A Social Cognition Framework for Examining Moral Awareness in Managers and Academics

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ABSTRACT. This investigation applies a social cognition framework to examine moral awareness in business situations. Using a vignette-based instrument, the investigation compares the recall, recognition, and ascription of importance to moral- versus strategy-related issues in business managers (n = 86) and academic professors (n = 61). Results demonstrate that managers recall strategy-related issues more than moral-related issues and recognize and ascribe importance to moral-related issues less than academics. It also finds an inverse relationship between socialization in the business context and moral awareness. Future directions for moral awareness research and the practical implications for these findings are discussed.

KEY WORDS: moral awareness, moral sensitivity, social cognition, managers

Introduction

The catastrophic corporate scandals of the last decade have caused business practitioners' ethical (and unethical) actions to be scrutinized. The media has begun to look at business through a more critical lens (e.g., Morgenson, 2006, Sect. 3.1) and the government has enacted strict legislation intended to prevent future harm to shareholders and non-share-owning stakeholders (e.g., Sarbanes-Oxley; U.S. Sentencing Guidelines). The academic community has similarly begun to recognize ethicsrelated topics as worthy of investigation (e.g., Brown et al., 2005; Trevino et al., 2003; Weaver et al., 1999a, b). Within the psychological domain, these issues have sparked interest in how fundamental theories of human cognition and behavior are related to ethics in organizational contexts (Agle, 1996; Jones, 1991; Trevino, 1986); however, few empirical examinations have resulted from this interest. The current investigation contributes to this research domain by examining business managers' and academics' awareness of moral-related issues within a social cognition framework. Specifically, it examines how schemas affect individuals' recall, recognition, and ascription of importance to moral¹-related issues in decision-making contexts. This investigation takes the cause of unethical decision-making beyond the hypothesis that it involves a series of intentional choices and proposes that unethical decision-making may be a product of non-conscious cognitive processes.

I explore this hypothesis in three stages. In the first stage, I ask individuals with business experience and individuals without business experience to recall both moral— and strategy-related issues in a morally ambiguous business dilemma. In the second stage, I examine how individuals both inside and outside of business define moral-related issues and distinguish them from strategy-related issues. I also measure the magnitude at which individuals include these issues in their open-ended responses to a hypothetical, morally ambiguous situation. In the third stage, I ask individuals with business experience and advanced business training to explicitly rate the *moral-relatedness* of several issues that are regularly faced in complex business decision-making.

Models of moral cognition in business

Unethical cognition and behavior in organizations have been partially attributed to person-based characteristics. For example, Trevino and Youngblood (1990) found that people at higher stages of moral development (Kohlberg, 1969) were more likely than those at lower stages to behave ethically in

a business situation. They recommended that building an ethical work environment should involve organizations' "attempt to attract individuals of high integrity" (p. 384). Similarly, some investigations (Fraedrich and Ferrell, 1992) and theoretical models (Hunt and Vitell, 1986) have proposed that one's personal moral philosophy affected ethical decision-making. Others have laid blame on context-related variables. For example, Jones (1991) proposed that characteristics of the issue under consideration, including the magnitude of its consequences, social consensus that the act is good or evil, and immediacy and proximity of the moral issue, affected the likelihood that individuals would make moral judgments.

The business domain itself has also been examined as the origin of differences in moral cognition and behavior. For example, Armstrong (1987) found that accountants' moral reasoning was significantly lower than that of current college students, despite their equivalent education levels. Similarly, business majors were more tolerant towards ethically questionable business practices than were non-business majors. The strength of this relationship was directly related to students' length of business training (Hawkins and Cocanougher, 1972). Lastly, business managers rated ethically questionable practices as being more ethical than did business students, lawyers, and law students – in that order (Stevens et al., 1989).

This investigation acknowledges that moral cognition and behavior in the business domain are affected by person-, issue-, and situation-based attributes; however, it also acknowledges that these factors do not entirely explain unethical decisionmaking. Instead, it proposes that moral cognition, particularly the awareness of moral issues (Rest, 1986), is the product of non-conscious processes related to the attention to and retrieval of stimuli. This theory is not novel (e.g., Butterfield et al., 2000; Gioia, 1992; Reynolds, 2006b); however, it has not been empirically tested. In addition to questioning the factors affecting moral cognition, the previous studies have not identified the origins of these domain-based differences within the moral cognition framework. Each investigation cited above focuses on moral reasoning or judgment (Kohlberg, 1984), which comprise the second component of a four-component process towards moral action (Rest, 1986, 1994). None examined the prior step, moral awareness.

In light of these unanswered questions, the current investigation has two primary goals: (1) to further explore the relationship between experience in the business domain and moral cognition, specifically moral awareness, and (2) to examine the cognitive mechanisms that operate within this context.

The four-component model and moral awareness

Rest's (1986, 1994) four-component model traverses the steps that lead to moral behavior. These include (1) moral sensitivity, (2) moral reasoning, (3) moral motivation, and (4) moral character. *Moral sensitivity* was Rest's label for Component 1; however, *moral awareness* will be used in the present investigation because the cognitive basis used for the main hypotheses stems from research on cognitive *awareness* (Fiske and Taylor, 1991) and because all other investigations within the business domain have also used this label (cf., Butterfield et al., 2000; Reynolds, 2006a).

According to Rest (1986, 1994), moral awareness is the first step in the moral action process and is defined as recognizing the effects of one's actions on others. It also includes an awareness of the different lines of action available and how each of these lines affects the parties involved (Rest, 1994). In contrast, (2) moral reasoning is the judgment of what potential action line is most moral and just. Moral reasoning consists of a series of six developmental stages that describes the level of cognitive complexity one applies when making moral judgments (Kohlberg, 1969). These range from the overly simplistic preconventional stages (i.e., Stages 1 and 2) where the decision-maker reasons based on rewards or punishments from an authority figure to the postconventional stages (i.e., Stages 5 and 6) where the decision-maker reasons apart from an authority figure's wishes and understands that moral decisions involve relativism. Moral motivation (3) is the degree of commitment that one has to the moral action (once it is identified during moral reasoning) and (4) moral character is having the courage and initiative to act upon this commitment (Rest et al., 1999).

Rest's definition of moral awareness is slightly different from how others conceive of this component, as well as how it is operationalized in the current investigation. Some define moral awareness as solely a recognition-based ability, conceptualizing the construct as the ability to detect moral issues within a broader, amoral context (e.g., Hebert et al., 1990). However, even if the moral issues are recognized and elicit an affective-response, if an individual places little or no importance on them, it is doubtful that they will be factored into decision-making. Instead, they will likely be supplanted by other issues that the individual considers to be more relevant to the task (Hunt and Vitell, 1992). Theoretically, if one does not recognize a moral issue, he or she will be unable to factor the issue into the judgment process (Fiske and Taylor, 1991; Gioia, 1992), leading to a poor prognosis for the likelihood of later moral action (Jones, 1991; Rest, 1986, 1994). For this reason the current investigation defines moral awareness as both an ability to recognize the moral issues in a morally ambiguous situation and the ascription of importance to these issues (Karcher, 1996; Shaub et al., 1993; Sparks and Hunt, 1998).

Schemas and moral awareness

Researchers have proposed, but not tested, the role of social cognition (Butterfield et al., 2000; Gioia, 1992) in one's awareness of moral issues. From a social cognition perspective, recognizing and recalling moral issues (i.e., demonstrating moral awareness) require one's selective attention to, encoding of, and recall of moral-related stimuli (Simon, 1945).

Most situations present large amounts of stimuli, making it necessary for an individual to attend to some stimuli while ignoring other stimuli (Fiske and Taylor, 1991; Simon, 1945). Stimuli that is salient and most likely to be encoded into memory is that which is compatible with the individual's existing schema for a situation (Anderson and Pearson, 1984; Taylor and Crocker, 1981). A schema is "a cognitive structure [representing] knowledge about a concept or type of stimulus" (Fiske and Taylor, 1991, p. 98) and is developed based on one's goals, motivations, and social experiences related to a given situation (Ashforth and Fried, 1988; Fiske and Taylor, 1991). Schemas provide an "ideational scaffolding for assimilating information" (Anderson et al., 1983,

p. 272; Ausubel, 1963) that structures memory, aids in recall, and edits unimportant or irrelevant data. Stimuli that is schema-relevant takes less time to encode (Hemsley and Marmurek, 1982; Steffensen et al., 1979; Stern et al., 1984), which is the process by which external stimuli is represented in the mind (Fiske and Taylor, 1991). It also takes less time to search for (Markus, 1977; Taylor et al., 1978). And it is more likely than irrelevant stimuli to be given attention, processed (Goetz et al., 1983; Wyer et al., 1982), remembered, or recalled (Anderson and Pichert, 1978; Brewer and Trayens, 1981; Kardash et al., 1988). Anderson and Pichert (1978) found that schemas are more likely to influence the recall of information than to affect its initial encoding. In their seminal study on the effect of schemas on information encoding, recall, and retention, the researchers found that if provided with a specific schema via perspective-taking instructions prior to reading a passage, the schema affected what information was correctly recalled. However, if the individual was instructed to switch perspectives after reading the passage and recalling information from his or her prior perspective, the individual remembered information that he or she was previously unable to recall but which was relevant to the latter perspective. The individual also forgot information that was relevant to the initial perspective.

Consistent with prior research, I predict that in the current investigation, one's dominant schema will effect one's memory and ability to recall relevant issues. This recall will manifest itself in two ways: (1) individuals' ability to correctly answer fact-based questions about the moral- and strategy-related issues in a hypothetical, morally ambiguous vignette and (2) their inclusion of moral- versus strategyrelated issues when asked to freely generate how they would respond to a hypothetical morally ambiguous vignette. Unlike Anderson and Pichert (1978), I do not randomly assign and manipulate the dominant schema but rather use the individual's professional background to determine schema. The use of naturalistic schemata, as opposed to one that is experimentally assigned, has been applied successfully in past investigations. For example, using Anderson and Pichert's stimulus passage, Goetz et al. (1983) found that in comparison to real-estate and psychology students, police officers rated burglarrelated items as more important and directed greater attention to them, even when explicitly directed to take the perspective of a potential homebuyer. Steffensen et al. (1979) found that native Indians and native Americans read passages that were related to traditions in home countries faster and retained more information from those passages than they did those that were related to foreign traditions.

Disadvantageous schema application

Schemas are not always advantageous. Possessing dominant schemas for a particular situation makes one more likely to narrowly focus on information that confirms the existing schema and to devote a reduced proportion of attention to all information, increasing the likelihood that important information will be suppressed in cognitive processing (von Hippel et al., 1993). In addition, schemas can cause distortion, meaning that the information presented can be interpreted within the context of the dominant schema, even if it is not the most appropriate one for the situation (Ashforth and Fried, 1988; Steffensen et al., 1979; Zadny and Gerard, 1974).

In managerial situations, specifically, one can expect multiple factors to impinge on one's decision-making (Gioia, 1992; Trevino, 1986). This complex environment increases the likelihood that schemas will dictate the selective attention to information and that some information will be filtered out of the process or forgotten (Bazerman, 2001; Ocasio, 1997). Businesspeople are "confronted with far more stimuli then they can fully comprehend and those stimuli are often ambiguous, complex, and even contradictory" (Finkelstein and Hambrick, 1996, p. 41). The moral issues within these complex business situations must compete for attention against strategy-related issues (Child, 1972). In business, where professional responsibility is often viewed as contributing to shareholder wealth (Friedman, 1970; Sundaram and Inkpen, 2004) and executives predominantly send messages about the financial goal-orientation of the organization relative to ethics-related messages (Trevino and Brown, 2004; Weaver et al., 1999a), one's business schema is likely to contain significant strategy-related associations. As Gioia (1992) proposes, schemas offer explanations for why experts might overlook factors that less experienced individuals consider obvious. Two questions that I seek to answer in this investigation are (1) what do individuals in the business

domain consider to be moral- versus strategy-related issues and (2) how does this distinction affect their recall and focus during decision-making?

Previous research on social cognition and moral awareness

Several prior studies have proposed the relationship between schemas and moral awareness but have not empirically examined this relationship. For example, a former recall analyst at Ford Motor Company wrote about the prior muting of emotion that took place during his socialization at the organization, eventually leading him to vote against recalling the infamously dangerous Pinto (Gioia, 1992). Gioia called on the social cognitive concept of schemas, and more specifically scripts, to explain his behavior. He wrote that, "my own schematized (scripted) knowledge influenced me to perceive recall issues in terms of the prevailing decision environment and to unconsciously overlook key features of the Pinto case, mainly because they did not fit an existing script." (p. 385). He used this explanation in lieu of competing explanations like a lack of strong personal values, intimidation by company superiors, adherence to a utilitarian ethical system, and low moral development. Scripts and schemas are closely related in that scripts are specialized schemas that in addition to containing a framework to understand events, also contain information on appropriate behaviors and patterns of acting (Abelson, 1981).

Like Gioia (1992), Butterfield et al. (2000) evoked a social cognition framework to explain their theory and findings but did not utilize such a framework in their methodology. Within social cognition's assertion that categories that are frequently primed² are more accessible and more likely to influence the interpretation of ambiguous data, the researchers conceptualized moral awareness as the situation where individuals direct attention to incoming moral-related stimuli and label it as such. Within the broader four-component process (Rest, 1986), Butterfield et al. (2000) conceived that approaching an ambiguous situation with a moral, as opposed to an amoral script, triggered the processes necessary for moral judgment. The authors did not actually test this proposition beyond examining how framing an issue using moral-related terms like integrity, propriety, and misrepresentation affected the evocation of a moral schema. In partial support of their theory, they found that in some contexts, using moral-related language evoked greater recognition of the moral issues, in effect, priming a moral schema. A major difference between Butterfield et al.'s investigation and the current study was the method used to code responses. Butterfield et al. used a dichotomous coding scheme, meaning responses were coded as either containing or not containing a moral issue. They operationalized moral issues as those that involved moral or legal concerns, broadly defined. The authors did not specify how they defined what was or was not a moral issue.

Reynolds (2006b) agrees with Gioia's (1992) and Butterfield et al's (2000) connection between schematic processes and moral awareness but unlike his contemporaries, approaches the situation from a neurocognitive framework. In his theoretical paper, Reynolds (2006b) calls upon the neurocognitive process of reflexive pattern matching to explain the initial stages of moral cognition. He writes that electrochemical signals produced by stimuli from the outside environment are compared and matched with existing prototypes in the brain. These prototypes allow the decision-maker to identify stimuli and react accordingly. When a situation containing ethical issues is confronted, the neural system automatically searches for prototypes (i.e., a reflexive pattern matching system) that match the stimuli. If the pattern matches a prototype related to an ethical issue, that information is then transmitted to consciousness, allowing the decisionmaker to consciously apply ethical rules and appropriate reactions. However, in order for ethicsrelated reactions and processes to be enacted, the incoming stimuli must match existing ethical prototypes in the brain. Thus, the system is dependent on the existence of such prototypes. Given that prototypes are developed from prior sensory experiences, it can be assumed that the type and magnitude of former experience and exposure shapes the presence and nature of the existing prototype. An individual with a paucity of experience with ethical situations or a person who has confronted ethical situations in environments where they are treated and labeled as non-ethical issues or simply ignored, would be less likely to contain developed ethical prototypes that aid in moral cognition and action. The use of euphemistic or unemotional language to describe ethical issues is one example of how one can have muted or underdeveloped ethical prototypes (Gioia, 1992). Reynolds (2006b) asserts that a significant part of the ethical decision-making process is nonconscious and involves pattern matching and reflexive judgments. In Reynolds' (2006a) empirical investigation, he does not test for the existence or triggering of prototypes and instead examines issuespecific factors and ethical predispositions that affect individuals' moral awareness.

The current investigation extends the above body of work on moral awareness in two ways. First, using predetermined dimensions, it asks individuals with business experience to define what dimensions do or do not qualify as moral-related issues. I acknowledge that this approach does not provide a definitive operationalization of what is and is not a moral issue; however, in an effort to understand how individuals approach ethical decision-making in an applied context, it is an informative and contextually appropriate methodology. Second, unlike Reynolds (2006a), it does not explicitly tell participants that moral issues are contained in the vignette and relies on their ability to freely detect these issues. This paradigm is more similar to the real world decision-making context, where moral issues are unlikely to be accompanied by red flags announcing their presence.

Business schemas and moral awareness

The research above suggests that it is the interaction between possessing both a well-defined business schema and being confronted with a business dilemma that elicits the decreased processing of information not considered to be part of that schema (including that considered to be moral-related [Armstrong, 1987; Hawkins and Cocanougher, 1972; Stevens et al., 1989]). In situations where one's cognitive processing is familiar and routine, automatic, as opposed to controlled, attentional processing dominates an individual's cognition (Shiffrin and Schneider, 1977). The result is that "decisions are triggered by environmental stimuli that is 'automatically' attended to" (Ocasio, 1997, p. 190). As possessing a dominant schema for a situation decreases one's encoding of irrelevant information but does not increase encoding of relevant information (von Hippel et al., 1993), it is not

expected that possessing a strategy-related business schema will increase one's awareness and focus on strategy-related issues but rather that it will inhibit attention to moral-related issues. This statement does not imply that business expertise offers no advantage for the decision-maker. In fact, quite the contrary. Expertise produces both strategies for seeing patterns in complex data (e.g., Chase and Simon, 1973) and tacit knowledge for dealing with specialized problems (Sternberg and Wagner, 1985); however, in comparison to those without expertise, expertise is not expected to increase recall of schema-relevant issues. As explained above, will also decrease recall of schema-irrelevant issues.

Hypothesis 1 Business managers will demonstrate poorer recall of and processing time for moral-related issues in a morally ambiguous business situation than will academics.

Schemas go beyond affecting stimuli attention and recall. They also affect individuals' reactions to the social world, including their judgments (e.g., Bargh and Thein, 1985; Pillutla and Chen, 1999; von Hippel et al., 1993). Selective attention and recall are theoretically necessary for moral awareness (Butterfield et al., 2000; Gioia, 1992). Consistent with this theory, the current investigation proposes that the ability to recall the moral-related issues in a situation is needed in order to demonstrate moral awareness. It also proposes that the possession and subsequent application of a strategy-related business schema reduces moral awareness in morally ambiguous situations. It is not expected that merely presenting a business-related dilemma to a person without the socialization experiences necessary to produce a well-developed strategy-related business schema will elicit such an effect. Ocasio (1997) theorized that organizational decisionmakers possess schemas that comprise the problems and threats that they or their industry have repeatedly encountered. These schemas are responsible for directing attention and subsequently, for how strategies and solutions to problems are designed. Schemarelevant information is more salient and cognitively proximal to the decision-maker, making it more likely to be included in decision-making about ethical issues (Jones, 1991). Businesspeople have more experience with strategy-related problems and threats than moral-related ones. This processing pattern leads to the prediction that business managers (i.e., those with a dominant schema for the situation) will demonstrate a lesser awareness of moral-related issues when confronted with a morally ambiguous business situation.

Existing findings in the empirical literature support this hypothesis. For example, managers and non-business students applied a lower-level of moral reasoning (Kohlberg, 1969) when responding to business than to non-business dilemmas (Carpendale and Krebs, 1992; Weber, 1990). In addition, the students displayed higher levels of moral reasoning when they believed that their responses would be evaluated by a philosophy, as opposed to a management professor (Carpendale and Krebs, 1992). Lastly, Tenbrunsel and Messick (1999) found that business students were less likely to demonstrate cooperative behavior when they construed a situation within a business frame as opposed to an ethics frame because, "a business frame produce[d] a calculative cost-benefit process..." (p. 700) and "moral choices are synonymous with cooperative choices" (p. 699).

I also hypothesize that individuals without a dominant and relevant schema for the situation will demonstrate no such preference for moral- or strategy-related issues and may, in fact, attend equally to both domains. This latter point is consistent with research demonstrating that when no dominant schema is available, individuals attend to all information equally – and better to information that is considered by some as "schema irrelevant" (Goetz et al., 1983). Thus, I predict that academics, who do not possess dominant, well-developed business schemas will attend equally to both moral- and strategy-related issues.

Hypothesis 2a Business managers will demonstrate less awareness of moral-related issues than will academics.

Hypothesis 2b Business managers will demonstrate less awareness for moral-related dimensions compared to strategy-related dimensions, whereas, academics will attend equally to both dimensions.

Schemas are developed through direct experience, communications, and observations about schema-relevant properties (Fiske and Taylor, 1991; Gioia, 1992). Socialization is the process by which individuals

acquire norms for appropriate conduct in specialized situations. Socialization, either direct or via social learning, is responsible for inculcating new members into an organizational culture and forming their values and beliefs. The relationship between socialization processes and schema development gives socialization an important role in fostering organizational culture and individual cognition and behavior. In short, developing organizational-relevant schemas aid individuals in acclimating to their environments and reducing role ambiguities (Ashforth and Fried, 1988). Socialization outcomes within organizations are largely dependent on factors such as who a group considers primary stakeholders and the reality and challenges inherent to its functioning environment (Schein, 2004).

Socialization also plays a significant role in communicating norms about moral cognition and behavior (Schein, 2004; Trevino and Youngblood, 1990). Moral principles, which are internalized social norms, develop through life experiences (Kohlberg, 1984), including social interactions (Eisenberg et al., 2006). This investigation considers professional socialization as a primary medium for developing schemas involved in ethical decision-making. Thus, one would expect that the greater a businessperson's socialization within the business context, the less his or her moral awareness in that context would be.

Hypothesis 3 Greater socialization within the business domain will negatively affect individuals' moral awareness.

Measuring moral awareness

Many moral awareness instruments present respondents with vignettes that contain moral issues and prompt them to identify those issues that they think are important in the situation (e.g., Bebeau et al., 1985; Butterfield et al., 2000; Hebert et al., 1990; Shaub et al., 1993; Sparks and Hunt, 1998). All moral awareness instruments confront the similar challenge of operationalizing what is considered a moral-related issue and creating criteria that can be used to evaluate when a respondent recognizes a moral-related issue.

Defining moral issues

Central to the study of moral awareness is the question of what is and is not a moral-related issue. Using a profession-based code of conduct to identify relevant and agreed-upon moral issues (e.g., Hebert et al., 1990; Karcher, 1996) is impractical for the general business domain. For one, no code exists. In addition, if an instrument's practical purpose is to provide prediction about individuals' decision-making when faced with morally ambiguous dilemmas, it is insufficient to measure only the awareness of explicitly defined, profession-based moral issues. For example, Gioia (1992) noted that according to both legal (i.e., within the framework of the law) and ethical (i.e., in accordance with professional standards) criteria, his decision to not recall the defective Pinto from America's roadways was blameless. He however questioned if his behavior could have been judged as moral – here using the term to refer to "adhering to some higher standards of inner conscience and conviction about the 'right' action to take" (p. 384). Other researchers have replaced or supplemented the use of an ethics code with expert consensus (e.g., Bebeau et al., 1985; Butterfield et al., 2000; Sparks and Hunt, 1998). This approach is used in the current investigation.

Moral versus amoral issues in management

Business-related values and foci have been divided into two distinct categories. For example, Agle et al. (1999) divided CEO values into those that were profit-maximization-firm-centered and those that were other-regarding-system-centered (Wood, 1994). They found that stakeholders that were part of the tradition "production function view of the firm" were more salient to executives than were entities of a more "expanded stakeholder view of the firm," like governments and communities. The authors described this as a type of stakeholder class system in which some stakeholders were more privileged than others. Similarly, Weaver et al. (1999a) divided topics of executive-interest into intrinsically valuable (e.g., "doing the right thing" and "seeking the good of society") and performance oriented (e.g., "finances, strategy, and operational problems"). They found that commitments to the latter category were related to the use of easily decoupled ethics communications strategies in the workplace - meaning those that were not extensively integrated into corporate communications and the organizational environment (Weaver et al., 1999b).

Both Agle et al.'s (1999) and Weaver et al.'s (1999a, b) divisions are based on explicit theories and not empirical data or implicit theories. In fact, most divisions of foci in the business domain have not based these categorizations on empirically derived data. I believe that it is important to understand how individuals who work in the business domain define and distinguish moral and amoral issues. Thus, the current investigation takes this division one step further and applies both a datadriven (i.e., how responses from individuals with and without experience in the management domain factor together on a moral- and strategy-related dimension) and implicit theory-based (i.e., what individuals with experience in the business domain consider to constitute a moral issue) method for defining moral-related issues. It is acknowledged that this technique does not provide a definitive definition of what is and is not a moral-related issue; however, I do believe that it is elucidating to business scholars and practitioners to understand how individuals with expertise and training in the business domain define moral issues. I also acknowledge that this approach would likely result in different categorizations or divisions if another population, such as philosophers or theologians, was used as a sample for defining and distinguishing moral from amoral issues.

Method

Participants

Participants were 86 business managers and 61 academic professors.

The business managers were members of a large enterprise software corporation based in the Eastern U.S. One hundred and thirty-eight individuals were contacted and 63% completed all study-related tasks. These individuals were stationed across the country and were at the middle-level of their organization's management hierarchy. Seventy-three percent were male and 84% were Caucasian. On average, 88% had received a bachelors degree or its equivalent, were approximately 40-years-old (M=39.83, SD = 8.15),

had spent 3.75 years (SD = 1.71) with their current employer, and 11.73 years (SD = 7.26) in their current profession.

The academic professors were junior faculty in the areas of liberal arts and sciences, communications, and education at a large public university in the Southwestern U.S. All junior faculty with a valid e-mail address (N = 270) were contacted and asked to participate. Twenty-three percent completed all study-related tasks (n = 61). Professors of religion, theology, philosophy, and justice-studies were not contacted based on concerns that their training and practice may have made them hyper-aware of moralrelated issues. Individuals with any business-related training or experience were also excluded from the sample. Forty-five percent were male and 74% were Caucasian. On average, all had received a doctoral degree or its equivalent, were approximately 44years-old (M = 44.26, SD = 9.25), had spent 4.15 years (SD = 2.10) with their current employer, and 12.34 years (SD = 8.39) in their current profession.

Junior professors were used as the non-business practitioner comparison group for several reasons: (1) they were of similar ages to those in the business group (M = 44.26 vs. 39.83), (2) they had statistically equivalent number of years with their employer (M = 4.15 vs. 3.75) and in their profession (M = 12.34 vs. 11.73) as did the business group, (3) there was no theoretical reason to expect that they possessed a greater level of knowledge or ability in moral-related matters.

Procedures

Participants completed all study materials via the Internet from their offices so that they would be in an environment that primed them for occupation-related cues. After logging on, participants were asked to read a vignette and complete a related task, and to answer several demographic questions. Before concluding their session, participants also completed a task measuring their recall of the moral- and strategy-related issues contained in vignette. They were unaware that they would be completing the latter task when they began the session. The recall task was presented after the moral awareness instrument in order to avoid priming effects.

Measures

The Moral Awareness in Business Instrument (MABI) The measure instructed participants to put themselves in the role of a committee member within the corporation featured in one of three vignettes. One vignette was randomly assigned to each participant. They were told that the committee was meeting to discuss the dilemma contained in the vignette and to indicate the (1) three to five issues they would bring to this meeting for consideration when deciding what action to take, (2) why they believed each issue was important to deciding what course of action to take, and to (3) rank the importance of each issue. This procedure was based on the operationalization of moral awareness as both the recognition and ascription of importance to moral issues (Karcher, 1996; Shaub et al., 1993; Sparks and Hunt, 1998). The vignette remained visible during completion and participants had an unlimited amount of time to access, browse, and read the vignette while generating their responses. Participants were unaware of the ethics-related nature of the project and that the vignettes they read contained any moral-related issues.

Vignette selection

The vignettes used in the MABI were pre-tested for their moral ambiguity and other relevant attributes. Moral ambiguity was operationalized as the quality of involving an equivalent magnitude of both moral-and strategy-related issues (Sparks and Hunt, 1998). In the pre-testing, participants read eight vignettes, which were adapted from existing business cases. Participants were 36 MBA students and 10 doctoral-level graduate students in the liberal arts.

Participants were instructed to read the eight vignettes and using an 8-point Likert-scale (1 = not all to 8 = very much so), rate each on one randomly assigned between-subjects item and six items that were administered to all participants. The between-subjects item asked approximately half of the participants (n = 24) how much the vignette contained of strategic, technical, or profit-focused issues in business. The remaining half (n = 22) were asked how much the vignette contained moral, ethical, or human well-being issues. All participants also rated the vignettes on their (1) ease of understanding, (2) technical complexity, (3) realism, (4) seriousness of consequences, (5) familiarity,

and (6) overall quality (cf., Bebeau et al., 1985; Shaub et al., 1993; Sparks and Hunt, 1998).

In order to be included in the main study, the vignette had to receive a moderately high (i.e., six or greater) and equivalent (based on *t*-test statistics) rating on the inclusion of both strategy- and moral-related issues. It also had to receive high ratings on ease of understanding, realism, seriousness of consequences, and overall quality and moderate ratings on technical complexity and familiarity.

The three vignettes chosen involved health care coverage for retired employees (*Health Care Vignette*), the distribution of drugs to a population unable to afford them (*Drug Vignette*), and the possibility of lead poisoning in factory workers (*Lead Vignette*). These were the only vignettes of the original eight that met the necessary criteria – most importantly being the equal, and moderately high, inclusion of both strategy– and moral-related issues (*Health Care:* t(44) = 1.34; p = 0.19; Drug: t(44) = 1.37; p = 0.18; Lead: t(42) = 1.54; p = 0.13). Appendix A contains one of the three MABI vignettes.

Scoring the MABI

Using an 8-point Likert scale (1 = almost entirely to8 = not at all), two trained coders scored participants' responses based on their inclusion of the following dimensions: (1) financial profitability, (2) viability, longevity, or competitive stance, (3) legal culpability, (4) public reputation or image, (5) the well-being (financial, physical, or emotional) of the powerful individuals involved, and (6) well-being (financial, physical, or emotional) of the non-powerful individuals involved. These dimensions were generated both by theory, that is by looking at what dimensions other researchers have used as rubrics for differentiating managerial values and awareness (e.g., Agle et al., 1999; Butterfield et al., 2000) and in looking at the actual responses generated by individuals in completing the task. Using explicit theory and actual data to design a coding rubric are techniques recommended in the literature (Boyatzis, 1998).

Participants' scores on this task were calculated by first reverse-scoring the rank and ratings assigned to each issue on the six dimensions so that a higher rank and rating corresponded to a greater importance or involvement of the dimension in the response. Unweighted dimension sums were calculated by summing the coders' ratings across each of the participant's responses without consideration of the participant's assigned rank. Weighted sums were calculated by multiplying each dimension score by the rank assigned to the response, with a higher score indicating both a greater inclusion of that dimension in the response, as well as a greater importance placed on the issue. Based on the definition of moral awareness as both the recognition and ascription of importance to a moral-related issue (Karcher, 1996; Shaub et al., 1993; Sparks and Hunt, 1998), the weighted scores were considered better indicators of the construct; however, because rank did not convey magnitude of difference, unweighted scores were also analyzed.

Implicit dimension categorizations

Individuals with business experience rated the six MABI coding dimensions to determine their implicit theories of moral- versus strategy-related issues. These individuals were asked to rate the six dimensions on the extent to which each was *moral-related*.

Participants

159 MBA students from a private business school in the Northeastern U.S. completed the questionnaire. One hundred and one were first-year students and 58 were second-year students. One hundred and eighteen participants were male and they had an average of 5.89 years (SD = 2.71) of professional business experience prior to matriculation in the MBA program. I used graduate business students for three reasons: (1) these individuals had significant experience in the business domain prior to matriculation, (2) the business school environment provided a controlled setting where I could be confident that second-year students were exposed to more business training and socialization than firstyear students, and (3) operationalizing "greater experience" within an actual organizational setting is complex and unreliable. Outside of a business school, it is difficult to define what constitutes "greater socialization," since individuals can be exposed to a variety of different responsibilities and experiences within the same amount of time depending on their division, role, or individual ambitions.

Procedures

Using an 8-point Likert Scale (1 = very much so to 8 = not at all), participants rated six different issues that are involved in complex management decisions on the extent to which each was moral-related. The MABI coding dimensions were presented and each was accompanied by an explicit definition. In order to avoid creating demand characteristics, the definition of moral-related was not provided and participants were instructed to use their existing implicit conceptions when assigning ratings.

Data analysis

Based on the dimensions that loaded on to each latent factor that emerged from the exploratory factor analysis (EFA) of the participants' responses to the MABI, a confirmatory factor analysis (CFA) was applied to the MBA students' moral-related ratings to assess the validity of the categorization of the dimensions. It was predicted that the latent factor structure found in the Main Study participants' responses to the MABI would correspond with the implicit theories that MBA students held about the moral-relatedness of the dimensions. It was also predicted that MBA students would perceive those dimensions that loaded on to one of the factors from the Main Study participants' responses as significantly more *moral-related* than those that loaded on to a second factor.

Vignette-related recall task

Approximately fifteen minutes after reading the vignette and immediately after answering the demographic questions, the Main Study participants were asked a combination of ten *true/false* and multiple-choice questions referring to material contained in the MABI vignette. These questions were designed to assess the retention and recall of moral- versus strategy-related issues in the vignette. As stated above, the ability to correctly recall some issues and not others is indicative of the accessibility of information in one's schema (Anderson and Pichert, 1978; Goetz et al., 1983).

Prior to administering these questions to participants, they were also pre-tested for both their moral-and strategy-relatedness. A sample of business and non-business graduate students from the pool of participants who pre-tested the vignettes was

instructed to read the vignette and indicate if the question asked about a moral-related issue, a strategyrelated issue, or both. Those questions that the majority considered involving either a moral- or strategy-related issue were then characterized as such. Those items that were rated by the majority as incorporating both a moral- and strategy-related issue were either discarded or rewritten so that their contents were unambiguous. Based on this rating scheme, ten questions accompanying each vignette were considered to test recall of moral- and strategyrelated issues contained in the dilemma. An example of a strategy-related multiple-choice question for the Drug Vignette (with the correct response included in italics) was, "Haremann Labs is currently focusing its financial and human resources on developing new drugs." Whereas, a moral-related multiple-choice question was, "In addition to causing illness in humans, Amazon River Flies have caused problems in South American villages because they breed in regions that have abundant sources of vegetation." There was no difference in the average number of words in the moral-related (M = 15.93, SD = 8.61) versus the strategy-related (M = 17.13, SD = 6.13) questions (t(14) = -0.539, p = 0.60).

These questions assessed how schemas may operate to affect individuals' moral awareness (Hemsley and Marmurek, 1982; Stern et al., 1984). One's schema for a situation determines what is subsequently recalled from memory (Anderson and Pichert, 1978). During this portion of the testing session, the vignette was not available for viewing and in order to assess recall speed, participants' response-times to each question were recorded with accuracy of 0.10 of a second. Response time was used as an indicator of the accessibility of the information in the person's dominant schema (cf., Steffensen et al., 1979). Participants received a score for both the number of moral- and strategy-related questions they answered correctly. Each had a maximum score of five.

Data analyses & results

Vignette-related questions

Hypothesis 1 predicted that in comparison to academics, managers would exhibit poorer recall and slower response-times when responding to the

moral-related but not the strategy-related questions associated with the vignette. In support of this prediction, the between-group difference for the number of strategy-related questions answered correctly was not significant (F(1, 132) = 2.92, p = 0.09), whereas the number of correct answers on moral-related questions was (F(1, 129) = 4.16, p < 0.05), with managers answering fewer correctly than academics.

One-way ANOVAs were also run for average response times for moral- and strategy-related questions by domain of practice, excluding cases identified as outliers.³ As was also predicted by Hypothesis 1, these analyses revealed significant differences on the average time spent on each moralrelated question (F(1, 132) = 4.20, p < 0.05), with managers taking a greater amount of time than academics. Differences on the overall average time (F(1, 132) = 1.75, p = 0.19) and average time spent on the strategy-related questions (F(1, 132) = 1.18,p = 0.28) by domain of practice were not significant. Table I contains descriptive statistics for total score, number of correct moral- and strategy-related questions, response-times for all questions, and response-times for moral- and strategy-related questions for all participants, as well as by domain of practice.

An alternative hypothesis is that the moral-related questions were more complex than the strategy-related questions and therefore took all participants longer to read. I ruled out this possibility by analyzing the time required by all participants to answer the moral- versus strategy-related questions. While it was true that all participants answered the strategy-related questions in a shorter amount of time, this difference was not above that predicted by chance (t(137) = 1.90; p = 0.06). As discussed above, the average word counts of the moral- and strategy-related questions were statistically equivalent.

MABI

Coders' ratings

Coders' ratings were highly convergent. Using Cronbach's α , inter-rater reliability was $\alpha = 0.93$. And the average correlation between the coders' ratings across the six dimensions was r = 0.91. Based

TABLE I

Descriptive statistics for number of questions answered correctly and response time by domain of practice

| Source | Mean | SD | N | F | |
|---|-------|-------|-----|--------|--|
| Total score | 8.12 | 1.48 | 130 | | |
| Manager | 7.82 | 1.50 | 73 | 6.83** | |
| Academic | 8.49 | 1.38 | 57 | | |
| Moral-related questions | 3.81 | 1.05 | 131 | | |
| Manager | 3.64 | 1.07 | 73 | 4.16* | |
| Academic | 4.02 | 1.00 | 58 | | |
| Strategy-related questions | 4.29 | 0.87 | 134 | | |
| Manager | 4.18 | 0.96 | 74 | 2.92 | |
| Academic | 4.43 | 0.74 | 60 | | |
| Average Time (in seconds) ^a | 16.84 | 7.18 | 134 | | |
| Manager | 17.58 | 7.43 | 73 | 1.75 | |
| Academic | 15.94 | 6.82 | 61 | | |
| Average time for moral-related questions | 18.96 | 9.32 | 134 | | |
| Manager | 20.42 | 10.38 | 74 | 4.20★ | |
| Academic | 17.14 | 7.54 | 60 | | |
| Average time for strategy-related questions | 14.49 | 5.88 | 134 | | |
| Manager | 14.99 | 5.88 | 73 | 1.18 | |
| Academic | 13.88 | 5.87 | 61 | | |

^aStatistics relating to average total, moral, and strategy times exclude outliers.

on this high convergence, individual coder's scores were averaged together for all subsequent analyses.

EFA of dimensions

The six dimension sums were subjected to a principal components analysis (Dunteman, 1989). An oblique rotation method (i.e., oblimin) was used because of the theoretically plausible correlation between the resulting factors. Latent factors left of the scree plot's curve inflection (Cattell, 1966) were retained and based on the sample size (N = 141), items with a loading of 0.5 and greater were considered important contributors to that factor (Stevens, 1992).

The first latent factor (eigenvalue = 2.83; 35.36% of the variance) comprised the dimensions of financial profitability (0.880); viability, longevity, or competitive stance (0.848); and the well-being of the powerful individuals (0.814). Given the nature of the items that comprised Factor 1, this factor was labeled shareholder and corporate concerns (CORP). The second latent factor (eigenvalue = 1.66; 20.73% of the variance) comprised the items well-being of the non-powerful

individuals (0.873), legal culpability (0.617), and public reputation or image (0.554) and was labeled non-shareholding stakeholder and responsibility concerns (STAKE). Numbers in parentheses denote factor loadings.

CFA of dimensions based on implicit theories

Based on the two-factor oblique structure that emerged from the responses to the MABI, structural equation modeling was used to conduct a two-factor CFA on the MBA students' implicit ratings of the six dimensions. As predicted, the indices converged, demonstrating adequate model fit. Fit indices and standardized parameter estimates for the model are presented in Table II. Model parameters were all significant (i.e., p < 0.05) and explained substantial amounts of item variance (R^2 ranged from 0.18 to 0.50).

In addition, as was also predicted, it was found that the dimensions that loaded on the second factor were rated as being significantly more moral-related than

 $[\]star p < 0.05$; $\star \star p < 0.01$.

TABLE II
Standardized parameter estimates and fit indices for the two-factor model

| Item | | | | CORP | STAKE | R^2 | | | |
|---|-------|----|------|------|-------|-------|------|------|------|
| Financial profitability | | | | 0.71 | | 0.50 | | | |
| Viability, longevity, or competitive stance | | | | 0.71 | | 0.50 | | | |
| Well-being of the powerful individuals | | | | 0.55 | | 0.30 | | | |
| Public reputation or image | | | | | 0.66 | 0.43 | | | |
| Legal culpability | | | | | 0.53 | 0.29 | | | |
| Well-being of the non-powerful individuals | | | | | 0.43 | 0.18 | | | |
| Model | x^2 | df | GFI | AGFI | RMSE | A NFI | CFI | PNFI | PGFI |
| 2-Factor, oblique | 15.25 | 8 | 0.97 | 0.92 | 0.07 | 0.95 | 0.97 | 0.51 | 0.3 |

those that loaded on the first factor (t(159) = -9.568, p < 0.001). This finding provided empirical support that the non-shareholding stakeholder and responsibilities factor (and the individual dimensions that comprised it) was more moral-related and the shareholder and corporate concerns factor (and the individual dimensions that comprised it) was more strategy-related. Based on results from the EFA and CFA, the dimensions that loaded on to the non-shareholding stakeholder and responsibilities (i.e., well-being of the non-powerful individuals, legal culpability, and public reputation or image) and the shareholder and corporate concerns (i.e., financial profitability; viability, longevity, or competitive stance; and the well-being of the powerful individuals) factors were then averaged together to create two composite variables for use in subsequent analyses.

Once again, it is acknowledged that while the items loading on to the non-shareholding stakeholder and responsibilities dimension were considered more moral-related by an independent sample than were the items loading on the shareholder and corporate concerns dimension, that this division between moraland strategy-related items is (1) particular to this population (i.e., a population with a different background may have perceived the dimensions differently) and (2) that as done with labeling latent variables, the labels of moral-related and strategy-related are based on implicit theories of the two constructs as well as how my rating participants perceived the individual items loading on to the two dimensions. These labels are not intended as all inclusive definitions of what constitute moral- and strategyrelated dimensions.

Domain-based differences on individual weighted dimensions

Hypothesis 2a predicted that in comparison to academics, managers would demonstrate a poorer awareness of moral-related issues. Using a one-way ANOVA to examine differences between the two groups on the six dimension sums, significant differences were found on the dimensions of public reputation and image (F(1, 138) = 4.01; p < 0.05), well-being of the non-powerful (F(1, 138) = 5.44; p < 0.05), and financial profitability (F(1, 138) = 4.68; p < 0.05) only. These were in the directions predicted by Hypothesis 2a, with managers mentioning issues related to public relations and industry image (M = 31.87; SD = 15.87) and wellbeing of the non-powerful (M = 41.51; SD = 25.71), dimensions that loaded on the non-shareholding stakeholder and responsibilities factor, less than academics (public relations: M = 37.13; SD = 14.88; well-being of the nonpowerful: M = 51.63; SD = 25.20), but mentioning issues related to financial profitability (M = 51.54; SD = 24.03), a dimension that loaded on the shareholder and corporate concerns factor, more than academics (M = 43.58; SD = 18.15). The same significant relationships were found when the unweighted dimension sums were used; however, because the weighted sums were considered better representations of the operationalization of moral awareness (Sparks and Hunt, 1998), only results using the weighted sums were reported. All data was run with univariate outliers excluded from analyses and based on the randomness of the missing data, missing values were substituted by the sample means.

Domain-based differences for composite variables

With the shareholder and corporate concerns and nonshareholding stakeholder and responsibilities composite variables as the dependent variables, one-way ANOVAs were performed to examine domain-based differences. In support of Hypothesis 2a, significant differences were found on the non-shareholding stakeholder and responsibilities variable (F(1, 138) = 5.94,p < 0.05), with managers displaying lower scores (M = 34.30; SD = 13.97) than academics (M = 39.66;SD = 11.43) on this composite. As predicted, between-group differences on the shareholder and corporate concerns variable were not significant (F(1, 138) =1.37, p = 0.24) (managers: M = 44.49; SD = 17.69; academics: M = 41.15; SD = 15.51). Schemas decrease attention to non-conforming stimuli and do not increase attention to conforming stimuli (von Hippel et al., 1993).

Within-group differences on composite scores

Hypothesis 2b predicted a within-group difference, with managers displaying a greater awareness of the shareholder and corporate concerns variable in comparison to the non-shareholding stakeholder and responsibilities variable and academics displaying no difference between the two variables. Based on this hypothesis, a mixed-model repeated measures ANOVA was run using the shareholder and corporate concerns and the non-shareholding stakeholder and responsibilities composites as the within-subjects variables and domain of practice as the between-subjects variable. Green-house-Geisser adjusted statistics were used and reported because the data violated assumptions of sphericity ($x^2 = 9.30$, p = 0.01).

As predicted, the interaction (composite score \times domain) effects were significant (F(1, 138) = 5.99, p < 0.05). Post-hoc analyses of within-subject differences on the composite variables, demonstrated a significant (F(1, 77) = 15.80, p < 0.00) drop between managers' focus on the shareholder and corporate concerns variable in comparison to the non-shareholding stakeholder and responsibilities variable, whereas the change in focus for academics was not significant (F(1, 61) = 0.41, p = 0.55). These differences were all in the directions predicted by Hypothesis 2b, with managers placing more emphasis

on the *shareholder and corporate concerns* variable and less emphasis on the *non-shareholding stakeholder and responsibilities* variable than did academics.

Schema-strength and moral awareness

Hypothesis 3 predicted that a more dominant business schema, produced via professional socialization, would reduce individuals' awareness of moral issues. In support of the hypothesis that a more dominant business schema negatively affected moral awareness, a significant difference was found between the firstand second-year MBA students' moral-related ratings of the dimensions that comprised the two composite variables during the implicit dimension categorization portion of the investigation. Results demonstrated that in comparison to first-year students (CORP: M = 3.39; SD = 1.35; STAKE: M = 3.40; SD = 1.03), second-year students (CORP: M =4.84; SD = 1.04; STAKE: M = 3.96; SD = 1.11) had significantly lower perceptions of the moralrelatedness of all dimensions comprising both of the composite variables (CORP: F(1, 157) = 4.94, p < 0.05; STAKE: F(1, 157) = 10.18, p = 0.00). These findings support the hypothesis that students with more well-developed business schemas (i.e., greater professional socialization) perceived less of a moral-related component to dimensions involved in complex management decisions than did those with less well-developed schemas.

Discussion

Motivated by the theory that schemas affect moral awareness (Butterfield et al., 2000; Gioia, 1992; Reynolds, 2006b), this investigation examined the cognitive mechanisms that affect individuals' attention to moral-related issues in morally ambiguous business situations. The investigation was also motivated by previous studies reporting a negative effect of management experience and context on moral-related tendencies (e.g., Armstrong, 1987; Hawkins and Cocanougher, 1972; Stevens et al., 1989; Weber, 1990), without providing evidence for where these differences originated in the four-component process towards moral action (Rest, 1986). The current investigation provided evidence that managers' relative lack of attention to moral-related

issues begins prior to the reasoning process, that is, during Component 1, moral awareness.

Examining the cognitive mechanisms behind one's awareness of moral issues was both an extension of the moral cognition field and a contribution to the understanding of managerial cognition and decision-making. Until very recently, the state of the field was one where responsibility for unethical cognition and behavior in the business domain was attributed to the person, situation, or the issue (Jones, 1991; Trevino, 1986; Trevino and Youngblood, 1990), rather than to the cognitive mechanisms that operate when one faces a difficult ethical dilemma. This investigation's results contribute to the new body of literature on non-conscious processes that affect moral cognition and behavior in business (e.g., Reynolds, 2006b). It suggests that businesspeople may exclude moral-related information from the decision-making process because of schema-based cognitive mechanisms that draw attention and recall abilities away from moral stimuli. Results of the vignette-related questions support these hypotheses. Managers spent more time than academics reading and responding to the moralrelated questions (there was no difference on the strategy-related questions) and they answered fewer correctly.

In order to extend the main thesis of the investigation, the relationship between strength of one's business schema and moral awareness was also examined. The investigation found that in comparison to their more professionally socialized secondvear counterparts, first-year MBA students perceived a greater moral-relatedness in all dimensions involved in business decision-making. One could explain this finding by arguing that perhaps, in comparison to first-year students, second-year MBA students had a more complex notion of what was a moral-related because of increased exposure to a business ethics class or to a better understanding of the business landscape. There are two reasons why this rival hypothesis is doubtful. First, the survey was administered to second-year students before they could have completed a business ethics course, which was a second-year elective course at their institution. Second, additional analyses were conducted with this same sample. In contrast to their previous question about how moral-related each of the dimensions were, the same sample was asked to

rate the strategy-relatedness of the six dimensions. If the MBA curriculum was indeed reshaping how individuals perceived traditionally moral-related issues, then one would expect that there would be an increase in the strategy-related rating of the dimensions of legal culpability, public reputation or image, and well-being of the non-powerful individuals involved. However, this was not what was found. MBAs did not increase their perceptions of either the strategyrelatedness of the dimensions comprising the shareholder and corporate concerns variable (1st years: M = 6.75, SD = 0.79; 2nd years: M = 6.83; SD = 0.67; F(1, 157) = 0.50, p = 0.48) nor the nonshareholding stakeholder and responsibilities variable (1st years: M = 5.67, SD = 1.08; 2nd years: M = 5.60; SD = 0.96; F(1, 157) = 0.99, p = 0.32). As explained above, only their view of these issues' moral-relatedness decreased with increased training.

I chose to ask this separate population, rather than the Main Study participants, how they perceived the *moral-relatedness* of these six dimensions for three reasons: doing so may have created demand characteristics by signaling to Main Study participants that (1) at least some of these dimensions *should* be seen as moral-related, (2) that they should include these dimensions in their responses, and (3) that this task was related to moral or ethical behavior. Even if I had asked the Main Study participants to complete the ratings *after* they completed the MABI, it is possible that due to self-presentational concerns, participants would have used the actual dimensions that they included in their responses as those they considered most *moral-related*.

Lastly, this investigation included both a datadriven and implicit theory-based methodology for defining what constituted a moral-related issue in management. No previous investigations utilized these methods (Agle et al., 1999; Weaver et al., 1999a). In a domain where shareholder profitmaximization is sometimes seen as a manager's primary ethical obligation (Friedman, 1970; Sundaram and Inkpen, 2004), such a contribution is particularly meaningful. While some theorists (e.g., Freeman, 1994) would argue that no distinction does or should exist, understanding how the distinction is conceptualized in managers' minds is imperative to understanding how to attenuate that separation. The EFA of responses to the MABI resulted in two factors, one moral-related and one strategy-related, which were consistent with categorizations of foci used in other investigations (e.g., Agle et al., 1999; Weaver et al., 1999a). The clustering of the observed variables was also consistent with prior research. For example, just as concerns related to the well-being of the non-powerful and legal concerns loaded on the same latent variable in the current investigation, Butterfield et al. (2000) considered moral awareness to be the recognition of both moral and legal issues. Again, I acknowledge that this data cannot speak to how other populations would define moral- versus strategy-related issues. It is likely that for example, philosophers, theologians, or doctors might see the dimensions very differently. This, of course, is an empirical question and one worthy of future investigation.

Moral awareness measurement

This investigation also contributed to the domain of moral awareness measurement. With the exception of Reynolds (2006a), there is no measurement for moral awareness in the general business domain. The current investigation developed an instrument that used vignettes that were rated by individuals in both the business and non-business domains as morally ambiguous, understandable, realistic, containing serious consequences, unfamiliar, and of an overall high-quality. In addition, respondents were permitted to recognize moral issues from the vignette that were not pre-identified by experts or contained in an existing code of ethics (Bebeau, 1994). This method allowed participants to be acknowledged for recognizing a wide-range of moral-related issues. It is hoped that this instrument's development opens the doors for other researchers to pursue investigations of moral awareness in business and other practical domains.

Strengths and limitations

Sample-based limitations

All managers came from one corporation within a single industry. In addition, they were at similar levels in the organization's status hierarchy. Academics had a similarly homogenous origin. Therefore, it cannot be determined if the results of this

investigation are generalizable to managers and academics outside of this sample. In addition, there was a considerable difference in the gender composition between the manager and academic groups (i.e., 73 vs. 45%, respectively); however, it is unlikely that this difference explained any differences in moral awareness between the two groups. Previous research has found that gender has no significant effect on moral awareness (Clarkburn, 2002; Jordan, in press; Karcher, 1996). However, I explored this possibility in my analyses and found no significant effects. 4

Comparison group

The use of junior-level academics as the nonbusiness comparison group is also a limitation in this investigation. First, there may be inherent differences between the moral awareness of individuals who choose to pursue a career in academia versus management. The issue of selection-related differences is very difficult to avoid in non-randomized design studies. In addition, the two groups have significant differences in their years of education and perhaps their analytical intelligence levels. However, these differences would unlikely explain the domain-based differences found in participants' ability to correctly recall moral- (but not strategy-) related issues in the business vignette they had read minutes earlier. Previous investigations have not found moral awareness to be improved by college (Bebeau et al., 1985; Hebert et al., 1990; Sparks and Hunt, 1998) or post-baccalaureate (Karcher, 1996) education. In Addition, differences between firstand second-year MBA students' ratings of the six dimensions support the hypothesis that it is businessrelated socialization that nurtures the development of a dominant business schema, thereby attenuating moral awareness. There is no difference in students' educational backgrounds (excluding the second years' additional year of business school) and there is a low probability that first- and second-year students at the same institution differ in their levels of analytical intelligence. However, it is possible that education level affected moral awareness. In the current investigation, I am unable to fully explore the effects of education separate from domain of expertise, since education level is endogenous to domain of expertise. All but one academic had attained a doctoral degree, whereas no managers had

attained a doctoral degree. These analytical differences withstanding, as mentioned above, it is also possible that the differences found between managers and academics could be explained by endogenous variables not accounted for in this investigation. These include, but are not limited to, different philosophies about one's professional role, different priorities about financial compensation, or different ethical theories guiding behavior (e.g., consequentialist versus justice-based).

One could also make the argument that the nature of preparation for academia may have made the academics *hyper-moral*. In response to this alternative explanation, many of the academics came from departments of chemistry, geography, geology, mathematics, nutrition, physics, and astronomy. It is unlikely that educational preparation for these disciplines primed individuals to be *hyper*-aware of moral issues involved in morally ambiguous dilemmas; however, the data in this investigation is unable to rule out this alternative explanation.

MABI

While the MABI presents a contribution to the moral awareness measurement domain, its use also imposes limitations on the conclusions that can be drawn from the investigation. For example, it used only three vignettes that were previously rated as being easy to understand and not of a high technical complexity. It is possible that had I used vignettes that were highly technical and complex, managers would have shown superior performance to the academics in their ability to recall the strategy-related issues. However, for the purposes of this investigation, I wanted to ensure that the vignettes were at a level understandable to both experts and non-experts.

Future directions

The results of this investigation motivate several future lines of research. The first is to examine if the deficits found in managers' moral awareness extend to other components of Rest's (1986, 1994) four-component process, including moral intent and moral action. Demonstrating moral awareness is the first step towards taking a moral action and is theoretically necessary for subsequent moral behavior;

however, the magnitude of the relationship between moral awareness and the other components is unknown (Bebeau, 1994; Thoma, 1994).

Second, it should be explored if the relationship between possessing a dominant business schema and moral awareness can be replicated using different methodologies and samples. The differences found in managers' and academics' moral awareness are unable to address how and when managers' relative moral unawareness develops and if it decreases as one transcends the highest organizational ranks. If such a decline does occur, it has unfortunate consequences for the moral awareness and judgment of those in the upper-echelons of the corporate hierarchy who are often credited for setting the ethical tone of the organization (Agle, 1996; Brown et al., 2005; Kelly et al., 2004; Trevino et al., 2003). Examining the individuals' moral awareness at various levels of the corporate hierarchy is one method for investigating this development.

The third is to design interventions to improve mangers' moral awareness without compromising their strategy-related acumen. Studies have found that although well-formed schemas are difficult to alter, in the face of contradictory or disconfirming evidence, one can develop sub-categories within a schema that extend its scope (Weber and Crocker, 1983). Accomplishing this objective in the workplace may entail having organizational leaders promote ethics-related initiatives to the same extent that they promote strategy-related initiatives (Trevino and Brown, 2004). Within business education, it may include embedding ethics discussions within all core business school classes so that students do not become accustomed to thinking about moral- and strategy-related dimensions as two separate domains but rather as domains that are inextricably linked.

Conclusions

These investigations' findings have several important implications for management practice and training. The utility of possessing well-developed, expert schemas is that they should aid in decision-making. If managers' schemas lead them to be slower and less accurate when making decisions about moral-related issues, then this finding supports the argument that

organizations should be motivated to partake in activities that reinforce the inclusion of moral-related issues in their practitioners' dominant schemas. There is strong evidence that managers will be confronted with an increasing number of ethical dilemmas which they will be required to responsibly manage. Being unaware of and unable to correctly recall these issues will not aid this objective.

This investigation also prompts one to question the educational processes that occur during the earliest part of a businessperson's professional socialization. Whereas one's earliest experiences within the family have an indelible impact on their general moral development (Eisenberg et al., 2006), the same is likely true for one's seminal professional training. The finding that more advanced (by a mere twelve months) business students rated every dimension as being *less moral-related* than less advanced students is troubling for educators and professionals concerned about the moral-mindedness of future business leaders.

There is little question that the corporate world is confronting ethical challenges. Uncovering the factors that affect moral awareness is not only interesting from a theoretical perspective but is also imperative if we expect these challenges to be abated

Notes

¹ It should be noted that as other business ethics scholars have done in the past (Jones, 1991; Trevino, 1986), the terms *moral* and *ethical* (and all other forms of these words) are being used synonymously.

² Priming is a phenomenon wherein specific, intentionally activated concepts are brought to one's mind (Fiske and Taylor, 1991).

There was a small number of extremely high scores on response times. It was presumed that some participants briefly left their computers before submitting their responses to some questions. As a result, the five highest scores were identified and cut from the analyses. This resulted in an elimination of all scores above the approximate 97th percentile on each variable.

Gender differences on the moral awareness composite variables were non-significant. CORP: females: M = 42.35, SD = 14.89; males: M = 43.46; SD = 17.36; F(1, 136) = 0.15, p = 0.70). SHARE: females: M = 38.14, SD = 12.66; males: M = 36.02; SD = 13.42; F(1, 136) = 0.84, p = 0.36).

Appendix A

Amazon river blindness

Haremann Labs, a large, American pharmaceutical company, has the potential to develop a drug that may combat a disease infecting thousands of people in the remote regions of South America. This potentially lifesaving drug, named Invironmed, holds the promise of curing Amazon River Blindness (ARB), a disease spread by a parasitic worm carried by the bite of Amazon River Flies. This parasite causes severe dermatological itching and eventually, and almost inevitably, total blindness.

The World Health Organization (WHO) estimates that approximately 350,000 people throughout South America are blind due to ARB and that almost a million others suffer from various stages of the disease. Many children in villages along the Amazon River believe that becoming blind is a normal part of growing old.

ARB does not only create disease in South American villages, but it also affects villagers' access to stable sources of food. Since many of the most fertile regions of the Amazon are also the most highly concentrated breeding grounds for the Amazon River Flies, entire villages have had to move to more desolate areas with less water and vegetation - locations where food is not as abundant. As a result, food shortages are frequent and common.

Past attempts to cure or control the spread of ARB have had limited success. There are currently two drugs available that are useful in killing the parasite that causes ARB, but both have severe side effects and require close monitoring by medical personnel, which is not realistic in the developing regions along the Amazon River. Scientists have also attempted to spray pesticides in the Amazon River Flies' most fertile breeding grounds, but this is only effective for short term periods and requires a constant re-administration of the pesticides.

Haremann Labs

Haremann Labs is one of the largest pharmaceutical companies in the world. It employs over 30,000 people in its ten laboratories and research centers

across the United States. Unfortunately, Haremann has recently faced some difficult financial conditions. It is just emerging from a fifteen-year "human-product drought," meaning that Haremann has not produced any significant or extremely profitable drugs for human use in the last fifteen years. Over this period of time, it has relied upon two older drugs, which are very popular and whose sales contribute a significant proportion of Haremann Labs' \$2 billion in annual revenue. Unfortunately, the seventeen-year patent on both drugs is quickly coming to an end, meaning that they will both be available for production on the generic market, diminishing Haremann's ability to rely on these drugs for the majority of its revenues.

For this reason, the executives at Haremann have decided to contribute approximately \$1 billion over the next five years to research for the development of new drugs. On average, it takes twelve years and \$200 million to bring a drug from the laboratory to the market. There are currently some promising drugs in the developmental stage, but it is too early to tell whether the drugs produced from these projects will ever reach the marketplace. Many drugs that are developed have little chance of being profitable to the company that develops them. Either the disease that the drug treats is too rare to have a substantial market for it, or the side effects are too great to make it a realistic treatment option. It is clearly a very critical time for Haremann's future. What it produces and distributes over the next five years will greatly influence its competitive stance in the pharmaceutical industry.

Details on Invironmed

A very similar chemical structure to that which is used in the potential drug, Invironmed, has been used for the last 5 years by Haremann in a drug (labeled "Petromed") that treats parasitic infection in cows, sheep, dogs and cats. Petromed is a top seller in the veterinary medicine segment of Haremann's sales, and is a very profitable drug for the company. The use of a similar chemical structure for treatment of parasitic infection in humans was accidentally stumbled upon by a chemist at Haremann. The chemist found that the parasite killed by Petromed

was almost identical to the parasite that infects humans with ARB. When the parasite was injected with a chemical compound almost identical to Petromed, the parasite died. Unfortunately, this chemical compound, labeled Invironmed, has never been tested on humans. Just because a drug is safe for some mammals is no guarantee that it will be safe for all mammals.

Financial risks and benefits of Invironmed

There is no possibility that the population in most need of Invironmed will ever be able to afford the drug. Given this reality, it is very questionable if Haremann should pursue the development and distribution of this drug. Not only could Invironmed be very expensive to develop and distribute, but also it could reduce Haremann's profits in other ways. For example, if Invironmed shows any negative effects to the human population, this could result in millions of dollars in law suits and could significantly hurt sales of the animal form of the drug, Petromed.

You are a member of the Haremann Labs and have been asked to join a committee that is focused on what course of action should be taken in the situation discussed above. You are about to go into a meeting with this committee. In preparation for this meeting you decide to make a list of the factors that you think should be given the most consideration by the committee when it is making its decision.

Please list the top 3–5 issues that you would bring to the committee for consideration when deciding what action to take. In about one sentence, also indicate *why* this issue is important to deciding what course of action should be taken. Please note that you *should not* indicate what you think the corporation should do in this situation. Rather, only indicate what issues you think are most important to making *this decision*. Please list one issue at a time and do not combine multiple issues.

After listing these issues, please rank order them from 1 to 5 (or 3, or 4), making "1" the issue that you would encourage the committee to give *the most* weight to in its final decision, and "5" the issue that you would encourage the committee to give *the least* weigh to in its final decision. Please do not assign the same rank number to more than one issue.

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References

- Abelson, R. P.: 1981, 'Psychological Status of the Script Concept', *American Psychologist* **36**, 715–729.
- Agle, B. R.: 1996, Ethical Leadership at the Top: A Comprehensive Model and Illustrations of the Role of the Chief Executive Officer in Organizational Ethics. *Proceedings of the 7th Annual Meeting of the International Association for Business and Society*, pp. 1–5.
- Agle, B. R., R. K. Mitchell and J. A. Sonnenfeld: 1999, 'Who Matters to CEOs? An Investigation of Stakeholder Attributes and Salience, Corporate Performance, and CEO Values', Academy of Management Journal 42, 507–525.
- Anderson, R. C. and P. D. Pearson: 1984, 'A Schema-Theoretic View of Basic Processes in Reading Comprehension', in P. D. Pearson, R. Barr, M. L. Kamil and P. Mosenthal (eds.), *Handbook of Reading Research* (Longman, New York), pp. 255–291.
- Anderson, R. C. and J. W. Pichert: 1978, 'Recall of Previously Unrecallable Information Following a Shift in Perspective', Journal of Verbal Learning & Verbal Behavior 17, 1–12.
- Anderson, R. C., J. W. Pichert and L. L. Shirey: 1983, 'Effects of the Readers' Schema at Different Points in Time', *Journal of Educational Psychology* **76**, 271–279.
- Armstrong, M. B.: 1987, 'Moral Development and Accounting Education', *Journal of Accounting Education* **5**, 27–43.
- Ashforth, B. E. and Y. Fried: 1988, 'The Mindlessness of Organizational Behaviors', *Human Relations* **41**, 305–329.
- Ausubel, D. P.: 1963, The Psychology of Meaningful Verbal Learning: An Introduction to School Learning (Grune & Stratton, New York).
- Bargh, J. A. and R. D. Thein: 1985, 'Individual Construct Accessibility, Person Memory, and the Recall-Judgment Link: The Case of Information Overload', *Journal of Personality and Social Psychology* **49**, 1129–1146.

- Bazerman, M. H.: 2001, Judgment in Managerial Decision Making, 5th Edition (John Wiley & Sons, New York).
- Bebeau, M. J.: 1994, 'Influencing the Moral Dimensions of Dental Practice', in J. R. Rest and D. Narvaez (eds.), *Moral Development in the Professions: Psychology and Applied Ethics* (Lawrence Erlbaum Associates, New Jersey), pp. 121–146.
- Bebeau, M. J., J. R. Rest and C. M. Yamoor: 1985, 'Measuring Dental Students' Ethical Sensitivity', Journal of Dental Education 49, 225–235.
- Boyatzis, R. E.: 1998, *Transforming Qualitative Information* (Sage Publications, Thousand Oak, CA).
- Brewer, W. F. and J. C. Trayens: 1981, 'Role of the Schemata in Memory for Places', *Cognitive Psychology* **13**, 207–230.
- Brown, M. E., L. K. Trevino and D. A. Harrison: 2005, 'Ethical Leadership: A Social Learning Perspective for Construct Development and Testing', Organizational Behavior and Human Decision Processes 92, 117–134.
- Butterfield, K. D., L. K. Trevino and G. R. Weaver: 2000, 'Moral Awareness in Business Organizations: Influence of Issue-Related and Social Context Factors', *Human Relations* **53**, 981–1018.
- Carpendale, J. I. M. and D. L. Krebs: 1992, 'Situational Variation in Moral Judgment: In a Stage or on a Stage', *Journal of Youth and Adolescence* **21**, 203–224.
- Cattell, R. B.: 1966, 'The Scree Test for the Number of Factors', *Multivariate Behavioral Research* 1, 245–276.
- Chase, W. G. and H. A. Simon: 1973, 'Perception in Chess', Cognitive Psychology 4, 55-81.
- Child, J.: 1972, 'Organizational Structure, Environment, and Performance: The Role of Strategic Choice', *Sociology* **6**, 1–22.
- Clarkeburn, H.: 2002, 'A Test for Ethical Sensitivity in Science', *Journal of Moral Education* **31**, 440–453.
- Dunteman, G. E.: 1989, 'Principle Components Analysis', Sage University Paper Series on Quantitative Applications in the Social Sciences, 07-069 (Sage, Newbury Park, CA).
- Eisenberg, N., T. Spinrad and A. Sadovsky: 2006, 'Empathy-Related Responding in Children', in M. Killen and J. Smetana (eds.), Handbook of Moral Development (Lawrence Erlbaum Associates, Mahwah, NJ), pp. 517–549.
- Finkelstein, S. and D. C. Hambrick: 1996, Strategic Leadership: Top Executives and Their Effects on Organizations (West Publishing Company, St. Paul, MN).
- Fiske, S. T. and S. E. Taylor: 1991, *Social Cognition* (Random House, New York).
- Fraedrich, J. and O. C. Ferrell: 1992, 'Cognitive Consistency of Marketing Managers in Ethical Situations', *Journal of Academy of Marketing Sciences* **20**, 245–252.

- Freeman, R. E.: 1994, 'The Politics of Stakeholder Theory: Some Future Directions', *Business Ethics Quarterly* **4**, 409–421.
- Friedman, M.: 1970, 'The Social Responsibility of Business is to Increase Its Profits', *The New York Times Magazine*, September 13, pp. 32–33, 122, 124, 126.
- Gioia, D. A.: 1992, 'Pinto Fires and Personal Ethics: A Script Analysis of Missed Opportunities', *Journal of Business Ethics* **11**, 379–389.
- Goetz, E. T., D. L. Schallert, R. E. Reynolds and D. I. Radin: 1983, 'Reading in Perspective: What Real Cops and Pretend Burglars Look for in a Story', *Journal* of Educational Psychology 4, 500–510.
- Hawkins, D. I. and A. B. Cocanougher: 1972, 'Student Evaluations of the Ethics of Marketing Practices: The Role of Marketing Education', *Journal of Marketing* **36**, 61–64.
- Hebert, P., E. M. Meslin, E. V. Dunn, N. Byrne and S. R. Reid: 1990, 'Evaluating Ethical Sensitivity in Medical Students: Using Vignettes as an Instrument', *Journal of Medical Ethics* 16, 141–145.
- Hemsley, G. D. and H. H. C. Marmurek: 1982, 'Person Memory: The Processing of Consistent and Inconsistent Person Information', *Personality and Social Psychology Bulletin* 8, 433–438.
- Hunt, D. and S. Vitell: 1986, 'A General Theory of Marketing Ethics', *Journal of Macromarketing* (Spring), 5–16.
- Hunt, S. D. and S. Vitell: 1992, 'A General Theory of Market Ethics: A Retrospective and Revision', in N. C. Smith and J. A. Quelch (eds.), *Ethics in Marketing* (Richard D. Irwin, Homewood, IL), pp. 775–784.
- Jones, T. M.: 1991, 'Ethical Decision Making by Individuals in Organizations: An Issue-Contingent Model', Academy of Management Review 16, 366–395.
- Jordan, J.: 2007, 'Taking a First Step Towards a Moral Action: A Review of Moral Sensitivity Measurement Across Domains', Journal of Genetic Psychology 168, 323–359.
- Karcher, J. N.: 1996, 'Auditors' Ability to Discern the Presence of Ethical Problems', *Journal of Business Ethics* 15, 1033–1050.
- Kardash, C. A. M., J. M. Royer and B. A. Greene: 1988, 'Effects of Schemata on Both Encoding and Retrieval of Information from Prose', *Journal of Educational Psychology* 80, 324–329.
- Kelly, C., P. Kocuurek, N. McGaw and J. Samuelson: 2004, Deriving Value from Corporate Values (Aspen ISIB, New York).
- Kohlberg, L.: 1969, 'Stage and Sequence: The Cognitive-Developmental Approach to Socialization', in D. A. Goslin (ed.), *Handbook of Socialization and Research* (Rand McNally, Chicago), pp. 347–480.

- Kohlberg, L.: 1984, The Psychology of Moral Development, Vol. 2 (Harper & Row, San Francisco).
- Markus, H.: 1977, 'Self-Schemata and Processing Information About the Self', *Journal of Personality and Social Psychology* **35**, 63–78.
- Morgenson, G.: 2006, 'Are Enrons Bustin' Out All Over?', New York Times, Sect. 3.1, May 28.
- Ocasio, W.: 1997, 'Towards an Attention-Based View of the Firm', Strategic Management Journal 18, 187–206.
- Pillutla, M. M. and X. Chen: 1999, 'Social Norms and Cooperation in Social Dilemmas: The Effects of Context and Feedback', Organizational Behavior and Human Decision Processes 78, 81–103.
- Rest, J. R.: 1986, Moral Development: Advances in Research and Theory (Preager, New York).
- Rest, J. R.: 1994, 'Background: Theory and Research', in J. R. Rest and D. Narvaez (eds.), *Moral Development in the Professions: Psychology and Applied Ethics* (Lawrence Erlbaum Associates, New Jersey), pp. 1–26.
- Rest, J., D. Narvaez, M. J. Bebeau and S. J. Thoma: 1999, Postconventional Moral Thinking: A Neo-Kohlbergian Approach (Lawrence Erlbaum Press, Mahwah, NJ).
- Reynolds, S. J.: 2006a, 'Moral Awareness and Ethical Predispositions: Investigating the Role of Individual Differences in the Recognition of Moral Issues', *Journal of Applied Psychology* **91**, 233–243.
- Reynolds, S. J.: 2006b, 'A Neurocognitive Model of the Ethical Decision-Making Process: Implications for Study and Practice', *Journal of Applied Psychology* **91**, 737–748.
- Schein, E. H.: 2004, 'Learning When and How to Lie: A Neglected Aspect of Organizational and Occupational Socialization', *Human Relations* 57, 260–273.
- Shaub, M. K., D. W. Finn and P. Munter: 1993, 'The Effects of Auditors' Ethical Orientation on Commitment and Ethical Sensitivity', Behavioral Research in Accounting 5, 145–164.
- Shiffrin, R. M. and M. W. Schneider: 1977, 'Controlled and Automatic Human Information Processing: II. Perceptual Learning, Automatic Attending, and a General Theory', Psychological Review 84, 127–190.
- Simon, H. A.: 1945, *Administrative Behavior* (Free Press, New York).
- Sparks, J. R. and S. D. Hunt: 1998, 'Marketing Researcher Ethical Sensitivity: Conceptualization, Measurement, and Exploratory Investigation', *Journal* of Marketing 62, 92–109.
- Steffensen, M. S., C. Joag-Dev and R. C. Anderson: 1979, 'A Cross-Cultural Perspective on Reading Comprehension', Reading Research Quarterly 15, 10– 29.
- Stern, L. D., S. Marrs, M. G. Millar and E. Cole: 1984, 'Processing Time and the Recall of Inconsistent and

- Consistent Behaviors of Individuals and Groups', *Journal of Personality and Social Psychology* **47**, 253–262.
- Sternberg, R. J. and R. K. Wagner: 1985, 'Practical Intelligence in Real-World Pursuits: The Role of Tacit Knowledge', *Journal of Personality and Social Psychology* **49**, 436–458.
- Stevens, J. P.: 1992, Applied Multivariate Statistics for the Social Sciences, 2nd Edition (Erlbaum, Hillsdale, NJ).
- Stevens, G. E., W. D. Richardson and A. E. Abramowitz: 1989, 'Perceptual Differences of Ethical Decision Situations Business vs. Law: A Difference of Opinion', Southern Academy of Management Meeting Proceedings, 199–201.
- Sundaram, A. K. and A. C. Inkpen: 2004, 'The Corporate Objective Revisited', *Organizational Science* **15**, 350–363.
- Taylor, S. E. and J. Crocker: 1981, 'Schematic Bases of Social Information Processing', in E. T. Higgins, C. P. Herman and M. P. Zanna (eds.), Social Cognition: The Ontario Symposium, Vol. 1 (Erlbaum, Hillsdale, NJ), pp. 89–134.
- Taylor, S. E., J. Crocker and J. D'Agostino: 1978, 'Schematic Bases of Social Problem-Solving', *Personality and Social Psychology Bulletin* **4**, 447–451.
- Tenbrunsel, A. E. and D. M. Messick: 1999, 'Sanctioning Systems, Decision Frames, and Cooperation', *Administrative Science Quarterly* **44**, 684–707.
- Thoma, S.: 1994, 'Moral Judgments and Moral Action', in J. R. Rest and D. Narvaez (eds.), *Moral Development in the Professions: Psychology and Applied Ethics* (Lawrence Erlbaum Associates, New Jersey), pp. 199–211.
- Trevino, L. K.: 1986, 'Ethical Decision-Making in Organizations: A Person-Situation Interactionist Model', *Academy of Management Review* 11, 601–617.
- Trevino, L. K. and M. E. Brown: 2004, 'Managing to be Ethical: Debunking Five Business Ethics Myths', *The Academy of Management Executive* **18**, 69–77.
- Trevino, L. K. and S. A. Youngblood: 1990, 'Bad Apples in Bad Barrels: A Causal Analysis of Ethical Decision– Making Behavior', *Journal of Applied Psychology* 75, 378–385.

- Trevino, L. K., M. Brown and L. P. Hartman: 2003, 'A Qualitative Investigation of Perceived Ethical Leadership: Perceptions from Inside and Outside the Ethical Suite', *Human Relations* **56**, 5–37.
- von Hippel, W., J. Jonides, J. L. Hilton and S. Narayan: 1993, 'Inhibitory Effect of Schematic Processing on Perceptual Encoding', *Journal of Personality and Social Psychology* **64**, 921–935.
- Weaver, G. R., L. K. Trevino and P. L. Cochran: 1999a, 'Corporate Ethics Programs as Control Systems: Influences of Executive Commitment and Environmental Factors', *Academy of Management Journal* 42, 41–57.
- Weaver, G. R., L. K. Trevino and P. L. Cochran: 1999b, 'Integrated and Decoupled Corporate Social Performance: Management Commitments, External Pressures, and Corporate Ethics Practices', Academy of Management Journal 42, 539–553.
- Weber, J.: 1990, 'Managers' Moral Reasoning: Assessing Their Responses to Three Moral Dilemmas', *Human Relations* 43, 687–702.
- Weber, R. and J. Crocker: 1983, 'Cognitive Processes in the Revision of Stereotypic Beliefs', *Journal of Personality and Social Psychology* **45**, 961–977.
- Wood, D. J.: 1994, 'Essays in the "Toronto Conference: Reflections on Stakeholder Theory", in T. Jones (ed.), *Business & Society* **33**, 101–105.
- Wyer Jr., R. S., T. K. Srull, S. E. Gordon and J. Hartwick: 1982, 'Effects of Processing Objectives on the Recall of Prose Material', *Journal of Personality and Social Psychology* **48**, 674–688.
- Zadny, J. and H. B. Gerard: 1974, 'Attributed Intentions and Informational Selectivity', *Journal of Experimental Social Psychology* 10, 34–52.

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