Management Accounting and Control: The Role of Ethical Reasoning, Goals, Climate, and Moral Disengagement on Unethical Behavior

by

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ABSTRACT

Management accounting and control (MAC) is not only a collection of system processes that provides usable firm information, it is also increasingly seen to be a key mechanism in reinforcing employee ethical behavior. The literature suggests a coordinated emphasis of multiple MAC systems is required to be successful in promoting ethical behavior. I deploy a research instrument in which an accounting manager is pressured by their CFO to commit fraud by not disclosing material contingent liabilities as part of an IPO. I investigate the role of the informal work climate dimension of social hierarchy and the formal MAC system of goal setting on accounting manager unethical behavior through the theoretical lens of moral disengagement.

Specifically, I find that the social hierarchy power (team) aspect of my 2X1 randomized experimental manipulation is positively (negatively) associated with unethical behavior. I also employ scale measures of power (team) social hierarchy and find that they are associated with more (less) unethical behavior as well. Findings also indicate that my scale measures of outcome (learning) goals are also consistently associated with more (less) unethical behavior, as predicted. Results also suggest that situational state moral disengagement is strongly associated with accounting fraud while more well-known measures of ethical reasoning, social consensus and seriousness of consequences attenuate such accounting manager unethical behavior. The situational influences of fraud seriousness of consequences and situational displacement of responsibility both moderate my social hierarchy power (team) manipulation. Lastly, I show that a combination of unethical MAC systems display reinforcing effects for stronger accounting manager fraudulent behavior.

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CHAPTER I

INTRODUCTION

Management accounting and control (hereafter MAC) subsumes corporate accounting functions such as budgeting, planning, reporting, as well as information and performance management systems (Hirth-Goebel & Weißenberger, 2019; Hall, 2016). However, owing to management accountants' influence on decision-making and systems design and management, MAC practice also plays a key role in organizational ethical behavior (Musbah, Cowton, & Tyfa, 2016; McLeod, Payne, & Evert, 2016; Maas & Matejka, 2009). MAC research has evolved from a focus on individual ethical research to a newer context that is concerned with a broader organizational ethical research agenda (Bellora-Bienengräber, Radtke, & Widener, 2021; Endenich & Trapp, 2020). However, despite some move towards more of an ethics focus, such MAC research remains scant (Endenich & Trapp, 2020). Therefore, the purpose of this study is to address this gap in the MAC literature by assessing the role of ethical reasoning, goals, organizational climate, and moral disengagement of management accountants' unethical behavior when facing an initial public offering (IPO) information asymmetry dilemma about whether or not to disclose material contingent liabilities.

The dearth of MAC ethics behavioral research is surprising, given that the array of recent MAC scandals is extensive. Since the mid-nineties we witnessed a succession of major financial accounting and MAC failures that include Enron, WorldCom, Tyco, Parmalat, HealthSouth, AIG, Global Crossing, and Lehman Brothers as well as more recently Wells Fargo, Volkswagen, and Deutsche Bank (Bellora-Bienengräber et al., 2021; Endenich & Trapp, 2020; Cugueró-Escofet & Rosanas, 2017). Society has increasingly called for an improved understanding of how to achieve more pervasive and persistent ethical behavior in management accounting (Hirth-Goebel & Weißenberger, 2019; Perryer & Scott-Ladd, 2014), yet relatively

little is known about how to mitigate MAC opportunism (Endenich & Trapp, 2020). My study addresses these issues.

The Wells Fargo fake accounts scandal aptly illustrates two important factors that are associated with unethical behavior that motivate my study. The New York Times reported, "[Wells Fargo's] top executives say that because they have eliminated the aggressive sales targets that spurred bad behavior, the bank's culture has changed. Many employees say that is news to them."[1] As the quote suggests, one source of undesirable behavior is when firms aggressively emphasize financial target goals, which incentivizes employees to manipulate information to achieve performance measure success (Bellora-Bienengräber et al., 2021; Merchant, 1990). Another source of undesirable behavior implicated by the above quote is work climates have been shown to be linked to unethical decision-making (Arnaud & Schminke, 2012; Kish-Gephart, Harrison, & Treviño, 2010).

Given the salience of organizational goals and work climate in fostering fraud such as at Wells Fargo, the primary focus of my study is to assess the influence of a combination of two MAC systems: goal-setting (individual and formal) and organizational climate (organizational and informal), on unethical behavior. My scenario setting relates to a realistic IPO information asymmetry situation adapted from Musbah, Cowton, & Tyfa (2016) about whether or not the accounting manager participant, taking on the role as the scenario controller, should disclose material contingent liabilities relating to COVID-19. To assess controllers' compliance pressure from superiors (Hartmann, & Maas, 2010; Davis, DeZoort, & Kopp, 2006), the scenario CFO is encouraging the controller to postpone disclosure until after the IPO is completed to enhance equity funding, which could be characterized as fraud. Hence, my study investigates how to best employ goal setting and climate MAC systems to manage the firm ethically by providing management with explicit goal and climate "levers" that will enhance moral organizational decision-making.

[1] Flitter, E., & Cowley, S. (2019, March 10). A Bank Says It's Reformed. Workers Differ. *The New York Times*, p. A1.

The secondary focus of my study is to assess the role of ethical reasoning and both dispositional trait and situational state (West & Fleischman, 2022) measures of moral disengagement on accounting manager unethical behavior. Moral disengagement, as initially developed by Bandura (1986), refers broadly to the suspension of one's self-regulatory ethical processes, through either dispositional trait or situational state influences, allowing one to engage in otherwise unethical behavior (Detert, Treviño, & Sweitzer, 2008; Barsky 2011). Hence, my primary study theoretical lens is the theory of moral disengagement (Bandura 1986; Detert et al., 2008; Barsky 2011; Newman, Le, North-Samardzic, & Cohen, 2020). My supplemental theoretical lens is Rest's (1986) ethical reasoning model as reinforced by moral intensity (Jones, 1991).

The order of my regression investigation is as follows. I first investigate the ethical effects of work social climate MAC systems on participant unethical behavior via a 2x1 randomized experimental design. Specifically, I manipulate organizational social climate proxied by team hierarchy (values workplace reputation and reliable judgment) versus power hierarchy (values having many subordinates and controlling company resources) using variations in the study scenario.[2] Second, I investigate the association of this manipulation with the unethical behavior dependent variable while controlling for established ethical reasoning measures (ethical judgment and moral intensity) in order to test the manipulation's face validity and theoretical consistency (Rest, 1986) as an independent variable.

Third, research assessing the confluence of MAC and ethics has been relatively rare (Hirth-Goebel & Weißenberger, 2019; Bampton & Cowton, 2013). This deficit of MAC and ethics research is surprising in light of the fact that management accountants

[2] I also initially manipulated *goal type* (learning goals versus outcome goals) using scenario differences. However, the association of this manipulation with the unethical behavior dependent variable is insignificant. When I investigated this insignificance using a post experimental question, participants apparently viewed learning goals (focus on improving quality and performance) and outcome goals (focus on achieving stated targets and measurement against coworkers) similarly, given that they indicated both are pretty typical in most organizations. Given the complexity of the study and the numerous significant findings that I discuss subsequently, for purposes of parsimony I drop further discussion of the goal type manipulation.

regularly interact with top management and routinely shape managerial decisions (Endenich & Trapp, 2020; Goretzki, Strauss, & Weber, 2013; Lambert & Sponem, 2012). MAC is the firm function that provides information for managerial decision-making and manages information systems with the intention of aligning employees with firm interests and objectives (van Veen-Dirks, 2010; Sprinkle, 2003). Hence, there has been a call for research into the relationship between unethical behavior and a firm's ethical infrastructure and management control systems (the term generally used for formal MAC systems, see Figure 1) (Bellora-Bienengräber et al., 2021; Burney, Radtke, & Widener, 2017; Tenbrunsel, Smith-Crowe, & Umphress, 2003), which subsumes goal setting and climate factors that I address directly. Specifically, research underscores the conception that organizational attributes may determine employee ethical behavior more so than individual employee characteristics (Goebel & Weißenberger, 2017; Kaptein, 2011a, 2011b; Pimentel, Kurtz, & Elenkov, 2010; Schminke, Arnaud, & Kuenzi, 2007). This would support the idea that employee unethical behavior sprouts from 'bad barrel' type organizational environments (Treviño & Youngblood, 1990), which further explains and motivates why I assess both organizational goals and corporate climate. With a potential mix (goals and climate) of accounting ethical control systems, few studies have investigated the interaction of various systems as a system combination "package" (Otley, 2016). My study addresses this gap in the literature by assessing the potential integrative relationship between goals and climate. Hence, the third step of my evaluation is to assess the combined effect of constructs that measure social hierarchy (power and team climate) as well as goal setting (learning and outcome goals) to analyze an ethical reinforcement or impediment impact of these two MAC system packages. Just as important as having both types of components (formal measurement goals and informal climate) is the need to align the two to work together (Bellora-Bienengräber et al., 2021).

Fourth, to comprehensively assess the moral disengagement effects when controllers are informally influenced to commit unethical acts (Musbah et al., 2016;

Liessem, Schedlinsky, Schwering, & Sommer, 2015), I assess the dual roles of 1) a control measure of individual dispositional trait moral disengagement (Moore, Detert, Treviño, Baker, & Mayer, 2012), and 2) a measure of situational state moral disengagement: the displacement of responsibility scale (Barsky, 2011).[3] In addition to main effects relating to study focal variables, I also investigate mediation (goal setting) and moderation influences (moral intensity seriousness of consequences and state moral disengagement displacement of responsibility), on the unethical behavior dependent variable while also assessing goal and climate (social hierarchy) alignment. Hence, given the above four components of my regression analysis, the study's primary research question is: What is the association of the social hierarchy manipulation, ethical reasoning, measures of MAC goals and climate, and moral disengagement on participant – controller unethical behavior in an IPO contingent liability situation in which the CFO is encouraging the controller to commit fraud?

To experimentally conduct this study, I administered my survey to 471 accounting managers with more than 10 years of experience obtained from the Centiment[4] platform. The major OLS regression findings of this study are as follows. First, I find that the power aspect of the social hierarchy experimental manipulation is positively associated with the unethical behavior dependent variable, while the ethical reasoning and moral intensity variables are negatively associated with unethical behavior, as predicted. I also find that the moral intensity dimension of seriousness of consequences moderates (weakens) the power aspect of the social hierarchy manipulation such that the interaction is associated with reduced accounting manager unethical behavior. Second, when the social hierarchy climate (power and team) and goal setting (learning and outcome) construct measures are added to the model, team social hierarchy and goal setting learning variables reduce unethical behavior, while

[3] Barsky (2011) is referenced in two accounting survey articles: Merchant and White (2017), *Advancements in Management Accounting*, and Liessem et al. (2015), *Journal of Management Control*. Barsky's (2011) Moral Disengagement measurement scales were used by Chong & Wang (2019) in an article for the *European Accounting Review* but in a general industrial firm manager setting not specific to accounting.

[4] Centiment is a market research company that provides respondent panels, survey tools, and other research services (see https://www.centiment.co/)

power social hierarchy and goal setting outcome variables increase unethical behavior, as predicted. Third, both the dispositional trait and situational state moral disengagement measures enhance accounting manager unethical behavior, consistent with the moral disengagement theoretical lens. Fourth, the situational state moral disengagement measure (displacement of responsibility) moderates (strengthens) the social hierarchy experimental manipulation to further enhance unethical behavior. Fifth, I find that the interaction alignment of social hierarchy (climate) power with goal setting outcome MAC systems increases management accountant unethical behavior. Sixth, results suggest that the situational state moral disengagement measure (displacement of responsibility) moderates the alignment of social hierarchy power and goal setting outcome variables (three-way interaction) to further enhance accounting manager unethical behavior. Finally, Hayes (2018) PROCESS results suggest that the goal setting learning dimension mediates the relationship between the social hierarchy experimental manipulation and the unethical behavior dependent variable.

One of the key contributions of this study is to demonstrate that management accountants need to be aware that an alignment of social hierarchy power and goal setting outcome MAC systems can inadvertently enhance organizational unethical behavior. Additionally, this study utilizes new measures of ethical behavior (organizational situational state moral disengagement) and organizational work climate (social hierarchy) not previously used in combination in the MAC literature. Assessing these variables in conjunction with ethical reasoning aids our understanding of how these variables are associated with each other, which provides insight to management accountants to attenuate opportunistic behavior. Collectively, my study answers the call for research into the relationship between unethical behavior and a firm's MAC systems and ethical infrastructure (Bellora-Bienengräber et al., 2021; Burney et al., 2017; Tenbrunsel et al., 2003), by addressing these factors concurrently.

The remainder of this manuscript is organized as follows. The next section provides the literature review and hypotheses development for the study, while also

presenting the theoretical frameworks that underpin the hypotheses. Section 3 presents the method of the study, including a discussion of the survey sample as well as the measures employed. Section 4 provides the statistical findings of the study, while Section 5 provides conclusions and managerial implications for the study findings. Appendix A provides variable definitions for the study while Appendix B presents the study behavioral instrument.

CHAPTER II

LITERATURE REVIEW AND HYPOTHESES

Moral Disengagement Theoretical Lens

To assess the impact of my variables of interest on the unethical behavior dependent variable, I employ moral disengagement as my study's theoretical lens. The theory of moral disengagement, developed by Bandura (1986, 1990, 1991, 1999, 2002; Bandura, Barbaranelli, Caprara, & Pastorelli, 1996), proposes that individuals have the capacity to regulate their ethical behavior[5] but this self-regulation can be circumvented if they opt to morally disengage from ethical decision-making. Moral disengagement permits accounting professionals and other employees to engage in undesirable or unethical behavior without cognitive conflict (Moore, 2008, 2015; Barsky, 2011; Detert et al., 2008; Johnson & Buckley, 2015; Johnson & Connelly, 2016). Moral disengagement has not been widely used in a business context (Newman et al., 2020; Egels-Zandén, 2017; Barsky, 2011; Moore, 2008), as initial applications were in the child development, bullying, military, and terrorism psychology fields (Egels-Zandén, 2017; Moore, 2008, 2015). More recently, however, business researchers have identified moral disengagement as a credible theory to explain corporate scandals such as Madoff and Enron (Newman et al., 2020; Kish-Gephart, Detert, Treviño, Baker, & Martin, 2014). Calls for its wider use in a business context

[5] Early discussions of ethics in the business context focused on when moral duties to the group clashed with organizational responsibilities (Chonko & Hunt, 1985). Later, ethics as a prescription to do the right thing was promoted (Hunt, Wood, & Chonko, 1989). Jones (1991) gave a more complete definition of ethics as a decision that fulfills both legal and communally acceptable obligations, which interestingly foreshadows the current observation of a necessary formal and informal ethical structure, that this paper will explore below. Moving beyond prescriptive statements, a parallel line of research suggests that ethical behavior has a contextual element and can encompass a broader definition based on moral philosophy and situation (Reidenbach & Robin, 1988). Mintz & Morris (2020) direct this contextual stream towards a more usable practice by stating that ethics should provide guidance and influence people's decision-making in a variety of situations. The flow of ethics research has therefore been more towards a structured informal definition. It includes references to generally accepted moral norms (perhaps like generally accepted accounting principles), adherence to social contracts and consideration and attention to others within and without the organization (Treviño, Weaver, & Reynolds, 2006; Vidaver-Cohen, 1998).

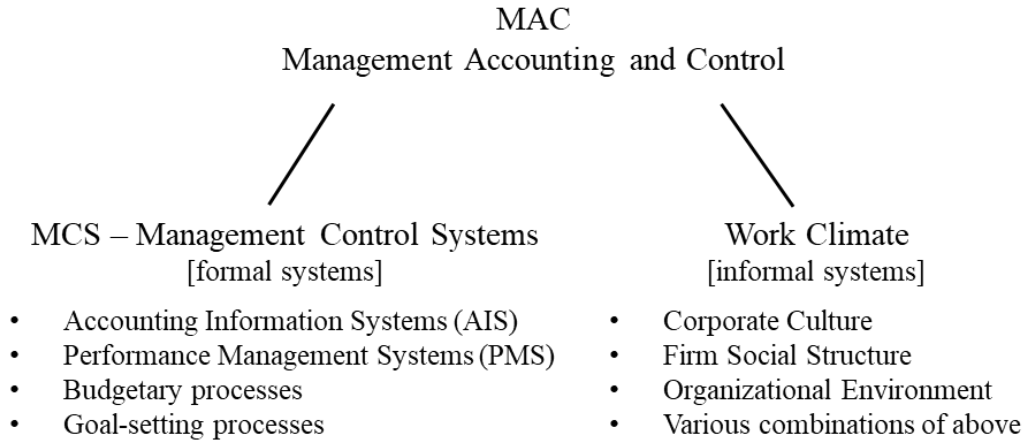
have been made (Newman et al., 2020; Egels-Zandén, 2017; Johnson & Buckley, 2015), which further motivates my use of this theoretical lens.

According to Bandura's (1990) theory of moral disengagement, people have personal standards of ethical behavior that they will tend to avoid infringing on if possible (Bonner, Greenbaum, & Mayer, 2016; Beaudoin, Cianci, & Tsakumis, 2015; Barsky, 2011; Alnuaimi, Robert, & Maruping, 2010). However, this self-regulatory behavior can be suspended if an individual engages in a rationalization process that then allows them to bypass a more regular ethical reasoning process (Detert et al., 2008; Moore, 2015, 2008). In effect, moral disengagement temporarily disconnects the link between an individual's internal ethical standards and their unethical behavior (Moore et al., 2012). Though the academic development of moral disengagement is still in early stages, it is theorized that the process of moral disengagement occurs before other more deliberative ethical reasoning processes (Moore et al., 2012).

Overview - Intersection of MAC and Ethics

Management accounting and control (MAC) is a collection of system processes that provides usable information to firm decision-makers (Hirth-Goebel & Weißenberger, 2019). The information generated by MAC systems can be both financial and non-financial, but traditionally the purpose of these systems is to improve financial performance (Banker, Potter, & Srinivasan, 2000; Ittner & Larcker, 1998). The underlying mechanism of MAC systems is to provide control incentives to employees with the intention of aligning their self-interested actions with the firm's objectives (van Veen-Dirks, 2010). MAC systems research has traditionally concentrated on goal setting, as well as budgeting, reward systems, and other control systems (Endenich & Trapp, 2020). However, early MAC research identified that these same systems had the capacity to influence firm climate values that were deemed necessary for attaining strategic firm objectives (Foster & Young, 1997). Figure 1 provides a classification of common MAC terminology.

Figure 1. Classification of Common MAC Terminology



Because of the wide ambit of MAC information and systems, management accountants have an expansive range of responsibilities within the firm which includes budgeting, planning, monitoring, performance reporting, and forecasting, among others (Hirth-Goebel & Weißenberger, 2019; Woelfel, 1986). Beyond simple information processing, management accountants have increasingly taken on the roles of advisors and business partners (Goretzki et al., 2013; Endenich & Trapp, 2020), which has increased their influence on firm decision-making over the years (Goretzki et al., 2013; Hirth-Goebel & Weißenberger, 2019).

The risk of this increased influence is that if management accountants' goals are not aligned with the firm's, their discretional capacity could be employed to undesirable organizational outcomes (Lambert & Sponem, 2012). Such unwanted MAC outcomes include misallocation of resources, skewed information that leads to poor decision-making, and more widespread unethical behavior (Hirth-Goebel & Weißenberger, 2019), which could damage the organizational legitimacy of the MAC function.

The increasing realization is that MAC systems must also reinforce ethical behavioral processes (Musbah, Cowton, & Tyfa, 2016; McLeod, Payne, & Evert, 2016). Studies have highlighted MAC's close engagement with managerial decision-

making, making it an imperative that MAC also support ethical behavioral systems (Maas & Matejka, 2009; Endrikat, Hartmann, & Shreck, 2017; Lambert & Sponem, 2012). Cultivating an ethical environment is increasingly being proposed as one of the fundamental roles of MAC in addition to managerial decision-making and systems management (Cowton, 2009; Bampton & Cowton, 2013), which further motivates my study. Without reliable and accurate information being generated by the MAC functions, decision-making bias and gaming behavior can emerge (Brown, Fisher, Sooy, & Sprinkle, 2014). My study investigates how to best manage the firm ethically by providing management accountants with explicit goal setting and climate "levers" to accomplish this objective. First, I describe my experimental manipulation that utilizes the climate "lever."[6]

Social Hierarchy Experimental Manipulation (H1)

Because I am interested in the role of ethical climate as it relates to MAC systems, I experimentally manipulate a measure of organizational climate: social hierarchy. Yu, Hays, & Zhao, (2019) describe social hierarchy as a functional social structure that frames employee interactions and firm goal achievement. This definition of social hierarchy lends itself more towards being considered a dimension of organizational or work climate (as opposed to organizational culture) which is described by Schneider, Ehrhart, and Macey (2013) pertaining to the shared understanding of firm policies, procedures, and expected behavioral rewards. The organizational behavioral literature has identified two separate and distinct foundations of social hierarchies, power and team (Blader & Chen, 2014). I created a manipulation by utilizing differences in the scenario in which accounting manager participants randomly receive one or the other scenario manipulation, in which the "power" hierarchy manipulation describes TruNorth's (my survey instrument scenario's firm name) climate as oriented towards clear direction and authority, while

[6] As mentioned earlier in footnote 1, the goal setting experimental manipulation was not significant. Based on a post-experimental question, participants felt that both learning and outcome goals were typical in most organizations, thus rendering neither of the two as unique enough to cause the manipulation to be differentially salient. For purposes of parsimony, I therefore dropped the goal manipulation from further consideration in the study.

the "team" hierarchy manipulation instead describes the climate as oriented towards group reputation and respect. As discussed in more detail below, team orientation should attenuate accounting manager unethical behavior, while power social hierarchy should enhance unethical behavior. I formalize these contentions in working hypothesis 1:

> **H1**: A power (versus team) social hierarchy is associated with higher levels of accounting manager unethical behavior.

Ethical Reasoning and Moral Intensity (H2)

A principal focus of this study is the role of MAC social hierarchy (climate), goals systems and moral disengagement on accounting manager unethical behavior. Owing to the in-development nature of moral disengagement in a business context (Newman et al., 2020), I concurrently assess ethical reasoning because it is a more recognized measure of unethical behavior (Moore et al., 2012). This is designed to bolster the theoretical support for moral disengagement while also addressing face validity and realism concerns. Hence, I employ the second step of Rest's (1986) four step process, namely, ethical judgment because it is the most commonly used and effective measure of ethical reasoning based on a review of accounting ethical reasoning studies using the Rest model (Jones, Massey, & Thorne, 2003). Other accounting studies also employ the second stage of Rest's model to assess ethical reasoning (Fleischman, Valentine, & Finn, 2007; Fleischman & Valentine, 2019). Furthermore, the Jones (1991) moral intensity construct has been shown to strengthen participant ethical reasoning, and this fact was confirmed by both Barnett (2001) and Valentine and Hollingworth (2012), which suggests that ethical judgement and moral intensity assessment is complementary. Accordingly, I include two salient dimensions of Jones's (1991) moral intensity construct that I deem to be especially relevant to my study: social consensus, which measures how society views an ethical dilemma, and seriousness of consequences, which measures the magnitude of impact participants view the outcome of an unethical act to be. In sum, ethical judgment, social consensus,

and seriousness of consequences should collectively be negatively associated with accounting manager unethical behavior, which I formalize in working hypothesis 2.

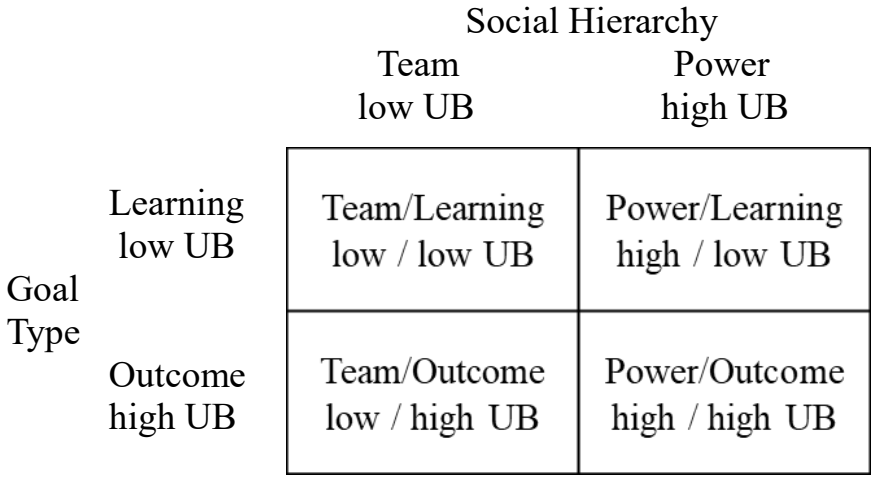
H2: Ethical judgment, social consensus, and seriousness of consequences are negatively associated with accounting manager unethical behavior.

Categorization of MAC Systems

MAC systems have generally been described using two categorizations that are an evolution of Quinn and Rohrbaugh's (1983) Competing Values Model. The first is as a formal versus informal system (Bellora-Bienengräber et al., 2021; Demartini & Otley, 2020; Cugueró-Escofet & Rosanas, 2017; Goebel & Weißenberger, 2017; James, 2000). Formal systems are typified by explicit controls such as performance management systems, and informal systems are more implicit such as corporate climate and work attitudes (Cugueró-Escofet & Rosanas, 2017).

The second Competing Values Model categorization reflects an individual versus an organizational system (Endenich & Trapp, 2020; Hirth-Goebel & Weißenberger, 2019; Goebel & Weißenberger, 2017; Hall, 2016; McLeod et al., 2016; James, 2000). This identifies whether the MAC system describes individual or organizational outcomes (Hall, 2016), and these formal versus informal and individual versus organizational categorizations are, in my opinion, complementary. For example, a system can be described as both an individual and a formal organizational system, or any of four combinations from these two groups of descriptors. I refer to my variables of interest in this manner. Specifically, I categorize my ethical control system variable (goal-setting) as formal-individual and my ethical climate environmental variable (social hierarchy) as informal-organizational. Figure 2 depicts the categorization of my goal setting and social hierarchy (work climate) variables in terms of their expected impact on the unethical behavior dependent variable.

Figure 2. Social Hierarchy and Goal Setting Ethical System Combination Packages



MAC and Ethical Systems

Management control systems (MCS) are typically formalized processes of MAC that are used to both control firm personnel and assets as well as measure and evaluate their performance (Guragai, Hunt, Neri, & Taylor, 2017; Burney et al., 2017; James, 2000). The overall intention of these systems is to direct employee behavior to be in congruence with organizational objectives (Bellora-Bienengräber et al., 2021; Tessier & Otley, 2012; Sprinkle, 2003). The general roles and uses of MCS are to plan, monitor, diagnose, focus attention, provide feedback, and assist decision-making (Burney et al., 2017; Henri, 2006; Simons, 1990).

The issue with MCS is that they tend to produce undesirable behavior (Cugueró-Escofet & Rosanas, 2017; Goebel & Weißenberger, 2017). Rigid MCS with highly engineered control metrics have been found to place employees in adverse situations in which they are pressured into gaming the system or engaging in dysfunctional and undesirable behavior to achieve organizational goals (Goebel & Weißenberger, 2017; Cohen, 2013; Barsky, 2008; Jin, Drozdenko, & Bassett, 2007). Formal policies and processes designed to control ethical behavior were also found to

have little influence on actual employee behavior (Beu & Buckley, 2004; Falkenberh & Herremans, 1995). Research also found that poorly designed MCS could be used by employees to disassociate themselves from unethical behavior (Burney et al., 2017), and the mere existence of a harmful MCS could adversely affect honesty (Hannah, Rankin, & Towry, 2006). The primary weakness of formal MCS is when an action that is perceived to be good for the organization is contrary to what will maximize the value of an MCS metric; it will usually compel employees to choose maximizing the metric over what is good for the organization because they will be personally better rewarded (Cugueró-Escofet & Rosanas, 2017).

The content of an MCS is a design feature that underpins the practical structure and defines the substance and intention of an MCS (Bellora-Bienengräber et al., 2021; Vidaver-Cohen, 1998). Theoretical work linking MCS with ethical behavior content suggests that it may be effective in reducing undesirable behavior (Tenbrunsel et al., 2003, Vidaver-Cohen, 1998). For example, a recent experimental study shows that an MCS that communicates the firm's ethical values is associated with a reduction in counterproductive workplace behavior (Bellora-Bienengräber et al., 2021). This stream of ethically - focused research is being positioned as part of a larger overall firm ethical infrastructure (Bellora-Bienengräber et al., 202121; Rottig, Koufteros; & Umphress, 2011). In my study, I use the MCS as a tool to enhance the ethical behavior of accountants, which I explain in more detail below.

MAC and Ethical Work Climate (H3a & H3b)

I introduce the informal-organizational component of my study using the ethical work climate construct social hierarchy. Specifically, a second area of MAC literature development has been to move from a focus on individual to organizational characteristics such as the ethical work climate (Bellora-Bienengräber et al., 2021; Endenich & Trapp, 2020; Musbah et al., 2016; McLeod et al., 2016; Maas & Matejka, 2009). This is important, because MBA-trained managers reported that pressure to engage in unethical acts came not from specific supervisors but from the general organizational work climate (Badaracco & Webb, 1995; James, 2000). The now

infamous Wells Fargo case, in which many hundreds of employees opened over an estimated two million fake deposit and credit-card accounts to reach corporate sales goals, underscored a real and pernicious corporate culture issue that refocused attention on the role of work climate in accounting (Burney et al., 2017). According to the Wall Street Journal, "The sales culture rooted itself so deeply among employees in Wells Fargo branches that it eventually spiraled out of control."[7]

Studies reviewing traditional performance and control approaches to work climate concluded these approaches were insufficient as they only provided limited guidance and motivation to employees to behave in an ethical manner (Endenich & Trapp, 2020; Goebel & Weißenberger, 2017). James (2000) suggested that it was the ethical work climate that was most salient to address the gaps between formal MAC systems. This led to an acceptance that the role of an ethical work climate was predominantly an informal control rather than a formal control (Kaptein, 2011; Webley & Werner, 2008; Adam & Rachman-Moore, 2004).

Early MAC research grasped that management could not deploy an ethical work climate as a formal control and expect to dependably produce ethical behavior; in other words, they could not force internalization of ethics (James, 2000; Vidaver-Cohen, 1998). The solution was to instead realize that an ethical climate's ability is to influence and not dictate ethical behavior (Bellora-Bienengräber et al., 2021; Tenbrunsel et al., 2003). Therefore, the ethical work climate should ideally informally provide guidance that aligns the firm's values, standards, and accepted modes of conduct (Goebel & Weißenberger, 2017; Arnaud & Schminke, 2012). Research has followed suit by focusing on the broader and more implicit aspects of informal ethical controls as a more effective guide of employee behavior (Goebel & Weißenberger, 2017; Jin et al., 2007; Adam & Rachman-Moore, 2004). MAC research also discovered that ethical work climate controls, even as informal controls, could strongly influence employee ethical behavior, perhaps even as much or more than

[7] Glazer, E. (2016). How Wells Fargo's high-pressure sales culture spiraled out of control. *The Wall Street Journal*, *16*.

individual dispositional characteristics (Goebel & Weißenberger, 2017; Kaptein, 2011; Pimentel et al., 2010). Additional studies found that the ethical environment could overcome an employee's own natural ethical reasoning predispositions (Booth & Schulz, 2004; Beu & Buckley, 2004), allowing ethical behavior to be guided towards positive pro-organizational outcomes (Goebel & Weißenberger, 2017; Chun, Shin, Choi, & Kim, 2013).

An important consideration is the research community's ability to develop robust and useful measures of organizational ethics (McLeod et al., 2016; Douglas, Davidson, & Schwartz, 2001). These studies suggest that the main characteristics that a suitable organizational ethical behavioral measure should possess are that it: 1) influences behavior towards organizational outcomes, 2) specifies the psychological mechanisms of its effects, 3) demonstrates an association with unethical behavior, and 4) preferably is not a repurposed individual-level construct. The measure I employ that satisfied these four criteria is the social hierarchy measurement scale developed by Yu, Hays, and Zhao (2019), which I discuss next.

The theory of social hierarchy is defined by how a group is ordered or ranked along a social dimension (Magee & Galinsky, 2008). A group's social hierarchy can provide a measure of structure, promote coordination, as well as prompt the group towards accomplishing organizational goals (Piazza & Castellucci, 2014). For example, Anderson and Brown (2010) investigated the effectiveness of different forms of social hierarchy and found that outcomes were influenced by the types of work tasks and leadership selection. The type of social hierarchy leads to differences in intra-group coordination and group members' motivation towards issues such as communication and compensation. The social hierarchy literature stream has evolved recently to settle on two primary dimensions of social hierarchy: power and team.[8] While the two dimensions are separate and distinct, they do share one important

[8] The original study used the terms power and status, but for the purposes of this study I have relabeled "status" as "team" to provide better separation and identification of concepts that aligns better with the items that make up the construct.

attribute; they are both sources of influence over others and their environments (Magee & Galinsky, 2008).

A power hierarchy is one in which the group values those who have greater access to firm resources, and consequently, those without access are not valued as highly (Yu et al., 2019; Blader & Chen, 2014). This power differential creates an environment in which individuals with resource control depend less on those without control, leading to social distancing in which those with power pursue their own individual goals (Anderson & Brion, 2014; Galinsky, Magee, Gruenfeld, Whitson, & Liljenquist, 2008). This often results in individuals with power exhibiting a reduced concern for others individually and for the social norms of the group (Dubois, Rucker, & Galinsky, 2015; Galinsky et al., 2008).

In contrast, a team hierarchy is one in which perceived group value is based not on resource control but on socially approved and conferred positive social prestige (Blader & Chen, 2012). This group assigned value is acquired through awareness and concern for others, the sharing of knowledge and abilities, and generosity in general (Yu et al., 2019; Blader, Shirako, & Chen, 2016). Additionally, a team hierarchy environment encourages behaviors that benefit others and enhances the group's awareness of equity and fairness issues (Yu et al., 2019; Blader & Chen, 2012). Hays and Blader (2017) investigated social hierarchy by assessing MBA students (among a series of six studies) during intensive multi-month team projects. Those teams based on a team hierarchy were outwardly group-focused. Attentiveness to one's team-based status led to generosity in social exchanges. Contributions to the team increased a sense of deservingness of benefits awarded by the team. This perceived team legitimacy resulted in a more stable work environment. Conversely, power hierarchy teams had team members who were more egocentric and self-focused. Instead of generosity, there were interactions of dominance. Instead of deservingness, there was as sense of entitlement. This led to a perception of team illegitimacy and consequently instability in the work environment.

With regard to unethical behavior, Yu et al. (2019) predict that a power hierarchy "can make individuals more likely to rationalize and engage in unethical behaviors" (Yu et al., 2019, p.91). For example, they hypothesize that a power hierarchy is positively associated with unethical behavior (Yu et al., 2019), and they also posit that moral disengagement is how employees rationalize such actions (Moore et al., 2012; Detert et al., 2008). Conversely, in a team hierarchy environment, employees who behave unethically risk losing group value through a loss of prestige (Yu et al., 2019), suggesting that team hierarchy is negatively associated with unethical behavior. Yu et al.'s findings strongly support the power hierarchy / unethical behavior positive relationship, and marginally support a negative relationship between team hierarchy and unethical behavior. Therefore, I supplement the moral disengagement – ethics literature (Moore et al., 2012; Detert et al., 2008) which associates moral disengagement with unethical behavior, with the social hierarchy literature (Yu et al., 2019; Magee & Galinsky, 2008). Therefore, I predict the following for my informal-organizational social hierarchy construct: team hierarchy attenuates unethical behavior while power hierarchy instead exacerbates unethical behavior:

H3a: Higher versus lower levels of team hierarchy are negatively associated with accounting manager unethical behavior.

H3b: Higher versus lower levels of power hierarchy are positively associated with accounting manager unethical behavior.

MAC and Goal-Setting (H4a & H4b)

Goal-setting is a primary MCS in which management accountants can purposefully design the content of the system to positively influence employee ethical decision-making (Endenich & Trapp, 2020). Accounting goal-setting research has primarily focused on audit costs, budgetary slack, honesty, promotion impact, and related issues (e.g. Brunner, & Ostermaier, 2019; Chung, & Hsu, 2017; Thomas, 2016; Clor-Proell, Kaplan, & Proell, 2015; Presslee, Vance, & Webb, 2013; Sweeney,

Arnold, & Pierce, 2010; Buchheit, Pasewark, & Strawser, 2003; Kadous, Kennedy, & Peecher, 2003; Wentzel, 2002). Accounting research employing goal-setting in an ethical setting has been relatively uncommon (e.g. Johnson, Fleischman, Valentine, & Walker, 2012; Douglas, & Wier, 2000). To my knowledge, no accounting study has examined goal-setting as an ethical MCS embedded in a larger ethical MAC infrastructure. This study addresses calls for examination of ethically focused MCS and ethical goal-setting in particular (Bellora-Bienengräber et al., 2021).

Increasingly, practitioners and researchers became aware of a darker side to goal-setting when goal difficulty was set too high, that frequently triggered employee unethical behavior (Welsh, Bush, Thiel, & Bonner, 2019; Welsh, & Ordóñez, 2014; Welsh, Baer, Sessions, & Garud, 2020). High difficulty goals were reported to cause a number of stressors such as anxiety, reduced self-esteem, pressure to cheat, and harmful competitiveness (Welsh, Baer, & Sessions, 2020; Welsh et al., 2020a; Welsh, & Ordóñez, 2014; Schweitzer, Ordóñez, & Douma, 2004). Welsh et al. (2020a, 2020b) theorized that this unethical behavior occurred through the mechanism of situational state moral disengagement.

Barsky (2008, 2011) further established the link between goal-setting and unethical behavior in two papers, one theoretical (Barsky, 2008) and one experimental (Barsky, 2011). He reinforced the moral disengagement mechanism association with unethical behavior (Barsky, 2011), and also added two related key considerations. First, he categorized goals as either learning goals, in which the focus is on process, growth and improvement, or outcome goals, in which the focus is on results (or avoidance of bad results), and self-elevation (Barsky, 2008). This classification expanded previous research that primarily focused on high versus low outcome goals only (Ordóñez, Schweitzer, Galinsky, & Bazerman, 2009; Locke & Latham, 1990, 2019, Schweitzer et al., 2004). Barsky's second major contribution was the finding that the two types of goals differed in their association with unethical behavior (Barsky, 2008, 2011). Specifically, he found that outcome goals were associated with

enhanced unethical behavior while learning goals instead attenuated unethical behavior (Barsky, 2008, 2011).

Welsh et al., (2019, 2020a) corroborated Barsky's (2008, 2011) findings that outcome goals increase unethical behavior and learning goals decrease unethical behavior. However, they found that neither goal choice results in a loss of performance (Welsh et al., 2020a). They further bolster the conception that the primary mechanism by which goal-type affects unethical behavior is via situational state moral disengagement (Welsh et al., 2019, 2020b; Ordóñez, & Welsh, 2015). To extend the goal-setting – unethical behavior literature (Welsh et al., 2019, 2020a, 2020b; Barsky, 2008, 2011), I posit the following hypotheses for my formal-individual ethical MCS goal-setting construct:

H4a: Higher versus lower levels of learning goals are negatively associated with accounting manager unethical behavior.

H4b: Higher versus lower levels of outcome goals are positively associated with accounting manager unethical behavior.

Situational State Moral Disengagement – Displacement of Responsibility (H5)

Moral disengagement is a suitable measure for this study because literature suggests that it is positively associated with unethical behavior (Moore et al., 2012; Thiel, Bagdasarov, Harkrider, Johnson, & Mumford, 2012; Detert et al., 2008). Further, moral disengagement is also a powerful predictor of unethical organizational behavior (Johnson & Buckley, 2015; Moore et al., 2012; Detert et al., 2008).

Bandura (2002) describes the moral disengagement construct as an interaction between personal and social influences, imbuing it the ability to be expressed as both a trait and state condition (Welsh et al., 2020a; Paharia, Vohs, & Deshpandé, 2013; Gino & Galinsky, 2012; Moore et al., 2012; West & Fleischman, 2022). The propensity to morally disengage is conceived to be a relatively stable dispositional trait that does develop and change over time in reaction to one's environment (Moore,

2008, 2015). However, a specific noteworthy context can also trigger a situational state moral disengagement response (Welsh et al., 2020a; Moore, 2015; Moore et al., 2012; West & Fleischman, 2022).

The concept of moral disengagement as an interpersonal process (Johnson & Buckley, 2015) was recognized by business researchers as having a robust explanatory utilization for the workplace with abundant opportunities for ethical dilemmas and moral disengagement (Newman et al., 2020; Hiekkataipale, & Lämsä, 2019; Johnson & Connelly, 2016; Kish-Gephart et al., 2014). Moral disengagement is evolving towards an organizational point of view as a collective characteristic of the work climate (Newman et al., 2020; Huang & Yan, 2014; Alnuaimi et al., 2010) rather than simply an individual rationalization. Research on organizational moral disengagement (Newman et al., 2020; Johnson & Buckley, 2015) is relatively non-existent, resulting in calls for explorations into how moral disengagement manifests in organizations and what underlying constructs explain its activity (Johnson & Buckley, 2015; Murphy & Dacin, 2011). My study also fills this gap in the literature.

Bandura (1986, 1991, 1999) identified a coherent set of eight moral disengagement mechanisms (Newman et al., 2020; Johnson & Buckley, 2015; Moore et al., 2012) that this literature groups into three categories: justification, distancing, and dehumanization (Egels-Zandén, 2017; Bonner et al., 2016). Following Barsky (2011), I employ elements from the second (distancing) category[9] because, to a large degree the dehumanization category (and to a lesser degree the cognitive restructuring

[9] Bandura (1986) suggested eight dimensions of moral disengagement: moral justification, euphemistic labeling, advantageous comparison, displacement of responsibility, diffusion of responsibility, disregarding or distorting consequences, dehumanization, and attribution of blame. These eight dimensions are further organized into three categories as outlined by Detert (2008). The first three dimensions (moral justification, euphemistic labeling, and advantageous comparison) are categorized as "cognitive restructuring" in which an individual would reframe otherwise unacceptable behavior in a more morally justifiable light, as in the phrasing of "collateral damage" to represent wartime civilian deaths. The next three dimensions (displacement of responsibility, diffusion of responsibility and distorting consequences) involve cognitive "distancing" from unacceptable behavior so as to minimize its cognitive dissonance, as in "I was just following orders". The last two dimensions (dehumanization and attribution of blame) lead to tribalizing us-versus-them mentalities in which out-of-group members are not entitled to the same protections as in-group members and in fact may be assigned the blame for their own misfortune.

category) is not as salient to a business context. The distancing category should be especially salient presently relating to the scenario ethical dilemma in which the CFO is pressuring the scenario controller to not disclose material contingent liabilities until after the IPO is finalized. Hence, Displacement of Responsibility, which is a mechanism that bestows a weakening of agentive responsibility by allowing an individual to distance themselves from an ethical situation, either through claiming unethical actions taken were based on orders from management, because everyone else is doing it, or some other similar rationalization, should be especially relevant to my study scenario context (Egels-Zandén, 2017; Bonner et al., 2016; Barsky, 2011). I employ Barsky's (2011) Displacement of Responsibility scale as an organizational situational state driver of unethical behavior in my scenario context in which accounting managers can claim that they did not disclose material COVID 19 contingent liabilities because their CFO pressured them to take such action. This also affords me the use of Moore et al.'s (2012) Propensity to Morally Disengage trait dispositional scale as a control. Therefore, I formalize the strengthening role of displacement of responsibility in enhancing accounting manager unethical behavior in H5.

> **H5**: Accounting manager situational displacement of responsibility is positively associated with unethical behavior.

Situational Moderation influences (H6)

Jones' (1991) model of the ethical decision-making process focuses on six dimensions of moral intensity and their effect on the ethical intent and behavior of decision-makers. As Kelley and Elm (2003) highlight, Jones did not incorporate the effects that situational organizational factors (such as my social hierarchy manipulation of team versus power) might have on the strength of the moral intensity construct and on the subsequent (un)ethical behavior of employees. Kelley and Elm (2003) find that context and specifically the organizational setting can play a critical role in the magnitude of moral intensity effects on ethical decision-making. Hence,

this literature suggests that moral intensity will likely interact with a situational organizational factor such as my social hierarchy manipulation.

Likewise, Moore (2015) also finds that a complex interaction (moderation) of situational effects influence one's moral behavior. For example, an ethically dangerous social situation promotes high situational state moral disengagement and leads to increased unethical behavior (Moore, 2015). Newman et al. (2020) extend this theory to the workplace and state that organizational factors such as organizational climate exercise a significant force on an individual's likelihood to morally disengage, which suggests a social hierarchy and situational state moral disengagement interaction effect. Accordingly, given the strong influences of moral intensity factors (Kelly & Elm, 2003) and situational moral disengagement (Moore, 2015; Newman et al., 2020) on situational organizational factors such as my social hierarchy manipulation, I therefore posit the following moderation hypothesis:

H6a: Seriousness of consequences situationally moderates the accounting manager power (team) social hierarchy experimental manipulation.

H6b: Displacement of responsibility situationally moderates the accounting manager power (team) social hierarchy experimental manipulation.

MAC Ethical Systems Package Combinations (H7a & H7b)

The literature suggests that using only formal control systems to resolve ethical behavior issues best suited to informal, organizational controls will be unsuccessful (James, 2000). However, solely relying on informal controls in the presence of a weak formal infrastructure will also result in undesirable behavior (Bellora-Bienengräber et al., 2021; Tenbrunsel et al., 2003). For example, research focusing on performance and control approaches to work climate were deemed insufficient from a managerial perspective because they did not actually engender ethical behavior (James, 2000). Additionally, there did not seem to be a diminution in unethical and fraudulent activities in many organizations that were only implementing work climate

enhancement schemes (Kaptein, 2011, 2010; Michaelson, 2006), which calls into question the efficacy of the role of a work climate system in isolation.

Therefore, coordinated emphasis of various MAC systems is important. For example, employing an encouraging ethical climate with a formal organizational structure that contradicts such an environment will create message dissonance, leading to undesirable behavior (James, 2000; Cressy & Moore; 1983). Many opportunistic behaviors occur because either the formal control systems insufficiently support ethical behavior, send mixed signals, or actively undermine employee ethical behavior (James, 2000; Vidaver-Cohen, 1998). James (2000) found that the formal code of conduct programs at many firms were uncoordinated and separate from the core corporate infrastructure, which possibly contributed to their ineffectiveness.

A firm's ethical infrastructure is composed of a number of formal and informal aspects and systems (Bellora-Bienengräber et al., 2021; Tenbrunsel et al. 2003). The formal systems are more focused on performance measurement while the informal systems inform, influence and guide employees towards desirable behavior that is aligned with the firm's goals and objectives (Cugueró-Escofet & Rosanas, 2017). Separately, the formal or informal systems alone are not sufficient to positively influence ethical behavior (Bellora-Bienengräber et al., 2021; Endenich & Trapp, 2020; Goebel & Weißenberger, 2017; Tenbrunsel et al., 2003). Hence, the formal and informal systems must not only work together, but also be properly aligned by promoting the same message and values (Bellora-Bienengräber et al., 2021; Tenbrunsel et al., 2003). At a minimum, individual ethical infrastructure components should not impede or undermine any other ethical component of the system (James, 2000).

Unfortunately, many MAC system studies select one system for analysis without regard for the other systems it works alongside (Otley, 2016). The risk with this approach is that any conclusions will be partial and possibly problematic because they do not take into account real world system interactions (Demartini & Otley, 2020; Hopwood, 2009; Malmi & Brown, 2008). If a set of MAC systems is to be combined

for the purpose of mitigating undesirable and unethical behavior, they need to be conceived as an integrated package (Bellora-Bienengräber et al., 202121). Examination of MAC systems combination packages should not be evaluated independently, given that the components do not operate in isolation (Demartini & Otley, 2020; Otley, 2016; Malmi & Brown, 2008).

Following this line of reasoning, I examine if the two systems (goal-setting and social hierarchy) that I employ function better as a systems combination package when their underlying values are aligned. In the goal-setting formal-individual system, learning goals are hypothesized to be associated with less unethical behavior and outcome goals to be associated with enhanced unethical behavior (Welsh et al., 2020a). In the social hierarchy informal-organizational system, team hierarchy is hypothesized to be associated with less unethical behavior and power hierarchy to be associated with greater unethical behavior (Yu et al., 2019). Of the four possible systems combinations, two show an alignment of values with regard to less unethical behavior: a learning goal / team hierarchy systems package, while an outcome goal / power hierarchy systems package should instead increase unethical behavior. H7 formalizes these theoretical contentions.

H7: There will be an interaction between social hierarchy and goal orientation such that the highest amount of accounting manager unethical behavior will be associated with the outcome goal/power hierarchy combination and the least amount of unethical behavior with the learning goal/team hierarchy combination.

Learning Goals as a Mediator (H8)

Two key foundational realizations were uncovered with regards to managing corporate unethical behavior. First, an ethical MCS as an individual control mechanism was not as effective as when it is instead designed to be an influencing mechanism (Welsh et al., 2019, 2020a; Hall, 2016; Barsky, 2011; Henri, 2006). Second, an ethical MCS had a better chance to flourish when a reciprocal ethical

corporate work climate was present (Bellora et al., 2021; Goebel & Weißenberger, 2017; Burney et al., 2017; Barsky, 2011; Henri, 2006; Vidaver-Cohen, 1998). Specifically, the literature finds that learning goals are especially effective to cultivate an ethical decision-making work climate (Welsh et al., 2019, 2020a). Given the noteworthy salience of learning goals, I therefore posit that effective learning goals will mediate (change) the significant relationship between my social hierarchy power (team) work climate experimental manipulation and accounting manager unethical behavior. I formalize this contention in H8.

> **H8**: Learning goals will mediate the positive association between the accounting manager power (team) social hierarchy experimental manipulation and accounting manager unethical behavior.

The following section presents the method section of my study.

CHAPTER III

METHOD

Data Collection

After my research instrument received institutional review board (IRB) approval, I purchased survey responses from the data collection firm Centiment using two research grants.[10] The participant sample consisted of 471 responses from professional accountants with at least 10 years of accounting experience and a position of manager or higher. Centiment protects against online worker fraud (Dennis, Goodson, and Pearson, 2020) using IP / geo-location blocking detection, worker fraud scores, and encryption measures,[11] in addition to native Qualtrics platform fraud protection technologies. The survey data was collected in June, 2022.

Survey Design

The experimental survey consisted of a random assignment of a scenario manipulation and 62 questions covering variables of interest and controls. The variables of interest were focused on measures of unethical behavior, social hierarchy, goal setting, state moral disengagement, ethical reasoning and moral intensity. The control variables consisted of personality, social desirability, and trait moral disengagement measures. Qualified responses required passing two manipulation and attention checks as well as full completion of the survey.

Scenario, Experimental Manipulation (SHManip) and Manipulation Check

In my study scenario, survey participants assume the role of a controller at a private professional services firm that is soon to go public through an IPO. The participants are presented with an ethical dilemma in the form of a request by the CFO to overlook material contingent liabilities until after the IPO is completed. For full details about the study scenario, please see Appendix B.

[10] Institute of Management Accountants (IMA) and the Rawls College of Business, Texas Tech University, respectively. I paid approximately $11 per accounting manager participant.
[11] https://help.centiment.co/irb-approval-faq

The survey presents an accounting scenario utilizing a 2x1 randomized manipulation of team versus power social hierarchy (SHManip) to simulate the influence on accounting manager unethical behavior to test H1. The literature encourages the use of real-world scenarios in accounting behavioral research (Bloomfield, Nelson, & Soltes, 2016). I employ the SH manipulation by differentiating two versions of the scenario. Specifically, accounting manager participants randomly receive either a team or a power scenario manipulation, in which the "power" hierarchy manipulation describes TruNorth's climate as oriented towards clear direction and authority, while the "team" hierarchy manipulation instead describes the climate as oriented towards group reputation and respect.

The experimental manipulation relies on the theoretical differences in unethical behavioral effects of corporate social hierarchy (Welsh et al., 2019; Yu et al., 2019). Specifically, team social hierarchy is associated with attenuated unethical behavior while power social hierarchy is associated with increased unethical behavior (Yu et al., 2019). Given that power social hierarchy is coded as 1 (team is coded as 0), I predict in H1 that the SHManip variable will be positively associated with unethical behavior. I employed an attention check where participants must correctly identify whether the scenario manipulation involves team versus power social hierarchy. All of my participants correctly identified the manipulation as a screening attention requirement to be entered into the sample. Furthermore, the SHManip variable is marginally negatively associated (1 tailed p = .0805) with my social hierarchy team measured variable (SHTeam), which serves as a corroborative manipulation check.

Measures

The following section presents how I measure the theoretical constructs in my study. For each measure I create a factor score, which is calculated by summing the participant's responses to each item in a particular scale and then dividing that sum by the number of items in the scale. All variables are defined in Appendix A.

Unethical Behavior (Measured Dependent Variable - UnethBvr)

The unethical behavior dependent variable is measured using an adapted Unethical Pro-Organizational Behavior[12] scale as developed by Umphress, Binghamn and Mitchell (2010). It is a five-item seven-point Likert scale (anchored by 1=strongly disagree and 7=strongly agree) that measures the participant's willingness to engage in unethical behavior, defined as unethical behavior that is not codified in a formal job description that benefits the organization (Umphress, et al., 2010). This variable measures the tendency of accounting professionals in my study scenario to commit accounting fraud by not disclosing material unbooked contingent liabilities to investors and creditors before the IPO.

Social Hierarchy (Measured Independent variables (IVs): SHPower, SHTeam)

The social hierarchy measurement scale is developed by Yu et al., 2019 as an organizational behavior measure to include dimensions of organizational citizenship behavior and counterproductive work behavior, and is also validated on an unethical behavior dimension. The measure employs a 7-point Likert scale that utilizes six items, three that measure the power dimension and three that measure the team dimension. Each item is anchored by 1=strongly disagree and 7=strongly agree. While the scale use is in its early stages, in this study, it was effective in distinguishing between two distinctive constructs.

Social hierarchy, an aspect of a firm's social infrastructure, provides organizational motivation and goal coordination (Yu et al., 2019; Anderson & Brown, 2010; Magee & Galinsky, 2008). The literature has identified two separate social hierarchy foundations, power and team (Blader & Chen, 2014). A power hierarchy is one in which individuals seek greater control of firm resources, are less concerned for the welfare of others, and is associated with increased unethical behavior. A team

[12] The adaptations were primarily to personalize the items to this scenario. For example, one original item read "If it would benefit my organization, I would withhold negative information about my company or its products from customers and clients" and my situational adaption read, "If it would benefit the organization, Robin should withhold negative information about the COVID-19 contingent liabilities until after the IPO."

hierarchy is one in which individuals value the respect of the team, are more concerned with the welfare of others, and is associated with reduced unethical behavior (Yu et al., 2019; Magee & Galinsky, 2008). The social hierarchy manipulation in the survey instrument is also based on the Yu et al. (2019) power and team hierarchy measures.

Goal Setting (Measured IVs: GSOutcm, GSLearn)

Goal setting, an important MAC system (Welsh et al., 2020a), can contain an inherent risk for unethical behavior in ethically aggressive firm situations (Welsh et al., 2019; Welsh, & Ordóñez, 2014). Welsh et al. (2019) developed the 7-point Likert scale that I employ that identifies two separate goal setting types, outcome (3 items) and learning (3 items). Each item is anchored by 1=strongly disagree and 7=strongly agree. An outcome goal is one that is focused on meeting a management-provided standard and is associated with more unethical behavior. A learning goal is one that is focused on learning and self-improvement and is associated with less unethical behavior (Welsh et al., 2019). Higher scores indicate increased outcome and learning, respectively.

State and Trait Moral Disengagement (Measured IVs: DispResp, TraitMD)

Moral disengagement is the occurrence of unethical behavior through the suspension of one's ethical processes (Detert et al., 2008; Barsky 2011). It can be expressed as both a state and trait condition as it is an interaction between personal and social influences (Welsh et al., 2020a). I employ Barsky's (2011) situational state scale labeled Displacement of Responsibility that measures moral disengagement in a corporate context arising from an individual's rationalization that circumstances are beyond their control, as in situations involving management orders. The 7-point Likert scale consists of 5 items. As a control, I also assess individual dispositional trait moral disengagement using Moore et al.'s (2012) validated Propensity to Morally Disengage scale. This 7-point Likert scale is an eight-item measure that covers the eight dimensions of moral disengagement. Higher scores indicate an increased propensity to

morally disengage. All items for both scales are anchored by 1=strongly disagree and 7=strongly agree.

Ethical Reasoning (Measured IVs: EthJudg , SocConsen, SeriousCons)

To bolster the theoretical support for my social hierarchy, goal setting, and moral disengagement measures, I employ a number of additional measures commonly associated with ethical reasoning. Firstly, I use the second step of Rest's (1986) ethical reasoning four step process ethical judgment because it is a commonly used and effective measure of ethical reasoning (Jones et al., 2003). I employ Reidenbach and Robin's (1990) moral equity scale, that is a 7 – point semantic differential scale with four items to measure ethical judgment. Next, I also include two pertinent dimensions of Jones's (1991) moral intensity construct that is developed by Barnett (2001): social consensus, which measures how society views an ethical dilemma, and seriousness of consequences, which measures how serious participants view the outcome of an unethical act. Both dimensions are composed of three semantic – differential scale items based on a 7 – point scale. The following section presents the empirical findings of my study. All variable definitions are provided in Appendix A.

CHAPTER IV

EMPIRICAL FINDINGS

Sample Characteristics

I purchased 471 accounting manager responses from the data collection firm Centiment for approximately $11 per participant. The average age of the participants was 51.5 years, with the youngest being 35 and the oldest 70. As for job tenure experience, 20.4% had between 10 and 14 years of experience, 22.1% had 15 to 19 years of experience, and 57.5% had 20 or more years of experience. Although not explicitly included as a filter on this survey instrument, the data collection firm confirmed that the study has an approximate 50/50 gender balance.

Confirmatory Factor Analysis (CFA)

After verifying dimensionality and validity of the multi-item constructs through exploratory factor analysis (EFA) in the SPSS software,[13] I employed the Amos[14] software plugin for SPSS to conduct confirmatory factor analysis (CFA) to test my model for goodness of fit. After loading the survey data set, I built the model of latent factors and their associated indicator variables; I ran the model estimator and was presented with data output relating the model fit which I summarize in Table 1.

The Table 1 CMIN output shows the chi-square values that indicate whether the model is distinct from one that exactly fits the data. The p-value is less than .05, signifying that we must reject the null hypothesis of an exact-fitting model (Kline, 2015). It is likely that the large sample size in my study (n = 471) contributed to this unsupportive finding. The Baseline Comparisons sub-table shows an array of fit indices that compare the fit of the model with that of a null or independence model. The more commonly used TLI and CFI indices express an acceptable fit for values ≥

[13] The exploratory factor analysis (EFA) in Table 5 shows all multi-item independent variable (IV) scales are unidimensional. The EFA was performed using principal components extraction with Varimax rotation All eigenvalues exceed 1, indicating the individual significance of each construct.
[14] Amos is the IBM SPSS structural equation modeling package that contains a model fit / confirmatory factor analysis function. https://www.ibm.com/products/structural-equation-modeling-sem

.90 and superior fit for values ≥ .95. My model's TLI and CFI values are .946 and .952 respectively indicating a strongly acceptable and borderline superior fit (Kline, 2015).

For the root mean-square error of approximation (RMSEA) sub-table, the RMSEA value signals a close fit if the value is less than .05 and adequate fit if between .05 and .08. My model's RMSEA value is .054 with the 90% confidence interval being between .050 and .058. Again this shows a strongly adequate and borderline close fit (Kline, 2015). This trend is also mirrored in the RMR, GFI sub-table where GFI and AGFI values of greater than .90 indicate a more acceptable model fit. My model's respective values are .873 and .849 (Pituch & Stevens, 2015). I note that when the model is adjusted for error term covariance within latent variables, all values move firmly into the strong fit categories (not tabulated). The overall findings from the CFA are that my model demonstrates at least an adequate and possibly stronger model fit.

Table 1. Confirmatory Factor Analysis (CFA) SPSS Amos Model Fit Indices

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	85	1047.244	443	.000	2.364
Saturated model	528	.000	0		
Independence model	32	13106.817	496	.000	26.425

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.920	.911	.952	.946	.952
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.197	.873	.849	.732
Saturated model	.000	1.000		
Independence model	1.085	.189	.136	.177

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.054	.050	.058	.065
Independence model	.233	.229	.236	.000

Descriptive Statistics, Correlations, and Discriminant Validity

The Pearson correlations and magnitudes of their bivariate relationships are reported on Table 2 with general two-tailed correlation significance (unless hypothesized directional one-tailed significance when related to the dependent variable UnethBvr) at .01, .05, and .10 levels, respectively. The table shows that the social hierarchy manipulation (SHManip) was marginally significantly correlated with the dependent variable unethical behavior (UnethBvr, p =0.076), providing partial support for H1. Ethical judgment, social consensus, and seriousness of consequences

are all significant and negatively correlated as hypothesized with unethical behavior (H2, all three $p < .001$) as expected. While power social hierarchy is strongly significant and negatively correlated with unethical behavior (H3b, $p < .001$) as expected, team social hierarchy is surprisingly marginally positively correlated to unethical behavior (H3a, $p = .098$). Both outcome and learning goal dimensions are significantly correlated with unethical behavior, respectively (H4b, $p < .001$, H4a, $p = .006$). Lastly, displacement of responsibility dimension of state moral disengagement is also significantly positively correlated to unethical behavior (H5, $p < .001$), as expected.

Table 2. Correlations, Descriptive Statistics and Assessment of Discriminant Validity (n=471)

Variable	*M*	*SD*	*AVE*	*α*	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) *UnethBvr*	2.44	1.57	0.776	0.927	**0.88**										
(2) *SHManip*	0.49	0.50			0.07 ^	--									
(3) *SHPower*	4.27	1.16	0.605	0.673	0.46 **	0.03	**0.78**								
(4) *SHTeam*	5.32	1.08	0.641	0.720	0.06	-0.07	0.48 **	**0.80**							
(5) *GSLearn*	5.01	1.25	0.740	0.824	0.13 **	-0.10 *	0.36 **	0.46 **	**0.86**						
(6) *GSOutcm*	5.02	1.25	0.766	0.847	0.17 **	-0.04	0.34 **	0.45 **	0.85 **	**0.87**					
(7) *DispResp*	3.05	1.57	0.728	0.904	0.80 **	0.07 ^	0.40 **	0.09 ^	0.10 *	0.14 **	**0.85**				
(8) *EthJudge*	5.19	1.82	0.890	0.959	-0.61 **	0.01	-0.39 **	-0.06	-0.22 **	-0.24 **	-0.52 **	**0.94**			
(9) *SocConsen*	5.23	1.68	0.941	0.969	-0.49 **	-0.02	-0.24 **	-0.02	-0.07	-0.08 ^	-0.42 **	0.41 **	**0.97**		
(10) *SeriousCons*	5.60	1.39	0.881	0.933	-0.54 **	-0.03	-0.22 **	0.01	0.02	-0.02	-0.52 **	0.47 **	0.35 **	**0.94**	
(11) *TraitMD*	2.86	1.17	0.522	0.866	0.64 **	0.05	0.33 **	0.04	0.06	0.07	0.64 **	-0.39 **	-0.37 **	-0.42 **	**0.72**

Numbers in **bold** represent the square root of the average variance extracted (AVE) for the underlying construct to assess discriminant validity.

Where *M* = mean, *SD* = Standard deviation, *AVE* = average variance extracted, *α* = Cronbach's alpha

** Correlation is significant at the 0.01 level (2-tailed unless hypothesized with *UnethBvr* (1-tailed)).

* Correlation is significant at the 0.05 level (2-tailed unless hypothesized with *UnethBvr* (1-tailed)).

^ Correlation is significant at the 0.10 level (2-tailed unless hypothesized with *UnethBvr* (1-tailed)).

See Appendix A for variable definitions

On Table 2, I also report the average variance extracted (AVE) for each multiple item construct, which all exceed .50, indicating adequate convergent reliability. From the AVE score, I then calculate the square root of the AVE (bolded on the diagonal) of Table 2 to assess construct discriminant validity. For all multi-item measures, the square root of the AVE exceeds the associated correlations, that indicates that there is adequate discriminant validity between all multi-item measures (see Fornell and Larcker, 1981). Also, Table 2 demonstrates that all Cronbach alpha scores exceed .70 (except for SHPower at .67). These findings satisfy the commonly accepted .60 threshold (Hair, Anderson, Tatham, & Black, 1998) for construct measure reliability acceptability.

Regression Results

Table 3 reports the variables of interest as they are regressed on the unethical behavior dependent variable (UnethBvr). Column 1 shows the baseline social hierarchy manipulation as being positively associated with unethical behavior (1 tailed p = .0465). This finding provides support for H1. Additionally, I find strong support for H2 in which the three more commonly used measures pertaining to ethical reasoning and moral intensity (Jones et al., 2003; Valentine & Hollingsworth, 2012), consisting of ethical judgment (EthJudge; p = .000), social consensus (SocConsen; p = .000), and seriousness of consequences (SeriousCons; p = .000) all show a significant and negative association with unethical behavior. I also note that the interaction term of the social hierarchy manipulation and seriousness of consequences is also negative and significant with respect to unethical behavior (SeriousCons X SHManip; 1 tailed p = .027). This demonstrates that the more serious the perceived consequence of one's actions relating to withholding material COVID-19 contingent liability disclosures, the less inclined one is to engage in unethical behavior. This interaction will be discussed further, below.

Table 3. OLS Regression Analysis

		Dependent Variable = Unethical Behavior					
Independent Variable	**Prediction**	**Col 1 β**	**Col 2 β**	**Col 3 β**	**Col 4 β**	**Col 5 β**	**Col 6 β**
SHManip	+	0.055 **	0.037	0.011	0.010	0.015	0.016
EthJudge	-	-0.371 ***	-0.278 ***	-0.153 ***	-0.158 ***	-0.151 ***	-0.147 ***
SocConsen	-	-0.242 ***	-0.214 ***	-0.108 ***	-0.107 ***	-0.095 ***	-0.085 ***
SeriousCons	-	-0.280 ***	-0.269 ***	-0.090 ***	-0.088 ***	-0.101 ***	-0.103 ***
SHManip X SeriousCons	?	-0.063 **	-0.059 *	-0.062 ***			
SHPower	+		0.278 ***	0.141 ***	0.146 ***	0.126 ***	0.108 ***
SHTeam	-		-0.100 ***	-0.078 ***	-0.080 ***	-0.082 ***	-0.075 ***
GSLearn	-		-0.087 *	-0.052	-0.059	-0.060	-0.063 *
GSOutcm	+		0.109 **	0.081 *	0.090 **	0.095 **	0.066 *
TraitMD	+			0.143 ***	0.146 ***	0.139 ***	0.130 ***
DispResp	+			0.475 ***	0.474 ***	0.476 ***	0.449 ***
SHManip X DispResp	+				0.057 **		
SHPower X GSOutcm	+					0.073 ***	0.069 **
SHTeam X GSLearn	-					-0.019	-0.006
SHPower X GSOutcm X DispResp	+						0.108 ***
	Model *F* Test	95.666 ***	65.009 ***	119.162 ***	118.836 ***	108.937 ***	104.294 ***
	R^2	0.507	0.559	0.741	0.740	0.741	0.748
	Adjusted R^2	0.502	0.551	0.734	0.734	0.734	0.741
	N	471	471	471	471	471	471

p values *. **. ***, indicate signficance at the 0.10, 0.05, and 0.01 level respectively

p values two-tailed unless hypothesized (one-tailed).

All β coefficients are standardized

Column 2 adds in the variables for social hierarchy (power and team) and goal setting (outcome and goal). The result is that the social hierarchy manipulation (SHManip) loses significance (ultimately due to GSLearn mediation effect as we will see subsequently), while the individual social hierarchy variables are highly significant in the predicted directions, (positively for power (SHPower; p = .000), supporting H3b, and negatively for team (SHTeam; 1 tail p = .0055), supporting H3a). The goal setting variables are somewhat less significant but also in their predicted directions (positively for outcome (GSOutcm; 1 tail p = .0335), supporting H4b, and negatively for learning (GSLearn; 1 tail p = .0745), supporting H4a). The interaction term of the social hierarchy manipulation with seriousness of consequences remains significant, albeit slightly less so than in column 1 (SeriousCons X SHManip; 1 tailed p = .029).

Table 3, Column 3 adds the remaining variables of interest by including displacement of responsibility (DispResp) as my state moral disengagement measure along with a trait moral disengagement control variable. This column represents my focal regression model as represented below:

$$\begin{aligned} UnethBvr = {} & \beta_0 + \beta_1 SHManip + \beta_2 EthJudge + \beta_3 SocConsen + \beta_4 SeriousC + \\ & \beta_5 SHPower + \beta_6 SHTeam + \beta_7 GSOutcm + \beta_8 GSLearn + \\ & \beta_9 TraitMD + \beta_{10} DispResp + e \end{aligned} \quad [1]$$

Moral disengagement, as measured by DispResp (p = 000), signals a positive association with unethical behavior (UnethBvr) as evidenced by a stronger magnitude of effect (standardized coefficient) than any other variable. This provides strong support for H5. Goal setting continues to weaken in significance, while interestingly the social hierarchy manipulation X seriousness of consequences interaction regains strength (SeriousCons X SHManip; 1 tailed p = .005). Hence, in this model, the severity of consequences relating to not disclosing key IPO contingent liabilities is potent enough that it overwhelms the influence of SHPower,[15] in which the interaction

[15] In the S*HManip* 2X1 experimental treatment, *SHPower* is coded as 1 and *SHTeam* is coded as 0. Therefore, in isolation, we expect the social hierarchy manipulation to *increase* unethical behavior. Please see the discussion supporting H1.

again reduces accounting manager unethical behavior in connection with the IPO. This interaction term moderation provides support for H6.

Table 3, Column 4 investigates an alternative mode of social hierarchy manipulation (SHManip) interaction, this time by adding one additional interaction (moderation) effect: crossing SHManip with the situational state moral disengagement variable displacement of responsibility (DispResp). Here this interaction is highly significant (SHManip X DispResp; 1 tailed p = .009), and is positively associated with unethical behavior (UnethBvr), which provides additional support for the moderation predicted in H6. Hence, we can conclude that accounting managers morally disengage in the present IPO scenario, in which they justify accounting fraud by hiding behind the fact that their CFO superior is pressuring them to take such action. This fact explains why the interaction exacerbates the unethical behavior (UnethBvr) dependent variable when moderating the SH manipulation (SHManip).

Table 3, Column 5 investigates the synergistic effects of MCS packages in which the learning goal / team hierarchy systems package is predicted to reduce unethical behavior (H7), while the outcome goal / power hierarchy package is instead predicted to enhance unethical behavior (H7). The results shown in Column 5 indicate that the learning goal / team hierarchy systems package interaction effect is insignificant (this portion of H7 is not supported), while the H7 outcome goal / power social hierarchy combination is supported, given the strong association (1 tailed p = .008) with higher unethical behavior (UnethBvr). In sum, this portion of the H7 finding suggests that combining a climate factor such as social hierarchy power (SHPower) with goal setting that is focused on outcomes and performance (GSOutcm) is a poor strategy for executive management that wishes to cultivate an ethical organizational climate. Hence, this suggests that in this kind of an environment accounting managers are more likely to not disclose the material COVID-19 contingent liabilities, which will potentially hurt IPO investors.

Table 3, Column 6 shows the increased effect on unethical behavior (UnethBvr) of the outcome goal / power social hierarchy combination (GSOutcm and

SHPower, respectively) when interacted with my measure of situational state moral disengagement, namely displacement of responsibility (DispResp). Specifically, the three-way interaction (SHPower X GSOutcm X DispResp) is positively associated (p = .000) with my UnethBvr dependent variable. Accordingly, this finding builds on H7b above, which demonstrates the danger of combining a power – oriented climate (SHPower), and an outcome – oriented goal structure (GSOutcm), with accounting managers who have a proclivity to commit unethical acts because they can rationalize behavior that will hurt others, such as in my IPO contingent liability scenario (Detert et al., 2008; Moore et al., 2008).

I note that in the midst of this study's complexity, the regression models do exhibit a high degree of model fit as defined by the adjusted R squared terms. Although the threshold for good model fit can vary by research field and type, a close analog to behavioral accounting research may be marketing research. In scholarly research that focuses on marketing issues, Sarsedt and Mooi (2014) find that "R squared values of 0.75, 0.50, or 0.25 can, as a rough rule of thumb, be respectively described as substantial, moderate, or weak" (Sarsedt & Mooi, 2014, p.211). My primary regression models in Table 3, columns 3-6 all have R squared values above 0.74, indicating that my regression models provide substantial explanation of variance.

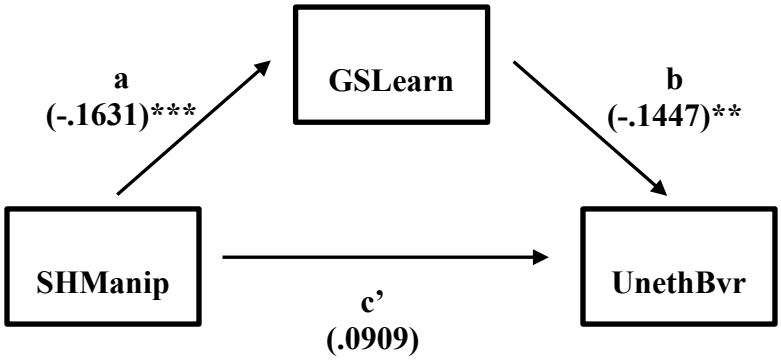
HAYES Process Mediation (H8)

In order to test the mediating role of my learning goal setting variable (GSLearn), I performed a Hayes (2018) PROCESS[16] Mediation Model 4 (95% confidence interval, 5,000 bootstraps) with SHPower, SHTeam, GSOutcm, TraitMD, EthJudge and SocConsen as covariates. Table 4, Panel A shows that the effect of the social hierarchy manipulation (SHManip) on learning goal setting (GSLearn = dependent variable (DV) is negative and significant (p <.001), as theory would predict. Additionally, the full model shown on Table 4, Panel B with both SHManip

[16] The PROCESS macro for SPSS, written by Andrew F. Hayes, is an OLS regression path analysis tool used for estimating the direct and indirect effects of mediation and moderation models. https://www.processmacro.org/

and GSLearn predicting unethical behavior (UnethBvr = DV) is also significant (F = 91.41; p <.001). However, the direct effect of SHManip on UnethBvr in the full model loses significance in the presence of GSLearn and the confidence interval contains zero (lower confidence interval = -.0902, upper confidence interval = .2719), indicating that the relationship is not significant. Whereas Table 4, Panel C indicates the indirect effect of SHManip on UnethBvr as mediated by GSLearn, which shows a confidence interval that does not contain zero (lower confidence interval = .0005, upper confidence interval = .0564). This indicates that GSLearn fully mediates the effect of SHManip on UnethBvr, which provides strong support for H8. Figure 3 illustrates this full mediation effect.

Figure 3. Mediation Model (Mediation from Table 4)



Indications of significance: *p < .10, **p< .05, *** p<.01

Analysis was conducted using the SPSS PROCESS macro (**Model 4**) following procedures described by Hayes (2018). Path coefficients (limited to main effects for ease of reading) are reported below each path label in the figure. Path coefficients, indirect effects, and confidence intervals are also reported in Table 4.
See Appendix A for variable definitions.

Table 4. Exploratory Analysis: Mediation: GSLearn Hayes (2018) Model

Model 4 Input:
Y = *UnethBvr* Unethical Behavior
X = *SHManip* Social Hierarchy Manipulation
M = *GSLearn* Goal Setting – Learning (Mediator)

Panel A: Effect of *SHManip* on *GSLearn*

	R	**R-sq**	**F**	**p-value**
Model Summary	.8548	.7307	179.49	.0000

***GSLearn* = DV**	**path**[17]	**b**	**SE**	**t**	**p-value**
Constant		.4720	.2604	1.8127	.0705
SHManip	a	-.1631	.0608	-2.6818	.0076

Panel B: Mediation Model, DV = UnethBvr

	R	**R-sq**	**F**	**p-value**
Model Summary	.7828	.6128	91.41	.0000

***UnethBvr* = DV**	**path**	**b**	**SE**	**t**	**p-value**
Constant		2.4889	.3928	6.3360	.0000
SHManip	c	.0909	.0921	.9866	.3243
GSLearn - Mediator	b	-.1447	.0699	-2.0720	.0388

Panel C: Index showing Mediation[18]

	Index	**SE**	**LLCI**	**ULCI**
GSLearn - Mediator	.0236	.0148	.0005	.0564

See Appendix A for variable definitions

Figure 3.

[17] Corresponds to the path letter on the exploratory moderated mediation model, illustrated in Figure 3
* Significant based on a 95 percent confidence interval (5,000 bootstraps)
[18] Per Hayes (2018), the index of mediation indicates significant model effects if the bootstrap interval does not include zero, as is the case in this analysis.

CHAPTER V

DISCUSSION AND CONCLUSION

The choice of MAC systems is consequential for firm accounting manager ethical behavior. A chief contribution and primary focus of this study is to evaluate the combined effects of social hierarchy and goals on unethical behavior. I first approach this assessment task through a 2x1 randomized experiment. The social hierarchy manipulation was positively associated with unethical behavior. Secondly, I confirm the validity of the manipulation's association with unethical behavior by employing three more commonly used measures of ethical reasoning (Rest, 1986) and moral intensity (Jones, 1991). I also find the interaction of the social hierarchy manipulation and seriousness of consequences, a dimension of moral intensity, is negative, significant and moderates (weakens) the power dimension of social hierarchy.

My third step, and my study's primary focus, investigates the combined effects of social hierarchy and goals on accounting manager unethical behavior was to insert the scale measures of social hierarchy and goal setting variables into my OLS regression. One result is that the social hierarchy manipulation loses significance, but further investigation shows the learning dimension of goal setting mediates the manipulation's effect. However, the scale measures of social hierarchy and goal setting variables assume high significance in the predicted direction. These findings indicate adopting a power hierarchy and to a lesser degree outcome goals results in increased accounting manager intent to fraudulently deceive study scenario IPO investors and creditors (see Appendix B for scenario details), which adds support to previous such findings (Yu et al., 2019; Welsh et al., 2019; Barsky, 2011).

In the context of this study, Goebel & Weißenberger (2017) appear correct in their contention that the informal work climate (including my measure of social hierarchy) can influence ethical behavior more strongly than individual formal MAC controls such as goal setting. Although this study finds that work climate exerts greater influence on (un)ethical behavior, a case may be made for a multilateral

combined ethical control system approach. For example, Kaptein (2011) questioned the capacity of work climate in isolation to check unethical behavior, while other research suggests that multiple control vectors are essential to effectively abate unethical behavior (Bellora-Bienengräber et al., 2021; Endenich & Trapp, 2020; Goebel & Weißenberger, 2017; Tenbrunsel et al., 2003). Though goal setting's effect was limited in my study context, it is possible that social hierarchy's effect may not have been as strong in the absence of goal setting. This is a point for future research to address.

The fourth step and my study's secondary focus, was to investigate moral disengagement as a suitable measure for assessing unethical organizational behavior (Moore et al., 2012; Detert et al., 2008). This study's results show the displacement of responsibility dimension of situational state moral disengagement performed as well in a business setting as traditional measures of unethical behavior such as ethical reasoning and moral intensity. Situational displacement of responsibility, similarly to situational seriousness of consequences, moderates my social hierarchy experimental manipulation to trigger increased accounting manager fraudulent tendencies. The claim that moral disengagement may occur prior to ethical reasoning (Moore et al., 2012) while enticing, was not investigated here, so such an inquiry is another candidate for future research. Additionally, its primary role as a moderator, mediator, or dependent variable is partially addressed here but warrants further evaluation.

In total, these findings directly address the call for research by Bellora-Bienengräber et al. (2021) into the relationship between unethical behavior and a firm's MAC systems and ethical infrastructure, the observation by Endenich and Trapp (2020) that ethics-focused MAC research is thin on the ground, and Otley's (2016) call for additional investigation into MAC system combination interactions. The implications for addressing accounting fraud in the workplace are that a firm's choice of MAC ethical control systems will affect employee unethical behavior. In evaluating the combination effect of social hierarchy and goal setting, it is clear that

the power hierarchy / outcome goal combination resulted in stronger tendencies towards unethical behavior and therefore this combination should be avoided as a MAC combination ethical system. And while the team hierarchy / learning goal combination did not achieve significance as regards reducing unethical behavior, at least this combination does not exhibit the same noteworthy unethical behavioral pressure that the power hierarchy / outcome goal combination does. So in this context it may be the preferred choice of ethical control systems, but more research is needed to clarify this supposition.

Though this study provides notable contributions to the MAC and professional ethics literature, I am attentive to a number of limitations. One such limitation is that this study uses a vignette scenario which may not elicit actual behaviors because the choices are not consequential (Lonati, Quiroga, Zehnder, & Antonakis, 2018). Although as a research form it is not completely avoidable, real world scenario research such as I investigate is encouraged in the behavioral accounting literature (Bloomfield et al., 2016). I also heed the scenario research recommendations by Lonati et al. (2018) to increase the psychological realism, link the scenario to a real-world analog and purge demand effects. For example, to increase face validity, the scenario references actual guidance provided by the SEC's Division of Corporation Finance on material COVID19 - related contingencies.[19] Additionally, the various measure items within the survey were randomized so as to mitigate participant hypothesis guessing. Another limitation is that there was a very high correlation (r = .80) between my displacement of responsibility situational state moral disengagement measure and my unethical behavior dependent variable. Not surprisingly, this caused the two variables to load on the same factor when I conducted exploratory factor analysis (EFA). When I constrained the analysis to two factors, they separated out with the exception of one cross-loading item. However, when one looks on Appendix

[19] Securities and Exchange Commission, Division of Corporation Finance, CF Disclosure Guidance: Topic No. 9 [Coronavirus (COVID-19)], Date: March 25, 2020. https://www.sec.gov/corpfin/coronavirus-covid-19

A to compare the item definitions for each construct, it is clear that the two measures are very distinct on their face, and are also theoretically dissimilar.

Due to the ethics-related nature of the scenario, social desirability bias could be an issue. However it was controlled for and found to not be a significant problem. As one of my main variables of interest was state situational moral disengagement (Barsky, 2011), I employed a measure of trait dispositional moral disengagement (Moore et al., 2012) as a control in which both measures were derived from the same literature stream (Bandura, 1986). I also assessed and confirmed study reliability and construct validity, to include convergent and discriminant validity. I further determined that common method bias was not an issue via the Podsakoff, MacKenzie, Lee, & Podsakoff's (2003) single factor test. My factor test result of 34.7% is well below the 50% cutoff that would indicate possible bias. Lastly, I advise caution with generalizations of my study findings to other groups.

In addition to the above-mentioned items for future research, I assert that a renewed and broader examination of various MAC systems as regards ethical behavior is justified. With the rise of environmental, social and governance (ESG) factors in the minds of managers and investors, it behooves the accounting profession to understand and promote effective MAC systems in accord with the market. That these issues are not easily measured or managed speaks directly to the need for increased research in this area.

I conclude with the somber news that Ernst & Young recently incurred the largest fine ever imposed by the SEC on a Big 4 accounting firm. That the reason for the fine was cheating on the CPA ethics exam and misleading the SEC investigation more than suggests the need for increased corporate governance and professional ethics research in the manner that I am attempting here.

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APPENDICES

APPENDIX A

VARIABLE DEFINITIONS

Variable	Definition	Scale
UnethBvr	Unethical Behavior 5 Items summed and divided by 5	1 to 7 point Likert Higher scores associated with *more* unethical behavior
SHManip	Social Hierarchy Manipulation 2 Scenarios	Scenario #1 – Social Hierarchy, power orientation Scenario #2 – Social Hierarchy, team orientation
SHPower	Social Hierarchy, Power 3 Items summed and divided by 3	1 to 7 point Likert Higher scores associated with stronger *power* social hierarchy Stronger *power* social hierarchy is associated with *more* unethical behavior
SHTeam	Social Hierarchy, Team 3 Items summed and divided by 3	1 to 7 point Likert Higher scores associated with stronger *team* social hierarchy Stronger *team* social hierarchy is associated with *less* unethical behavior
GSLearn	Goal Setting, Learning 3 Items summed and divided by 3	1 to 7 point Likert Higher scores associated with stronger *learning* goal setting Stronger *learning* goal setting is associated with *less* unethical behavior
GSOutcm	Goal Setting, Outcome 3 Items summed and divided by 3	1 to 7 point Likert Higher scores associated with stronger *outcome* goal setting Stronger *outcome* goal setting is associated with *more* unethical behavior
DispResp	Displacement of Responsibility State Moral Disengagement 5 Items summed and divided by 5	1 to 7 point Likert Higher scores associated with *more* unethical behavior
EthJudge	Ethical Judgment Rest Ethical Reasoning Step 2 Moral Equity Scale 4 Items summed and divided by 4	1 to 7 point Likert Higher scores are associated with *less* unethical behavior
SocConsen	Social Consensus 3 Items summed and divided by 3	1 to 7 point Likert, reverse-coded Higher scores are associated with *less* unethical behavior
SeriousCons	Seriousness of Consequence Moral Intensity Scale 3 Items summed and divided by 3	1 to 7 point Likert, mean-centered Higher scores are associated with *less* unethical behavior
TraitMD	Trait Moral Disengagement Control variable 8 Items summed and divided by 8	1 to 7 point Likert Higher scores are associated with *more* unethical behavior

APPENDIX B

SURVEY RESEARCH INSTRUMENT

Measures Before the Scenario
These questions are asked prior to the scenario as individual characteristic controls:

Tenure filter
Number selection from 1 to 25
1. How many years have you worked as an accounting professional?

Trait Propensity to Morally Disengage Scale – 7-point Likert
For each of the following statements, please indicate your level of agreement using the given scale.
2. It is alright to lie to keep your friends out of trouble.
3. It's okay to gloss over certain facts to make your point.
4. Considering the ways people grossly misrepresent themselves, it's hardly a sin to inflate your own credentials a bit.
5. You can't blame people for breaking the rules if that's what they were taught to do by their leaders.
6. It's okay to tell a lie if the group agrees that it's the best way to handle the situation.
7. Walking away from a store with some extra change doesn't cause any harm.
8. It's okay to treat badly somebody who behaves despicably.
9. People who get mistreated have usually done something to bring it on themselves.

Abbreviated Social Desirability Scale – 7-point Likert
10. I am always willing to admit it when I make a mistake.
11. I always practice what I preach.

Manipulation (Attention) Checks Within the Scenario
Manipulation Check – Hierarchy
12. Choose the accurate choice: TruNorth's climate is focused on 1) direction and authority, or 2) doing the best you can.

-- or-- (depending on which manipulation option is presented)

Choose the accurate choice: TruNorth's climate is focused on 1) reputation and respect, or 2) doing the best you can.
13. TruNorth's climate seems to be 1) pretty typical, or 2) somewhat different from similar firms.

Manipulation Check – Goals
14. Choose the accurate choice: Your job evaluation targets are tied to 1) IPO-related performance-based outcomes, or 2) gaining general experience.

-- or-- (depending on which manipulation option is presented)

Choose the accurate choice: Your job evaluation targets are tied to 1) IPO-related learning-based improvement, or 2) gaining general experience.

15. TruNorth's job evaluation targets seem to be 1) pretty typical, or 2) somewhat different from similar firms.

Measures Following the Scenario
These questions are asked after the scenario

Organizational Situational Moral Disengagement – 7 point Likert
For each of the following statements, please indicate your level of agreement using the given scale, assuming you are Robin.

Moral Justification Scale
16. It is alright for Robin to exaggerate the truth to keep the company out of trouble.
17. If it helps Robin do the job, it is alright to deceive investors and creditors.
18. It is alright for Robin to stretch the truth to protect the company.
19. In general, if employees need to stretch the truth to do their job, they cannot be blamed for lying.

Displacement of Responsibility Scale
20. Robin is not at fault for wrongdoing if their supervisor puts too much pressure on them to perform at work.
21. In general, employees like Robin cannot be blamed for wrongdoing if they feel that their boss pressured them to do it.
22. In general, if employees like Robin perceive that their company wants them to do something that conflicts with their personal values, it is unfair to blame the employee for doing it.
23. Robin cannot be blamed for exaggerating the truth when it's apparent that the supervisor is okay with it.
24. It is unfair to blame Robin who has potentially only a small part in the potential harm caused by the company's actions.

Social Hierarchy – 7 point Likert
25. To continue to advance in the company, it is better that Robin supervises a large number of subordinates.
26. To continue to advance in the company, it is better that Robin is able to provide rewards to others at Robin's discretion.
27. To continue to advance in the company, it is better that Robin has the authority to discipline others when needed.
28. To continue to advance in the company, it is important that others respect Robin and often seek Robin's opinion.
29. To continue to advance in the company, it is important that Robin has a good reputation among the other workers.
30. To continue to advance in the company, it is important that other people look up to Robin because Robin is a good accountant.

Goal-Setting – 7 point Likert

31. Job evaluation targets are useful to help Robin improve at work
32. Job evaluation targets are useful to incrementally improve Robin's skills over time
33. Job evaluation targets are useful to help Robin learn
34. Job evaluation targets are useful to see whether Robin meets company standards
35. Job evaluation targets are useful to evaluate Robin's performance relative to other coworkers
36. Job evaluation targets are useful to show whether Robin reached certain outcomes

Unethical Behavior – 7 point Likert

Please check the appropriate blank (1=strongly disagree, 7=strongly agree)

37. If it would help the organization, Robin should wait to disclose the COVID-19 contingent liabilities until after the IPO.
38. If it would benefit the organization, Robin should withhold negative information about the COVID-19 contingent liabilities until after the IPO.
39. If it would benefit Robin's personal financial situation, Robin should wait to disclose the COVID-19 contingent liabilities until after the IPO.
40. If it would benefit Robin's personal financial situation, Robin should withhold negative information about the COVID-19 contingent liabilities until after the IPO.
41. Withholding negative information about the COVID-19 contingent liabilities (that in your opinion will likely hurt investors) is not as important as having a profitable IPO.

Rest Ethical Reasoning - Steps 1 & 2

Ethical Judgment (Moral Equity Scale) – 7-point Likert

Assuming you are Robin, please select the adjective value that accurately reflects your general beliefs about your (Robin's) situation and the issue above relating to your supervisor, the CFO, wanting you to wait to assess and book the material COVID-19 contingent liabilities. (Please check the appropriate blank)

42. Fair :__:__:__:__:__:__:__: Unfair
43. Just :__:__:__:__:__:__:__: Unjust
44. Morally right :__:__:__:__:__:__:__: Not morally right
45. Acceptable to my family :__:__:__:__:__:__:__: Unacceptable to my family

Recognition of an Ethical Issue – 7-point Likert

46. Ethical :__:__:__:__:__:__:__: Unethical
47. Overall, do you perceive that TruNorth is an ethical or instead an unethical organization?

Ethical :__:__:__:__:__:__:__: Unethical

Moral Intensity

Seriousness of Consequences – 7 point Likert

What do you believe about any potential harm resulting if Robin does NOT disclose the material COVID-19 contingent liabilities? Please check the appropriate blank.

48. Minor :__:__:__:__:__:__:__: Severe
49. Insignificant :__:__:__:__:__:__:__: Significant
50. Slight :__:__:__:__:__:__:__: Great

Social Consensus – 7 point Likert

Indicate how you believe society as a whole would view the situation if Robin does NOT disclose the material COVID-19 contingent liabilities? Please check the appropriate blank.

51. Unethical :__:__:__:__:__:__:__: Ethical
52. Wrong :__:__:__:__:__:__:__: Right
53. Inappropriate :__:__:__:__:__:__:__: Appropriate

Influence Factors – 7 point Likert

Please indicate your degree of agreement with the following statements:

54. TruNorth's corporate climate was influential in formulating my responses to the previous questions
55. TruNorth's job evaluation targets were influential in formulating my responses to the previous questions.
56. TruNorth's corporate climate and job evaluation targets are aligned.

TruNorth Scenario

Text that is indented and italicized is for informational and review purposes only. It explains how the scenario will be presented but will not be present in the actual survey.

All participants will receive the following scenario information.

Instructions: Please take on the viewpoint and role of Robin Jones in the following scenario to answer the questions at the end.

The Company and Your Role

You are Robin Jones and you work at TruNorth. TruNorth is a private professional services company with a unique business model that has recently become profitable and has decided to go public very soon. You know this success is in part due to TruNorth's and your commitment to strong financial fundamentals.

TruNorth hired you 5 years ago as its financial controller because of your extensive accounting and industry experience. You took the job not only for the interesting work, but also for the opportunity to be involved in taking a private firm public someday. The CEO has delegated all financial and accounting decisions to the CFO, your supervisor, and you.

Three Concerns on Your Mind

First Concern: While the IPO preparations are going smoothly, your main accounting concern is that there are a number of material COVID19 - related loss contingencies that are both probable and can be reasonably estimated and therefore should be recorded before the IPO.

The CFO recently told you "I don't think we will have time before the IPO to adequately address this potential COVID19 contingent liability issue that you have raised. This is an emerging area and I don't think it will be material in any case. Let's do a deep dive after the IPO."

You are confident that your opinion conforms with guidance provided by the SEC's Division of Corporation Finance on material COVID19 - related contingencies. Your concern is that if the financial statements are not corrected NOW before the IPO, they will be misleading due to overstated profits and understated liabilities and will therefore considerably hurt the new IPO investors financially.

Second Concern: Investment bankers will be visiting the firm soon and the CFO has reminded you that the IPO has significant wealth implications for the senior executives given that they will receive an ownership stake in the company.

Your pay package consists of $150,000 in salary plus benefits. You know you have a $70,000 potential bonus after the company goes public that is tied to meeting your TruNorth job evaluation targets that are tied to the success of the IPO.

Third Concern: Upper management is making a final assessment of the type of company structure and systems that need to be in place for TruNorth to be successful once the firm is publicly traded. In your role as controller and as an important advisor to upper management, you have a window of opportunity to influence how TruNorth will be organized before going public.

TruNorth Corporate Climate

TruNorth wants to make sure that it has a solid brand and can attract the best employees after it goes public. From your experience, you know these can be influenced by a company's corporate climate. To assess its current culture, the company conducted an employee survey. In a survey summary, one employee comment seemed representative of the general mood of the staff:

Manipulation #1 – Social Hierarchy (Power Hierarchy vs. Team Hierarchy)
Participants randomly receive one of the following two manipulation options

Option 1 – Power Hierarchy

"I like that TruNorth's climate is more oriented towards clear direction and authority. This allows me access to significant company resources, the ability to efficiently delegate work, and to reward or reprimand employees in order to help build the company."

Option 2 – Team Hierarchy

"I like that TruNorth's climate is more oriented towards group reputation and respect. This allows me to focus on building organizational competence, to seek input from valued employees, and to exercise reliable judgment in order to help build the company."

All participants receive the following set up for the next manipulation

TruNorth Job Evaluation Targets

Your $70,000 potential bonus will be assessed AFTER the company goes public and is based on meeting your TruNorth job evaluation targets that are tied to the IPO.

Manipulation #2 – Goal Setting (Outcome Goals vs. Learning Goals)
Participants randomly receive one of the following two manipulation options

Option 1 – Outcome goals

Your job evaluation targets are tied to key performance-based outcome goals. The most important goal for you is to ensure that the IPO is both successful and profitable for TruNorth executives.

Option 2 – Learning goals

Your job evaluation targets are tied to key learning-based improvement goals. The most important goal for you is to ensure that the IPO is both successful and improves TruNorth's employee critical problem-solving skills.

All participants will receive the following concluding remarks.

What's next for you (Robin)

The next couple weeks are important to TruNorth's IPO and to your future at TruNorth. You are focused on how you will integrate your own personal views and your working relationships with your three concerns: the material COVID19 - related loss contingencies, the company's corporate culture, and your job evaluation targets where your bonus is tied to the IPO. All three concerns deserve serious consideration. However, you continue to believe that the material COVID19 - related loss contingencies (that are both probable and can be reasonably estimated) need to be

recorded NOW, before the IPO. Otherwise, the TruNorth financials will be misleading and will considerably hurt the new IPO investors financially.