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**WHEN WILL THEY LEARN? AN ACCOUNTABILITY THEORY PERSPECTIVE
ON THE EFFECTS OF BOARD OF DIRECTOR DECISION MONITORING
ON CEO LEARNING**

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Abstract

This paper contributes to the management literatures on board of director effectiveness and strategic cognition by developing a conceptual model that describes how the nature of the decision monitoring pressures that CEOs face from their boards of directors will influence their ongoing abilities to learn about the complex strategic issues facing their firms. Our model highlights the contingent nature of the effects of board decision monitoring on CEO learning. We identify a range of conditions under which board decision monitoring will be less likely to promote learning by CEOs, and may actually interfere with executive learning.

Keywords: boards of directors, strategic decision making, organizational learning

JEL Classification Code: M10

Corporate governance scholars have devoted considerable attention to the question of how boards of directors influence firm performance. Agency theory (Fama & Jensen, 1983) and related perspectives that currently dominate academic thinking on board effectiveness make the relatively straight-forward prediction that firms will perform better to the extent that their boards of directors vigilantly monitor management decision making (Daily, Dalton, & Cannella, 2003; Dalton, et al., 1998). The conventional account suggests that vigilant monitoring by boards of directors will have positive performance effects because close monitoring of firm managers enhances directors' abilities to intervene to block ill-conceived management strategic initiatives that would otherwise have negative effects on firm financial results (Fama & Jensen, 1983).

While the extensive management literature on boards of directors that is guided by conventional theory provides important insights into the critical question of what makes boards effective, we believe that board scholars have not given enough systematic attention to other possible mechanisms through which boards are ultimately likely to influence firm success. We found especially noteworthy the fact that board scholars have given little consideration to how board monitoring might influence any number of important aspects of how individual firm CEOs think about the strategic issues facing their firms, particularly since these executive cognitions are ultimately likely to have important implications for CEO and organizational effectiveness.

This paper begins to address this general issue by developing a theoretical framework that describes how "board decision monitoring", conceptualized as board members' demands that firm managers provide explanations and justifications for the strategic initiatives they propose, is likely to influence a critical aspect of CEO cognition, CEOs' abilities to learn about the strategic challenges facing their firms. We define CEO learning as the ongoing "updating" of CEOs' existing beliefs and assumptions about strategic issues in ways that serve to render those

beliefs and assumptions more reflective of the full complexities of the important challenges confronting their firms. An overarching thesis of our theoretical model is that the nature of decision monitoring pressures that CEOs face will influence the extent to which they learn through the effects that monitoring has on CEOs' propensities to bring a relatively self-critical and "open" or bolstering and "closed" mindset to their thinking about complex strategic issues.

It seems difficult to overestimate the implications that firm managers' abilities to learn are likely to have on long-term firm performance. Strategic management scholars have frequently observed that the fundamental task of firm managers is to adapt firm strategy to the demands of the competitive and broader environments, and that effective adaptation is essential to firm success and survival (see Barr, 1998; Barr & Huff, 1997 for reviews). It seems almost certain then that a critical determinant of managers' abilities to successfully adapt firm strategy to changing conditions is their ability to learn (Haleblian & Finkelstein, 1999; Hayward, 2002).

Despite the critical importance of the issue, only a relatively small number of studies have been conducted which focus on learning by individual top executives. The empirical investigations that are currently available offer some preliminary evidence that executives can face significant challenges to learning from their prior experiences (Haleblian & Finkelstein, 1999; Hayward, 2002; McDonald, Westphal, & Graebner, 2008), providing additional impetus to further research on executive learning. There is a special dearth of systematic research on how CEOs' relations with their boards of directors might influence their capacities for ongoing learning. Currently dominant perspectives on board effectiveness would seem to provide little guidance regarding how CEOs' capacities for learning might be influenced by board members' efforts to oversee their actions. We are aware of no prior theorizing on this general issue.

We draw on social psychological research on accountability relations (e.g., Lerner & Tetlock, 1999; Tetlock, 1985; 1992; 2002) to develop our conceptual model. Our baseline proposition is that greater monitoring of CEO decisions by board members will generally tend to enhance CEOs' abilities to learn about the strategic issues facing their firms. However, the central focus of our theoretical framework is the specification of a wide range of conditions under which closer monitoring of CEO decisions will be less likely to promote learning, and may actually interfere with learning by CEOs. These contingency factors include characteristics of the monitoring the board, the similarity and relationship between the CEOs and board, and professional background and individual personality traits of the CEOs.

Our conceptual model specifically indicates that board decision monitoring will be less likely to promote CEO learning when (1) it impinges on CEO thinking late in the strategic decision making process, (2) CEOs believe that the board will judge their individual performance primarily based on decision outcomes (e.g., short-term financial performance) rather than the thoroughness of the decision processes they employ, (3) CEOs believe that outside directors lack requisite expertise to effectively evaluate their decisions (e.g. when board members have relatively limited experience as top managers at other firms or as directors at the focal firm), (4) there are few differences between CEOs' and directors' views on strategic issues, (5) there is a relatively low level of trust of directors by CEOs, (6) CEOs' professional backgrounds (e.g., long industry tenure) increase their tendencies to cognitive rigidity and inertia in their beliefs about strategic issues, and (7) CEOs' personality traits (e.g. openness to experience) leave them inherently more prone to cognitive rigidity. Figure 1 summarizes our conceptual model and its theoretical predictions.

Insert Figure 1 about here

This paper contributes to the management literature on board of director effectiveness in that, to the best of our knowledge, it is the first to systematically consider the relationship between board decision monitoring and learning by individual CEOs. As previously discussed, the conventional wisdom on board effectiveness suggests that board scrutiny of CEO decisions is universally beneficial, and the reader's intuition may be that greater monitoring will increase CEO cognitive effort, and will therefore enhance CEOs' capacities for learning. While we conclude that monitoring generally promotes learning by CEOs, we specify a range of fairly common circumstances under which monitoring will be less likely to support CEO learning. Thus, this paper contributes to the board effectiveness literature by being among the first to attempt to specify moderating factors that are likely to influence the extent to which board monitoring will prove to be more or less beneficial. Prior research has devoted only limited attention to the boundary conditions under which board monitoring will be more or less likely to be of benefit (Forbes & Milliken, 1999; Hillman & Dalziel, 2003; McDonald, Khanna, & Westphal, 2008).

Perhaps the most provocative contribution of our model is that it suggests that at least some of the boundary conditions we specify may sometimes create "cross-over" interaction effects such that director monitoring may actually have negative effects on CEOs' capacities for learning. In this view, the irony may be that, while increased vigilance may enhance directors' abilities to identify poorly conceived management initiatives, it may, under certain conditions, simultaneously increase the likelihood that managers' decisions will be of lower quality in the first place, because monitoring at least sometimes interferes with firm managers' capacities for learning.

This paper also contributes to the nascent literature on learning by individual top executives by considering a previously unexamined, but important, potential contributing factor. The relatively small number of studies that have been conducted in this area have not systematically considered ways in which CEOs' relations with their board might influence their capacity for learning about key strategic issues. More generally, our model also contributes to the broader psychological literature on the cognitive effects of monitoring by considering previously unconsidered ways in which accountability pressures are likely to impact individual learning.

BOARD DECISION MONITORING AND CEO LEARNING

Board Decision Monitoring and CEO Efforts to Develop Explanations for Strategic

Decisions

There is a sizable literature on accountability relations in social psychology that considers the effect of accountability demands on the quality of decisions made by the individual being monitored. Accountability scholars argue that decision makers experience accountability demands to the extent that they believe their decisions are being closely scrutinized by authority members and expect that they must provide convincing explanations and justifications for their decisions (e.g., Lerner & Tetlock, 1999). Accountability theory indicates that, generally speaking, as accountability pressures become more intense, decision makers devote additional mental energy to anticipating authority members' response to their proposals, and to developing explanations and justifications for their decisions (Lerner & Tetlock, 1999; Tetlock, 1985; 1992; 2002).

This literature would seem to have clear relevance to the question of how board monitoring of strategic decision making by firm managers might influence those managers' efforts to develop justifications for their decisions. Corporate boards have a fiduciary

responsibility to scrutinize managerial decisions on behalf of shareholders, and thus, CEOs are formally accountable to their firm's board of directors for the strategic decisions that they make on behalf of their firms (Daily, Dalton, & Cannella, 2003). CEOs can, therefore, expect that they may be called upon in board meetings to provide explanations and justifications for the strategic initiatives they present for the board's approval. At the same time, they can also expect that they will be asked to provide accountings of the performance outcomes of their prior decisions. Consistent with extant definitions of decision monitoring and accountability in psychology (Lerner & Tetlock, 1999), we define board decision monitoring as demands for explanations and justifications raised by directors for managers' strategic decisions (cf. Carpenter & Westphal, 2001; McDonald, Khanna, & Westphal, 2008; Westphal, 1999). Evidence from the accountability literature in psychology, which was discussed above, indicates that CEOs who face more intense pressures from their board to provide justifications for their initiatives will devote larger amounts of time and mental energy to developing explanations and justifications for their thinking on strategic issues.¹

CEO Efforts to Develop Explanations for Strategic Decisions and CEO Learning

While there are many forms of learning by individuals (for evidence of the considerable diversity in the types of individual learning studied by psychologists compare, for example, the following: Ashby & Maddox, 2005; Meece, Anderman, & Anderman, 2006; Schultz, 2006; Shors, 2006), one often employed conceptualization characterizes learning as the assimilation of new information into existing beliefs and assumptions about important, task-relevant issues in ways that enhance the validity and richness of those beliefs and assumptions. This is the way in which learning is routinely conceptualized by psychologists who study how learning processes

¹ We note here that there is likely to be a substantial subjective element to CEOs' perceptions of the intensity with which their decisions are being monitored by directors.

contribute to the acquisition of individual expertise in making decisions in information-rich task domains such as medical diagnosis or world-class competitive chess (Ericsson & Charness, 1994; Ericsson & Lehmann, 1996; VanLehn, 1996). The greater validity and richness of “expert” decision makers’ beliefs, assumptions and knowledge, in turn, is expected to be manifested in higher quality decisions and superior task performance (Ericsson & Charness, 1996; Ericsson & Lehmann, 1996; VahnLehn, 1996).

Given that CEOs’ central responsibilities require them to make decisions regarding informationally-complex issues, this conceptualization of learning seems particularly appropriate for the study of learning by top corporate executives (cf. McDonald, Westphal, & Graebner, 2008). Accordingly, we conceptualize learning by individual CEOs as the assimilation of new information about strategic issues into their existing beliefs and assumptions such that the overall validity and richness of those beliefs and assumptions is substantively increased. We expect that learning by CEOs, as defined here, will likely enhance the quality of the strategic initiatives advanced by CEOs, and will have positive effects on the ultimate success of those initiatives (McDonald, Westphal, & Graebner, 2008).

While psychologists who study accountability and its cognitive effects have given relatively little systematic consideration to how accountability might influence individual learning per se, it seems reasonable to expect that the cognitive implications of vigilant decision monitoring are likely to promote executive learning as previously defined. Increased cognitive effort by CEOs in support of developing explanations and justifications for specific strategic decisions and the beliefs and assumptions that undergird those decisions, which is prompted by vigilant board decision monitoring, provides potential opportunities for the kind of learning that we focus on in this paper. In particular, as CEOs think harder about their beliefs and assumptions

on strategic issues, it will increase the number of opportunities which they have to re-consider their basic validity. Such a re-examination of the veracity of their existing thinking on strategic issues is an important pre-requisite to executive learning as conceptualized in this paper. This line of argument points to the following baseline proposition:

Proposition 1 (P1): There will be a positive relationship between the intensity of board decision monitoring and CEO learning.

MODERATORS OF THE RELATIONSHIP BETWEEN BOARD DECISION MONITORING AND CEO LEARNING

While we expect that board decision monitoring will be, on the whole, positively related to CEO learning, key underlying insights from psychological research on accountability highlight a range of factors that are likely to moderate the monitoring-CEO learning relationship. Accountability research indicates that much depends on the extent to which extra cognitive effort prompted by closer monitoring of decisions is devoted primarily to “self-critical thinking” or primarily to “bolstering” modes of thought among decision makers (Lerner & Tetlock, 1999; Tetlock, 1983; 1985; 1992; 2002).

Relevant theory and research suggests that the kind of learning that is of interest to us in this paper is more likely to occur to the extent that decision makers respond to accountability pressures by adopting a self-critical frame of mind. Self-critical or open-minded thinking, in the context of developing justifications for proposed decisions, involves objectively re-evaluating the validity of the beliefs and assumptions that support those decisions (Lerner & Tetlock, 1999; Tetlock, 1983; 1985; 1992; 2002). Adopting a self-critical frame of mind promotes integratively complex thinking (e.g., Tetlock, Peterson, & Armor, 1994; Tetlock, Peterson, & Berry, 1993), and has a range of cognitive effects that are likely to promote learning. In general, people have a

tendency to notice, search for, and treat as valid, information that is consistent with their current beliefs. Self-critical thinking reduces this counter-productive tendency by increasing decision makers' propensities to search for, and notice belief-inconsistent information (e.g., Swann & Read, 1981). Self-critical thinking also enhances decision makers' abilities to recall information that challenges their extant beliefs and assumptions (e.g., Rothbart, Evans, & Fulero, 1979). A self-critical mindset, moreover, increases peoples' capacities to assimilate such new information into their extant beliefs and assumptions in constructive ways (e.g., Tetlock, 1983). In sum, when decision makers engage in self-critical thinking about their beliefs and assumptions, they are more aware of novel information and are better able to incorporate such information into their thinking about important issues. Consequently, self-critical thinkers are better positioned to learn because they are more likely to manifest all of these cognitive tendencies.

In contrast, bolstering or closed-minded patterns of thought have a contrasting set of cognitive implications (Lerner & Tetlock, 1999; Tetlock, 1983; 1985; 1992; 2002) that are ultimately likely to interfere with learning. A bolstering mind-set is manifested in a number of cognitive activities that will tend to undermine learning. Decision makers adopting a defensive mindset tend to actively engage in patterns of information search that lead them to information that supports their extant beliefs and assumptions. Such a frame of mind also leaves decision makers less likely to notice belief-challenging information. In addition, even if they do notice this kind of information, they are more likely to under-estimate its credibility or dismiss it altogether. Those adopting a defensive mindset are, moreover, less likely to recall information that is inconsistent with their prior views. A defensive or bolstering frame of mind also undermines decision makers' capacities to constructively assimilate novel information into extant understandings. A bolstering mindset interferes with decision makers' capacities for

individual learning through some or all of the mechanisms just described. It is worth noting here that corporate executives are far from immune from manifesting defensive, bolstering and self-justifying patterns of thinking. Rather, considerable evidence suggests that managers can suffer from a variety of cognitive biases (see Schwenk, 1995; Maule and Hodgkinson, 2002 for reviews). There is, for example, considerable evidence that executives frequently generate self-serving explanations for firm performance problems (e.g., Salancik & Meindl, 1984; Staw, McKenzie, & Puffer, 1983).

Taken together, the above discussion would suggest that, while the notion that the extra cognitive effort expended by CEOs that is prompted by board scrutiny will promote learning may be an intuitively appealing one, the extent to which these justification efforts will actually promote learning will depend upon the extent to which this additional cognitive energy is devoted primarily to objective, self-critical thinking or defensive thinking that simply serves to bolster pre-existing perspectives. This raises the question of what kinds of factors are likely to determine CEOs' relative propensities to adopt a self-critical or bolstering mindset in the face of decision monitoring by their boards of directors.

Accountability researchers have been keenly interested in trying to understand how various characteristics of accountability demands help to determine the relative degree to which the additional cognitive effort inspired by accountability pressures is devoted to self-critical or defensive thought. While accountability scholars have not given much systematic attention to the kind of learning of interest in this paper, a recent comprehensive, and frequently cited, review of social psychological research on the underlying cognitive effects of accountability pressures highlights certain conditions under which demands for accountability have been shown to be counter-productive (Lerner and Tetlock, 1999). Of the conditions discussed in this review, we

propose that three factors will likely moderate the link between board decision monitoring and individual CEO learning: (1) the timing of monitoring pressures from the board, (2) the degree to which board members are focused on strategic decision outcomes rather than strategic decision processes, and (3) the degree to which board members are viewed as having relevant expertise.

Timing of Board Decision Monitoring

A core insight of the accountability literature is that decision makers are more likely to engage in self-critical, complex thinking to the extent that monitoring and accountability demands impinge on the decision maker early in the decision process (Lerner & Tetlock, 1999; Tetlock, 1985; 1992; 2002). In contrast, when decision makers experience accountability pressures late in the decision making process, they are more likely to adopt a defensive mental posture. Accountability theory argues that the likelihood of decision makers having made significant private, and perhaps public, commitments to a particular course of action is higher later in the decision process. Once such initial commitments have been made, decision makers are reluctant to consider alternative perspectives because doing so is tantamount to admitting to themselves, and possibly others, that previously held views were in error. There is considerable empirical evidence that supports the view that, once decision makers have made even preliminary commitments to a particular alternative, subsequent information processing tends to serve the desire to see that preferred solution bolstered (Brockner, Shaw, & Rubin, 1979; Conlon & Wolf, 1980; Simonson & Nye, 1992; see Lerner & Tetlock, 1999 for a review). Thus, defensive bolstering, and not self-critical thinking, tends to become the dominant mode of thinking as it becomes later and later in the decision process.

Extending this line of argument to the context of interest in this paper suggests that decision monitoring is most likely to promote learning to the extent that demands for

explanations and justifications impinge on CEO strategic decision making early in the decision process. In contrast, when monitoring and accountability pressures are salient to CEOs only late in strategic decision making, CEOs will engage in significantly less self-critical thinking and will be more prone to adopt a bolstering frame of mind. This suggests that following proposition:

Proposition 2 (P2): The relationship between the intensity of board decision monitoring and CEO learning will be less positive to the extent that board decision monitoring becomes salient to CEOs relatively late in the strategic decision making process.

Focus of Board Decision Monitoring

Another fundamental insight of accountability theory and research is that decision makers are more likely to engage in self-critical thought when they believe that, in evaluating their effectiveness as decision makers, authority members will take into account the thoroughness of the decision processes they use, and not just the outcomes of their decisions (Brtek & Motowidlo, 2002; Siegel-Jacobs & Yates, 1996; Simonson & Staw; 1992; Tetlock, 1992; Zhang & Mittal, 2005; see Lerner & Tetlock, 1999 for a review). This is because decision makers are more likely to think in thorough and systematic ways to the extent that they believe they will receive “credit” for doing so from relevant authorities. It follows that decision makers are less likely to think in self-critical ways, and more likely to adopt a bolstering mindset, to the extent that they believe that a monitoring authority gives little credence to the thoroughness of the decision making processes that they employ. A number of empirical studies support the conclusion that accountability pressures are less likely to promote self-critical thought, and may instead inspire bolstering, to the extent that decision makers see relevant accountability authorities as primarily focused on decision outcomes and as having little interest in, or perhaps

access to, decision processes (Brtek & Motowidlo, 2002; Siegel-Jacobs & Yates, 1996; Simonson & Staw; 1992; see Lerner & Tetlock, 1999 for a review).

The above argument suggests that CEOs will be less willing to engage in self-critical thought when they believe that directors are more or less exclusively interested in the outcomes of strategic decisions, and give limited attention to the thoroughness of the processes by which they arrive at those decisions. Taken together with prior discussion, this line of argument points to the following proposition:

Proposition 3 (P3): The relationship between the intensity of board decision monitoring and CEO learning will be less positive to the extent that a CEO believes that the board focuses on decision outcomes rather than the thoroughness of CEO strategic decision making processes when assessing CEO performance.

Board Member Expertise

Accountability researchers have also devoted significant attention to understanding how authority expertise, and the more general legitimacy of authority demands for justifications of decisions, influence decision makers' relative propensities to adopt a self-critical or bolstering mind set in response to accountability pressures (Lerner & Tetlock, 1999; Mero, Guidice, & Brownlee, 2007). The extra cognitive energy spent on efforts to justify decisions and underlying beliefs and assumptions is less likely to be devoted to self-critical thinking, and by implication, more likely to be devoted to bolstering, to the extent that authority members are viewed as having relatively low levels of relevant expertise (Lerner & Tetlock, 1999; Tetlock, 1985; 1992; 2002). Accountability pressures from authorities with relatively high levels of expertise are especially likely to promote thorough consideration of the issues because such authorities are expected to be better able to "see through" accounts that are primarily or entirely self-justifying.

In contrast, the potential reservations of authority members who lack relevant expertise are given little credence because their objections can be more easily satisfied, and thus, may either not prompt any additional cognitive effort, or prompt defensive modes of thought because they are seen as largely illegitimate (Lerner & Tetlock, 1999). The available empirical evidence indicates that decision makers are less likely to adopt a self-critical mindset when they are accountable to authorities who possess relatively low levels of relevant experience and expertise. Instead, the extra cognitive energy inspired by accountability pressures may be devoted primarily to bolstering existing perspectives to the extent that decision makers view the relevant expertise of accountability authorities as low (e.g., Fitzpatrick & Eagly, 1981; Gordon & Stuecher, 1992).

Extending the theory and evidence just reviewed to the issues of interest in this paper would suggest that following general proposition:

Proposition 4 (P4): The relationship between the intensity of board decision monitoring and CEO learning will be less positive to the extent that board members view board members as having lower levels of relevant expertise.

The above discussion suggests that CEOs will be less likely to adopt a self-critical mindset, and more likely to engage in bolstering efforts, to the extent that they believe that board members have relatively low levels of relevant expertise. While expertise may be judged in a number of different ways, we discuss below two common metrics that CEOs are likely to use in their informal judgments about how much relevant knowledge directors possess. These include directors' prior experience as top managers at other firms and the length of directors' tenure at the focal firm.

Board members' prior executive-level experience. One basic cue that CEOs are likely to use in assessing directors' expertise is the amount of prior executive experience that directors

have (Carpenter & Westphal, 2001; McDonald, Khanna, & Westphal, 2008; McDonald, Westphal, & Graebner, 2008). Thus, we expect that CEOs will be less inclined to adopt a self-critical frame of mind when they are being monitored by directors who have relatively low levels of prior experience as top managers of others firms. Empirical evidence from a study by McDonald, Khanna, & Westphal (2008) is broadly consistent with this line of argument. Using a survey measure of board monitoring, the authors found that monitoring is less likely to inspire CEOs to seek out their “weak ties” when directors have relatively low levels of prior executive experience. One compelling explanation of these effects is that CEOs are less likely to adopt a self-critical mindset under these conditions, and therefore, less willing to seek out others, like their weak-tie social contacts, who are more likely to provide views on strategic issues that depart from their own.

Proposition 4a (P4a): The relationship between the intensity of board decision monitoring and CEO learning will be less positive to the extent that board members have lower levels of executive-level management experience.

Board members’ tenure on the focal firm’s board. Similarly, in judging the directors’ relevant expertise, CEOs are also likely to consider how much directors know about the focal firm, its resources and capabilities, and the specific competitive challenges it faces. Thus, CEOs are likely to use directors’ tenure on a focal firm’s board as a rough indicator of a directors’ firm-specific knowledge. This additional discussion suggests the following extension to Proposition 4:

Proposition 4b (4b): The relationship between the intensity of board decision monitoring and CEO learning will be less positive to the extent that board members have shorter tenures on a focal board of directors.

CEO-Board Member Cognitive Differences

In this sub-section, we combine the core principles of the psychological literature on accountability perspective with insights from the psychological and management literatures on the effects of cognitive diversity and interpersonal trust to develop propositions regarding how CEO-director cognitive differences and CEO trust of directors will moderate the effects of board monitoring on CEO learning. An accountability theory perspective would seem to at least implicitly suggest that decision makers are less likely to engage in self-critical thinking in response to accountability pressures to the extent that they expect to provide justifications to authority members who hold views that are similar to their own. Decision makers are less likely to think self-critically under these circumstances because intense questioning by authority members is less likely to be viewed as an outright challenge to the substance of their perspectives on important issues. A self-critical mindset is also less likely because decision makers will tend to believe that they can readily address whatever concerns a like-minded authority raises relatively easily. In Tetlock's (1983) seminal study of the effects of accountability on decision maker willingness to think self-critically, supplementary exploratory analyses revealed that accountability only prompted self-critical thinking when subjects expected to justify their views on certain social issues to others with political perspectives that were different from their own. Subjects accountable to similarly-minded others displayed levels of self-critical thought that were no different than the levels manifested by subjects in the "no accountability" experimental condition.

Thus, an accountability theory perspective would indicate that decision monitoring will be less likely to promote CEO self-critical thinking when directors' views on strategic issues are not very different from those held by the CEO. CEOs who report to directors who have views that are similar to their own will be less likely to adopt a self-critical mindset because they will

be less likely to expect that demands for justifications and explanations will manifest themselves as outright challenges to their perspectives on strategic issues. In contrast, when directors' views differ from those of the CEO, he or she will be more likely to adopt a self-critical frame of mind because he or she must take into account authority members' contrasting beliefs and assumptions. Taken together with prior discussion, this line of argument suggests the following research proposition:

Proposition 5 (P5): The relationship between the intensity of board decision monitoring and CEO learning will be less positive to the extent that the level of cognitive differences between a CEO and board members is lower.

CEO Perceptions of Director Trustworthiness

In this section we draw on theory and research on accountability and interpersonal trust to argue that CEOs will be more likely to think in self-critical ways, and less likely to manifest a bolstering mindset, when they trust the board members to whom they are accountable. In contrast, we expect that CEOs will be more likely to respond to board decision monitoring by adopting a defensive mental posture to the extent that they manifest lower levels of trust in members of their boards.

Trust is routinely defined as a person's expectation that relevant others will refrain from unfairly exploiting their context-relevant vulnerabilities (Kramer, 1999). This definition suggests that, in general, decision makers will expect there to be a significant risk that, authority members that they do not perceive to be highly trustworthy, will seek to unfairly exploit their vulnerabilities. Decision makers who report to such authorities are therefore likely to be especially reluctant to reveal any uncertainty regarding the merits of a selected course of action to those authorities, for fear that such uncertainty will be unfairly treated as a shortcoming in

their decision making or leadership ability. These decision makers are also likely to believe that any changes in their previously expressed views will be exploited by such authority members as evidence of “indecisiveness” or past errors in judgment. This line of argument suggests that decision makers’ efforts to appear certain and decisive in the eyes of authority members whom they do not perceive as highly trustworthy, will reduce their tendencies to engage in self-critical thought, and will instead increase their tendencies to adopt a bolstering frame of mind. In contrast, as Edmondson (1999) argues, trusting social relations create a kind of zone of “psychological safety” that enhances managers’ willingness to take interpersonal risks including, for example, admitting past mistakes (p. 354).

It follows from the above discussion that decision makers who report to authorities whom they do not trust very highly will be particularly likely to engage in active efforts to convince the authority members of the correctness of their views. Such impression management efforts are routinely supported by private self-justifying thinking that tends to “crowd out” private self-critical thought regarding key beliefs and assumptions. As Tetlock and Manstead (1985) argue, self-justifying thought that is meant to support public impression management efforts has substantive cognitive effects which, in turn, render the individual’s private thinking less self-critical and complex. Lerner & Tetlock (1999) provide an extensive review of empirical research that supports this conclusion.

While there are few empirical studies in the psychological literature on accountability that look specifically at the effects of decision makers’ perceptions of the level of trustworthiness of monitoring authorities, several studies from the management literature indicate that decision makers are less willing to engage in self-critical thought, and more prone to defensive bolstering, when they face socio-political vulnerabilities in their relations with organizational authorities

(e.g., Cvetkovich, 1978; Fox & Staw, 1979; Morris & Moore, 2000). At least one empirical study indicates that the inhibition of self-critical thinking that results from these vulnerabilities, in turn, reduces individual managers' abilities to learn (Morris & Moore, 2000).

Extending the theory and evidence reviewed above to the issues that are the focus of this paper suggests that CEOs who report to directors whom they perceive as having lower levels of trustworthiness will be less likely to devote the extra cognitive energy inspired by decision monitoring to the self-critical patterns of thought that will tend to support learning. Thus, these CEOs will be less likely to respond to decision monitoring pressures by reconsidering the validity of their views for fear that any revisions that they might make will be viewed as evidence of "indecisiveness" or past errors in judgment. These CEOs will, moreover, devote extra cognitive energy to efforts to convince less trusted board members of the validity of their beliefs and assumptions about strategic issues. These private bolstering efforts, which are meant to support impression management, will tend to "crowd out" private self-critical thinking. This discussion suggests the following formal proposition:

Proposition 6 (P6): The relationship between the intensity of board decision monitoring and CEO learning will be less positive to the extent that a CEO perceives board members as less trustworthy.

CEO Professional and Personality Characteristics

Accountability researchers have given comparatively little systematic attention to how individual decision maker attributes will moderate the cognitive effects of accountability pressures (Mero, Guidice, & Anna, 2006). In this section, we combine the basic principles of an accountability theory perspective with insights from the executive leadership literature (Carpenter, Geletkanycz, & Sanders, 2004; Finkelstein & Hambrick, 1996) and psychological

research on individual personality (e.g., Kruglanski & Webster, 1996) to consider how individual CEO characteristics will moderate the link between board decision monitoring and CEOs' capacities for learning. Individual CEO attributes that increase CEOs' inherent tendencies to cognitive inertia or rigidity will play an especially important role in this respect. When CEOs are prone to inflexibility in their thinking about the strategic issues facing their firms they will be more likely to adopt a bolstering mindset in response to demands for justifications for their decisions, and less likely to engage in the kind of self-critical thought that we have argued will support CEO learning. In the discussion that follows, we consider a number of CEO professional background and personality characteristics that are likely to moderate the link between monitoring-inspired justification efforts and CEO learning through the implications that those CEO attributes have for CEO tendencies to cognitive inertia and inflexibility.

CEO Position, Organization, and Industry Tenure. Executive leadership scholars have been keenly interested in identifying top managers' professional background characteristics that will contribute to cognitive inflexibility among top managers because this is likely to have important implications for firms' capacities for adaptive strategic behavior (e.g., firms' propensities to change their strategies when changing external conditions dictate change is required). Among the professional background attributes considered by executive leadership scholars interested in the sources of executive cognitive inertia are various forms of CEO tenure including position, organization, and industry tenure.

CEO position tenure. There is considerable agreement among executive leadership scholars that top managers' thinking about strategic issues become less flexible when they have been in their positions as CEO of a particular firm for a relatively long period of time (see Carpenter, Geletkanycz, & Sanders, 2004; Finkelstein & Hambrick, 1996 for reviews). It has

been argued that CEOs' perspectives on strategic issues become more rigid over time in part because their personal commitment to firm strategy increases over time. Greater personal commitments to existing strategies come about because, with increasing position tenure, a firm's overarching strategy is more likely to reflect the strategic thinking and prior strategic decisions of the firm's CEO.

CEOs' cognitions are also likely to be rigid when they have been in their position for a relatively long time because the information sources that CEOs are exposed to become narrower, and less diverse, over time. As Finkelstein and Hambrick (1996) argue, "this occurs because of habituation, the establishment of informational routines, the cultivation of trusted sources, and the tendency for those sources to cater to the executives' information preferences" (pp. 83-84). Thus, top managers are exposed to a less diverse set of points of view with increasing position tenure. Because their views are more likely to be reinforced by the information sources that they rely on the longer they are in their positions, CEOs will become more rigid in their thinking with increasing position tenure. Consistent with this line of reasoning, relevant empirical studies suggest that CEOs pursue strategic change less frequently when they have been in their positions as CEOs for a long period of time. Executive leadership scholars have consistently argued that a critical mediating mechanism of this relationship is the increasing cognitive rigidity that tends to accompany increasing position tenure (e.g., Miller, 1991).

CEO organizational tenure. Executives' cognitive flexibility also tends to be lower at relatively high levels of tenure with a particular organization (Hambrick, Geletkancyz, & Fredrickson, 1993). The mediating mechanisms here are similar to those outlined above. In particular, CEOs who have spent relatively little time outside their current organization will have been exposed to a less diverse set of opinions than their counterparts who have greater

experience at other firms. Thus, their views will have been especially likely to have been reinforced through the information sources that they have relied upon most heavily over time. Relevant empirical studies indicate that executives become more psychologically committed to the correctness of a firm's strategy, and the beliefs and assumptions upon which it is based, to the extent that they have been with their current firm for a long period of time (e.g., Hambrick, Geletkanycz, & Fredrickson, 1993).

CEO industry tenure. Executive leadership theory and research also indicates that top managers' understandings of the strategic issues facing their firms will become less flexible to the extent that they have been managers in their firm's industry for a long period of time (Hambrick, Geletkanycz, & Fredrickson, 1993). The thinking of executives who work in particular industries reflects, to some considerable degree, widely held "industry recipes" that are likely to vary from industry to industry (Spender, 1989). Executives who have relatively little experience in other industries will have been exposed to a less diverse set of viewpoints than executives with significant experience in other industries. Relevant empirical studies indicate that CEOs with long industry tenures are more convinced of the correctness of existing firm strategies than their counterparts with shorter industry tenures (Hambrick, Geletkanycz, & Fredrickson, 1993).

To sum up the arguments just presented, CEOs whose thinking has been rendered less flexible by long position, organization, or industry tenure will be generally less willing and able to reconsider the validity of their beliefs and assumptions about important strategic issues. Thus, we should expect that CEOs with long organizational, industry or position tenure will be less willing than their short-tenured counterparts to devote extra mental energy inspired by board decision monitoring to self-critical thinking. They will instead be prone to adopting a bolstering

mindset that prior argument indicated will likely interfere with their abilities to revise their beliefs and assumptions to enhance their overall validity (i.e., their abilities to learn). This leads to the following three propositions:

Proposition 7a (P7a): The relationship between the intensity of board decision monitoring and CEO learning will be less positive to the extent that CEO position tenure is relatively high.

Proposition 7b (P7b): The relationship between the intensity of board decision monitoring and CEO learning will be less positive to the extent that CEO organization tenure is relatively high.

Proposition 7c (P7c): The relationship between the intensity of board decision monitoring and CEO learning will be less positive to the extent that CEO industry tenure is relatively high.

CEO Personality Characteristics. Integrating the basic principles of accountability theory and research previously reviewed with insights from psychological research on individual personality suggests that individuals whose personality traits render them less cognitively flexible will be less likely to adopt a self-critical mindset in response to accountability pressures. As a result, these accountability pressures will be less likely to promote decision maker learning. In the discussion that follows, we consider two widely researched personality traits that are likely to influence how CEOs respond to accountability pressures from their boards through the implications that they have for CEOs' inherent propensities to high (or low) levels of cognitive rigidity.

Openness to experience. In the currently influential Five Factor Model of human personality, peoples' inherent tendencies to cognitive inflexibility are indicated by where they

fall on the trait “openness to experience”. People who are high in trait openness to experience are more flexible in their thinking than those low in trait openness (McCrae, 1996). Especially relevant to the issues of interest in this paper, is the specific finding that high openness individuals are more willing and able to assimilate information that is inconsistent with their pre-existing views into their thinking about important issues (McCrae, 1994; McCrae & Costa, 1997). As McCrae and Costa (1997) conclude, high openness individuals manifest a greater willingness and ability to shift their beliefs as “the weight of the evidence accumulate[s]” (McCrae & Costa, 1997: 838). This suggests that high openness individuals will show a higher propensity to respond to accountability pressures by engaging in self-critical thought in which they re-examine the validity of relevant beliefs and assumptions, and will be less likely to adopt a defensive mindset.

In contrast, low openness individuals manifest relatively low flexibility in their thinking, and personality theorists routinely characterize the cognitive strategies of low openness individuals as “conservative” (e.g., Jost, Glaser, Kruglanski, & Sulloway, 2003). People who are low in trait openness are dispositionally resistant to revising their beliefs and assumptions even in the face of contradictory information. An extensive body of empirical evidence in psychology indicates that low openness individuals are less willing and able than high openness individuals to adopt new ways of thinking about important issues (McCrae, 1987; for reviews see Flynn, 2005; McCrae, 1994; McCrae & Costa, 1997), and extant studies have extended these findings to applied settings (e.g., George & Zhou, 2001). Thus, low openness individuals will be especially likely to respond to accountability pressures by adopting a bolstering mindset and less likely to engage in self-critical thought that would support their abilities to learn.

Applying these insights to the issues of interest in this paper suggests that CEOs who are relatively low in trait openness to experience will be more likely to respond to accountability pressures from their boards by adopting a bolstering mindset that focuses their attention on the ways in which their pre-existing beliefs and assumptions about strategic issues are valid and correct. These low openness CEOs will, moreover, be less likely than their high openness counterparts to respond to decision monitoring by devoting additional cognitive energy to self-critical thinking that will support learning. This line of argument suggests the following research proposition:

Proposition 8a (P8a): The relationship between the intensity of board decision monitoring and CEO learning will be less positive to the extent that CEO trait openness to experience is low.

Need for cognitive closure (NFC). The need for cognitive closure (NFC) (Kruglanski, 1989; 1990; Kruglanski & Webster, 1996; Webster & Kruglanski, 1994) is among the most influential constructs in contemporary personality psychology related to peoples' pre-dispositions to cognitive rigidity and inflexibility. A person's dispositional NFC represents their inherent tendencies to "freeze" on particular points of view on important issues (Webster & Kruglanski, 1994). High NFC individuals engage in a range of cognitive and behavioral strategies that help them to preserve their pre-existing understandings of the issues that they face. In contrast, low NFC individuals are more willing to reconsider the validity of their beliefs and assumptions when exposed to contradictory information, and to revise those beliefs and assumptions, if necessary. Thus, NFC theory suggests that high NFC individuals will be especially likely to devote additional cognitive energy inspired by accountability pressures to defensive thinking rather than self-critical thought. The available empirical evidence supports

this view. Extant studies demonstrate that high NFC individuals are less willing to engage in self-critical thinking and more prone to adopting a defensive mindset than their low NFC counterparts (Kruglanski, Shah, Pierro, & Mannetti, 2002; Kruglanski & Webster, 1991; Kruglanski, Webster, & Klem, 1993; Tetlock, 1998). At least one published study provides indirect evidence that accountability pressures are less likely to promote a self-critical mindset, and more likely to prompt bolstering, for high NFC individuals than individuals with low NFC (Kruglanski & Freund, 1983).

Thus, the NFC literature suggests that CEOs with a high dispositional NFC will be less likely to adopt a self-critical mindset in response to board scrutiny than their low NFC counterparts, and will instead tend to devote additional cognitive effort inspired by monitoring pressures to bolstering their existing beliefs and assumptions. As a result, monitoring will be less likely to promote learning for CEOs who have a high dispositional NFC; on the contrary, it may inhibit learning. This discussion points to the following research proposition:

Proposition 8b (P8b): The relationship between the intensity of board decision monitoring and CEO learning will be less positive to the extent that CEO dispositional need for cognitive closure is high.

DISCUSSION

In our view, a central contribution of this paper is that it is among the first to systematically explore the potential nexus between the nature of monitoring of CEO decisions by boards of directors, which has typically been the purview of corporate governance researchers, and important aspects of CEOs' strategic cognitions, which have largely been the purview of executive leadership scholars adopting a managerial cognition perspective. Conventional academic theories of board effectiveness seem to suggest that board monitoring of management

action will affect performance-related outcomes primarily through its effects on directors' abilities to block ill-conceived initiatives that have been advanced by firm managers. This paper focused instead on a different, and largely unexplored, mechanism through which boards are likely to impact firm success: the effects that board decision monitoring has on CEOs' capacities for learning about the complex strategic issues facing their firms. A central theme in the strategic management literature is that firms will succeed to the extent that top managers are able to align firm strategy and structure with the ever-evolving demands that emanate from their firms' external environments. A critical contributor to top managers' capacities in this regard is their ability to learn.

The baseline proposition of our theoretical framework is that, because more vigilant board decision monitoring will prompt more extensive thinking by CEOs, greater board vigilance will generally tend to support learning. However, our model brings into sharp relief the contingent nature of any learning-promoting effects of greater board monitoring. In fact, the focus of our theoretical framework is the specification of a range of boundary conditions that will tend to moderate any potential learning-related benefits of greater board scrutiny. In this regard it is worth noting that prevailing academic theory often seems to place few boundary conditions around the supposed beneficial effects of greater board vigilance, and governance scholars seem to have given relatively limited attention to the possible limits of the benefits of increased monitoring pressures (see Hillman & Dalziel, 2003 for an important exception). Thus, a perhaps ancillary contribution of this paper is that it helps to highlight the need for further investigation of the likely contingent nature of the benefits of board monitoring.

Our theoretical framework explains how a range of situational factors and individual CEO characteristics are likely to moderate the potential benefits that board decision monitoring

might have on CEO learning. The conceptual framework we presented specifically indicates that decision monitoring will be less likely to promote CEO learning to the extent that (1) board decision monitoring impinges on CEO thinking only late in the strategic decision making process, (2) CEOs believe that directors judge their performance more or less exclusively based on decision outcomes rather than the thoroughness of their decision processes, and (3) directors have relatively low levels of executive experience or relatively short tenures at a focal firm, and are therefore seen as having limited relevant expertise.

Our theoretical framework also integrates the basic principles of extant accountability theory with insights from the literatures on the effects of cognitive diversity and interpersonal trust to develop predictions regarding how additional factors that have received relatively limited prior attention in the psychological literature on accountability will likely moderate the effects of board of director decision monitoring. We specifically argued that board decision monitoring will have less positive effects on CEO learning when (1) there are few differences between CEOs' and directors' views on strategic issues and (2) CEOs judge director trustworthiness to be relatively low. Accountability researchers have also given only limited consideration to how decision makers' individual attributes might moderate the cognitive effects of accountability pressures (Mero, Guidice, & Anna, 2006). We integrated insights from upper-echelons research and psychological research on personality with the basic principles of accountability theory to propose that monitoring would have less positive effects on CEO learning when (1) CEOs have long position, organization, and industry tenures that render them prone to cognitive rigidity in their thinking about strategic issues and (2) CEOs have personality characteristics that render them especially susceptible to inertia in their thinking about strategic issues.

Our theoretical framework makes one more notable overarching contribution to the management literature on board effectiveness. A central thesis of accountability theory and research is that additional cognitive effort, which is inspired by accountability pressures, is often devoted to simply bolstering extant beliefs and assumptions. These bolstering efforts have a range of cognitive effects that we reasoned would likely undermine, rather than enhance, decision makers' capacities for learning. While it is inevitably an empirical question at this point, some of the moderating effects that we propose may represent "cross-over" interactions, such that at high levels of at least some of the moderators we specify there may be a negative, rather than a positive, relationship between board decision monitoring and CEO learning. From this perspective, the irony may be that, while board monitoring may enhance directors' abilities to act to block ill-conceived management strategic initiatives, monitoring may not infrequently interfere with CEO learning such that firm managers are more likely to arrive at lower quality strategic decisions in the first place.

In this light, it is worth speculating about the likely "typical" levels of the boundary conditions that we specify. Observers of board functioning have frequently suggested that there are important gaps in outside directors' knowledge of the firms that they oversee and the industries in which those firms compete (Carpenter & Westphal, 2001). Outside directors routinely have substantially less firm- and industry-specific knowledge than a firm's CEO. Observers of boards of directors have also frequently suggested that at least some CEOs work to "pack" their boards with personal friends and socially-similar others who are likely to hold views that are like their own (Westphal, 1999; Westphal & Zajac, 1995). Moreover, outside directors often do not have a great deal of access to the processes CEOs use in making decisions, and as a result they are likely to frequently focus more or less exclusively on decision outcomes

(Baysinger & Hoskisson, 1990). Our theory proposes a mechanism through which all of the not infrequently observed conditions described here may mitigate, and perhaps ultimately, reverse, any learning-promoting effects that board scrutiny might have.

It is worth noting that our conceptual framework also highlights aspects of board processes that have received little systematic consideration in the literature on board effectiveness. For example, our theory focuses attention on the influence that outside directors' access to, and consideration of, internal management decision processes is likely to have on the link between decision monitoring and CEO learning. Our theoretical framework specifically indicates that monitoring is less likely to promote learning, and may ultimately inhibit it, to the extent that directors are unwilling or unable to assess the overall comprehensiveness of CEO decision making, but instead focus more or less exclusively on decision outcomes. Our theory also suggests that the effects of monitoring are likely to depend to some significant degree on the timing of the salience of board scrutiny. When decision monitoring pressures are salient only late in CEOs' decision making efforts, monitoring is less likely to support learning and more likely to interfere with it.

This paper also makes a notable contribution to the literature on how top executive personality traits might moderate the effects of director vigilance. The contemporary literature on executive leaders has given only limited attention to executives' personality characteristics and their likely impact on any of a range of important outcomes. A number of executive leadership scholars have observed that consideration of executive personality might provide important insights into long-standing conundrums in executive leadership research (Cannella & Monroe, 1997; Peterson, et al., 2003). We are aware of no prior theorizing that examines how CEOs' personalities might influence how they respond to scrutiny from their boards of directors. Our

theory suggests that whether decision monitoring promotes significant learning likely partly depends on the monitored individuals' levels of trait openness to experience and dispositional need for cognitive closure (NFC), and we specifically argue that board scrutiny is less likely to support learning among low openness and high NFC CEOs.

Beyond the contributions to the literature on boards effectiveness outlined above, this paper also makes a notable contribution to the literature on learning by top executives. A number of eminent learning scholars have argued that learning from strategic decisions is particularly difficult because these decisions have so many idiosyncratic elements (e.g., March, Sproull, & Tamuz, 1991). Studies of experiential learning in undertaking acquisitions, a kind of strategic decision that many executives are involved in multiple times over their careers, indicate no simple positive linear relationship between the number of prior acquisitions executives have been involved in the past and the performance of subsequent acquisitions (Haleblian & Finkelstein, 1999; Hayward, 2002). In light of these findings, a number of scholars interested in experiential learning have begun to explore some of the conditions under which top managers are more or less likely to learn from prior experience. Haleblian & Finkelstein (1999), for example, found that top executives' prior acquisition experience has positive performance effects to the extent that prior acquisition targets are similar in important respects to current targets (see also McDonald, Westphal, & Graebner, 2008). While these studies provide much needed insights into the conditions under which executive experiential learning is more or less likely, we are aware of no prior theorizing that has considered how fundamental corporate governance mechanisms, including decision monitoring, might influence top managers' capacities for learning (but see Morris & Moore, 2000 for an empirical study of accountability and its effects on learning by non-executives in organizations). Our accountability theory-based perspective suggests how

various attributes of the monitoring pressures that CEOs face are likely to impact their capacities to learn.

Future Theory and Research

In this paper, we purposefully limited the scope of our theorizing to the ways in which board decision monitoring might influence CEOs' capacities to learn. However, an accountability theory perspective on CEO-board relations indicates that board monitoring will also likely have significant effects on CEOs' susceptibility to a wide range of noteworthy biases in strategic decision making. This would seem to be an important area for future theory and research. How accountability pressures influence decision makers' tendencies to decision-making biases has been the central focus of psychological research on the effects of accountability. An extensive body of empirical evidence reviewed by Lerner & Tetlock (1999) suggests that, at least under some conditions, monitoring pressures reduce decision makers' susceptibility to important biases including tendencies to use simplifying heuristics, to overconfidence, and to escalation of commitment to failing courses of action. It is important to recognize, however, that the accountability literature indicates that the ultimate effects of decision monitoring on biases in decision making are likely to depend upon on a range of contingency factors. In the presence of such factors, monitoring is less likely to reduce tendencies to bias, and may actually promote bias in decision making.

Extending insights from the accountability literature to the question of how boards might influence CEOs' susceptibility to decision making biases suggests that, at least under some conditions, board decision monitoring will reduce CEOs' propensities to manifest biases such as those mentioned above that are likely to substantively degrade the quality of their strategic decisions. However, the accountability literature further suggests that monitoring will be less

likely to reduce susceptibility to strategic decision-making biases, and may actually exacerbate tendencies to important biases, under a range of contingency conditions. Thus, board decision monitoring may, for example, promote, rather than reduce, CEOs' susceptibility to important biases when boards focus exclusively on outcomes rather than decision processes or when CEOs have lower levels of trust of directors. Future theorizing and empirical research might apply an accountability theory perspective on CEO-board relations to systematically examine the kinds of effects we briefly described here.

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Figure 1: A Theoretical Model of the Effects of Board Decision Monitoring on CEO Learning

