. In addition, while past work (Umphress & Bingham, 2010; see discussion section) suggests that UPB, similar to SUB, may still include a self-interested component, I propose that this may not be the case. Namely, I theorize that one's time orientation may contribute to divergence between SUB and UPB because it influences different types of self-interest. The next section outlines the theorizing behind this proposition.

2.2. Hypotheses development

2.2.1. Time orientation

Organizational members implement strategic decisions to attain goals, and their decisions may inevitably involve a temporal cost and benefit analyses. For example, an employee considering an overtime assignment might consider more immediate benefits (e.g., I will get paid extra when I complete the task) versus more distal benefits of (e.g., My boss may give me more lucrative assignments in the future) of that decision. Thus, many researchers have considered the nature of "time" as an important construct (Holman & Silver, 1998; Mogilner & Aaker, 2009; Trope & Liberman, 2003; Vohs & Schmeichel, 2003) and have highlighted the importance of individuals' time orientation in shaping their behaviors.

There are two different types of time orientation as a continuum ranging from a short-term orientation to a long-term orientation (Bearden, Money, & Nevins, 2006; Hofstede, 2001). I define the former as one's tendency to focus on status quo or the present and the latter as one's tendency to focus on the future consequences. Previously, researchers have suggested that individuals with a long-term orientation may have holistic time view that values the past, the present, and future equally while those with short-term orientation may have monochromic time view that values status quo (Bearden et al., 2006; Hofstede, 2001). Thus, depending on different types of time orientation, one's behaviors may vary. For example, long-term oriented individuals tend to possess more bank savings and act more frugally (Dwyer, Mesak, & Hsu, 2005), while short-term oriented individuals tend to invest more on mutual funds (Howlett, Kees, & Kemp, 2008), and to have more compulsive buying tendencies (Joireman, Kees, & Sprott, 2010). Das

(1987) found that CEOs with short-term orientation are more likely than those with long-term orientation to have relatively shorter planning horizon.

Furthermore, the inter-temporal choice literature suggests that one's time orientation may lead individuals to violate the traditional rational choice assumption that individuals prefer immediate benefits and will choose to delay costs over time. Researchers have found that individuals with a short-term orientation may discount their rate of future benefits by following a hyperbolic discount function (Frederick, Loewenstein, & O'donoghue, 2002; Read, 2004; Reynolds & Schiffbauer, 2004; Takahashi, 2009). Thus, time orientation affects us when we make our daily decisions by evaluating the expected values of our current behaviors.

2.2.2. Bottom-line mentality

One reason why time orientation may influence unethical behaviors in particular is that it shapes one's bottom-line mentality. Bottom-line mentality is defined as "one-dimensional thinking that revolves around securing bottom-line outcomes to the neglect of competing priorities" (Greenbaum et al., 2012, p. 344). As past research in BLM (Barsky, 2008; Wolfe, 1988) has found, individuals with high bottom-line mentality tend to apply extremely simplified thinking in order to focus on their own bottom-line outcomes, rather than holistic thinking that considers the future consequences of their decisions (Greenbaum et al., 2012). Indeed, Wolfe (1988) argues that BLM may induce highly self-serving interests with minimal concerns of any collective interests.

Given the simplistic and self-serving nature of BLM, it may be shaped by short-term orientation. Recent studies have that discovered that time leads to differences in resource allocation (e.g., Bearden et al., 2006; Joireman, Kamdar, Daniels, & Duell, 2006;

Zimbardo & Boyd, 1999). For example, Das (1987) found that people with a short-term orientation allocated greater resources to achieve present goals than future goals. As individuals with a short-term orientation exhibit increased concerns about their own interests in the status quo, this may induce a mindset that focuses on their current and singular goal of securing their bottom line. However, on the flip side, individuals with a long-term orientation may be less likely to exhibit BLM because they utilize a more holistic view in their cost-benefit calculations when making decisions.

H1: Time orientation is negatively related to bottom-line mentality, such that, individuals with short-term orientation are more likely to have higher levels of bottom-line mentality.

Jones (1991) suggested that individuals may behave unethically when they make decisions based on economic rationality rather than moral decision-making schemata. Thus, individuals with high BLM may be more likely to enact behaviors that gratify their bottom-line self-interest without considering potential ethical issues. Indeed, many studies suggest BLM increases different types of unethical behaviors (Greenbaum, Quade, & Bonner, 2014; Piccolo, Greenbaum, & Eissa, 2012; Treviño, den Nieuwenboer, & Kish-Gephart, 2014). For example, Greenbaum et al. (2012) discovered the role of BLM in explaining social undermining (e.g., destroying others' reputations and diminishing others' performance in order to increase one's own relative standing). Moreover, Greenbaum (2009) found that managers with high BLM are more likely to engage in morally questionable behaviors that benefit them (e.g., manipulating performance numbers, breaking the organizational rules to meet their goals). Aligning with these

examples that clearly illustrate how individuals with high BLM behave unethically for their own gain, it is reasonable to predict that BLM leads to SUB.

H2: Bottom-line mentality is positively related to self-serving unethical behavior.

2.2.3. Time orientation and self-serving unethical behavior

The aforementioned literature on time orientation and bottom-line mentality suggests that a short-term orientation may increase SUBs because it triggers different types of self-interest that discounts the rates of future consequences (both benefits and losses). In particular, I propose that those who have a short-term orientation may discount their future benefits and thus more likely to perform unethical behavior that benefits their present self-interest. For example, an employee may steal from the organization or lie on their timesheet, actions that provide immediate gratification.

The basic notion of utility maximization (Kluver, Frazier, & Haidt, 2014; Persky, 1995) helps explain why this may occur. In general, people are motivated to be short-term oriented (Agnew, 2014) because this orientation encourages them to behave in ways that allow them to receive immediate benefits while delaying any costs (Loughran, Paternoster, & Weiss, 2012). Further, Hofstede (2001) suggested that people with short-term orientation tend to extract more utility out of immediate rather than delayed gratification. Within the ethical domain, research suggests that individuals who have a short-term orientation exhibit less concern for ethical consequences because such an orientation may make them myopically focus on securing present self-benefits (Googins, 2002)

Moreover, a short-term orientation may also increase a focus on the self at the cost to others, a line of reasoning that fits the theorizing that a short-term orientation

increases a singular focus on self-benefits and the expense of other priorities (i.e., BLM). For example, stealing from an organization negatively impacts the organization and its members. Indeed, Gottfredson and Hirschi (1990, p. 5) suggest that "people think of and act first for themselves…they are not naturally inclined to subordinate their interests to the interests of others." Thus, given that SUBs are deeply rooted on self-interest, short-term oriented people, compared to long-term oriented people, may not only view performing SUBs as providing greater utility to themselves, but they may also be more willing to discount the costs associated with their negative actions (both of others and their future selves). On the flip side, studies have revealed that individuals with a long-term orientation suppress unethical behaviors (Bearden et al., 2006; Thorne & Saunders, 2002; Tsui & Windsor, 2001), potentially because they know that their future interactions or relationships will be negatively affected if their SUBs are eventually discovered by others.

H3: Time orientation is negatively related to self-serving unethical behavior (H3a), with bottom-line mentality mediating this relationship (H3b).

Whereas a long-term orientation may reduce SUBs, it may increase another type of unethical behavior – namely UPBs. Unlike SUBs, which can be more easily explained by the utility maximization axiom, UPB brings more complexity because unethical actors may benefit in the long-run from their behavior; however, in the short-term, the costs for their behavior may outweigh the benefits. For example, an accountant who falsifies numbers on behalf of her company may bear immediate costs (e.g., the effort put forth to perform the action; the psychological costs associated with performing an unethical behavior) with little to no short-term benefits, but may gain considerably in the long-term

(e.g., job security). Or, a pitcher who throws a bean-ball, a ball intentionally thrown at an opposing player, may suffer from immediate sanctions (e.g., expulsion; suspension; fine), but receive future benefits (e.g., earning a positive reputation as a team player).

In the case of UPB, BLM may not increase unethical behavior, as I predicted above with SUBs. Instead, I propose that BLM may in fact *reduce* UPB because the immediate benefits to the self for acting unethically are less salient. In other words, since bottom-line mentality induces a singular motivation to secure one's own bottom-line, one might be less willingly behave unethically on behalf of the organization, as the benefits to one's own bottom line are less clear, while the costs to the self from behaving unethically are clearer and exorbitantly high.

H4: Bottom-line mentality is negatively related to unethical pro-organizational behavior.

By this reasoning, time orientation may have differential effects on individuals' unethical behaviors, depending on whether the behavior is SUB or UPB. Individuals who focus their *present* self-interest (i.e., short-term oriented individuals) may be more inclined to pursue SUBs. In contrast, those who focus on their future or *future* self-interest (i.e., long-term oriented individuals) may be more willing to seek UPBs. Indeed, Joireman et al. (2006) found that long-term oriented people tend to place more magnitude on future outcomes when making decisions. Furthermore, behavioral economic researchers suggested that individuals with long-term orientation tend to behave more pro-socially by accommodating other members' improper behaviors (Finkel & Campbell, 2001), sacrificing self-interest in favor of developing close relationships (Righetti, Finkenauer, & Finkel, 2013), and cooperating more with others in the organization (Van

Lange, Joireman, Parks, & Van Dijk, 2013). These findings signal that a long-term orientation may increase the immediate costs associated with performing UPBs.

H5: Time orientation is positively related to unethical pro-organizational behavior (H5a), with bottom-line mentality mediating this relationship (H5b).

2.2.4. Time orientation and calculative mindset

I have been theorizing how time orientation shapes different types of unethical behavior (SUB and UPB). However, certain factors may diminish or amplify these proposed effects. To better understand the proposed relationships, I suggest calculative mindset as a one potential boundary condition.

Calculative mindset can be defined as one's cognitive predisposition to analyze and convert social values into monetary or numeric metrics (Wang et al., 2014). Fiske (1992), in his classic analysis of human relationships, suggests that individuals experience different types of social relationships and apply a mathematical approach to reduce "relevant features and components under consideration to a single value or utility metric" (Fiske, 1992, p. 691) to compare both quantitative and qualitative social values.

Furthermore, those who possess a calculative mindset are viewed as utilizing rational and deliberate thinking patterns that help calculate and maximize utility (Wang et al., 2014). In other words, this mathematical approach makes people reduce their consideration on non-quantitative issues (e.g., social issues) by converting the issues into a single value or quantifiable utility (Wang et al., 2014). When people adopt this mindset, they tend to overlook social consequences of their decision making (Bennis, Medin, & Bartels, 2010). Given moral judgment is value-laden and non-quantifiable, individuals may underestimate moral issues if they simplify and convert the moral issues for the

calculation. Thus, if one applies a calculative mindset, it may increase the likelihood of unethical behavior. For example, Wang, Malhotra, and Murnighan (2011) found that students from economics, who are well exposed to the utility maximization assumption and mathematic calculations, were more likely to act in a self-interested manner. Also, Zhong (2011) discovered that engaging in calculative tasks induced more deceptive behavior.

With higher levels of calculative mindset, short-term oriented individuals may engage in SUBs even more because their calculative mindset helps them to over-simplify the magnitude of relationships with potential victims (e.g., coworkers, organization, customers) and focus more on the maximization of their short-term utility. For example, short-term oriented individuals may partake in unethical behavior because they see the immediate benefits to the self for those actions. Moreover, for those with a calculative mindset, the effects of short-term orientation on SUB may become exacerbated because they are less likely to consider how their actions may harm those around them.

In addition, a calculative mindset may encourage short-term oriented individuals to engage in SUBs because it frees them from paying emotional costs (Small, Loewenstein, & Slovic, 2007), such as experiencing feelings of guilt and shame arising from harming others. For example, one reason that short-term oriented individuals become self-interested is that they view their social relationships as transient. This perspective means they may feel less guilty acting in ways that can harm these relationships. With a calculative mindset, the tendency for short-term individuals to feel less guilt about their unethical behavior may be intensified because they are less likely to consider social consequences of their actions.

I hypothesize that a calculative mindset will strengthen the influence of a short-term orientation on SUBs, as a calculative mindset will increase the likelihood that short-term individuals will focus on the immediate benefits SUBs without considering the future ramifications of their actions.

H6a: Calculative mindset moderates the negative relationship between time orientation and SUB, such that the relationship will be stronger when one's calculative mindset is high opposed to low.

Research suggests that calculative mindset may enhance a self-focus (e.g., BLM) because it reduces the regard for others (Zhong, 2011) and the importance of their social relationships (Small et al., 2007). For example, Mathieu and Zajac (1990) found that employees with calculative thinking are less likely to be committed in their jobs and the organization. A calculative mindset may affect how an actor's time orientation (short-term vs. long-term) influences the engagement in UPB. Specifically, with a calculative mindset, short-term oriented individuals may think that engaging in UPB is not a favorable option because it benefits the organization at a perceived cost to the self. This is because UPB does not induce immediate benefits for an actor while it imposes potential costs and risks.

For example, engaging in UPB induces immediate risks and costs (e.g., the cost of undertaking unethical actions, being personally and legally liable if caught) with the potential for future benefits (e.g., future positive performance evaluations). With a calculative mindset, long-term oriented individuals may consider future benefits of UPB more because they more precisely calculate the benefits they may gain from doing UPB.

Aligning with this reasoning, I hypothesize that the negative relationship between short-term orientation and UPB would be stronger when one has high calculative mindset.

H6b: Calculative mindset moderates the positive relationship between time orientation and UPB, such that, the relationship will be stronger when one's calculative mindset is high oppose to low.

Overall, one's time orientation may explain different types of unethical behaviors (SUB and UPB) because it triggers different types of self-interest (present vs. future) that results in different discounting rates of future consequences (benefits and losses). I next outline Studies 1 – 2, which test H1-H6. Then, in the next chapter, we turn to understanding a potential socio-ecological antecedent to our theorized model – relational mobility.

CHAPTER III

PHASE I: METHODOLOGY

3.1. Study 1. Time orientation, bottom-line mentality, and unethical behaviors

Study 1 investigates the relationship between time orientation and different types of unethical behaviors (SUB and UPB). In addition, the study examined whether one's BLM explains the negative association between time orientation and SUB and the positive association between time orientation and UPB.

3.1.1. Sample and procedure

Three hundred and forty undergraduate and MBA students at a southwestern university recruited employee-coworker dyads. Undergraduate students recruited at least one working acquaintance who could serve as the focal employee in the dyad. The focal employees were then instructed to send a survey to a coworker. Many non-traditional, online students tend to be employed full-time in addition to pursuing an education, thus we instructed online MBA students who were working (20+ hours a week) to complete their own survey and sent a survey to a coworker. To avoid the concern of common method variance, participants were asked to rate their paired other's unethical behaviors (SUB and UPB).

After omitting the incomplete dyads, 92 focal employee-coworker dyads (N = 184) were subjected to the main analyses. Therefore, a total of one hundred eighty-four participants (93 women, 87 men, and 4 did not report) took part in the focal employee

and coworker surveys. The mean age of the sample was 27.08 years (*SD* = 8.86). The racial composition of the sample was approximately 75.1% White, 9.6% Asian, 5.6% other, 5.1% Hispanic, and 4.6% African American (see Table 1 for descriptive statistics and correlation matrix). The average organizational tenure at their respective organization was 4.79 years (*SD* = 1.65). The majority of participants indicated they worked full-time (92.3%).

On the first page of the online survey, participants were asked to review an information participation sheet. Only participants who agreed to take part in the survey and click the "next" button were allowed to proceed to the survey. Then, participants were presented with the study measures. At the end of survey, participants were asked to provide demographic information and were debriefed.

3.1.2. Measures

Time orientation. Time orientation was measured by an eight-item Considerations for Future Consequences scale (CFC) developed by Petrocelli (2003). Sample items include "I consider how things might be in the future, and try to influence those things with my day to day behavior," and "I think it is more important to perform a behavior with important distant consequences than a behavior with less-important immediate consequences." Each item was measured on a seven-point Likert type scale (1 = extremely uncharacteristic to 7 = extremely characteristic). The items were averaged into a composite score, with higher numbers reflecting a greater consideration for future consequences. The reliability estimate was .85.

Bottom-line mentality (BLM). Participants were asked to indicate how strongly they agreed with items regarding their thinking while working. Bottom-line mentality

(BLM) was measured using a four-item employee measure developed by Greenbaum et al. (2012). Sample items include, "I treat the bottom line as more important than anything else," and "I am solely concerned with meeting the bottom line." Each item was measured on a seven-point Likert type scale (1 = strongly disagree, 7 = strongly agree). The items were averaged into a composite score, with higher numbers reflecting higher BLM. The reliability estimate was .86.

Self-serving unethical behavior (SUB). To measure self-serving unethical behavior, a seven-item measure of unethical behavior, developed by Moore, Detert, Treviño, Baker, and Mayer (2012), was used. Participants were asked to rate their paired coworkers' SUB. Sample items include, "Falsifying a receipt to get reimbursed for more money than your coworker (your paired partner) spent on business expenses," and "Discussing confidential company information with an unauthorized person." Each item was measured on a seven-point Likert type scale (1 = never, 7 = very often). The items were averaged into a composite score, with higher numbers reflecting higher level of SUB. The reliability estimate of SUB was .96.

Unethical pro-organizational behavior (UPB). To measure unethical pro-organizational behavior, I used a six-item measure of UPB developed by Umphress et al. (2010). Participants were asked to report their own levels of UPB because other employees (e.g., coworkers or leaders) around the focal employee may not have insights necessarily to capture the employee's ulterior intention for unethical behavior (Umphress et al., 2010). Sample items include, "If it would help the organization, I would exaggerate the truth about company's products or services to customers and clients," and "If the organization needed me to, I would give a good recommendation on the behalf of an

incompetent employee in the hope that I will become another organization's problem instead of my own." Each item was measured on a seven-point Likert type scale (1 = strongly disagree, 7 = strongly agree). The items were averaged into a composite score, with higher numbers reflecting higher level of an UPB. The reliability estimate of UBP was .93.

Organizational identification. I controlled for organizational identification because employees with strong organizational identification are less morally aware of the impact of their unethical decisions (Umphress & Bingham, 2011; Umphress et al., 2010). Participants rated how much they identify with their organization by answering a six-item measure of organizational identification developed by Mael and Ashforth (1992). Sample items include, "When I talk about my organization, I usually say 'we' rather than 'they'," and "When someone praises my organization, it feels like a personal compliment." Each item was measured on a seven-point Likert type scale (1 = strongly disagree, 7 = strongly agree). The items were then averaged into a composite score, with higher numbers reflecting higher levels of organizational identification. The reliability estimate of this scale was .63.

Social desirability. Many studies have demonstrated that participants tend to answer in socially desirable ways when completing socially-sensitive questionnaires (Spector, 2006). Given the sensitive nature of the dependent variables (SUB and UPB), it is possible that participants may have provided socially-desirable responses. I used an adapted five-item measure of social desirability (Strahan & Gerbasi, 1972) that only includes non-reverse coded items. Sample items include "I'm always willing to admit it when I make a mistake," and "I am always careful about my manner of dress." Each item

was measured on a seven-point Likert type scale (1 = strongly disagree, 7 = strongly agree). The items were averaged into a composite score. The reliability estimate of this scale was .70.

3.1.3. Results

A test of the mediation effect of BLM onto the relationship between short-term orientation and different types of unethical behaviors (H1 – H5) was conducted by utilizing structural equation modeling (SEM) because the dependent variables (SUB and UPB) are likely to co-vary. By using SEM rather than running two separate regressions, I am able to estimate the measurement model and simultaneously test the proposed relationships.

Measurement Model

Before testing the hypotheses, a confirmatory factor analysis (CFA) was conducted to ensure the factor structure of the measurement model. In addition, convergent and discriminant validity of the two different types of unethical behaviors (SUB and UPB) was accessed. I ran a confirmatory factor analysis (CFA) with maximum likelihood estimation by using Mplus. I examined the measurement model, which consisted of six latent factors (i.e., time orientation, bottom-line mentality, SUB, UPB, OID, and social desirability) including 35 indicators (8 items for time orientation, 5 items for BLM, 7 items for SUB, 6 items for UPB, 6 items for OID, 5 items for social desirability). The fit indices suggest that the measurement has an acceptable fit (Hu & Bentler, 1995) to the data (χ^2 = 964.30, *df* = 579, RMSEA = .06, CFI = .91, TLI = .90, SRMR = .06) and all the indicators loaded significantly ($p < .01$) on their intended constructs.

Confirmatory Factor Analyses

In addition to the measurement model, I ran several confirmatory factor analyses to test the discriminant validity of the variables. First, I compared my initial six-factor measurement model with (a) a five-factor model (where SUB and UPB were integrated into an "unethical behavior" factor; $\chi^2 = 1777.58$, $df = 584$, RMSEA = .11, CFI = .72, TLI = .70, SRMR = .13), (b) a four-factor model (where SUB, UPB, and BLM were integrated into a single factor; $\chi^2 = 2100.83$, $df = 588$, RMSEA = .12, CFI = .65, TLI = .62, SRMR = .14), (c) a three-factor model (where SUB, UPB, BLM, and time orientation were integrated into a single factor; $\chi^2 = 2651.91$, $df = 591$, RMSEA = .14, CFI = .52, TLI = .49, SRMR = .16), (e) a two-factor model (where all the main variables were integrated into a single factor and control variables were integrated into another factor; $\chi^2 = 2872.13$, $df = 593$, RMSEA = .14, CFI = .49, TLI = .46, SRMR = .17), and (f) a one-factor model (where all the items were integrated into a single factor; $\chi^2 = 2867.27$, $df = 594$, RMSEA = .14, CFI = .47, TLI = .44, SRMR = .17).

The results revealed that the six-factor model improved chi-squares over the five-factor model ($\Delta\chi^2 = 813.28$, $\Delta df = 10$, $p < .05$, ΔRMSEA = .06, ΔCFI = .19, ΔTLI = .21, ΔSRMR = .07), the four-factor model ($\Delta\chi^2 = 1136.53$, $\Delta df = 14$, $p < .05$, ΔRMSEA = .07, ΔCFI = .26, ΔTLI = .29, ΔSRMR = .08), the three-factor model ($\Delta\chi^2 = 1850.08$, $\Delta df = 17$, $p < .05$, ΔRMSEA = .09, ΔCFI = .38, ΔTLI = .42, ΔSRMR = .10), the two-factor model ($\Delta\chi^2 = 1907.83$, $\Delta df = 19$, $p < .05$, ΔRMSEA = .09, ΔCFI = .42, ΔTLI = .45; ΔSRMR = .11), and the one-factor model ($\Delta\chi^2 = 1902.97$, $\Delta df = 20$, $p < .05$, ΔRMSEA = .09, ΔCFI = .44, ΔTLI = .47, ΔSRMR = .11). Thus, the initial six-factor model has a better fit than the alternative models (Schumacker & Lomax, 1996).

Harman's one-factor test

Although SUB was rated by participants' paired others, Study 1 utilized single-source data. As it is important to address same-source bias concerns, I conducted Harman's One-Factor Test (Chang, Van Witteloostuijn, & Eden, 2010; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). In this test, all of the variables (6 variables: time orientation, BLM, SUB, UPB, organizational identification, and social desirability) in the model were submitted to an un-rotated principal component analysis (PCA) to see how many factors were needed to capture the variance in the variables. The results of this test revealed that 6 distinct factors emerged with eigenvalue greater than 1.26 (calculated by Watkins' Parallel Analysis; see Study 2b for an explanation). In addition, the first factor accounted for only 26.40% of the total variance. As there was no single distinct factor emerged and none of the factors dominantly explained the majority of the total variance, I concluded that the same-source collection did not influence the results.

Hypothesized model

Having established the fit of the measurement model, I next tested the structural portion of the proposed theoretical model (see Figure 2 for the path coefficients of the model). The structural model also has an acceptable fit to the data (χ^2 = 966.07, RMSEA = .06, CFI = .91, TLI = .90, SRMR = .06).

Self-serving unethical behavior. In support of H1, the path coefficient between time orientation and bottom-line mentality (BLM) was negative and significant (b = -.31, p < .01), suggesting that reduced long-term orientation (e.g., more short-term oriented) is associated with increased bottom-line mentality. Supportive of H2, the path coefficient between BLM and self-serving unethical behavior (SUB) was positive and significant (b

= .34, $p < .05$) suggesting that BLM increases SUB. The direct effect of time orientation on SUB is negative and significant (b = -.26, $p < .05$), providing support for H3a. Individuals with reduced long- term orientation (e.g., more short-term oriented) were more likely to engage in SUB.

H3b predicted that the effect of time orientation on SUB would be mediated by BLM. To analyzes the indirect effect, I employed a bootstrapping method (Preacher & Hayes, 2004; Preacher, Rucker, & Hayes, 2007; Shrout & Bolger, 2002; Williams & MacKinnon, 2008) that provides point estimates of the indirect effect by yielding 95% confidence intervals. I used 5,000 bootstrap replications to see whether the confidence interval (CI) does or does not include zero (See Table 1-2 for indirect effects). Supportive of H3b, the results revealed that the CI of the indirect effect did not include zero (b = -.10, 95% bias-corrected CI = [-.27, -.03]), suggesting that individuals with short-term orientation were more likely to have higher levels of BLM, which in turn, led to greater engagement of SUB.

Unethical pro-organizational behavior. The path coefficient between time orientation and UPB was statistically significant but in the opposite direction of my theoretical prediction (b = -.20, $p < .20$), suggesting that the less long-term oriented individuals were, the more likely they were to engage in UPB. Thus, H5a was not supported. In addition, the path coefficient between BLM and UPB was positive and statistically significant (b = .71, $p < .05$), not supporting H4. Then, I conducted an indirect effect between time orientation and UPB via BLM. The bootstrapping results revealed that the indirect effect between time orientation and UPB via BLM was statistically significant (b = -.22, 95% bias-corrected CI = [-.38, -.11]), suggesting that,

individuals with short-term orientation were more likely to exhibit BLM, which in turn, led to engage in more UPBs. Thus, H5b was not supported.

The results from structural equation modeling (SEM) partially supported the theorized relationships. Although I predicted that time orientation would be negatively related to SUB, but positively related with UPB, the results showed that long-term orientation is negatively associated with both SUB and UPB.

3.2. Study 2a: Calculative mindset as a boundary condition

Study 1 results found significant direct and indirect effects of time orientation on SUB and UPB. Study 2a attempted to replicate the findings from Study 1, and sought to empirically examine calculative mindset as a boundary condition. To enhance the internal validity of the findings, I employed an experimental framework using a calculative mindset manipulation suggested by Wang et al. (2014).

3.2.1. Sample and procedure

In Study 2a, I recruited working adults in the United States through Amazon's Mechanical Turk (MTurk), online survey program. Although there is some debate regarding the data quality from MTurk or other E-lancing platforms, many researchers have noted the benefits of these platforms, such as diversity of subjects (Buhrmester, Kwang, & Gosling, 2011), subject anonymity (Aguinis & Lawal, 2012), and low costs (Horton, Rand, & Zeckhauser, 2011). Indeed, Sprouse (2011) tested data quality by replicating class experiments with MTurk data and found there were not any significant differences in data quality in terms of rejection rates, statistical power, attention, and shape of distributions. Two hundred thirty-seven participants (118 men, 112 women, and 7 did not report their demographic information) took part in this study. The mean age of

the sample was 27.08 years (*SD* = 8.86). The racial composition of the sample was approximately 74.8% White, 11.3% African American, 6.9% Asian, 4.8% Hispanic, and 2.2% other races (see Table 2a-1 for descriptive statistics and correlation matrix).

Once participants agreed to take part in the survey, they were randomly assigned to one of the two conditions (calculative vs. non-calculative mindset). Participants in the *calculative mindset condition* (*N* = 119) were asked to solve five GRE math questions (see Appendix 1 for details). Those in the *non-calculative mindset condition* (*N* = 118) were asked to solve GRE verbal questions.

Upon completion of their task, participants were randomly assigned to one of the two scenarios that induced self-interested unethical behaviors (SUB scenario; N = 124) or pro-organizational unethical behaviors (UPB scenario; N = 113). Participants were presented with the following scenario.

"*Imagine that you are a salesperson working in Gate Technologies, a software company. The year-end performance review is coming up soon and you (your company) are (is) close to your (company's)annual sales target. Moments ago, you received the following email from a potential customer, Chris: 'My Company is thinking of buying some new software from Gate Technologies. I've read online that Gate Technologies software has compatibility issues with DMC computers. My office uses DMC computers, so I am concerned. Do you know of others who have had compatibility issues? -Thanks, from Chris.'"*

Then, participants in SUB (UPB) condition read, "*You have received complaints from previous customers about compatibility issues with DMC computers. Not telling Chris about these complaints will likely bring you (your company) to your (their) annual*

sales target," and were then given two minutes to write an email response. Upon completion of this task, participants were asked to complete the manipulation check and demographic questionnaires.

3.2.2. Manipulation check

To test whether the calculative mindset manipulations worked, participants were asked to complete a set of manipulation check questionnaires. Participants read, "During the experiment, you finished a cognitive ability test. Please answer the following questions regarding your test experience." Sample items include, "Did the task make you think more mathematically (3 items)?" and "Did the task make you think more analytically (3 items; reverse coded)?" Participants indicated how much they thought the task required calculative thinking on the seven-point Likert type scale (1= *no at all*, 7 = *extremely*). The items were averaged to form a scale. The reliability of the manipulation check questions was .70.

An independent t-test was conducted to test the mean differences of task calculative-ness with the calculative task as an independent variable (0 = *non-calculative mindset condition; 1= calculative mindset condition).* A significant difference in the levels of calculative thinking emerged between conditions, $F(3, 233) = 52.88$, $p < .001$. Participants in the calculative mindset condition perceived that task required more calculative thinking ($M = 4.82$, $SD = 1.12$) than those in the non-calculative mindset condition ($M = 3.26$, $SD = .74$), $t(233) = 12.52$, $p < .001$. Thus, I confirmed that the manipulation instruments operated properly.

3.2.3. Measures

Time orientation. As with Study 1, time orientation was measured using the same eight-item measure of considerations of future consequence scale (Petrocelli, 2003). The reliability of this measure was .89.

Outcome measures (SUB and UPB). Two independent coders who were not exposed to the purpose of this study coded essay entries independently. They coded the email text entries by answering three coding questions that included "Did the participant lie to the customer (0 = No; 1 = Yes)?", "Did the participant conceal the information that the product had potential compatibility problems (0 = No; 1 = Yes)?", and "Did the participant make a sales push (0 = No; 1 = Yes)?" The level of agreement among the coders was high (*ICC*(2,1) = .91 for SUB and *ICC*(2,1) = .93 for UPB). Upon completion of the coding process, scores from three questions were averaged to form a dependent variable measure with higher numbers reflecting higher level of unethical behavior in each condition.

Control measures. As with Study 1, I measured and controlled for social desirability. The reliability of this measure was .81.

3.2.4. Results

Two separate regression analyses were conducted to test the moderation effect of calculative mindset on the relationship between time orientation and SUB (or UPB).

The first regression analysis tested the interaction effect of time orientation and calculative mindset on SUB. As with Study 1, there is a significant negative association between time orientation and SUB (b = -.35, SE = .16, t = -.3.12, $p < .01$), suggesting that long-term oriented people were less likely to engage in SUB (See Table 2a-2 for regression results). In addition, there is a significant positive association between

condition (0 = non-calculative mindset; 1 = calculative mindset) and SUB (b = .38, SE = .16, t = 2.30, p = .02). Furthermore, there was a significant Time Orientation x Condition interaction (b = -.48, SE = .22, t = -.2.17, p = .03).

To further understand the nature of the interaction, a simple slope analysis was conducted (See Figure 3 and 4 for plotted interaction) to check the significance of the slope for each condition. With a non-calculative mindset, the relationship between time orientation and SUB was not significant (b = -.11, SE = .15, t = -.71, p = .48). However, with a calculative mindset, the relationship was significant (b = -.59, SE = .16, t = -.3.58, p < .01). Thus, Hypothesis 6a is supported.

In the same fashion, a second regression analysis was conducted regarding the interaction effect on UPB. The results revealed that there is a significant negative association between time orientation and UPB (b = -.30, SE = .10, t = -2.98, p < .01), suggesting that long-term oriented people were less likely to engage in UPB. In addition, there was a significant, positive association between condition (0 = non-calculative mindset; 1 = calculative mindset) and UPB (b = .45, SE = .19, t = 2.53, p = .01). Furthermore, a significant Time Orientation x Condition interaction emerged (b = -.43, SE = .20, t = -.2.12, p = .04).

To further understand the nature of the interaction, the same simple slope analysis was conducted. The results revealed that, for those with a non-calculative mindset, the relationship between time orientation and UPB was not significant (b = -.09, SE = .15, t = -.58, p = .56). However, for those with a calculative mindset, the relationship was significant (b = -.51, SE = .14, t = -.3.76, p < .01). Therefore, Hypothesis 6b was not supported.

Study 2a experimentally replicated the findings from Study 1 whereby time orientation is negatively associated with both SUB and UPB. In addition, Study 2a introduced and tested the effect of calculative mindset on the relationship between time orientation and unethical behaviors. Specifically, individuals with a calculative mindset were more likely to cheat/lie to customers in each scenario, regardless of its beneficiary. The results supported only half of my theoretical predictions due to the opposite directionality of the relationship between time orientation and UPB. However, calculative mindset worked consistently with studies in the literature (Wang et al., 2014; Zhong, 2011).

3.3. Development and validation of calculative mindset scale

Study 2a tested the moderating role of calculative mindset on the relationship between time orientation and unethical behaviors (SUB and UPB) by using hypothetical scenarios and experimental manipulations (e.g., GRE Math & Verbal questionnaires; Wang et al., 2014). However, due to the nature of the experimental setting, the findings may not be generalizable to real-life situations. To consider the psychometric properties of individuals and enhance the generalizability of the findings, it is important to develop a scale of calculative mindset. Indeed, to date only one paper has measured calculative mindset (Belmi & Pfeffer, 2015), but the authors clearly state that one of the limitations of their measure is that their items were derived from other measures. In response to the lack of a validated measure, in Study 2b, I develop and validate calculative mindset scale by following Hinkin's (1995; 1998) conventional procedures for developing a new scale.

3.3.1. Construct development and item generation

To generate items for a calculative mindset scale, the present study applied a hypothetically deductive approach, which involves both inductive and deductive methodologies. First, I thoroughly reviewed the relevant calculative mindset literature. With the limited number of experimental studies examining the effect of calculative mindset (Belmi & Pfeffer, 2015; Wang et al., 2014; Zhong, 2011), I created 10 initial items from the literature. Sample items include, "I calculate the value of my time spent with others," "I exert effort in sustaining relationships which I have analyzed will be beneficial to my future," and "I help someone based on the expected value of the relationship."

Then, I utilized qualitative data from semi-structured interviews with working adults and undergraduate students in the United States. Specifically, a sample of 52 working adults were recruited via snowball sampling, and an additional 43 undergraduate students from a large, public Southwestern university were recruited to take part in the interviews. Participants were asked to complete an essay task discussing to the attitudes, behaviors, and perceptions of calculative individuals around them. Based on their text entries, I sorted the frequently mentioned descriptions, and converted them into items. Upon completion of contents analysis, I generated 15 items from the interview process. The sample items include, "I tend to convert everything into numbers (e.g., trust, love, money) for cost-benefit analysis," "I see all of my social relationships in terms of who can benefit me the most," and "Before I befriend someone I mentally assess the benefit to myself of the friendships." Overall, an iterative process of literature reviews and semi-constructed interviewed yielded a total of 25 items. I then reviewed the items to check

face validity. Five items were omitted because they were redundant and unclear. One more item was also omitted because it was double-barreled.

3.3.2. Content validity and item modification

In this step, I checked the content validity of the calculative mindset scale. Following DeVellis (2012) recommendation, I invited a panel of subject matter experts (SMEs) to also review the pool of 19 items. The panel consists of 11 judges who are faculty members and Ph.D. students in the management department at a large, southwestern university. The main purpose of this pilot test was to check whether the items adequately tapped the conceptual definition of calculative mindset. As with the pretest, SMEs were given a definition of calculative mindset and asked to indicate how well each item described the definition on a five point Likert type scale (*1 = not at all like the definition, 5 = just like the definition*). In addition, SMEs were instructed to make comments in terms of wordings, clarity, and conciseness. Based on their ratings and comments, I omitted 8 items that were misaligned or insufficiently described the definition of calculative mindset. In addition, 2 items were re-written for clarification.

Then, I conducted a pilot test with the 11 initial items using a sample of adults from Amazon's Mechanical Turk (M-Turk). Seventy-nine working adults (44 male and 35 female) participated in the pretest. The average age of this sample as 33.59 years (SD = 9.00) and the racial composition of the sample was 75.9% Caucasian, 10.1% African American, 6.3% Hispanic, 6.3% Asian, and 1.4% other races. The average organizational tenure at their respective organization was 3.51 years (*SD* = 1.63). Of the 79 participants, 74.7% reported that they were currently working full-time and 7.6% reported they were currently working part-time.

Participants were given a definition of calculative mindset as "one's cognitive predisposition that allows one to analyze and convert social values into monetary or numeric values" and asked to rate how well each of the 11 items described the definition on a 5-point Likert type scale (*1* = not at all like the definition, *5* = just like the definition). All of the 11 items were significantly and positively correlated with each other (all *r*'s > .40, *p*'s < .05), and none of the means were significantly different from the overall mean of the items. Thus, the 11 initial items were retained for subsequent analysis (See Table 2b-1 for the initial items).

3.3.3. Survey administration

Participants and procedure

Using Amazon Mechanical Turk (MTurk), I recruited two hundred-four adults (103 female and 101 male) in the United States who are currently working or have work experience. Participants took part in the survey in exchange for cash payment of $1.80 (See Table 2b-2 for summary demographics of samples). The average age of this sample as 36.83 years (SD = 11.03) and the racial composition of the sample was 79.4% Caucasian, 6.9% African American, 5.4% Asian, 5.4% Hispanic, and 2.9% other races. The average organizational tenure at their respective organization was 5.88 years (SD = 5.13). Of the 204 working adults, 79.4% was full-time workers and 15.2% was part-time worker. Two participants were omitted from the subsequent analysis due to missing data.

The survey stem of the calculative mindset measure was as follows. *"Instructions: Please read each of the following statements and indicate how strongly you agree with the statements."* I administered participants with the same 11-item calculative mindset questionnaires that were retained from the previous step. They

indicated their agreement with each statement of calculative mindset measure on a 5-point Likert Type scale (1 = Strongly Disagree, 5 = Strongly Agree).

3.3.4. Item reduction (Exploratory Factor Analysis)

In this step, I explore the factor structure of the 11 calculative mindset items. Before I proceed to exploratory factor analysis (EFA), I investigated inter-item correlations among the 11 calculative mindset items retained from the previous steps. The reliability estimates (Cronbach's alpha) of the remaining 11-item calculative mindset scale was .93. There was one item ("I am able to rank the importance of my social relationships") that was suggested to improve the reliability estimate (α) if it was deleted from the scale. As a result, the final 10-items were subjected to an EFA (α = .94).

An EFA was conducted on the ten items with varimax rotation and principal axis factoring method. Although Kaiser (1960)'s eigenvalue-greater-than-one-rule is conventional and well used in practice, many researchers agree that this conventional rule is problematic because this method 1) was originally developed for Principal Component Analysis (PCA), 2) may produce arbitrary decisions (e.g., retaining an additional factor that have an eigenvalue of 1.01 but dropping a factor with eigenvalue of .99), and 3) tends to overestimate or underestimate the number of factors (Zwick & Velicer, 1986). Thus, as recommended by Haywood and his colleagues (Hayton, Allen, & Scarpello, 2004). I calculated the exact eigenvalue by conducting a Parallel Analysis (PA) and decided the number of factors to retain. The parallel analysis was conducted by using the program developed by Watkins (2005). The results from this Monte Carlo simulation-based parallel analysis yielded the eigenvalue of 1.25, a suggested cutoff for the second factor. In addition, I followed several decision rules regarding the item factor loadings: 1)

an item should load on its intended factor at .50, 2) an item should not load on other factors at .40 or greater, and 3) when an item cross-loaded on two factors, their factor loadings should differ by .20 (DeVellis, 2012).

The EFA results showed that the largest eigenvalue was 6.45 and it explained 64.46% of the total variance. There was no other eigenvalue greater than 1.36 that was calculated from a PA. All the items had factor loadings greater than .50 and no cross-loadings emerged. Thus, I found the unidimensionality of the 10-item calculative mindset scale (See Table 2b-2). The factor loadings ranged from .65 ("I calculate the value of my relationships with others") to .86 ("I help someone based on the expected value of the relationship").

3.3.5. Convergent and discriminant validity

The purpose of step 5 is to check the validity of the calculative mindset scale by establishing convergence and divergence of the scale. I included utilitarianism, calculative commitment, and calculative compliance scales in this step to show the calculative mindset scale taps into a conceptually different domain.

Participants

One hundred ninety-two adults (104 female, 87 male, and 1 did not report) in the United States recruited from Amazon Mechanical Turk (M-Turk) were asked to complete a survey in exchange for cash payment. The average age of this sample was 35.95 years (SD = 11.75) and the racial composition of the sample was 79.1% Caucasian, 7.9% African American, 6.8% Asians, 3.7% Hispanic, and 2.5% other races. The average organizational tenure at their respective organization was 5.93 years (SD = 6.04). Of 192

participants, 68.1% reported that they were currently working full-time and 22.5% reported they were currently working part-time.

Confirmatory Factor Analyses (CFAs)

As suggested by Hinkin (1998), I conducted a CFA to confirm the factor structure of the measurement model and validate convergence and divergence of the new measure. The 10-item calculative mindset measure developed from the previous EFA was subjected to a CFA. In addition, to test the convergent/discriminant validity, I included three additional measures (Calculative commitment, Calculative compliance, and Utilitarianism).

A series of CFAs were conducted in Mplus with MLM estimator that considers the skewness of the data. The first CFA was conducted only on the 10-item calculative mindset measure. The fit statistics suggest that the model fits the data well (χ^2 = 79.04, *df* = 35, $p < .01$; RMSEA = .08; CFI = .96; TLI = 0.95; SRMR = .04) (Arbuckle, 1997; Bollen, 1989; Browne, Cudeck, Bollen, & Long, 1993). All nine parameter estimates for the items were statistically significant (all p's < .01). The modification indices suggested that the error terms of "I see social situations (relationships) as a potential source of monetary gain," "I see all of my social relationships in terms of who can benefit me the most," "I cut my social relationships which I have analyzed will be not beneficial to future," and "I only keep the friendships that I view as valuable" slightly exceeded a cut-off value of 10.00 (Jöreskog & Sörbom, 1996). However, as there is no theoretical justification to correlate the error terms, no modification of the measurement model was made. Overall, I concluded that, based on the results of this CFA and the previous EFA, the new 10-item calculative mindset scale can be used for the subsequent analyses.

As the conceptualization of the calculative mindset involves deliberate thinking in managing social interactions, I tested the calculative mindset measure's convergence and divergence with relevant constructs such as calculative commitment, calculative compliance, and utilitarianism. As the calculative nature of each scale, it is expected that there are potential moderate to high correlations among the scales. Specifically, I expected that calculative mindset scale would be positively correlated with the three relevant scales. Thus, I mixed the calculative mindset scale items with those of the other three scales. The basic correlations among the scales (See Table 2b-5) revealed that the calculative mindset measure was moderately correlated with calculative commitment (r = .21, p < .01), calculative compliance (r = .29, p < .01), and utilitarianism (r = .59, p < .01). Thus, I conducted a series of CFAs and tested the chi-square differences to prove that the calculative mindset scale is divergent.

I ran a CFA with a four-factor model with all the all items loading on their respective factor. The results revealed that the four-factor model is a good fit to the data (χ^2 = 425.13, df = 203, p < .001, RMSEA = .08, CFI = .90, TLI = .89, SRMR = .07). Items significantly loaded onto their intended factor (all ps'< . 05). Then, the four-factor model was compared with an alternative three-factor model whereby a) the calculative mindset and utilitarianism items loaded onto a single factor (χ^2 = 820.32, df = 206, p < .001, RMSEA = .13, CFI = .73, TLI = .69, SRMR = .09), b), the calculative mindset and calculative commitment items loaded on a single factor (χ^2 = 450.50, df = 206, p < .001, RMSEA = .08, CFI = .89, TLI = .88, SRMR = .07), c) the calculative mindset and calculative compliance items loaded on a single factor (χ^2 = 494.90, df = 206, p < .001, RMSEA = .09, CFI = .87, TLI = .86, SRMR = .07).

Chi-square difference tests were conducted to check whether the four-factor model improves the model fit when compared to the alternative measurement models. The results revealed that the four-factor model showed a significant improvement in fit over the three-factor model a) with the calculative mindset and utilitarianism loaded on a single factor ($\Delta \chi^2 = 395.19$, $\Delta df = 3$, $p < .05$, ΔRMSEA = .05, ΔCFI = .17, ΔTLI = .20, ΔSRMR = .02). The four-factor model showed a significant improvement in fit over the three-factor model b) with the calculative mindset and calculative commitment items loaded on a single factor ($\Delta \chi^2 = 25.37$, $\Delta df = 3$, $p < .05$, ΔRMSEA = .005, ΔCFI = .00, ΔTLI = .01, ΔSRMR = .005). Finally, the four-factor model showed a significant improvement in fit over the three-factor model c) with the calculative mindset and calculative compliance items loaded on a single factor ($\Delta \chi^2 = 69.77$, $\Delta df = 3$, $p < .05$, ΔRMSEA = .01, ΔCFI = .03, ΔTLI = .02, ΔSRMR = .005). Overall, the CFA results suggested that the 10-item calculative mindset scale has convergent validity and discriminant validity. To further examine the discriminant validity of the new measure, I checked the correlations between calculative mindset and social desirability, age, and gender. The results revealed that calculative mindset is unrelated to social desirability ($r = -.11$, $p = .15$) and gender ($r = -.12$, $p = .09$), but negatively related to age ($r = -.24$, $p < .05$).

3.3.6. Mini-criterion validity test of calculative mindset scale

Having new calculative mindset scale developed, I conducted a brief nomological validity test to see if the new scale operates consistent with previous findings in the literature. Although there are limited number of studies examine a calculative mindset, researchers (Wang et al., 2014; Zhong, 2011) suggested that individuals with higher

levels of calculative mindset are more likely that those with lower levels of calculative mindset to engage in unethical behaviors. Thus, I tested the basic relationships between possessing a calculative mindset and unethical (and deviant) behaviors.

Participants and procedure

Two hundred two adults (107 female and 95 male) in the United States were recruited from Mturk. The average age of this sample as 37.06 years (SD = 10.50) and the racial composition of the sample was 82.7% Caucasian, 6.4% Asian, 6.4% African American, 2.5% Hispanic, and 2.0% other races. The average organizational tenure at their respective organization was 6.70 years (SD = 6.77). Of the 202 participants, 75.7% reported that they were currently working full-time and 18.4% reported they were currently working part-time. Furthermore, six participants were omitted from the subsequent analysis due to missing data.

Measures

Calculative mindset. The newly developed 10-item scale was used to measure participants' level of calculative mindset. Participants were asked to indicate the extent to which they agreed with each of the statements on a seven-point Likert type scale. Sample items include, "Before I befriend someone I mentally assess the benefit to myself of the friendship," and "I see social situations (relationships) as a potential source of monetary gain." The reliability estimate for this measure was .93.

SUB and UPB. As with the previous studies, the same scales were used to capture SUB and UPB. The reliability estimates were .89 and .90, respectively.

Interpersonal deviance. A seven-item scale developed by Bennett and Robinson (2000) was used to capture participant deviant behaviors. Participants were asked to

indicate the extent to which they agreed with each of the statements on a seven-point Likert type scale. Sample items include, "You made fun of someone at work," and "You publicly embarrassed someone at work." The reliability estimate for this measure was .92.

Social undermining. A 13-item scale developed by Duffy, Ganster, and Pagon (2002) was used to measure participants' level of social undermining. Participants were asked to indicate how often they intentionally engaged in social undermining behaviors on a seven-point Likert type scale (1 = Never; 7 = Daily). Sample items include, "Criticized the way your coworker(s) handled things on the job in a way that was not helpful," and "Let your coworker(s) know you did not like them or something about them." The reliability estimate for this measure was .94.

Workplace incivility. A seven-item scale developed by Blau and Andersson (2005) was used to measure the levels of incivility. Participants were asked to indicate the extent to which they agreed with each of the statements on a seven-point Likert type scale. Sample items include, "Did you address people at work in unprofessional terms, either publicly or privately," and "Did you doubt judgment on a matter over which others have responsibility?" The reliability estimate for this measure was .90.

Measurement model

Prior to examining the relationships between calculative mindset and dependent variables (SUB, UPB) as well as deviant behaviors (interpersonal deviance, social undermining, workplace incivility), I conducted confirmatory factor analyses to check the distinctiveness of the variables. First, I conducted a CFA on my original measurement model where each item loading on their respective factor. The results revealed that the measurement model this six-factor has an acceptable fit to the data (χ^2 = 2363.01, *df* =

1015, $p < .001$, RMSEA = .06, CFI = .91, TLI = .90, SRMR = .04). Then, I compared my original measurement model with alternative models: 1) a five factor model where calculative mindset and UPB were combined into a single factor ($\chi^2 = 3662.89$, $df = 1020$, $p < .001$, RMSEA = .08, CFI = .82, TLI = .81, SRMR = .13), 2) a five factor model where calculative mindset and UPB were combined into a single factor ($\chi^2 = 3431.88$, $df = 1022$, $p < .001$, RMSEA = .08, CFI = .83, TLI = .82, SRMR = .07). A chi-square difference test results showed that the original factor significantly improves the model fit over the alternative model 1 ($\Delta \chi^2 = 1299.89$, $\Delta df = 5$, $p < .05$, ΔRMSEA = .04, ΔCFI = .09, ΔTLI = .09, ΔSRMR = .09) and model 2 ($\Delta \chi^2 = 1068.87$, $\Delta df = 7$, $p < .05$, ΔRMSEA = .04, ΔCFI = .08, ΔTLI = .08, ΔSRMR = .03).

Results

I predicted that calculative mindset may be positively correlated with unethical and/or deviant behaviors in the organization. To check the relationships, I checked the correlations among the variables (See Table 2b-6). The results revealed that, calculative mindset was significantly and positively related to SUB ($r = .40$, $p < .01$), UPB ($r = .43$, $p < .01$), , interpersonal deviance ($r = .42$, $p < .01$), social undermining ($r = .37$, $p < .01$), and workplace incivility ($r = .38$, $p < .01$).

In Study 2b, I developed and validated a new calculative mindset scale. Series of analyses were conducted to confirm construct validity. As I found evidence that the 10-time scale operates in the predicted direction of my theorization, the scale was included in the data collection in the subsequent study (Study 3) in phase II.

CHAPTER IV

PHASE II THEORETICAL DEVELOPMENT

4.1. Conceptual background and hypothesis development

4.1.1 Relational mobility

One dominant factor that may shape individuals' social behaviors is the level of mobility within a given environment. Three types of mobility have been studied: job mobility (i.e., Wang, Leung, See, & Gao, 2011; Whitson, Wang, Kim, Cao, & Scrimpshire, 2015), residential mobility (i.e., Lun, Oishi, & Tenney, 2012; Oishi et al., 2013), and relational mobility (i.e., Li, Adams, Kurtiş, & Hamamura, 2015; Li, Hamamura, & Adams, 2015; Sato, Yuki, & Norasakkunkit, 2014; Yuki, Schug, et al., 2007). Job mobility is defined as "the degree to which people can move between jobs and professions" (Chen, Chiu, & Chan, 2009, p. 851). Residential mobility is defined as the degree to which people change their place of living (Oishi, 2010). Relational mobility is defined as the degree to which people perceive or believe they can selectively establish new relationship with others (Falk et al., 2009; Yuki, Maddux, et al., 2007). Although these three types of mobility are conceptually distinct, they may produce similar phenomenological experiences. In my dissertation, I focused on relational mobility because unethical behaviors in the workplace involve one's cost-benefit analyses in societal settings, and may lead to negative consequences to organization and its members.

Recent empirical studies suggest that mobility encourages different psychological and cognitive responses (Gelfand, Erez, & Aycan, 2007). In particular, mobility, a socio-ecological variable (Oishi & Graham, 2010), uses a framework that examines how the macro-environment (e.g. socio-economic system or even political environment) shapes how people think, feel, and behave in their interactions with other individuals, groups, and societies. Many studies from the social psychology literature have found psychological and behavioral differences based on people's level of relational mobility. For example, Yuki, Maddux, et al. (2007) found people in a society with high relational mobility spend more time and resources maintaining relationships, but their social commitments are lower because of their ability to establish new ties and dissolve old ones. Falk et al. (2009) demonstrated that people in a low relational mobility society tend to have stable relationships, denser social networks, and stronger ties than those in a high relational mobility society. Wang and Leung (2010) discovered and explained divergent patterns of reward and punishment based on different levels of mobility, whereby more mobile Americans were more likely to reward honest actors and less mobile East Asians were more likely to punish dishonest actors.

4.1.2. Relational mobility and time orientation

With dynamic environmental changes in contemporary societies, individuals are more mobile (Arthur & Rousseau, 1996). As such, it is crucial for individuals to manage and develop their social relationships and careers in the long run by planning ahead. This may be especially pertinent in a mobile society. Compared to those in low mobility societies, those in high mobility societies are afforded more opportunities to seek out new beneficial relationships (and leave existing relationships with fewer benefits). Mobile individuals also risk losing advantageous relationships if they themselves cannot provide benefits to those

relationships. Therefore, mobile individuals form social relationships through personal choice rather than external environmental constraints (e.g., preexisting social networks or group membershipWiseman, 1986; Yamagishi, Jin, & Miller, 1998).

The aforementioned opportunities and risks in relationally mobile societies may require individuals to possess a long-term orientation. To survive in highly relational socio-ecologies, it is important for individuals to be socially attractive in the eyes of others (Oishi & Kesebir, 2012; Yuki & Schug, 2012a). In other words, it is dangerous to be complacent with the status quo, as complacency makes one's social network outdated and reduces access to valuable information that could increase risks of being abandoned by members in the existing relationships and reduce opportunities of acquiring valuable new relationships in the future. Indeed, Falk et al. (2009) found that individuals need to constantly exert effort to find desirable relationships within their social networks that bring benefits such as information (e.g., non-redundant valued information) and social capital. Thus, a highly mobile individual who has just formed a new relationship may be more likely to speculate about the future of this relationship, along with how much effort to put into this relationship, as not doing so may cause greater ramifications in the long run.

Hypothesis 7: Relational mobility is positively associated with long-term orientation.

CHAPTER V

PHASE II METHODOLOGY

5.1. Study 3. Relational mobility shapes the effect of time orientation

Study 3 attempted to investigate the effect of relational mobility on time orientation, which in turn, influences bottom-line mentality (BLM) to explain self-interested unethical behaviors (SUB) and unethical pro-organizational behaviors (UPB). Additionally, utilizing the newly created calculative mindset scale, I investigate the moderating role of calculative mindset on the relationship between time orientation and unethical behaviors.

5.1.1. Sample and procedures

One hundred ninety-eight adults (113 male and 85 female) in the United States recruited from Amazon Mechanical Turk (M-Turk) were asked to complete the survey in exchange for cash payment of $2.0. The average age of this sample as 36.21 years (SD = 10.65) and the racial composition of the sample was 79.8% Caucasian, 10.6% Asian, 5.1% African American, 2.5% Hispanic, and 2.2% other races. The average organizational tenure at their respective organization was 6.31 years (SD = 5.44). Of the 192 participants, 78.8% reported that they were currently working full-time and 15.1% reported they were currently working part-time. Furthermore, six participants were omitted from the subsequent analysis due to missing data.

5.1.2. Measures and Harman's one factor test

Relational mobility. A twelve-item scale developed by Yuki, Maddux, et al. (2007) was used to measure levels of relational mobility. Sample items include, "In our society, people can choose who they interact with," and "In our society, people are able to choose the groups and organizations they belong to." Each item will be measured on a seven-point Likert type scale (1 = strongly disagree, 7 = strongly agree). The items were averaged into a composite score, with high numbers reflecting higher degree of relational mobility. The reliability estimate of this scale was .89.

Time orientation. The same 8-item Considerations for Future Consequences scale (CFC; Petrocelli, 2003) used in the Study 1 and Study 2a was employed to measure time orientation. The reliability estimate was .87.

Bottom-line mentality (BLM). As with Study 1, I used the four-item employee bottom-line mentality (BLM) measure developed by Greenbaum et al. (2012). The reliability estimate was .91.

Calculative mindset. To measure the levels of calculative mindset (CM), I utilized the newly developed 10-item calculative mindset scale from Study 2b. Participants indicated the extent to which they agree with each statement on a seven-point Likert type scale (1 = strongly disagree, 7 = strongly agree). The reliability estimate was .93.

Self-serving unethical behavior (SUB). As with Study 1, Moore et al. (2012) unethical behavior scale was used to measure self-serving unethical behavior (SUB). The reliability estimate of SUB was .92.

Unethical pro-organizational behavior (UPB). As with Study 1, I used Umphress et al. (2010) six-item UPB scale. The reliability estimate of this scale was .91.

Organizational identification. As with Study 1, the organizational identification measure developed by Mael and Ashforth (1992) was used to measure participants' levels of organizational identification. The reliability estimate of this scale was .93.

Social desirability. As with Study 1 and 2a, the same social desirability scale from Study 1 was used to control for social desirability bias. The reliability estimate of this scale was .73.

As the data in Study 3 was collected from a single-source by using a survey method, I conducted Harman's one-factor test consistent with Study 1. All of the variables (8 variables: relational mobility, time orientation, BLM, SUB, UPB, CM, organizational identification, and social desirability) in the model were submitted to a un-rotated principal component analysis (PCA) to see how many factors were needed to capture the variance in the variables. The results of this test revealed that 8 distinct factors emerged with eigenvalue greater than 1.30 (calculated by Watkins' Parallel Analysis). In addition, the first factor accounted for only 22.35% of the total variance. Thus, no single distinct factor emerged and none of the factors dominantly accounted for the majority of the total variance. I concluded that the same source bias did not influence the results.

5.1.3. Results

After conducting Harman's one-factor test, I checked the fit of my structural path model. The fit statistics of the model revealed that the model has an acceptable fit to the data (χ^2 = 15.27, *df* = 7, CFI = .97, RMSEA = .08, SRMR = .04). The structural path-

analysis was conducted to examine all of the hypotheses. Table 3-1 illustrates descriptive statistics and inter-correlations of variables of interests. Thus, I tested the direct effects, indirect effects, conditional direct effects, and conditional indirect effects using this model (See Figure 5 for path-coefficients).

Direct effects

I first tested the direct effect of relational mobility on time orientation, and the results suggest that relational mobility is positively related to time orientation, such that the higher the relational mobility individuals have, the longer time orientation they have (b = .36, p < .01), supporting H7. In addition, the relationship between time orientation and BLM was negative, and significant (b = -.32, p < .01), suggesting that individuals with short-term orientation (lower scores in time orientation) were more likely to have higher levels of bottom-line mentality. Thus, H1 was supported. Subsequently, I tested direct effects on each of the dependent variables: SUB and UPB.

SUB. The direct effect of time orientation on SUB was negative and significant (b = -.17, p < .05), providing support for H3a. However, the path coefficient between BLM and SUB was not statistically significant (b = .10, p = .23). Thus, H2 was not supported.

UPB. The direct effect of time orientation on UPB was negative and significant (b = -.19, p < .05), thus, while the relationship is significant, it is significant in the opposite direction of my theorization. Thus, H5a was not supported. Rather, the results indicate that short-term oriented individuals were more likely to engage in UPB. In addition, the path coefficient between BLM to UPB was statistically significant (b = .18, p < .05) but in the opposite direction, not supporting H4.

Post-hoc analyses: Indirect effects

Although I did not specifically hypothesized indirect effects of relational mobility, I theorized that relational mobility as a socio-ecological variable to shape ones' time orientation. Thus, in conjunction with my theorization in phase I, I investigated the specific indirect effects of relational mobility on each dependent variable.

As with Study 1, I used the same bootstrapping method (Preacher & Hayes, 2004; Preacher et al., 2007; Shrout & Bolger, 2002; Williams & MacKinnon, 2008) to test indirect effects (See Table 3-2 for specific indirect effects).

SUB. The results indicate that the effect of relational mobility on SUB is mediated through time orientation (boot effect = -.21, 95% bias-corrected CI = [-.34, -.11]), suggesting that individuals with a high level of relational mobility were more likely to have long-term orientation, and, were thus, less likely to engage in SUB.

However, the effect of relational mobility on SUB mediated through time orientation and BLM in sequence was not statistically significant (boot effect = -.01, 95% bias-corrected C.I. = [-.04, .001]). This suggests that sequential mediation did not occur.

UPB. The same series of analyses of indirect effects were conducted on UPB. The results revealed that the effect of relational mobility on UPB was mediated through time orientation (boot effect = -.07, 95% bias-corrected CI = [-.15, -.01]). This suggested that individuals with a high level of relational mobility were more likely to have long-term orientation, and, were thus, less likely to engage in UPB. This pattern of result is the opposite of my theoretical prediction. In addition, the effect of relational mobility on UPB was sequentially mediated through time orientation and BLM (boot effect = -.02, 95%

bias-corrected C.I. = [-.06, -.001]). This suggests that the relational mobility decreased UPB through increased long-term orientation and decreased bottom-line mentality.

Finally, the total indirect effect of relational mobility on UPB was statistically significant (boot effect = -.09, 95% bias-corrected C.I. = [-.18, -.04]), but not the direct effect (boot effect = -.28, 95% bias-corrected C.I. = [-.23, .05]). This suggests that the effect of relational mobility on UPB is fully mediated through both mediating variables (time orientation and BLM).

Conditional effects of calculative mindset

Having developed a calculative mindset scale, I next tested the moderating role of calculative mindset on the relationship between time orientation and the dependent variables (SUB and UPB). The results revealed that the interactive effect of time orientation and calculative mindset on SUB was statistically significant (b = -.18, p < .05). In addition, the same interactive effect on UPB was marginally significant (b = -.14, p = .09). To understand the nature of each interaction, I conducted simple slope analyses that test the slope of time orientation and unethical behaviors at different levels of calculative mindset (one standard deviation above and below the mean; See Figure 6 and 7 for plotted interactions).

SUB. The results revealed that, when calculative mindset was high, the slope of the relationship between time orientation and SUB was statistically different from 0 (b = -.44, p < .05). However, the relationship was not significantly different from 0 when calculative mindset was low (b = -.05, p = .58). The results replicated Study 2a and suggested that short-term oriented individuals are more likely to engage in SUB only when they have high levels of calculative mindset.

UPB. In the same pattern, when calculative mindset was high, the slope of the relationship between time orientation and UPB was statistically different from 0 (b = -.38, p < .05). However, the relationship was not significantly different from 0 when calculative mindset was low (b = -.13, p = .16), suggesting short-term oriented individuals are more likely to engage in UPB only when they have high levels of calculative mindset.

Conditional indirect effects

As with previous analyses, I conducted conditional indirect effect of relational mobility on each of the dependent variables (See Table 3-3). The results showed that the effect of relational mobility on SUB was mediated only when calculative mindset was high (boot effect = -.13, 95% bias-corrected C.I. = [-.24, -.04]) as opposed to low (boot effect = .003, 95% bias-corrected C.I. = [-.04, .05]). In the same pattern, the effect of relational mobility on UPB was mediated only when calculative mindset was high (boot effect = -.12, 95% bias-corrected C.I. = [-.24, -.05]) as opposed to low (boot effect = -.02, 95% bias-corrected C.I. = [-.10, .05]).

Consistent with the previous studies, the results from the structural path analysis partially supports the theorized model. Although I hypothesized that time orientation would be negatively related to SUB, the results suggest the opposite relationship exists. Thus, the findings from Study 3 echoed the finding in the previous studies. Specifically, individuals with high relational mobility were more likely to have long-term orientation, which in turn, led to lower engagement to SUB and UPB. In addition, the moderating role of calculative mindset was established, and it suggests that conditional indirect and direct effects were significant only when calculative mindset is high opposed to low.

CHAPTER VI

DISCUSSION

To my knowledge, no studies in the management literature simultaneously examine different types of unethical behaviors based on their time orientation, and few studies specifically investigate antecedents to such an orientation. This dissertation study contributions to both the behavioral ethics and culture literatures by testing the effects of time orientation on different types of unethical behaviors (SUB vs. UPB), and investigating the role of perceived relational mobility, as a socio-ecological factor, in shaping one's time orientation.

Results from Study 1 suggest that time orientation is positively associated with both SUB and UPB, such that short-term oriented individuals are more likely to engage in unethical behaviors regardless of their underlying motives. In addition, BLM mediated the relationship between time orientation and unethical behaviors (SUB and UPB). Study 2a experimentally replicated Study 1 results, and investigated the moderating effects of calculative mindset on the relationship between time orientation and the unethical behaviors (SUB and UPB). The results suggest that short-term oriented individuals are more likely to engage in unethical behaviors (SUB and UPB) following a calculative task, but not following a non-calculative task. In Study 2b, I developed and validated a 10-item calculative mindset scale to further test the full theoretical model with field data.

I found that the new calculative mindset measure has convergent and discriminant validity and it operates appropriately in its nomological network. Finally, results from Study 3 replicated the findings from the previous studies and confirmed the ecological role of mobility in shaping time orientation. Particularly, I found that individuals with low relational mobility were more likely to have a short-term orientation, and subsequently behave unethically for the benefit of the self and organization. In addition, possessing a calculative mindset strengthened the relationship between time orientation and unethical behaviors (SUB and UPB), and the indirect effect of mobility on unethical behaviors via time-orientation.

6.1. Theoretical Implications

The present dissertation provides several contributions toward the business ethics and unethical behavior literatures. First, the present research provides a novel perspective regarding why individuals take part in different types of unethical behavior. Indeed, a recent meta-analyses in behavioral ethics suggest that individual differences may help explain employee engagement in unethical behaviors (Kish-Gephart et al., 2010; O'Boyle Jr, Forsyth, Banks, & McDaniel, 2012). The current research sheds light on an additional individual factor (time orientation) that predicts the engagement in unethical behaviors. The consistent patterns of results confirm that short-term orientation is an important factor in predicting one's engagement to unethical behaviors.

In addition, this research contributes by introducing and applying inter-temporal choice framework to explain how differences in time orientation plays a central role in enacting different types of "self-interest" (*present* self-interest vs. *future* self-interest) to determine unethical and deviant behaviors (SUB and UPB). Although the results did not

fully support the theoretical model (the relationship between time orientation and UPB was positive, rather than negative), it is worthwhile to test the relationship in this theoretical framework. This is because, to date, the behavioral ethics and deviance literatures have failed to theorize and examine the effect of more sophisticated forms of self-interest on certain deviant behaviors.

In conjunction with the aforementioned framework, the present research makes theoretical contributions to deviance literature and behavioral ethics literature by discovering the explanatory role of bottom-line mentality in the relationship between time orientation and unethical behaviors (SUB and UPB). Indeed, to my knowledge, no study has been identified antecedents of bottom-line mentality. Although research suggested that bottom-line mentality leads employees to overlook and minimize potential moral concerns by locking themselves in securing their own bottom-line goals (Greenbaum et al., 2012), a little is known what causes ones to fall prey to bottom-line mentality, which impacts one's ethical decision making.

In addition, as shown in Study 2b (mini-nomological network testing), calculative mindset may even explain variances in particular types of unethical (or deviant) behaviors. This is because possessing a calculative mindset may allow individuals to calculate costs and benefits of engaging unethical behaviors more precisely based on the value of their social relationships. For example, when engaging in UPB, individuals with a high calculative mindset may think of benefits (e.g., how much would my organization pay back for my sacrificed ethicality in the form of bonus, pay raise, promotion, etc?), costs (e.g., how much would engaging in UPB cost me in terms of a bad reputation or legal responsibility?), and risks (e.g., what if my organization betrays and punishes me?).

Thus, when compared to those with low calculative mindset, those with high calculative mindset are more likely to engage in UPB (see Study 2a, main effect). Interestingly, Study 3 showed that the interactive effect of calculative mindset and time orientation is relatively stronger in regards to SUB rather than UPB because it may be more obvious for individuals with a calculative mindset to see the costs and benefits of engaging SUB than UPB in the short term (e.g., SUB may bring relatively immediate benefits than UPB).

One other contribution that the present research makes to the behavioral ethics is discovering a unique boundary condition, calculative mindset, may induce unethical and deviant behaviors. Indeed, this dissertation developed and validated a calculative mindset measure. Most current studies testing the effect of calculative mindset are in experimental settings, which have limited the generalizability of findings in the literature. Thus, the newly developed calculative mindset scale from Study 2b will help researchers discover the effects of individual calculative thinking on organizational outcomes. In addition, I provide conceptual and empirical evidence to show how possessing a calculative mindset captures unique variance compared with other relevant constructs. Particularly, utilitarianism had the highest correlation with calculative mindset ($r = .50$), however, they are empirically (see CFA results in Study 2b) and theoretically distal constructs. The biggest difference between the two is that possessing a calculative mindset is value-neutral while utilitarianism is value-laden. In order words, calculative mindset is one's tool set in one's mind that enables a more precise calculation in gauging and interpreting social relationships, while utilitarianism is a form of moral reasoning based on Bentham's notion, "the greatest good for the greatest number." Indeed, calculative mindset

measurement items were situated in interpersonal relationships while those of utilitarianism (Robinson, 2012) were situated in a normative environment (e.g., rules and laws).

Finally, this dissertation contributes to the management literature by theorizing and exploring the role of relational mobility as an environmental factor that shapes one's interpersonal strategies and social decision making, specifically unethical decision making. Many researcher in the management field use mobility as a construct mainly conceptualized and operationalized individuals' actual mobility (Aime, Johnson, Ridge, & Hill, 2010; Landau & Hammer, 1986; Vardi & Hammer, 1977) or the individual's mobility perceptions (George, Chattopadhyay, & Zhang, 2012; Hui, Law, & Chen, 1999). However, relational mobility is different from these forms of mobility because it is not operationalized at the individual level (e.g., whether an individual has more or less potential opportunities to choose beneficial social relationships), but at the socio-ecological level (e.g., whether a certain society allows for a group of people to be embedded in choosing beneficial social relationships) (Yuki & Schug, 2012b). This might be because, in a high relational mobility society, relationships that individuals form will be decided by an interplay between how socially attractive an employee is in the coworker's viewpoint, and what other potential opportunities are there for new relationships in that environment. Thus, it is important for employees to have long-term orientation to build and maintain their career and reputation. In other words, engaging in unethical behaviors may substantially reduce one's social attractiveness, which in turn, constrains one's relational mobility. Thus, in some societies, it is necessary for individuals to have high relational mobility and long-term orientation in order to survive.

Overall, by exploring key antecedents (relational mobility), mediators (bottom-line mentality), and moderators (calculative mindset), I provide a comprehensive perspective that allows people to more fully understand the central causes of unethical behavior, and the motivation that underlie decisions to act unethically.

6.2. Practical Implications

Beyond the aforementioned theoretical implications, there are several practical implications. First, one of the most consistent findings that replicated across my studies is that individuals with short-term orientation were more likely to engage in unethical behaviors. Specifically, one's decision horizon (short-term vs. long-term) may influence employees narrow focus on bottom-line goals (Study 1 and 3), and this subsequently contributes to self-interested unethical behaviors. Indeed, these findings are very relevant to contemporary societies given that the majority of corporate scandals (e.g., Enron, Worldcom, Dynergy, AIG, Sunbeam, Lehman Brothers, Johnson & Johnson) were actually triggered by the pursuance of short-term self-interests in organizational systems (e.g., short-term performance-based monetary payoffs, financial incentive systems). Thus, it is important for practitioners to develop and/or update their performance management system and ethics management system for valuing long-term orientation. In addition, managers may also seek to hire employees with a long-term orientation, and train employees to broaden their decision horizon to enhance ethicality of the organizational climate and culture.

Second, as results from studies 2a, 2b, and 3 consistently suggest, calculative mindset strengthens employees' tendencies to engage in unethical behaviors. Due to the malleability of calculative mindset (e.g., activated or deactivated based on situations),

employees in organizations may exhibit their calculativeness very differently depending on the characteristics (or climate) of their coworkers, groups, and organization. Thus, it is possible that individuals with a low calculative mindset could increase their calculativeness over time by exposing themselves to a very calculative environment. In addition, as Wang et al. (2014) suggested, even simply engaging in calculative tasks may increase self-interested behaviors, it is important for managers to understand what may increase the calculative mindset of employees. Thus, managers may benefit from re-designing jobs and tasks that potentially increase calculativeness of employees.

6.3. Limitations and future directions

As in all research, this dissertation is not without limitations that may provide us fruitful avenues to future research. First, contrary to my theorization, results from Study 1, 2a and 3 consistently revealed that the relationship between time orientation and UPB was, in fact, negative. This may be because UPB and SUB share commonality as norm-violating behaviors. For example, the correlation between the two constructs was positive and moderately high (e.g., r = .48 from Study 1, r = .46 from Study 2b, and r = .43 from Study 3). Indeed, some of items in the UPB measure may not fully rule out 'confounded' variance between "self-interest" and "organizational-interest" (i.e., "If it would help my organization, I would exaggerate the truth about my company's products or services to customers and clients"). Although I provided evidence of distinctiveness of the constructs, such shared variance may contribute to the opposite directionality of the findings.

Second, the present research may lead scholars to an avenue for future research. As replicated by my dissertation studies and existing research in the literature (Belmi & Pfeffer, 2015; Wang et al., 2014; Zhong, 2011), calculative mindset as an individual trait

may intensify one's selfish-ness and leads people to engage in unethical decision making. Indeed, one's ethical judgment can be influenced by the interplay with personal and situational factors (Treviño, 1986). Although many individual difference and situational factors have been discovered in the behavioral ethics literature, calculative mindset is different from them because it encompasses both individual and situational aspects that could be activated or deactivated based on the relationships of the target. For example, one who is very calculative in nature may not activate his/her calculative mindset (trait) when making decisions regarding his/her family or close friend, or one who is not calculative may act calculatively when the person experiences significant threats in managing social relationships.

Third, although I made an effort to omit concerns of same-source bias by collecting dyadic data that allowed for other-rated SUB (Study 1), however, the majority of my studies (Study 2a, 2b, and Study 3) were purely based on self-reported data. I conducted a Harman's one factor tests and found empirical evidence that no common-method variance was confounding on the observed effects in the full model, however, this is an empirically driven test that cannot fully rule out the potential concern of common method variance. Thus, it would beneficial for future studies to employ more rigorous research designs (e.g., mixed method design) and data collection methods (e.g., having multiple raters to capture employee unethical behavior) to reduce such biases.

Fourth, some of the studies in my dissertation heavily relied on Amazon Mechanical Turk (M-Turk) data. Specifically, in Study 2b, I validated the calculative mindset scale based on Mturk data. Additional validation studies should be conducted to cross-validate this newly developed measure by collecting data from real life

organizations. Although I provided evidence from existing studies in regard to feasibility of using Mturk data (Aguinis & Lawal, 2012; Buhrmester et al., 2011; Horton et al., 2011; Sprouse, 2011), there are several concerns relating to Mturk data, such as lack of intervention (control) and ballot-stuffing (e.g., taking part in several times on one survey by creating multiple accounts). Future research should address this issue by collecting data from real organizations and cross-validating the newly developed calculative mindset scale.

Fifth, one other limitation of my dissertation is that, I conducted only one experiment (Study 2a) that is solely based on hypothetical scenarios. Although employing experimental studies is useful in demonstrating causality and enhancing internal validity, the hypothetical scenarios may not be realistic for participants. To address this concern, I paired Study 2a with field studies (Study 1 and 3), and successfully replicated the results to enhance generalizability and realism (Shadish, 2002) and to reduce the concern of CMV (Podsakoff et al., 2003). Even so, it is important for future research to conduct additional experiments. Indeed, Study 2a indirectly and perceptually gauged one's unethical behavior, a more rigorous experiment could capture real unethical behaviors. Future research would benefit from behavioral experiments, which involve actual unethical/ethical behaviors (e.g., anagram tasks; cheating tasks).

Sixth, the full model test (Study 3) was only conducted at the individual level. One's unethical behaviors may not solely be determined by individual characteristics, but also by many other situational factors. This is because employees are embedded in interpersonal relationships with other employees (e.g., subordinates, coworkers, leaders) so that their behaviors might be shaped by situational factors (e.g., ethical leadership,

climate, or culture). Particularly, unethical pro-organizational behavior may be more likely to occur when individuals experience pressure from other employees to follow their group norms (Thau et al., 2015). Thus, it would be beneficial for future research to examine my theoretical model across different levels to account for cross-level effects.

Finally, I only collected data from working adults in the United States. Relational mobility was conceptualized as a socio-ecological factor and measured by individuals' perceptions in regard to relationship strategies (e.g., how much they meet new people and/or establish social ties) of the people in their society. Thus, it is possible that individuals perceive such strategies differently. Future studies may benefit from testing this model in a cross-cultural setting to capture more variance and different patterns of results.

CHAPTER VII

CONCLUSION

Organizations committing unethical business practices continue to be a pressing problem (e.g., Enron, WorldCom, Sarbanes-Oxley). Thus, in contemporary business organizations, managing business ethics has become a more salient issue over the past two decades (Kish-Gephart et al., 2010; O'Fallon & Butterfield, 2005; Tenbrunsel & Smith-Crowe, 2008). Although many great studies have been published in the management literature that identify antecedents and outcomes of different types of unethical behaviors and deviant behaviors (Aquino et al., 2009; Duffy et al., 2002; Ferris, Brown, Berry, & Lian, 2008; Greenbaum, 2009; O'Reilly, Robinson, Berdahl, & Banki, 2014b), none of these studies deeply considered the effect of one's time orientation and relational mobility in shaping different types of unethical behaviors. Indeed, given dynamic changes and of the mobility of the workforce in contemporary organizations, it is important for us to understand the effect of employees' relational mobility, and how it influences their time horizon in making decisions, specifically, in engaging unethical behaviors. In this dissertation, I theorized and examined such relationships in a multi-method framework. I hope my findings regarding the relationships among mobility, time orientation, calculative mindset, bottom-line mentality, and two different types of unethical behavior trigger brisk scholarly discussions in future research.

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APPENDICES

Appendix A: TABLES

Appendix B: FIGURES

Appendix C: STUDY MEASURES

Appendix D: IRB APPROVAL

Appendix A: Tables

Table 1-1.

Descriptive statistics and variable inter-correlations, study 1.

Variables	Mean	SD	1	2	3	4	5	6
1. Time orientation	4.78	1.02	-					
2. Bottom-line mentality	2.91	1.07	-.44**	-				
3. SUB	2.43	1.36	-.23**	.32**	-			
4. UPB	1.79	1.54	-.42**	.48**	.56**	-		
5. OID	2.18	.54	.06	.02	.15*	-.05	-	
6. Social desirability	5.17	1.94	.24**	-.13	-.17*	-.25**	-.12	-

Note. $N = 184$.

*Correlation is significant at $p \leq .05$

**Correlation is significant at $p \leq .01$

Table 1-2.

Confidence intervals of indirect effects, study 1.

Paths	Indirect Effect Point Estimate	95% Confidence Interval
Time Orientation-BLM-SUB	-.10	[-.27, -.03]
Time Orientation-BLM- UPB	-.22	[-.38, .-11]

Table 2a-1.

Descriptive statistics and variable inter-correlations, study 2a.

Variables	Mean	SD	1	2	3	4	5
1. Time Orientation	5.35	.83					
2. Calculative Mindset	-	-	.01	-			
3. Unethical Behavior	.77	.98	-.26**	.21**	-		
4. UB/UPB Scenario	-	-	-.17*	.04	.02	-	
5. Social desirability	4.21	.99	.16*	-.01	-.08	-.17*	-

Note. $N = 237$.

*Correlation is significant at $p \leq .05$

**Correlation is significant at $p \leq .01$

Table 2a-2.

Regression results, study 2a.

	SUB Scenario (N = 124)			UPB Scenario (N = 113)		
Dependent variable model	*b*	*SE*	*t*	*b*	*SE*	*t*
Constant	.78	.37	2.10*	.80	.35	2.29*
Social Desirability	-.01	.09	-.05	-.002	.08	-.03
Task (0 = Non-calculative; 1 = Calculative)	.38	.16	2.30*	.45	.18	2.53*
Time Orientation	-.35	.11	-3.12**	-.30	.10	-2.98**
Time Orientation x Task	-.48	.22	-2.17*	-.43	.20	-2.12*
Conditional Effects of Task	*b*	*SE*	*t*	*b*	*SE*	*t*
Non-calculative	-.11	.15	-.71	-.09	.15	-.58
Calculative	-.59	.16	-3.58**	-.51	.14	-3.76**

Note. N = 237

Unstandardized regression coefficients are reported.

$^{+}p \leq .10$, $^{*}p \leq .05$, $^{**}p \leq .01$, $^{***}p \leq .001$

Table 2b-1.

Initial 11-items, study 2b.

Item
1. I calculate the value of my relationships with others.
2. I see social situations (relationships) as a potential source of monetary gain.
3. I put a different dollar value on time I spent with each individual.
4. I am able to rank the importance of my social relationships.
5. I tend to convert everything into numbers (e.g., time, trust, love, money) for cost-benefit analysis.
6. I see all of my social relationships in terms of who can benefit me the most.
7. I only keep the friendships that I view as "valuable."
8. I keep track of every social transaction.
9. Before I befriend someone I mentally assess the benefit to myself of the friendships.
10. I help someone based on the expected value of the relationship.
11. I cut my social relationships which I have analyzed will be not beneficial to future.

Table 2b-2.

Demographics of samples used in scale validation, study 2b

Sample	Validation Use	Sex (Female, Male)	Age (*M*, *SD*)	Ethnicity
Pretest Sample	Pretest	35, 44	33.59, 9.00	75.9% Caucasian, 10.1% African American, 6.3% Hispanic, 6.3% Asian, and 1.4% other races.
Sample 1	EFA	103, 101	37.33, 11.16	79.4% Caucasian, 6.9% African American, 5.4% Asian, 5.4% Hispanic, and 2.9% other races
Sample 2	CFA and Convergent/Discriminant Validity	104, 87	35.95, 11.75	79.1% Caucasian, 7.9% African American, 6.8% Asians, 3.7% Hispanic, and 2.5% other races
Sample 3	Nomological network test	107, 95	37.06, 10.50	82.7% Caucasian, 6.4% Asians, 6.4% African American, 2.5% Hispanic, and 2.0% other races.

Table 2b-3.

Exploratory factor analysis, study 2b

Item		Factor Loading
1.	I calculate the value of my relationships with others.	.65
2.	I see social situations (relationships) as a potential source of monetary gain.	.75
3.	I put a different dollar value on time I spent with each individual.	.80
4.	I tend to convert everything into numbers (e.g., time, trust, love, money) for cost-benefit analysis.	.78
5.	I see all of my social relationships in terms of who can benefit me the most.	.85
6.	I only keep the friendships that I view as "valuable."	.70
7.	I keep track of every social transaction.	.78
8.	Before I befriend someone I mentally assess the benefit to myself of the friendships.	.83
9.	I help someone based on the expected value of the relationship.	.86
10.	I cut my social relationships which I have analyzed will be not beneficial to future.	.76

Note N = 204. (Two observations were dropped by listwise deletion)

Table 2b-4.

Descriptive statistics and variable inter-correlations for CFA sample, study 2b.

Variables	Mean	SD	1	2	3	4	5	6	7
1. Calculative mindset	2.24	.85	-						
2. Utilitarianism	2.70	1.34	.59**	-					
3. Calculative commitment	4.28	1.07	.21**	.19**	-				
4. Calculative compliance	4.00	1.12	.29**	.23**	.10	-			
5. Social desirability	3.05	.62	-.11	.04	-.09	-.20**	-		
6. Age	35.95	11.75	-.24**	-.22**	-.16*	-.14	.13	-	
7. Gender (1= male 2 = female)			-.12	-.11	-.12	-.05	.09	.03	-

Note. $N = 192$.

*Correlation is significant at $p \leq .05$

**Correlation is significant at $p \leq .01$

Table 2b-5.

Descriptive statistics and variable inter-correlations for nomological network test, study 2b.

Variables	Mean	SD	1	2	3	4	5	6
1. Calculative Mindset	2.04	.86	-					
2. SUB	1.76	1.14	.40**	-				
3. UPB	2.78	1.31	.43**	.46**	-			
4. Interpersonal Deviance	1.94	1.15	.42**	.65**	.39**	-		
5. Social Undermining	1.53	1.53	.37**	.68**	.44**	.73**	-	
6. Workplace Incivility	2.27	1.21	.38**	.59**	.41**	.84**	.70**	-

Note. $N = 202$.

*Correlation is significant at $p \leq .05$

**Correlation is significant at $p \leq .01$

Table 3-1.

Descriptive statistics and variable inter-correlations, study 3.

Variables	Mean	SD	1	2	3	4	5	6	7	8
1. Relational mobility	4.68	.79	-							
2. Time orientation	4.60	1.15	.33**	-						
3. Calculative mindset	2.23	.88	-.25**	-.30**	-					
4. Bottom-line mentality	3.07	1.27	-.16*	-.29**	.63**	-				
5. UPB	2.95	1.33	-.21**	-.31**	.29**	.29**	-			
6. SUB	1.63	1.00	-.31**	-.31**	.39**	.27**	.43**	-		
7. Organizational identification	4.27	1.49	.12	-.02	.19**	.16*	.13	-.02	-	
8. Social desirability	3.15	.77	.08	.08	.002	.19**	.19**	-.09	.12	-

Note. $N = 198$.

*Correlation is significant at $p \leq .05$

**Correlation is significant at $p \leq .01$

Table 3-2.

Confidence intervals of indirect effects, study 3.

Path (Dependent variable: SUB)	Standardized Indirect Effect Point Estimate	95% Confidence Interval
Relational mobility-Time orientation-SUB	-.21	[-.34, -.11]
Relational mobility-Time orientation-BLM- SUB	-.01	[-.04, .001]
Path (Dependent variable: UPB)	**Standardized Indirect Effect Point Estimate**	**95% Confidence Interval**
Relational mobility-Time orientation-UPB	-.07	[-.15, -.01]
Relational mobility-Time orientation-BLM- UPB	-.02	[-.06, -.001]

Table 3-3.

Confidence intervals of conditional indirect effects, study 3.

Path (Dependent variable: SUB)	Standardized Conditional Indirect Effect Point Estimate	95% Confidence Interval
Low calculative mindset	.003	[-.04, .05]
High calculative mindset	-.12	[-.24, -.04]
Path (Dependent variable: UPB)	**Standardized Indirect Effect Point Estimate**	**95% Confidence Interval**
Low calculative mindset	-.02	[-.10, .05]
High calculative mindset	-.12	[-.24, -.05]

Appendix B: FIGURES

Figure 1. Theoretical model

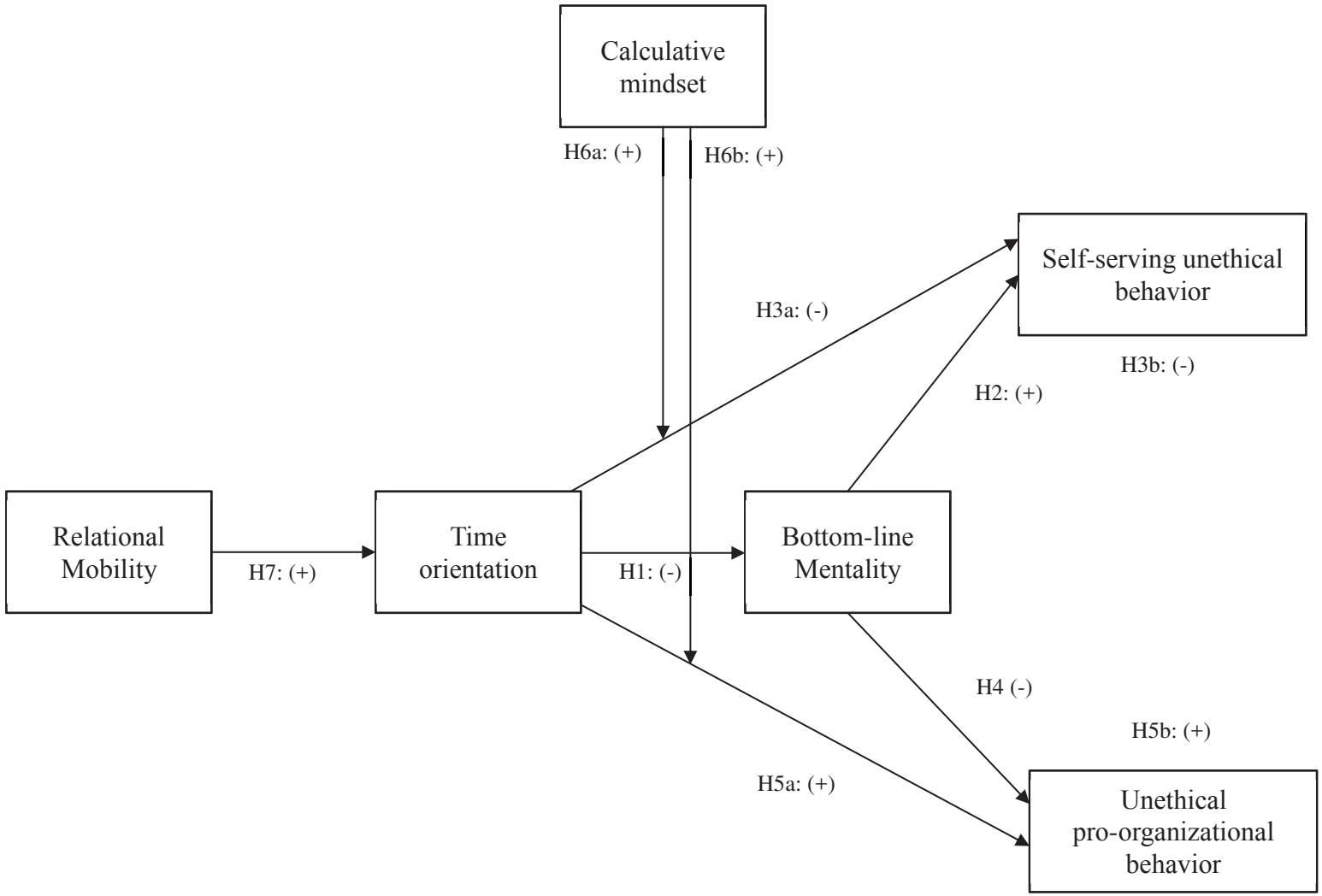
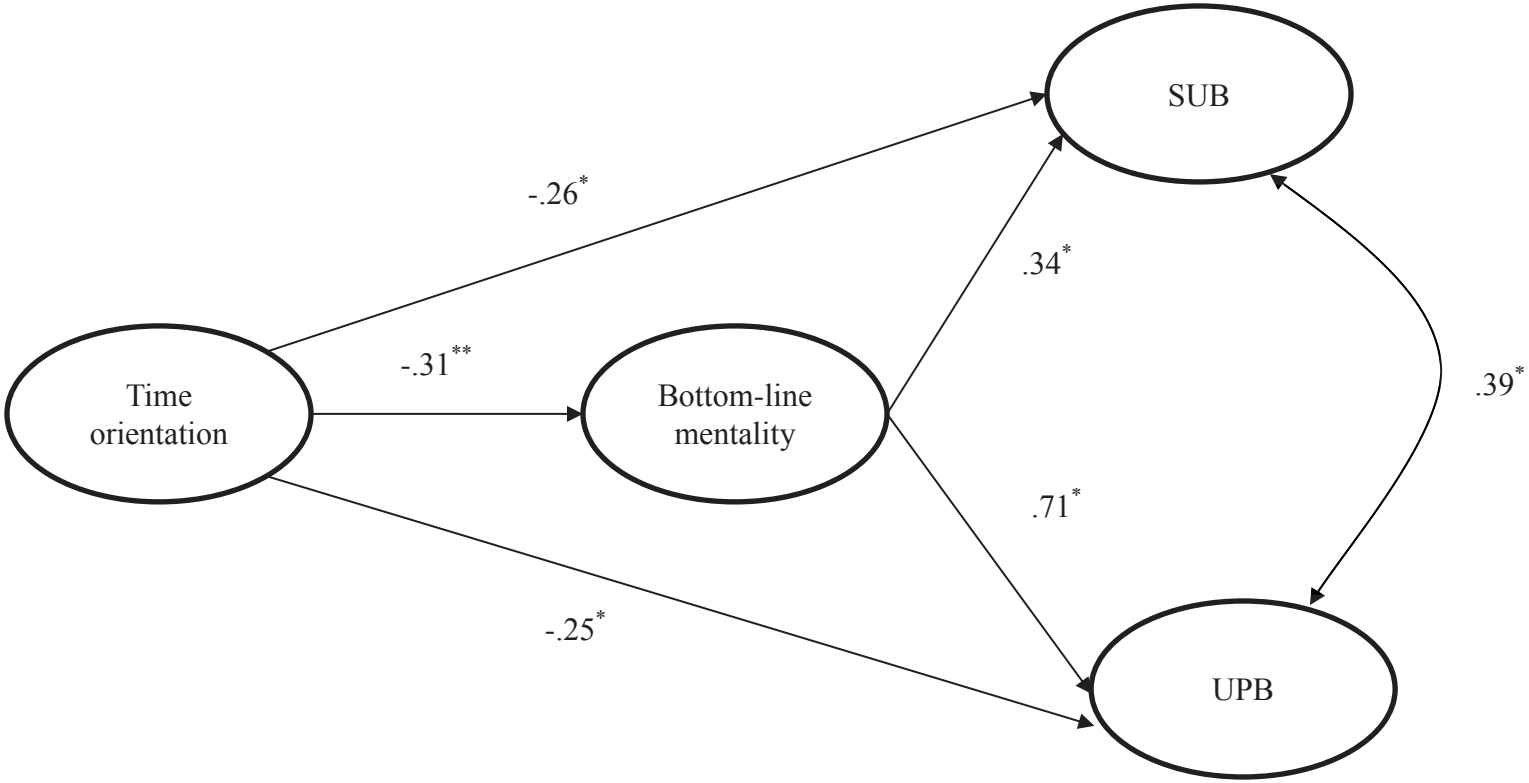


Figure 2. Standardized path coefficients for study 1.



Note. $N = 184$; *$p \leq .05$, **$p \leq .001$. Model fit: $\chi^2 = 966.07$, $df = 581$, RMSEA = .06, CFI = .91, TLI = .90, SRMR = .06.

Figure 3. Plotted interaction, study 2a.

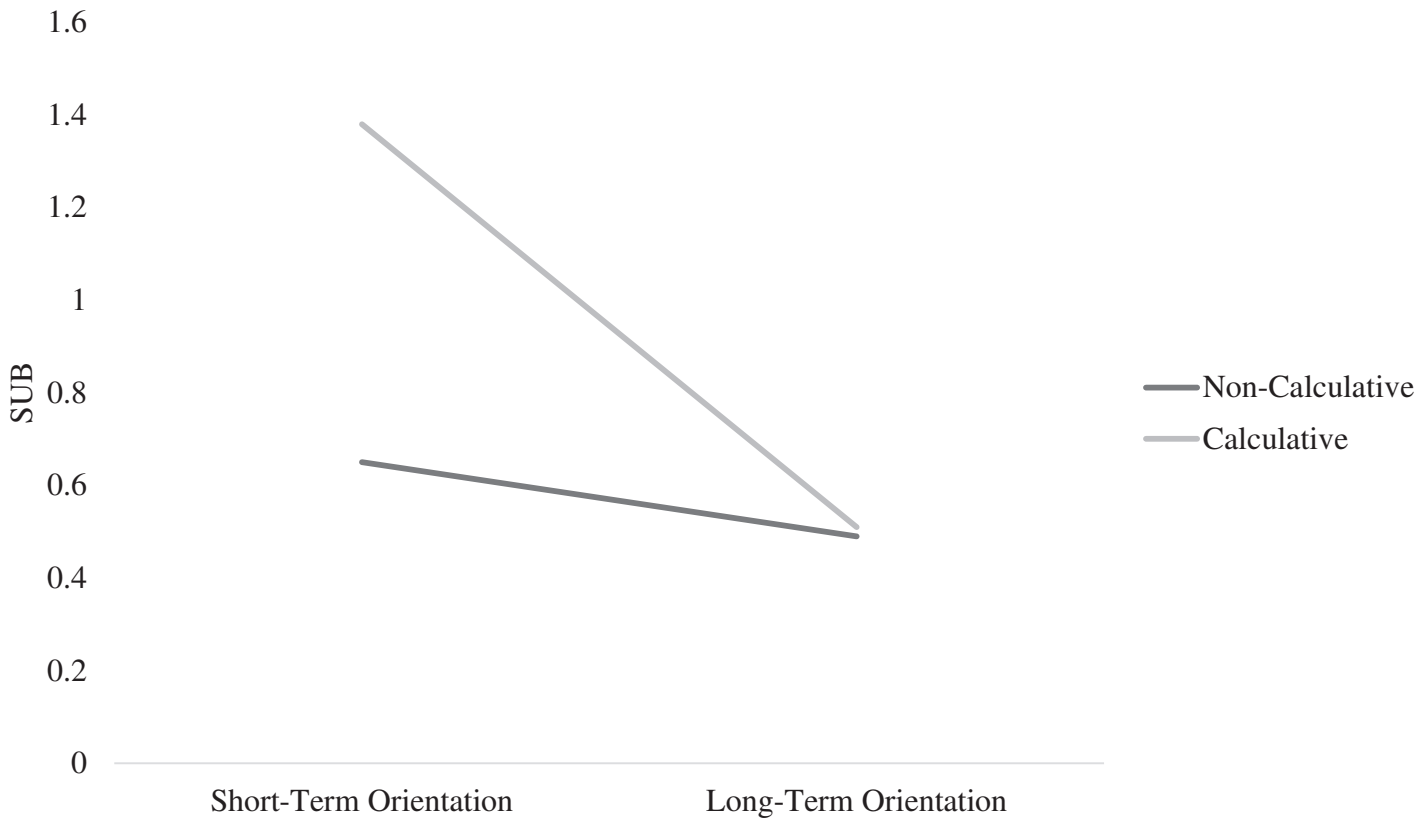


Figure 4. Plotted interaction, study 2a.

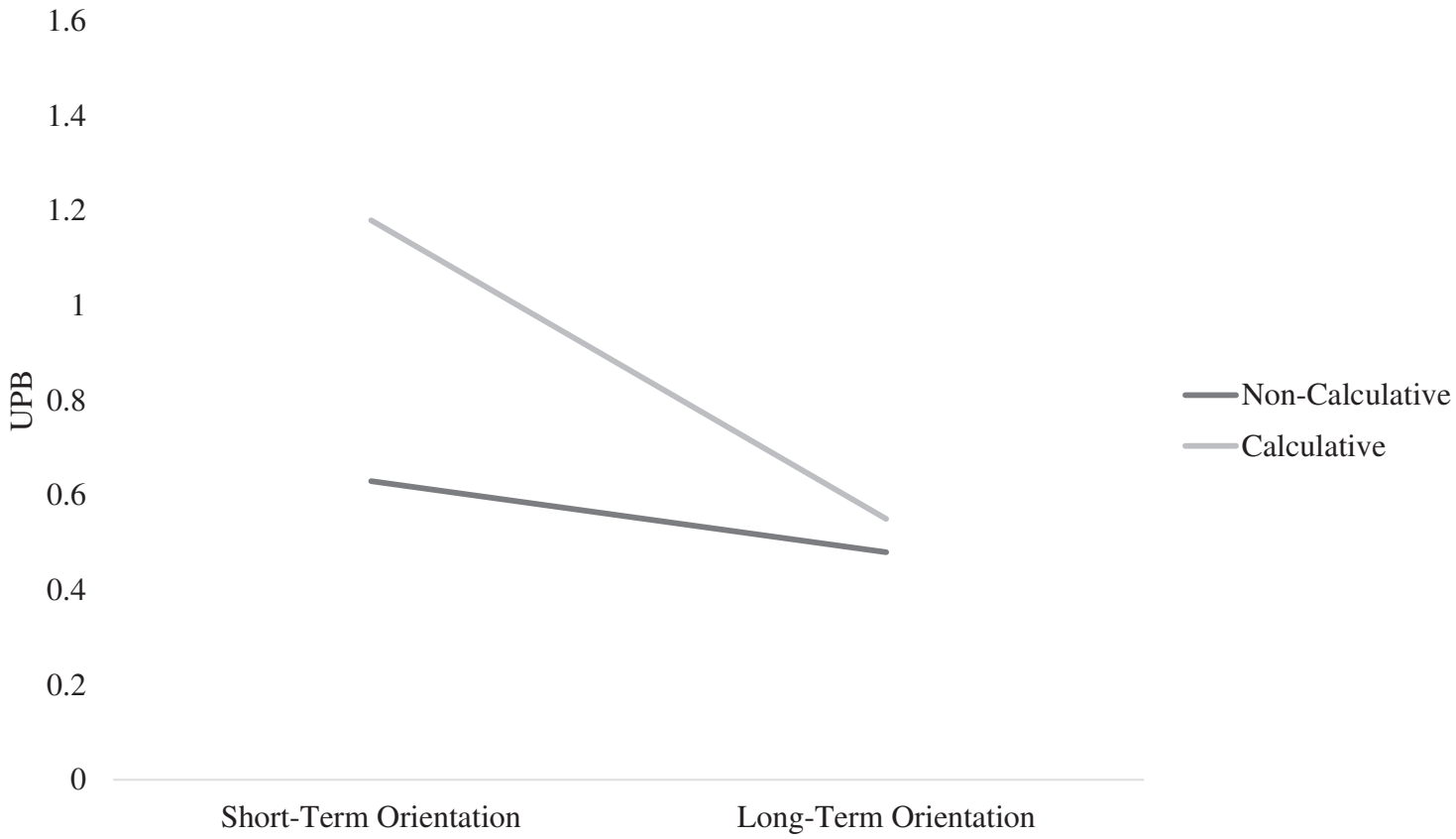
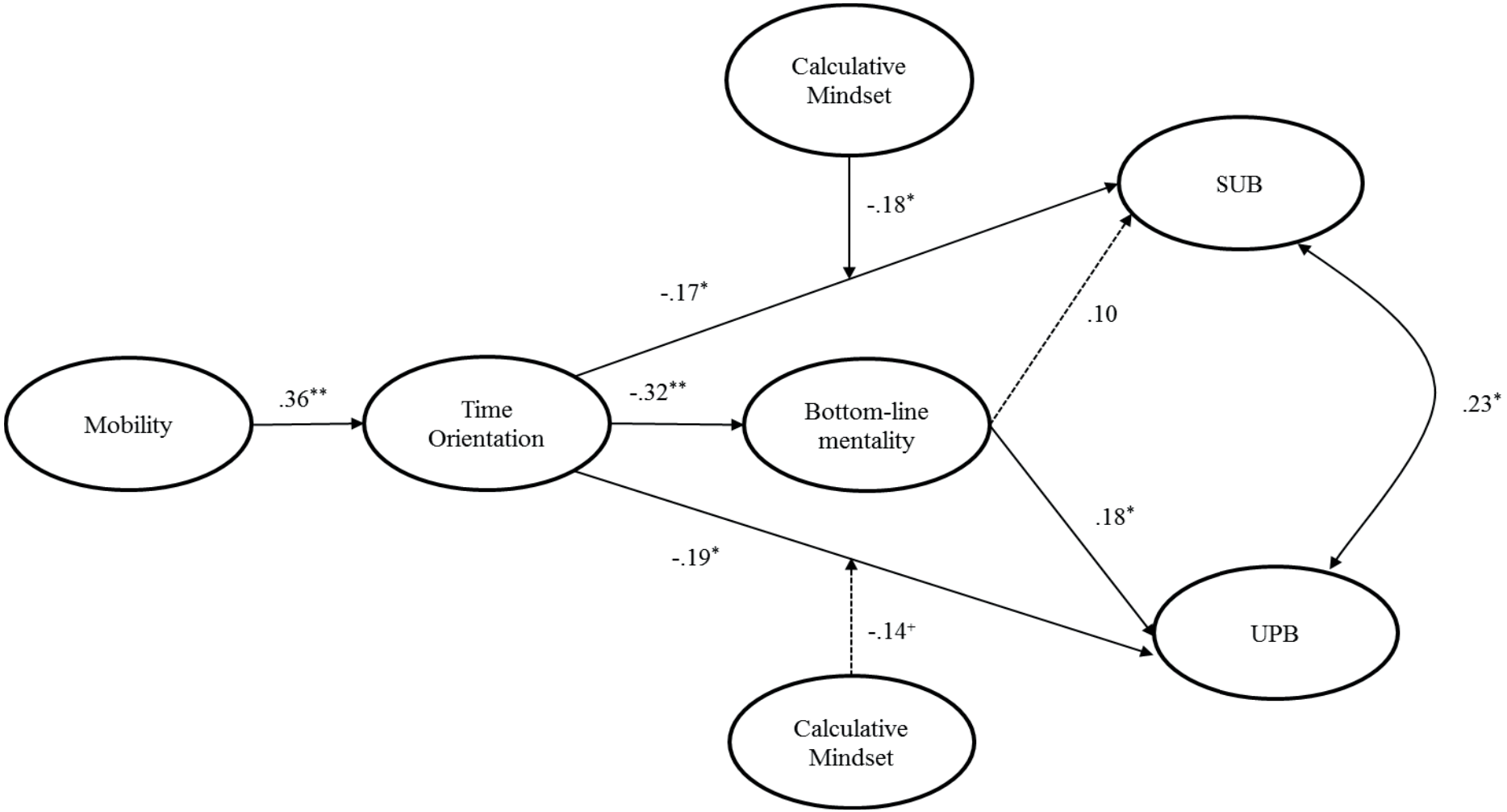


Figure 5. Standardized path coefficients for study 3.



Note. N = 198; Non-significant lines are dashed. *$p \leq .05$, **$p \leq .001$. Model fit; $\chi^2 = 15.27$, $df = 7$, RMSEA = .08, CFI = .97, SRMR = .04.

Figure 6. Plotted interaction on SUB, study 3.

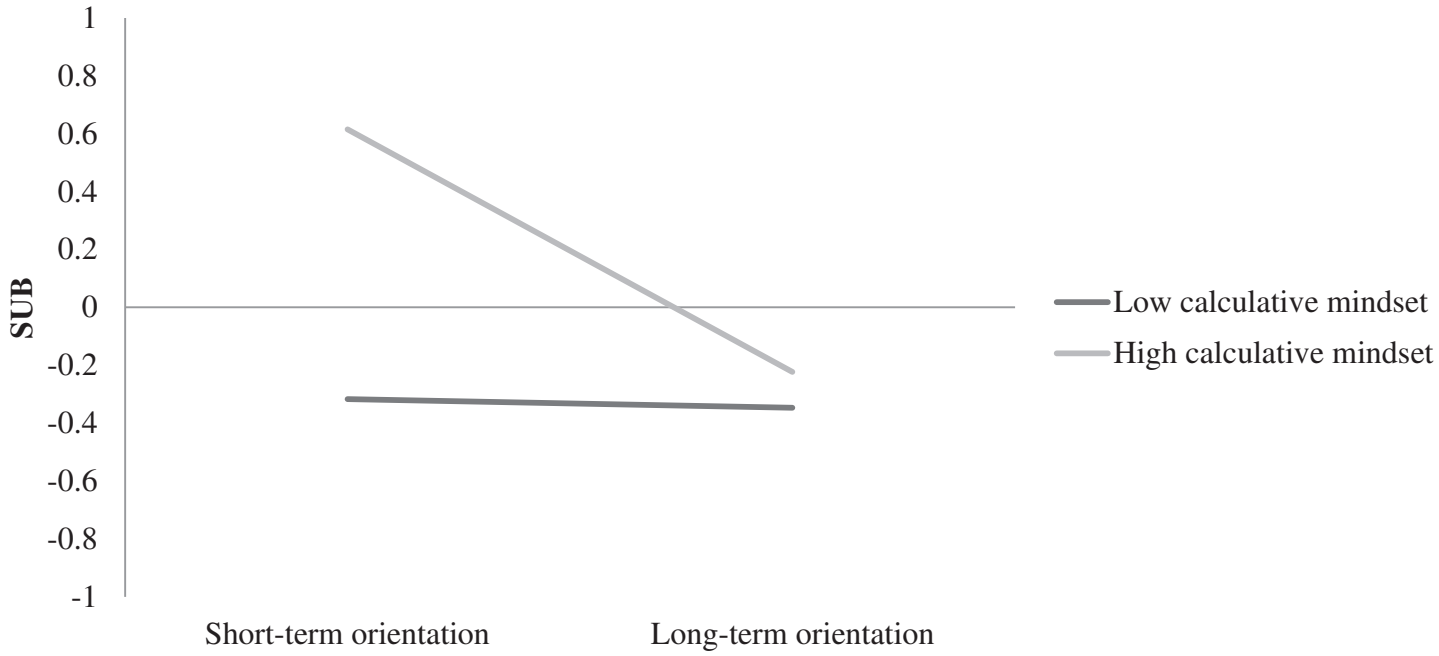
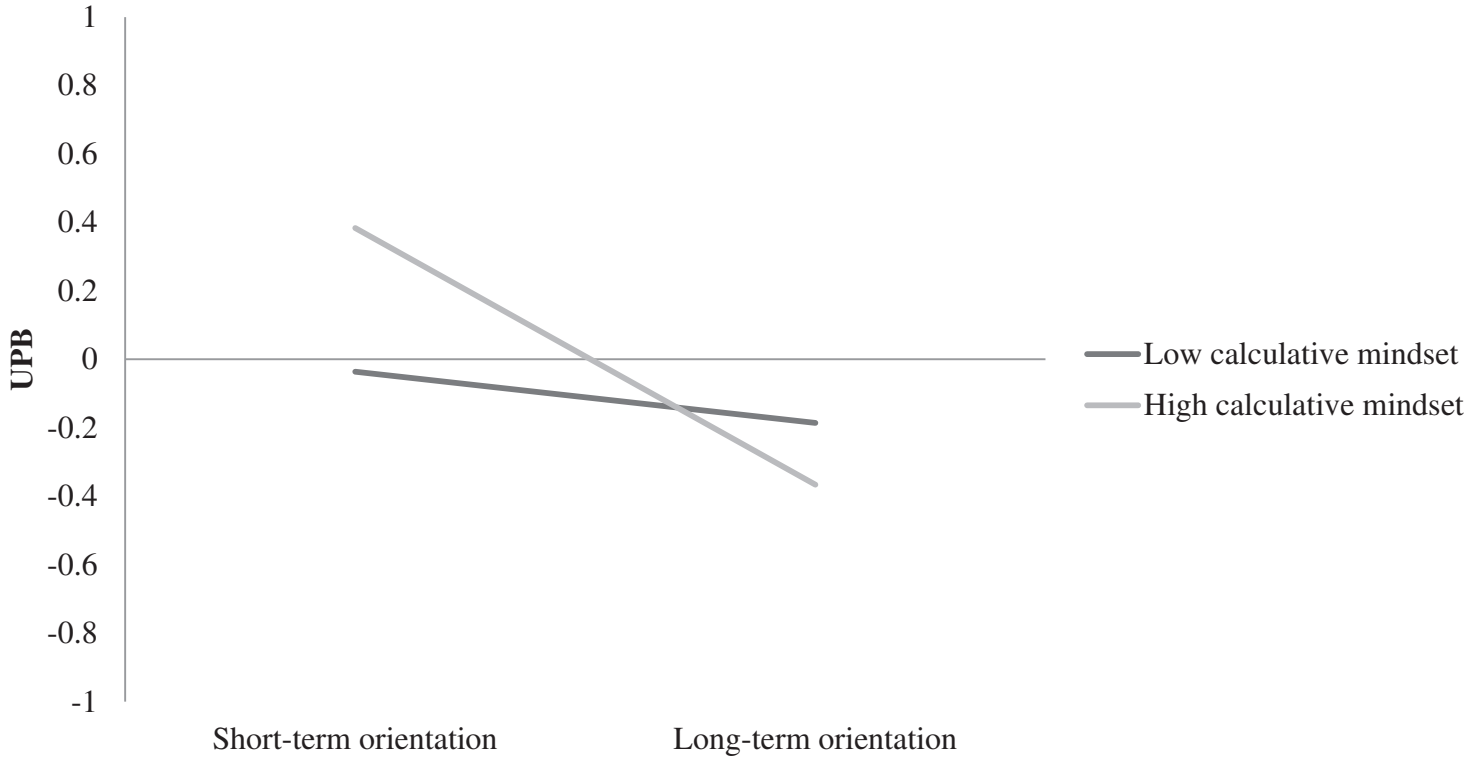


Figure 7. Plotted interaction on UPB, study 3.



APPENDIX C. STUDY MEASURES

Study 1 Measures.

Consideration of Future Consequences Scale (Petrolcelli, 2003)
Please indicate whether or not the statement is characteristic of you (1 = extremely uncharacteristic, 5 = extremely characteristic).

1. Often I engage in a particular behavior in order to achieve outcomes that may not result for many years.
2. I only act to satisfy immediate concerns, figuring the future will take care of itself. (r).
3. My behavior is only influenced by the immediate (i.e., a matter of days or weeks) outcomes of my actions. (r)
4. My convenience is a big factor in the decisions I make or the actions I take. (r)
5. I generally ignore warnings about possible future problems because I think the problems will be resolved before they reach crisis level. (r)
6. I think that sacrificing now is usually unnecessary since future outcomes can be dealt with at a later time. (r)
7. I only act to satisfy immediate concerns, figuring that I will take care of future problems that may occur at a later date. (r)
8. Since my day to day work has specific outcomes, it is more important to me than behavior that has distant outcomes. (r)

Bottom-line Mentality (Greenbaum et al., 2012) (BLM)
Within organizations, the term "bottom line" is usually used to refer to financial outcomes, such as profits, or to other performance outcomes. Please think about YOURSELF in regard to business dealings. Please indicate how strongly you agree with the following items REGARDING YOUR THINKING when working within your organization.
When working within my organization…

1. I treat the bottom line as more important than anything else.
2. I am solely concerned with meeting the bottom line.
3. I care more about profits than employee well-being.
4. I only care about the business.

Organizational Identification (Mael & Ashforth, 1992)
Please indicate how strongly you agree with the following statements. (1 = strongly disagree, 7 = strongly agree)

1. When someone criticizes my organization, it feels like a personal insult.
2. I am very interested in what others think about my organization.
3. When I talk about my organization, I usually say 'we' rather than 'they'.
4. My organization's successes are my successes.
5. When someone praises my organization, it feels like a personal compliment.

6. If a story in the media criticized my organization, I would feel embarrassed.

Unethical Pro-organizational behavior (Umphress et al., 2011)
Please indicate how strongly you agree with the following statements about your partner. (1 = strongly disagree, 7 = strongly agree)

1. If it would help my organization, I would misrepresent the truth to make my organization look good.
2. If it would help my organization, I would exaggerate the truth about my company's products or services to customers and clients.
3. If it would benefit my organization, I would withhold negative information about my company or its products from customers and clients.
4. If my organization needed me to, I would give a good recommendation on the behalf of an incompetent employee in the hope that the person will become another organization's problem instead of my own.
5. If my organization needed me to, I would withhold issuing a refund to a customer or client accidentally overcharged.
6. If needed, I would conceal information from the public that could be damaging to my organization.

Unethical behavior (Moore et al., 2012)
Please Rate the frequency with which you engage in each of the following behaviors, ranging from (1) "never" to (7) "very often.

1. Falsifying a receipt to get reimbursed for more money than you spent on business expenses.
2. Discussing confidential company information with an unauthorized person.
3. Damaging property belonging to my employer.
4. Taking property from work without permission.
5. Saying or doing something to purposely hurt someone at work.
6. Using an illegal drug or consuming alcohol on the job.
7. Making ethnic, religious, or racial remarks at work.

Temporal Depth Index (Bluedorn, 2002)
This set of questions concerns how you typically consider the past and the future when you make plans or decisions. Please use the following choices to items below by indicating the appropriate number on the drill-down menu in front of each statement. If you use choice 15 to respond to any of the items, also write the specific number of years on the blank after the item. (1 = One day, 2 = One week, 3 = Two weeks, 4= One month, 5 = Three months, 6 = Six months, 7 = Nine months, 8 = One year, 9 = Three years, 10 = Five years, 11 = Ten years, 12 = Fifteen years, 13 = Twenty years, 14 = Twenty-five years, 15 = More than twenty-five years)

1. When I think about short-term future, I usually think about things this far ahead.
2. When In think about the mid-term future, I usually think about things far ahead.
3. When In think about the long-term future, I usually think about things far ahead.
4. When I think about things that happened recently, I usually think about things that happened this long ago.

5. When I think about things that happened middle time ago, I usually think about things that happened this long ago.
6. When I think about things that happened long-time ago, I usually think about things that happened this long ago.

Demographic Questions

1. Choose the Industry of your Current Job: (Industry)
2. How old are you?
3. What is your gender?
4. What is your race?
5. What is your educational level?
6. What is your employment status?
7. How many years (rounded to the nearest whole number) have you been employed at your current job?
8. How many different jobs have you had in your life?
9. Please list the city, state (if applicable), and country where you were born.
10. Please list any city, state (if applicable), and country where you have lived, and how old you were when you moved there.
11. How many times in your life have you moved?
12. What is your nationality (e.g. American, Canadian, etc.)?
13. Do you feel comfortable communicating in English?
14. What is your first language?

Study 2a. Measures and Experiment manipulation materials

Calculative Mindset Manipulation (GRE Verbal)

Directions: Each passage in this group is followed by questions based on its content. After reading a passage, choose the best answer to each question. Answer all questions following a passage on the basis of what is stated or implied in that passage.

Most people agree that Black Sabbath is amongst the most influential bands for all heavy metal in general, and Doom-Metal is no exception; esp.,their Satanic lyric became a theme for later Doom-metal bands. Their early albums "Black Sabbath", "Paranoid", "Master Of Reality", "Vol. 4", "Sabbath Bloody Sabbath", and "Sabotage" are all without doubt, masterpieces, and without them Doom-Metal (or even metal in general) would not exist at all. While Black Sabbath was definitely well ahead of their time, and as such one of a kind, they certainly weren't without their contemporaries (Pentagram, Blue Cheer, Black Widow). Some of the earliest prototypes of Doom-Metal were in fact songs of the late sixties and early seventies that, whilst not wholly doomy, contained countless great riffs that came to shape the sound of Doom-Metal in later years. Such songs include Iron Butterfly's "Inna Gadda Da Vida". One of Black Sabbath's main contemporaries - Pentagram-can be counted as one of the earliest Doom bands around, often intertwining with the band Bedemon one could perhaps best label their style of music as "Proto Doom". Black Sabbath has a huge impact on their sound but they focused more on the

doomy side of this style. Thus creating some of the first ever Doom-metal records! The 1980s brought with them the first bona fide Doom-Metal acts. This was the era in which bands such as Def Leppard, Warrant, and Bon Jovi came to the foregrounds and professed to be "heavy metal", and where thrash/speed and death metal bands ruled the metal scene. The press also applied the term "heavy metal" in a nasty pigeonholing manner to any band that wore tight spandex and big hair. While there are so many bands during that time that were truly deserving to fly under the banner of Doom-Metal, they were vastly outnumbered by these Glam-metal acts. The eighties were also known for the end period of the NWOBHM, another semi-fast style of metal. So in an era where speed was the prominent factor in extreme music, Doom-Metal acts where greatly outnumbered, but this is the era where Doom-metal was mostly developed and created a name for itself. One 80s band that made Doom big was Trouble. Originally from Chicago, this band got together in 1979 but gained popularity from 1984 onwards. Trouble's music stands for slow, dragging heavy metal, clearly influenced by Black Sabbath. Due to Christian beliefs of the band and its effect on their lyrics the band initially fell under the label White-metal. Saint Vitus, another early doom-oriented band, had perhaps the biggest influence on the Doom-metal landscape (together with Candlemass). Their early work was on SST (Greg Ginn from Black Flag's label) and was mostly fronted by Wino who gained more fame later with semi-doom majors The Obsessed. Wino became one of the most legendary figures of Doom-metal in his own right. From his beginnings with The Obsessed, moving on to St. Vitus, and re-forming The Obsessed, he became one of the most prominent and influential figures within the Doom-metal scene. He now frequents the Stoner scene with his current band Spirit Caravan.

1. The passage is mainly concerned with____.

A. establishing Black Sabbath as the most influential bands of Doom-metal
B. giving a definition of Doom-metal as a rock genre
C. describing the development and introducing some master bands of Doom-metal
D. clarify the difference between Doom-metal and other metal genre.
E. introducing the Doom-metal genre to non-familiar rock fans

2. Which of the following is NOT true about the band Pentagram?

A. Pentagram is often entangled with another band.
B. Pentagram sets a good example for the style ―Proto Doom‖.
C. Pentagram ranks amongst the earliest Doom-metal band.
D. The author regard Pentagram as a main master band in the 1970s.
E. Pentagram‘s focus on doomy sides of Doom-metal affects Black Sabbath a lot.

3. The author cites Iron Butterfly"s "Inna Gadda Da Vida" (Line 13----14) in order to____.

A. give an example that shaped and influenced Black Sabbath‘s music style
B. point out one of the major resources of doomy riffs of later Doom-metal

C. illustrate the view that some bands of the late sixties and early seventies are more influential to later Doom-metal than Black Sabbath
D. indicate an example of the songs with great riffs enlightening later Doom-metal
E. contrast early bands and later Doom-metal bands

4. Which of the following bands is not regarded as a characteristic of Doom-metal according to the passage?

A. doomy atmosphere
B. spandex adornment
C. slow melody
D. Satanic theme
E. dragging riffs

5. Which of the following best states the organization of the passage?

A. A certain view is stated and illustrated with specified examples.
B. A chronological series of a certain development is stated.
C. A traditionally embraced standpoint is doubted and refuted.
D. Certain important facts are cited and commented on.
E. The significance of an assumption is reiterated in favor of a certain viewpoint.

Calculative Mindset Manipulation (GRE Math)

1. Add 0.98 + 45.102 + 32.3333 + 31 + 0.00009?

A. 368.573
B. 210.536299
C. 109.41539
D. 99.9975
E. 80.8769543

2. The total weight of a tin and the cookies it contains is 2 pounds. After ¾ of the cookies are eaten, the tin and the remaining cookies weigh 0.8 pounds. What is the weight of the empty tin in pounds?

A. 0.2
B. 0.3
C. 0.4
D. 0.5
E. 0.6

3. If Sam can do a job in 4 days that Lisa can do in 6 days and Tom can do in 2 days, how long would the job take if Sam, Lisa, and Tom worked together to complete it?

A. 0.8 days
B. 1.09 days
C. 1.23 days
D. 1.65 days
E. 1.97 days

4. What is the average (arithmetic mean) of all the multiples of ten from 10 to 190 inclusive?
A. 90
B. 95
C. 100
D. 105
E. 110

5. If 6 is 24% of a number, what is 40% of the same number?
A. 8
B. 10
C. 15
D. 20
E. 25

Unethical behavior scenario:
Imagine that you are a salesperson working in Gate Technologies, a software company. The year-end performance review is coming up soon and you are close to your annual sales target.
Moments ago, you received the following email from a potential customer, Chris.

Subject: Sales Inquiry
My company is thinking of buying some new software from Gate Technologies. I've read online that Gate Technologies software has compatibility issues with DMC computers. My office uses DMC computers, so I am concerned. Do you know of others who have had compatibility issues?
Thanks,
Chris

You have received complaints from previous customers about compatibility issues with DMC computers. Not telling Chris about these complaints will likely bring you to your annual sales target.

Unethical pro-organizational behavior scenario:
Imagine that you are a salesperson working in Gate Technologies, a software company. The year-end performance review is coming up soon and you are close to your annual sales target.
Moments ago, you received the following email from a potential customer, Chris.

Subject: Sales Inquiry
My company is thinking of buying some new software from Gate Technologies. I've read online that Gate Technologies software has compatibility issues with DMC computers.

My office uses DMC computers, so I am concerned. Do you know of others who have had compatibility issues?
Thanks,
Chris

You have received complaints from previous customers about compatibility issues with DMC computers. Not telling Chris about these complaints will likely bring you to your annual sales target.

Dependent Variable Measures

1. In the box below, please type a response to Chris that will be emailed to him. Please spend at least two minutes typing your response.
2. How do you justify the response you just wrote?
3. Please answer the following questions.

    1. Do you regret the choice you made?
    2. Would most people make the same decision you made if they were in your situation?
    3. How much did your decision in this task reflect who you really are?

4. How much would lying to Chris benefit you?
5. How much would lying to Chris benefit your company?

Consideration of Future Consequences Scale (Petrolcelli, 2003; as in Study 1)

Social Desirability (Strahan & Gerbasi, 1972)

Please indicate how strongly you agree with the following statements. (1 = strongly disagree, 7 = strongly agree)

1. I'm always willing to admit it when I make a mistake
2. I always practice what I preach
3. I never resent being asked to return a favor
4. I have never been irked when people expressed ideas very different from my own
5. I have never deliberately said something to hurt someone's feelings
6. I like to gossip at times
7. There have been occasions when I took advantage of someone
8. I sometimes try to get even rather than forgive and forget
9. At times I have really insisted on having things my own way
10. There have been occasions when I felt like smashing things

Demographic Questions (as in Study 1)

Study 2b. Measures

Calculative Mindset Initial Items

Please indicate how strongly you agree with the following. (1 = strongly disagree, 7 = strongly agree)

1. I tend to calculate the value of my relationships with others.
2. I calculate the value of my time spent with others.
3. 3. I do cost-benefit analyses in managing social relationships.
4. 4. I can calculate the importance of my social relationships.
5. I crunch the numbers when I experience conflict with others.
6. I keep track of balance in social transactions (giving and taking).
7. I try to quantify social values by giving them numerical values.
8. I see social situations (relationships) as a source of monetary gain.
9. I numerically calculate the value of time, relationships, and interactions.
10. I use numerical values to quantify what is the best situation for me.
11. I put a dollar value on the time, relationships, interactions, deeds.
12. I quantify my time, friendships, and deeds.
13. I am able to rank the importance of my social relationships.
14. I tend to convert everything into numbers (time, trust, love, money, etc) for cost-benefit analysis.
15. I see all of my social relationships in terms of who can benefit me the most.
16. I only keep the friendships that I view as "valuable."
17. I form relationships and connections which I have analyzed will be beneficial to my future.
18. I keep track of every social transaction.
19. I tend to befriend people for my own gain.
20. Before I befriend someone I mentally assess the benefit to myself of the friendships.
21. I help someone based on the expected value of the relationship.
22. I tend to objectively gauge the cost and benefits in managing social interactions.
23. I quantify the potential value that I can gain from the relationship with others.
24. I exert efforts in sustaining relationships which I have analyzed will be beneficial to my future.
25. I cut my social relationships which I have analyzed will be not beneficial to future.

Calculative Compliance (adapted from O'Reilly & Chatman, 1986)

Please indicate how strongly you agree with the following. (1 = strongly disagree, 7 = strongly agree)

1. Unless I'm rewarded for it in some way, I see no reason to expend extra effort on behalf of my coworkers.
2. How hard I work for the organization is directly linked to how much I am rewarded.
3. In order for me to get rewarded around here, it is necessary to express the right attitude.

4. My private views about the university are different than those I express publicly. (This item only loaded in the factor in one of the two studies)

Calculative commitment (Gustafsson, Johnson, & Ross, 2005)
Please indicate how strongly you agree with the following. (1 = strongly disagree, 7 = strongly agree)

1. It pays off economically to work with my coworkers.
2. I would suffer economically if my social relationship were broken.
3. My coworkers bring more advantages for me when compared to those from my previous company.

Machiavellianism (Dahling et al., 2008)
Please indicate how strongly you agree with the following. (1 = strongly disagree, 7 = strongly agree)

1. I believe that lying is necessary to maintain a competitive advantage over others.
2. The only good reason to talk to others is to get information that I can use to my benefit.
3. I am willing to be unethical if I believe it will help me succeed.
4. I am willing to sabotage the efforts of other people if they threaten my own goals.
5. I would cheat if there was a low chance of getting caught.
6. I like to give the orders in interpersonal situations.
7. I enjoy having control over other people.
8. I enjoy being able to control the situation.
9. Status is a good sign of success in life.
10. Accumulating wealth is an important goal for me.
11. I want to be rich and powerful someday.
12. People are only motivated by personal gain.
13. I dislike committing to groups because I don't trust others.
14. Team members backstab each other all the time to get ahead.
15. If I show any weakness at work, other people will take advantage of it.
16. Other people are always planning ways to take advantage of the situation at my expense.

Utilitarianism Scale (Robinson, 2012)
Please indicate how strongly you agree with the following. (1 = strongly disagree, 7 = strongly agree)

1. Rules and laws are irrelevant; whether an action produces happiness is all that matters when deciding how to act.
2. Rules and laws should only be followed when they maximize happiness.
3. If rules and laws do not maximize happiness for people they should be ignored.
4. The only moral principle that needs to be followed is that one must maximize happiness.

5. People that fail to maximize happiness are doing something morally wrong.

Social Undermining (Duffy, Ganster, and Pagon; 2002)
How often have your co-workers intentionally: (Seven point Likert scale, Frequency)

1. Insulted you?
2. Gave you the silent treatment?
3. Spread rumors about you?
4. Delayed work to make you look bad or slow you down?
5. Belittled your ideas?
6. Hurt your feelings?
7. Talked bad about you behind your back?
8. Criticized the way you handled things on the job in a way that was not helpful?
9. Did not help you as much as they had promised?
10. Gave you incorrect or misleading information about a job?
11. Competed with you for status and recognition?
12. Let you know they did not like you or something about you?
13. Did not defend you when someone spoke poorly about you?

Workplace Incivility (Cortina, Magley, Williams, & Langhout, 2004)
Please indicate how strongly you agree with the following. (1 = strongly disagree, 7 = strongly agree)

1. Put people down or was condescending to others?
2. Paid little attention to statements or showed little interest in others opinion at work?
3. Made demeaning or derogatory remarks about others at work?
4. Addressed people at work in unprofessional terms, either publicly or privately?
5. Ignored or excluded others from professional camaraderie?
6. Doubted judgment on a matter over which others have responsibility?
7. Made unwanted attempts to draw others into a discussion of personal matters?

Deviance (Bennet & Robinson, 2000)
Please indicate how strongly you agree with the following. (1 = strongly disagree, 7 = strongly agree)

1. Made fun of someone at work.
2. Said something hurtful to someone at work.
3. Made an ethnic, religious, or racial remark at work
4. Cursed at someone at work.
5. Played a mean prank on someone at work.
6. Acted rudely toward someone at work.
7. Publicly embarrassed someone at work.

Demographic Information (As in Study 1)

Study 3. Measures

Relational Mobility (Yuki et al., 2007)

Please indicate how strongly you agree with the following. (1 = strongly disagree, 7 = strongly agree)

1. They have many chances to get to know other people.
2. It is common for these people to have a conversation with someone they have never met before.
3. They can choose who they interact with.
4. There are few opportunities for these people to form new friendships. (r)
5. It is uncommon for these people to have a conversation with people they have never met before. (r)
6. If they did not like their current groups, they would leave for better ones.
7. It is often the case that they cannot freely choose who they associate with. (r)
8. It is easy for them to meet new people
9. Even if these people were not completely satisfied with the group they belonged to, they would usually stay with it anyway. (r)
10. These people are able to choose the groups and organizations they belong to.
11. Even if these people were not satisfied with their current relationships, they would often have no choice but to stay with them. (r)
12. Even though they might rather leave, these people often have no choice but to stay in groups they don't like. (r)

Calculative Mindset (From Study 2b Kim, 2016)

Please indicate how strongly you agree with the following. (1 = strongly disagree, 7 = strongly agree)

1. I tend to calculate the value of my relationships with others.
2. I see social situations (relationships) as a source of monetary gain.
3. I put a dollar value on the time, relationships, interactions, deeds.
4. I am able to rank the importance of my social relationships.
5. I tend to convert everything into numbers (time, trust, love, money, etc) for cost-benefit analysis.
6. I see all of my social relationships in terms of who can benefit me the most.
7. I keep track of every social transaction.
8. Before I befriend someone I mentally assess the benefit to myself of the friendships.
9. I help someone based on the expected value of the relationship.
10. I cut my social relationships which I have analyzed will be not beneficial to future.

Consideration of Future Consequences Scale (Petrolcelli, 2003; as in Study 1)

Bottom-line Mentality (Greenbaum et al., 2012; as in Study 1)

Social Desirability (Strahan & Gerbasi, 1972; as in Study 2a)

Organizational Identification (Mael & Ashforth, 1992; as in Study 1)

Unethical Pro-organizational behavior (Umphress et al., 2011; as in Study 1)

Unethical behavior (Moore et al., 2012; as in Study 1)

Demographic Questions (as in Study 1)

APPENDIX D: IRB APPROVAL

1. Study 1 IRB Approval
2. Study 2a IRB Approval
3. Study 2b IRB Approval
4. Study 3 IRB Approval

1. Study 1 IRB approval

Oklahoma State University Institutional Review Board

Date:	Thursday, May 07, 2015
IRB Application No	BU154
Proposal Title:	Effects of time orientation and bottom-line mentality on unethical behaviors
Reviewed and Processed as:	Exempt

Status Recommended by Reviewer(s): Approved **Protocol Expires: 5/6/2018**

Principal Investigator(s):

Cynthia Wang
219 Business Building
Stillwater, OK 74078

Joongseo Kim
226 Hanner
Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

- The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1.Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval. Protocol modifications requiring approval may include changes to the title, PI advisor, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms
2.Submit a request for continuation if the study extends beyond the approval period. This continuation must receive IRB review and approval before the research can continue.
3.Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of the research; and
4.Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Dawnett Watkins 219 Cordell North (phone: 405-744-5700, dawnett.watkins@okstate.edu).

Sincerely,

Hugh Crethar, Chair
Institutional Review Board

2. Study 2a IRB Approval

Oklahoma State University Institutional Review Board

Date:	Friday, March 13, 2015
IRB Application No	BU155
Proposal Title:	Calculative mindset as a boundary condition of unethical behaviors
Reviewed and Processed as:	Exempt

Status Recommended by Reviewer(s): Approved Protocol Expires: 3/12/2018

Principal Investigator(s):

Cynthia Wang
219 Business Building
Stillwater, OK 74078

Joongseo Kim
226 Hanner
Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

☒ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1.Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval. Protocol modifications requiring approval may include changes to the title, PI advisor, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms
2.Submit a request for continuation if the study extends beyond the approval period. This continuation must receive IRB review and approval before the research can continue.
3.Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of the research; and
4.Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Dawnett Watkins 219 Cordell North (phone: 405-744-5700, dawnett.watkins@okstate.edu).

Sincerely,

Hugh Crethar, Chair
Institutional Review Board

3. Study 2b IRB Approval

Oklahoma State University Institutional Review Board

Date:	Thursday, December 17, 2015
IRB Application No	BU1569
Proposal Title:	Calculative Mindset Scale Development
Reviewed and Processed as:	Exempt

Status Recommended by Reviewer(s): Approved Protocol Expires: 12/16/2018

Principal Investigator(s):

Cynthia Wang
219 Business Building
Stillwater, OK 74078

Joongseo Kim
004 Cordell North
Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

■ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1.Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval. Protocol modifications requiring approval may include changes to the title, PI advisor, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms
2.Submit a request for continuation if the study extends beyond the approval period. This continuation must receive IRB review and approval before the research can continue.
3.Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of the research; and
4.Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Dawnett Watkins 219 Scott Hall (phone: 405-744-5700, dawnett.watkins@okstate.edu).

Sincerely,

Hugh Crethar, Chair
Institutional Review Board

4. Study 3 IRB Approval

Oklahoma State University Institutional Review Board

Date:	Tuesday, February 23, 2016	Protocol Expires:	5/6/2018
IRB Application No:	BU154		
Proposal Title:	The effects of time orientation and bottom-line mentality		
Reviewed and Processed as:	Exempt **Modification**		

Status Recommended by Reviewer(s) **Approved**

Principal Investigator(s):

Cynthia Wang
219 Business Building
Stillwater, OK 74078

Joongseo Kim
004 Cordell North
Stillwater, OK 74078

The requested modification to this IRB protocol has been approved. Please note that the original expiration date of the protocol has not changed. The IRB office MUST be notified in writing when a project is complete. All approved projects are subject to monitoring by the IRB.

- The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

The reviewer(s) had these comments:

Mod to 1) add working adults from Niagara Bottling Company, 2) have this additional group fill out surveys in person, 3) add 1,000 subjects, 4) give the Niagara employees a chance to win a $100 gift card, 5) paper tents will be used by the Niagara employees during the survey time on which each person in the room will write an alphabet letter and others will use that letter to answer questions about a co-worker in the room. No identifiers will be used such as names or physical descriptions and team leaders will not record employee names and their chosen letter, and 6) change the title from "Effects of time orientation and bottom-line mentality on unethical

Signature :

Hugh Crethar, Chair, Institutional Review Board

Tuesday, February 23, 2016
Date

VITA

Joongseo Kim

Candidate for the Degree of

Doctor of Philosophy

Title: BACK TO THE FUTURE: THE EFFECT OF TIME ORIENTATION ON UNETHICAL BEHAVIOR

Major Field: Business Administration

Biographical:

Education:

Completed the requirements for the Doctor of Philosophy in Management at Oklahoma State University, Stillwater, Oklahoma in May, 2016.

Completed the requirements for the Master of Science in Management at the University of Colorado at Denver, Denver, CO in 2009.

Completed the requirements for the Bachelor of Arts in Business Administration at Hankuk University of Foreign Studies, South Korea in 2003.

Experience:

Administrative Non-commissioned Officer (NCO), 2nd Battalion, 9th Infantry Regiment (M), 1st Brigade Combat Team, 2nd Infantry Division, 8th Army

Professional Memberships:

Academy of Management, 2011-present
Society for Industrial/Organizational Psychology, 2010-present
Southern Management Association, 2011-present