Implicit Morality Theories: Employees' Beliefs about the Malleability of Moral Character Shape Their Workplace Behaviors

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Abstract

Implicit morality theories refer to people's beliefs about whether individuals' moral character is fixed or malleable. Drawing on the social cognitive theory of morality, we examine the relationship between employees' implicit morality theories and their organizational citizenship behaviors toward coworkers (OCBC) and coworker-directed deviance (CDD) through a moral self-regulatory mechanism. A laboratory experiment (Study 1), an online experiment (Study 2), and a multi-wave, multi-source field survey (Study 3) found that the more employees held a fixed belief about morality, the lower their sense of moral control, especially when their moral identity was lower. This perceived lack of moral control, in turn, predicted decreased OCBC, particularly when the workgroup ethical climate was weak. However, this relationship did not hold for CDD. Overall, our research highlights implicit morality theories as a novel antecedent of employees' workplace behaviors, and identifies the underlying moral self-regulatory process, along with individual and situational boundary conditions.

Keywords: implicit morality theories; moral control; moral identity; ethical climate; organizational citizenship behavior

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Shape Their Workplace Behaviors

People have different beliefs, or *implicit theories*, about the nature of human characteristics. People with a *fixed mindset* believe that personal characteristics (e.g., intelligence and personality) are largely fixed and stable over the lifetime. In contrast, those with a *growth mindset* believe that these characteristics are malleable and can change over time (Dweck and Leggett 1988; Molden and Dweck 2006). We focus on people's implicit theories about morality.[1] Research on this topic has found that the more people endorse a fixed morality belief, the more they punish others for wrongdoing (Chiu et al. 1997a; Tam et al. 2013), the less trust they have in others following an apology (Haselhuhn et al. 2010), and the less they engage in prosocial behavior when working with a morally humble leader (Owens et al. 2019). Although this body of research has advanced our understanding of the behavioral implications of holding a fixed or a growth morality belief, we know little about the underlying mechanisms that explain when and how employees' implicit morality theories influence their behaviors. In the present research, we investigate the moral self-regulatory process underlying the effects of implicit morality theory on important workplace behaviors.

To achieve this end, our research draws on the social cognitive theory of morality (Bandura 1991a) to theorize that employees' implicit morality theories translate into OCBC and CDD through a moral self-regulatory mechanism, *sense of moral control*, which refers to individuals' perception of their ability to exercise control over their moral actions (cf. Kraus et al. 2009; Lachman and Weaver 1998; Mittal and Griskevicius 2014). As the social cognitive theory of morality further suggests that the extent to which individuals' moral beliefs shape their

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[1] We use the terms *implicit morality theories*, *implicit theories of morality*, *implicit beliefs about morality*, and *implicit morality beliefs* interchangeably. We also use the terms *moral* and *ethical* interchangeably.

moral self-regulation is influenced by individual-difference factors (Bandura 1991a; Blasi 1980; Treviño 1986), we consider the role of employees' *moral identity*—defined as "the degree to which a person's moral character is experienced as a central part of his or her overall self-concept" (Aquino et al. 2011, p. 704)—as a salient factor that influences whether employees' implicit morality theories translate into their sense of moral control. Moreover, as the social cognitive theory of morality stipulates that the self-regulation of moral conduct is not entirely determined by personal factors but is rather governed by the interaction of both personal and situational factors (Bandura 1991a), we further propose that employees' sense of moral control interacts with a key situational factor—group ethical climate—to influence employees' OCBC and CDD. Figure 1 displays our theoretical model.

<Insert Figure 1 here>

We test our theoretical model by adopting a "full-cycle" research approach (Chatman and Flynn 2005, p. 434). We first conducted a laboratory experiment study using Singaporean undergraduates (Study 1) that measured moral identity, manipulated implicit morality theory, and examined their interaction on sense of moral control. We then conducted an online experiment with UK residents (Study 2) in which we measured implicit morality theory, manipulated moral identity, and measured sense of moral control, OCBC, and CDD. Finally, we conducted a multi-wave, multi-source field study using a Chinese employee sample (Study 3) to test the full model. By employing a combination of experimental and field studies to test our model, we address endogeneity concerns that are common in the field of organizational behavior (Antonakis et al. 2010; Fischer et al. 2020), and establish the external validity of our findings (Brewer and Crano 2000). Moreover, using samples from different countries to test our model enhances the generalizability of our findings.

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Our research makes a number of significant contributions to the literature. First, we contribute to the implicit morality theory and moral identity literatures by identifying sense of moral control as a novel mechanism that transmits the interaction effect of employees' implicit morality theories and moral identity on OCBC and CDD. In doing so, our research deepens our understanding of how employees' moral beliefs shape their moral self-regulation (sense of moral control) and behavior. Second, we contribute to the moral self-regulation literature by examining group ethical climate as a boundary factor for the relationship between employees' sense of moral control and OCBC and CDD. Third, we contribute to the self-regulation literature, which has primarily examined the self-regulatory process from a cognitive perspective (Johnson et al. 2014; Klotz et al. 2018; Koopman et al. 2020; Thau and Mitchell 2010), by adopting a motivational perspective to examine how employees' moral self-regulatory process drives the enactment of prosocial and antisocial behaviors. Finally, we contribute to the organizational citizenship behavior (OCB) and deviance literature by examining employees' implicit morality theories and sense of moral control as predictors of OCBC and CDD. In doing so, our research enriches the nomological network of ethical and self-regulation antecedents of employees' OCB and deviant behaviors.

Theoretical Background

Implicit Theories in Management

Although the idea of implicit theories originated in developmental and social psychology, a substantial body of research has examined the implications of implicit *person* theories in management (Heslin and VandeWalle 2008). This research has examined people's beliefs about whether the type of person that people are fixed and stable or can be changed and developed. Managers who believe that people can change and develop over time are more likely to coach

poor performing subordinates to help them become better at their job (Heslin et al. 2006), and more readily acknowledge that previously poor performing employees have improved or that previously well performing employees have deteriorated (Heslin et al. 2005). More broadly, employees working under managers who believed that people can change and improve found the managers more procedurally just and thus were more likely to engage in organizational citizenship behaviors (OCB), compared to employees working under managers who believed that the type of person someone is cannot change much (Heslin and VandeWalle 2011).

Recent research has identified analogous implicit theories about leadership, which refer to beliefs about whether individuals' leadership ability is fixed and stable, or whether individuals can improve and develop their leadership ability over time (Hoyt and Burnette 2013). Note that this construct is distinct from implicit personality leadership theories (ILT), which refer to people's beliefs about what are the personality characteristics of effective leaders (Offermann et al. 1994). Research has found that women believing that leadership ability can be developed were less demotivated by information showing that men greatly outnumber women in leadership positions (Burnette et al. 2010). Individuals exposed to the idea that leadership ability can be developed benefited from the provision of a role model before completing a leadership task, compared to those exposed to the view that leadership ability is fixed (Hoyt et al. 2012).

Although most past research in organizational behavior has focused on implicit person theories and implicit leadership theories, recent research has also examined the role of implicit morality theories. For example, ethical leadership increases employees' identification with the leader and with the organization, and this effect was stronger among employees with a more fixed morality belief (Zhu et al. 2015). The authors argued that when employees with a fixed morality belief are exposed to ethical (unethical) leaders, they believe that the leader would

continue to be ethical (unethical) in the future, and thus identify more (less) strongly with the leader. When employees with a growth morality belief are exposed to a morally humble leader, they experience a higher sense of moral self-efficacy (Owens et al. 2019). The authors argued that employees with a more growth morality belief would be more likely to construe themselves as ethical agents when working under a humbler leader, and therefore experience a higher sense of moral efficacy.

While this line of work has advanced our understanding of the consequences of implicit morality theories in the workplace, it provides less knowledge about whether, when, and how employees' implicit morality theories shape their own behaviors. In the next section, we draw from the social cognitive theory of morality (Bandura 1991a) to predict that employees' implicit morality theories would indirectly influence their OCBC and CDD through their sense of moral control, and that this indirect effect would be contingent on their moral identity as a first-stage moderator, and on group ethical climate as a second-stage moderator.

Prior research has conceptualized implicit theories as "relatively stable but malleable personal qualities, rather than as fixed dispositions" (Dweck et al. 1995, p. 279). Consistent with this conceptualization, researchers have both measured and manipulated implicit theories (e.g., Chiu et al. 1997b; Yeager et al. 2016). In line with this longstanding perspective, the present research conceptualized implicit morality theories as being both trait-like and state-like. Consistent with our position, Heslin and colleagues (Heslin et al. 2005; 2006) found that managers' chronic, measured implicit theories and experimentally induced implicit theories predicted their performance appraisal and coaching behavior similarly. Further, Chiu and colleagues (1997b) found that both measured and experimentally induced implicit personality theories influenced people's tendency to use traits as the unit of analysis in their social

perception in a similar way. In addition, the present research follows prior research (Zhu et al. 2015) to conceptualize fixed and growth morality beliefs as standing on opposite ends of a continuum, and therefore sees a strong fixed morality belief as representative of a weak growth morality belief. Although the terms fixed belief and growth belief are widely used in the literature, they are used for the purpose of conveniently denoting those who hold either an entity or an incremental implicit theory. In fact, people hold implicit theories that lie somewhere along the continuum between the fixed and growth beliefs (Dweck 1999; Heslin et al. 2005; 2019).

Hypothesis Development

Implicit Morality Theories, Moral Identity, and Sense of Moral Control

Many people want to act morally, but have difficulty translating their moral intentions, beliefs, and desires into moral behavior (Hannah et al. 2011; Rest 1986). Bandura's (1991a, p. 68) social cognitive theory of morality argues that moral behavior is "motivated and regulated mainly by the ongoing exercise of self-reactive influence." Thus, moral behaviors are not simply expressions of moral intentions or beliefs; instead, people need to exercise moral self-regulation to translate their moral beliefs into moral behaviors (Osswald et al. 2009; Treviño and Weaver 2003; Treviño et al. 2006). In the present research, we specifically focus on *sense of moral control*—which refers to individuals' perceptions about whether or not they can control their moral behaviors—as a moral self-regulatory mechanism that transmits the effect of people's implicit morality theories on their moral behaviors.

We chose to focus on sense of moral control for the following reasons. We acknowledge that there are many mechanisms involved in the self-regulation of moral behaviors. However, we believe that sense of moral control is arguably the most proximal internal self-regulatory mechanism of personal agency relevant to moral behaviors. First, we are primarily interested in

capturing the internal mechanism involved in moral self-regulation. However, moral efficacy, a related concept, involves both the internal aspect of one's belief about whether one can engage in moral self-regulation (Bandura 1997) and the external aspect of whether one has access to the means to enact moral self-regulation (Eden 2001), or one's beliefs regarding the extent to which external factors inhibit or support one's capability to perform ethically in a given situation (Hannah and Avolio 2010). Second, we believe that sense of moral control, a targeted self-regulatory mechanism focused on one's belief in one's ability to enact moral behaviors (i.e., meet moral behavioral goals), best captures the self-regulatory mechanism that is most proximal to executing moral behaviors (i.e., OCBC and CDD). There are other efficacy beliefs related to moral self-regulation mechanisms beyond one's capabilities to exercise control over one's moral behaviors, such as beliefs regarding self-monitoring capabilities and beliefs in one's efficacy to exercise control over motivation and thought patterns (Bandura 1991b). As scholars have recommended the use of domain-specific measures of control to maximize the likelihood of uncovering underlying relationships (e.g., Bandura 1997; Eden 2001; Lachman 1986), we chose to focus on the targeted self-regulatory mechanism of control beliefs regarding enacting moral behaviors, or moral control, with reference to OCBC and CDD.

The social cognitive theory of morality further suggests that the moral self-regulatory process through which individuals' moral beliefs are translated into moral behaviors is influenced by individual-difference factors (Bandura 1991a; Blasi 1980; Treviño 1986). Building on this theory, we theorize employees' *moral identity*—defined as "the degree to which a person's moral character is experienced as a central part of his or her overall self-concept" (Aquino et al. 2011, p. 704)—as a salient individual-difference factor that alters the effect of employees' implicit morality theories on their sense of moral control.

Moral identity is "a self-conception organized around a set of moral traits" such as being caring, compassionate, helpful, friendly, generous, etc. (Aquino and Reed 2002, p. 1424). By "aspiring to moral traits and regarding moral identity to be central to their self-concept" (Lee et al. 2016, p. 917), employees with high moral identity have more readily accessible moral self-schemas (Reynolds 2008; Reynolds and Ceranic 2007). Because of their accessible moral self-schemas, employees with high moral identity are more likely to drive their moral cognition to be consistent with their moral self (Hannah et al. 2011; Lee et al. 2016). Therefore, for employees with a more fixed morality belief who are high on moral identity, although their fixed morality belief might lead to lower confidence in their ability to exert moral control, their high moral identity is likely to compensate for this disadvantage by driving their motivation to exert self-control to act consistently with their moral self (Muraven and Slessareva 2003). By doing so, entity theorists with high moral identity can maintain a positive moral self-image (Aquino and Reed 2002; Mulder and Aquino 2013). For employees with a more growth morality belief who are high on moral identity, their high moral identity will bolster their beliefs that they are able to exert control over moral behaviors. As such, incremental theorists with high moral identity are motivated to exert high levels of moral control so as to be consistent with their moral self. Thus, when moral identity is high, both employees with a fixed morality belief and those with a growth morality belief will have a high sense of moral control.

In contrast, we predict that the more employees hold a fixed belief about morality, the lower their sense of moral control, especially when their moral identity is low. As low moral identity employees have limited access to their moral self-schemas (Aquino and Reed 2002; Reed and Aquino 2003), they would have fewer internalized moral standards available to help self-regulate their behavior (cf. Lee et al. 2016). In addition, immoral behaviors are less

threatening to people with low moral identity (Barclay et al. 2014; Harkrider et al. 2013; Van Quaquebeke et al. 2019). Therefore, those with low moral identity are less motivated to exert additional self-regulatory effort to overcome fixed morality beliefs in order to maintain a positive moral self-image. On the other hand, low moral identity employees who have growth morality beliefs still have a positive growth mindset to help raise their moral control levels above those of low moral identity employees with fixed morality beliefs. Therefore, when moral identity is low, employees with a fixed morality belief will have a lower sense of moral control than those with a growth morality belief. Based on these arguments, we hypothesize:

> *Hypothesis 1: Moral identity moderates the negative relationship between employees'*
> *fixed morality belief and sense of moral control, such that the relationship is stronger*
> *when moral identity is lower.*

Implications for Employee Work Behaviors

We argue that employees' low sense of moral control would in turn predict their workplace behaviors, such as OCBC and CDD. In the present research, we focus on OCBC and CDD for several reasons. First, OCBC and CDD are discretionary behaviors that require employees to engage in self-regulatory mechanisms. OCB refers to employees' behavior "that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (Organ 1988, p. 4). In the present research, we specifically focus on OCBC, which refers to employees' OCB directed at helping coworkers. Deviance is defined as "voluntary behavior that violates significant organizational norms and in so doing threatens the well-being of an organization, its members, or both" (Robinson and Bennett 1995, p. 556). Further, we focus on CDD, which refers to employees' deviance aimed at coworkers. Prior research has argued that engaging in OCBC and

inhibiting CDD requires employees to activate self-regulatory processes (e.g., Johnson et al. 2014; Klotz et al. 2018; Koopman et al. 2020; Thau and Mitchell 2010). In line with this work, we examine OCBC and CDD as behavioral implications of employees' moral self-regulatory process.

Second, OCBC and CDD tap employees' behaviors toward coworkers. In the workplace, employees frequently interact with their coworkers (Hitlan and Noel 2009). Research has suggested that when interacting with coworkers, employees need to self-regulate their feelings and behaviors in order to promote smooth coworker exchanges (Gabriel et al. 2020). Therefore, it is of importance to examine how the moral self-regulatory process drives employees' enactment of prosocial and deviant behaviors in the coworker interaction context.

Third, both OCBC and CDD have a moral component (Bolino and Klotz 2015; Cohen et al. 2014; Klotz and Bolino 2013; Treviño et al. 2006). Deviance is clearly an immoral behavior as it causes harm unto others (Bennett and Robinson 2000). OCBC is not necessarily moral in nature (Organ et al. 2006). However, OCBC has some tinges of morality associated with it. A study examining employees' moral judgments of work behaviors indicated that employees perceive OCB and deviance as examples of ethical behavior and unethical behavior, respectively (Cohen et al. 2014). In addition, researchers have argued that OCB "may be the manifestation of ethical behavior in the workplace" (Turnipseed 2002, p. 1). Further, the key construct underlying OCBC—helping others—is a moral construct that is featured as one of the key moral traits (Aquino and Reed 2002). Thus, we submit that OCBC has a moral component attached to it. Given both OCBC and CDD have a moral component attached to them, they are consistent with the current research's focus on implicit theories and sense of control and their consequences in the moral domain.

We propose that employees' low sense of moral control would suppress OCBC while facilitating CDD. Recent research suggests that people do not engage in OCBC automatically and effortlessly (Bolino et al. 2012; Fehr et al. 2017; Lanaj et al. 2016); performing OCBs "involves the choice to invest cognitive, emotional, and physical resources in activities that go beyond what is technically required" (Bolino et al. 2015, p. 57; see also Bolino and Turnley 2005; Bolino et al. 2010). Thus, employees must believe that they have the ability to help their coworkers if they want to. As employees who perceive that they lack a sense of moral control might be less confident in their abilities to engage in moral behaviors such as OCBC (Cohen et al. 2014), we predict that employees' low sense of moral control would be negatively related to their OCBC. That is, employees' sense of moral control would be positively related to OCBC.

However, we argue that when employees lack a sense of moral control, they would be more likely to engage in CDD, that is, deviant behaviors that threaten the well-being of their coworkers (e.g., acting rudely toward coworkers, making obscene comments toward coworkers, or engaging in actions hurtful to coworkers; Bennett and Robinson 2000; Robinson and Bennett 1995). Indeed, recent research has found that people need to exert willpower and self-control to refrain from engaging in impulsive deviant behaviors (e.g., Fehr et al. 2017; Thau and Mitchell 2010). As such, when employees who perceive a lack of moral control are less confident about their ability to control their moral behaviors, they might perceive that they cannot stop themselves from engaging in immoral behavior. Therefore, we submit that employees' low sense of moral control would be positively related to CDD. That is, employees' sense of moral control would be negatively related to CDD. Based on these arguments, we hypothesize:

Hypothesis 2a: Sense of moral control is positively related to OCBC.

Hypothesis 2b: Sense of moral control is negatively related to CDD.

As articulated in the previous section, the social cognitive theory of morality (Bandura 1991a) suggests that employees' moral self-regulation (i.e., sense of moral control) is driven by the interaction of implicit moral beliefs and moral identity. Hence, it is logical to further predict that employees' sense of moral control transmits the interaction effect of implicit morality beliefs and moral identity on OCBC and CDD. Specifically, we propose that the lower sense of moral control resulting from the negative interaction between fixed morality belief and moral identity contributes to lower levels of OCBC but higher levels of CDD. Taking these arguments together, we expect moral identity to moderate the indirect effect of employees' fixed morality belief on OCBC and CDD via sense of moral control. Therefore, we hypothesize:

> *Hypothesis 3a: Moral identity moderates the negative indirect effect of employees' fixed morality belief on OCBC via sense of moral control, such that the effect is stronger when moral identity is lower.*

> *Hypothesis 3b: Moral identity moderates the positive indirect effect of employees' fixed morality belief on CDD via sense of moral control, such that the effect is stronger when moral identity is lower.*

The Moderating Role of Group Ethical Climate

Although our above arguments suggest that employees' low sense of moral control might result in a lower willingness to engage in OCBC and a higher willingness to engage in CDD, we argue that these effects would not hold to the same extent across all situations. This is because according to the interactionist perspective of the social cognitive theory of morality (Bandura 1991a), personal factors and situational factors jointly govern individuals' moral behaviors. We propose that group ethical climate is a particularly salient situational factor that would moderate the link between employees' sense of moral control and their OCBC and CDD, respectively.

Ethical climate refers to "the holistic impression that individuals have regarding ethical policies, practices, and procedures within a unit or organization" (Mayer et al. 2010, p. 7). In the present research, we define group ethical climate as the extent to which group members share the perception that ethical procedures, policies, and behaviors are expected and supported in the work group (cf. Dickson et al. 2001; Kuenzi et al. 2020; Mayer et al. 2010). In a strong group ethical climate, group members share the idea that moral behavior is important, appropriate, and likely rewarded (Dickson et al. 2001; Kuenzi et al. 2020; Mayer et al. 2010). Given that employees with a lower sense of moral control are more sensitive to the environment (cf. Mittal and Griskevicius 2014), they are more likely to be influenced by a strong group ethical climate, and therefore, follow the group's ethical procedures and policies by engaging in appropriate behaviors, such as OCBC, and refraining from engaging in inappropriate behaviors, such as CDD. In contrast, given employees with a higher sense of moral control are less sensitive to the situational environment, they are less likely to be affected by the group ethical climate. Therefore, their enactment of OCBC and CDD is less subject to the presence vs. absence of a group ethical climate.

However, in groups with a weak ethical climate, the social environment provides fewer cues to employees as to what others in the group deem as morally appropriate or inappropriate behavior (cf. Kuenzi et al. 2020; Mayer et al. 2010). The lack of such information will likely leave employees unclear about what behaviors are important and acceptable and what behaviors are not in the group. Employees' behaviors would thus not be as constrained by the group's ethical procedures and policies. As such, in a group with a weak ethical climate, employees with a lower sense of moral control are less likely to be motivated to engage in OCBC and to inhibit CDD. Further, in groups with a weak ethical climate, employees are neither rewarded for

engaging in ethical behavior nor punished for engaging in unethical behavior (cf. Babin et al. 2000; DeConinck 2011). Thus, employees who lack a sense of moral control are not provided with any extrinsic motivation to engage in OCBC and to inhibit CDD. In contrast, employees with a higher sense of moral control believe that it is in their power to act morally if they want to do so, so even in a weak group ethical climate, they can be motivated to engage in OCBC and to avoid CDD. Therefore, we reasoned that in groups with a weak ethical climate, employees who have a low sense of moral control would be less likely to engage in OCBC and more likely to engage in CDD, whereas employees who have a high sense of moral control would be more likely to engage in OCBC and less likely to engage in CDD. We thus propose:

> *Hypothesis 4a: Group ethical climate moderates the positive relationship between employees' sense of moral control and OCBC, such that this relationship is stronger when group ethical climate is weaker.*

> *Hypothesis 4b: Group ethical climate moderates the negative relationship between employees' sense of moral control and CDD, such that this relationship is stronger when group ethical climate is weaker.*

Thus far, we have theorized that employees' sense of moral control transmits the interaction effect of implicit morality belief and moral identity on OCBC and CDD, and that this moral self-regulatory process is also contingent on group ethical climate. As articulated earlier, the social cognitive theory of morality posits that employees' moral self-regulatory process is governed by the interaction of both personal and situational factors (Bandura 1991a). Drawing on this theory, we integrate previous hypotheses to propose a dual-stage moderated mediation model of moral self-regulation. Specifically, we expect moral identity as a first-stage moderator and group ethical climate as a second-stage moderator to influence the indirect effect of

employees' fixed morality belief on OCBC and CDD via sense of moral control, such that the negative (positive) indirect effect of fixed morality belief on OCBC (CDD) via sense of moral control will be stronger when moral identity is lower and when group ethical climate is weaker. Therefore, we hypothesize:

> *Hypothesis 5a: Moral identity and group ethical climate moderate the negative indirect effect of employees' fixed morality belief on OCBC via sense of moral control, such that the effect is stronger when moral identity is lower and when group ethical climate is weaker.*

> *Hypothesis 5b: Moral identity and group ethical climate moderate the positive indirect effect of employees' fixed morality belief on CDD via sense of moral control, such that the effect is stronger when moral identity is lower and when group ethical climate is weaker.*

Overview of Studies

We conducted three studies to test our theoretical model: a laboratory experiment study (Study 1), an online experiment study (Study 2), and a field survey study (Study 3). In Study 1, we provided a preliminary test of Hypothesis 1 by measuring people's moral identity, manipulating their beliefs about whether morality is fixed or can be changed, and then measuring their sense of moral control. In Study 2, apart from replicating Study 1's findings, we tested Hypotheses 2a, 2b, 3a, and 3b by measuring people's implicit morality beliefs, manipulating their moral identity, and then measuring their sense of moral control, OCBC, and CDD. In Study 3, we employed a two-wave, multi-source survey design to test the full model in a field setting. Taken together, these three studies use a combination of field and experimental designs, thus providing evidence for both the internal and external validity of our conclusions. All data and

materials reported in this manuscript are available at

https://osf.io/za8e6/?view_only=d1a1ab2dfa6f45a394f1cde5f34144fe.

Study 1

Study 1 aimed to test the first stage of our model, that whether moral identity moderates

the relationship between people's implicit morality theories and their sense of moral control.

Method

Participants and procedure. We conducted a power analysis using G*Power, *Linear*

bivariate regression: Two groups, difference between slopes. As Study 3 was conducted before

Study 1, we used statistics from Study 3 for Study 1's power analysis. We input Δ slope = .34

(i.e., the absolute value of the difference between the slope of moral identity at one standard

deviation above and below the mean on implicit morality theories), α = .05 (one-tailed), power =

80%, allocation ratio of two groups' sample size = 1, and standard deviations of the residual

= .90, of the independent variable = 1.64, and of the dependent variable (sense of moral control)

= 1.09. This analysis indicated that we need to recruit 108 participants. We posted a study

seeking 108 undergraduate business students from a large public university in Singapore. In

response, 202 undergraduate business students participated in this study in exchange for course

credit. As one participant did not complete the experiment, the final sample included 201

participants (M_{age} = 21.10 years, SD_{age} = 1.38, 2 missing values; 49% women, 1 missing value).[2]

Upon arrival at the lab, participants were seated in individual cubicles and asked to

complete a study on a computer screen. Participants first completed a measure of moral identity.

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[2] We conducted a post-hoc power analysis using G*Power, *Linear bivariate regression: Two groups, difference between slopes*. We input Δ slope = .55 (i.e., the absolute value of the difference between the slope of moral identity at one standard deviation above and below the mean on implicit morality theories), α = .05 (one-tailed), group 1's sample size = 101, group 2's sample size = 100, and standard deviations of the residual = .87, of the independent variable = .50, and of the dependent variable (sense of moral control) = .95. This analysis yielded a power of .88, indicating that our sample size is sufficiently powered.

Thereafter, they were randomly assigned to one of two conditions: the *fixed morality belief* condition or the *growth morality belief* condition, in which they were asked to read a scientific article that cites evidence in support of either the fixed belief or the growth belief, depending on participants' experimental condition. To ensure that participants thought about the article, we asked them to summarize the main point of the article in 2-3 sentences. We then administered the manipulation check measure. Finally, participants were asked to complete the dependent measure assessing sense of moral control, and a demographics questionnaire. we report all conditions, measures, and participants.

Manipulation. To manipulate participants' fixed vs. growth belief about morality, we adapted the materials used by Chiu et al. (1997b), who had created news articles arguing that people's personality characteristics are fixed or can be changed. We altered these articles to instead focus on morality. The fixed morality belief article informed participants that moral characteristics are largely fixed and unchanging over a person's lifetime. In contrast, the growth morality belief article informed participants that moral characteristics are malleable and change over time (see the Supplementary Material for detailed manipulation information).

Measures. Participants were administered the following measures, and asked to rate all items on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). All measure items are shown in the Supplementary Material.

Moral identity. We measured participants' moral identity using the scale developed by Aquino and Reed (2002). Participants were given a list of moral characteristics (e.g., caring, compassionate, fair, friendly, and honest) and asked to visualize in their mind the kind of person who possessed these characteristics, and how this person would think, feel, and act. They were then asked to respond to 10 items, 5 measuring moral internalization (e.g., "Having these

characteristics is really important to me") and 5 measuring moral symbolization (e.g., "I am actively involved in activities that communicate to others that I have these characteristics"). Our theorizing about the moderating effect of moral identity did not predict different theoretical relationships for the two dimensions of moral identity. Therefore, for purposes of parsimony, we focused on moral identity as a whole without considering the two dimensions. This practice is consistent with prior research (e.g., Keem et al. 2018; Zhu et al. 2016). Specifically, we averaged items for the *internalization* and *symbolization* subscales to create a score for moral identity (α = .87).

Sense of moral control. To assess participants' sense of moral control, we adapted Lachman and Weaver's (1998) 4-item *personal mastery* subscale of the *generalized sense of control* measure to refer to control in the moral domain (e.g., "Whether or not I am able to act morally is in my own hands"). This procedure of converting a generalized control measure into a moral control measure is in line with scholars' recommendations to use domain-specific measures of control to maximize the chance of finding relationships in a given domain (e.g., Bandura 1997; Lachman 1986; Lachman and Weaver 1998). High scores on this measure represent individual's high sense of moral control (α = .85).

Results

Preliminary analyses. The descriptive statistics, correlations, and reliabilities of the variables included in this study are shown in Table 1.

<Insert Table 1 here>

Manipulation check. To assess whether our experimental manipulation successfully altered participants' implicit morality beliefs, we asked participants to complete Chiu et al.'s (1997a) 3-item implicit theories of morality scale (α = .89). Participants were asked to respond to

such items as "A person's moral character is something very basic about them and it can't be changed much." As all items were framed in terms of the fixed belief, higher scores indicate a more fixed morality belief (Chiu et al. 1997a). An independent-samples t-test revealed that participants indicated that they held a more fixed morality belief in the fixed morality belief condition ($M = 4.31$, $SD = 1.56$) than in the growth morality belief condition ($M = 3.17$, $SD = 1.30$; $t(199) = 5.66$, $p < .001$; Cohen's $d = .80$). This finding indicates that our experimental manipulation was successful.

Hypothesis testing. Hypothesis 1 predicted that moral identity moderates the relationship between fixed morality belief and sense of moral control. As shown in Table 2, the interaction between the implicit morality beliefs manipulation and moral identity was significant ($b = .30$, $p = .030$, $t = 2.18$). We plotted this significant interaction effect (see Figure 2) and conducted simple slopes analyses (Aiken and West 1991). We found that the relationship between the implicit morality beliefs manipulation and sense of moral control was significant when moral identity was low (one standard deviation below the mean) ($b = -.36$, $p = .043$, $t = -2.04$), but not significant when moral identity was high (one standard deviation above the mean) ($b = .19$, $p = .292$, $t = 1.06$). Specifically, participants low in moral identity would more likely have a low sense of moral control in the fixed morality belief condition than in the growth morality belief condition; however, participants high in moral identity would less likely have a low sense of moral control across both the fixed and the growth morality belief conditions. Therefore, Hypothesis 1 was supported.

<center><Insert Table 2 and Figure 2 here></center>

Discussion

Study 1 used an experimental design to provide support for the causal nature of Hypothesis 1. Participants low on moral identity who were led to believe that morality is

malleable felt that they had more control over their moral behaviors than those who were led to believe that morality is fixed. However, participants who were high on moral identity perceived that they had a high degree of control over their moral behaviors irrespective of whether they were led to believe that morality is fixed or malleable.

Study 2

Although Study 1 provided causal evidence for the role of implicit morality theory, it is limited in several aspects. First, it did not provide causal effect for the role of moral identity. Second, Study 1 did not measure the outcome variables—OCBC and CDD. Further, Study 1 used Singapore undergraduate sample, which may limit the cultural generalizability of our findings. To address these limitations, Study 2 measured people's implicit morality beliefs but manipulated moral identity, and we measured OCBC and CDD so as to test a broader set of hypotheses (i.e., Hypotheses 2a, 2b, 3a, and 3b). Specifically, we conducted an online experiment by collecting a sample of UK residents. Moreover, we used an established priming procedure developed by Aquino et al. (2007) to manipulate moral identity.

Method

Participants and procedure. We conducted a power analysis using the approach developed by Fritz and MacKinnon (2007), which is a widely used method to compute power for the mediation effect. We used statistics from a pilot study[3] for this study's power analysis. The independent variable-mediator alpha path was .002, close to Fritz and MacKinnon's (2007, p. 236) small effect size (.14). The mediator-dependent variable beta path was .39, Fritz and MacKinnon's (2007, p. 236) medium effect size (.39). According to Fritz and MacKinnon's (2007) Table 3 (column "SM", row "Bias-corrected bootstrap"), to detect a small effect size for

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[3] We conducted a pilot study for Study 2. The details regarding this pilot study are shown in the Supplementary Material.

the alpha path and a medium effect size for the beta path, we had to recruit 400 participants to have 80% power. We posted a survey seeking 400 UK residents on Prolific. In response, 400 participants completed the survey. However, after excluding participants based on the criteria stated above, the final valid sample size was 305 (M_{age} = 37.76 years, SD_{age} = 13.02, 3 missing values; 52.8% women).[4]

Participants were asked to imagine that they were employees at ABC Bank. We first measured their implicit morality beliefs. Thereafter, they were randomly assigned to either the *high moral identity* condition or the *low moral identity* condition, in which they were asked to complete the writing task developed by Aquino et al. (2007). Then, participants were asked to complete a manipulation check question, measures of sense of moral control, OCBC, and CDD, an open-ended question that asked them to summarize the main point of the measures that they responded to (which serves an attention-check question), and a demographics questionnaire. we report all conditions, measures, and participants.

Manipulation. Participants were told that the writing task was a team building exercise at ABC Bank, which was designed to help employees get to know each other. This description was intended to conceal the purpose of the writing task. Participants were presented with a 9 × 5 matrix that contained nine character traits listed in each row in the first column. Participants were asked to type the nine traits across the remaining four columns. That is, each participant was asked to type each trait four times. On the next page, participants were asked to take a minute to think about each of the nine traits; they were then asked to write a story about themselves exhibiting these nine characteristics as an employee of ABC Bank. Participants were asked to

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[4] We conducted a post-hoc power analysis using the R package *powerMediation* developed by Qiu (2021). We input sample size = 305, regression coefficient of the mediator = .451, *SD* of the mediator = 1.12, *SD* of the random error term = .92, correlation between the independent variable and the mediator = -.048, and alpha = .05. This analysis yielded a power of 1.00.

use each of these nine traits at least once in their story. In the *high moral identity* condition, participants were presented with nine traits that comprise Aquino and Reed's (2002) moral identity scale (i.e., caring, compassionate, fair, friendly, generous, helpful, hardworking, honest, and kind); participants in the *low moral identity* condition were presented with nine negatively valenced moral traits (i.e., inconsiderate, heartless, unfair, hostile, stingy, unhelpful, lazy, dishonest, and mean; see the Supplemental Material for more details about the experimental manipulation).

Measures. Participants were administered the following measures, and asked to rate all items on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). All items are provided in the Supplementary Material.

Implicit morality beliefs. We used the 3-item scale in Study 1 (Chiu et al. 1997a) to measure participants' implicit morality beliefs ($\alpha = .85$). As all items were framed in terms of the fixed belief, higher scores on the scale indicate a more fixed morality belief.

Sense of moral control. We used the 4-item scale in Study 1 (Lachman and Weaver 1998) to measure participants' sense of moral control ($\alpha = .88$).

OCBC. We used the 7-item scale developed by Williams and Anderson (1991) to measure participants' OCBC ($\alpha = .95$). Participants were asked to rate their OCB directed towards coworkers by responding to items, such as "When working at ABC Bank, I will be willing to help my coworkers who have heavy work-loads" and "When working at ABC Bank, I will be willing to go out of way to help my coworkers."

CDD. We assessed participants' CDD ($\alpha = .95$) with the 10-item scale developed by Mitchell and Ambrose (2007). The original scale was developed to assess people's deviant behaviors directed toward supervisors. We slightly modified the items to evaluate participants'

deviant behaviors directed toward coworkers. Participants were asked to rate their deviant

behaviors directed towards coworkers by responding to items, such as "When working at ABC

Bank, I will be more likely to play a mean prank on my coworkers" and "When working at ABC

Bank, I will be more likely to act rudely toward my coworkers."

Results

  Preliminary analyses. The descriptive statistics, correlations, and reliabilities of our

study variables are shown in Table 3.

<center><Insert Table 3 here></center>

  Manipulation check. To assess whether our experimental manipulation successfully

influenced participants' moral identity, we asked participants to respond to the question (i.e., "To

what extent does your story reflect how you see yourself as a moral person?") on a 7-point scale

ranging from "not at all" to "extremely". An independent-samples t-test revealed that

participants in the high moral identity condition ($M = 5.23$, $SD = 1.35$) were more likely to think

they are a moral person than those in the low moral identity condition ($M = 3.70$, $SD = 2.29$;

$t(303) = 7.25$, $p < .001$; Cohen's $d = .83$). This finding indicates that our experimental

manipulation was successful.

  Hypothesis testing. Hypothesis 1 predicted that moral identity moderates the relationship

between fixed morality belief and sense of moral control. As shown in Table 4, the interaction

between implicit morality beliefs and moral identity manipulation was significant ($b = .21$, p

$= .039$, $t = 2.08$; see Figure 3). Simple slopes analyses (Aiken and West 1991) indicated that the

relationship between implicit morality beliefs and sense of moral control was significant in the

low moral identity condition ($b = -.14$, $p = .040$, $t = -2.06$) but nonsignificant in the high moral

identity condition ($b = .07$, $p = .368$, $t = .90$). Specifically, in the low moral identity condition,

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participants with a more fixed morality belief had a lower sense of moral control; however, in the high moral identity condition. There was no relationship between participants' implicit morality belief and their sense of moral control. Therefore, Hypothesis 1 was supported.

<Insert Table 4 and Figure 3 here>

Consistent with Hypothesis 2a, we found that people with high sense of moral control were more willing to engage in OCBC ($b = .45$, $p < .001$, $t = 9.54$). Consistent with Hypothesis 2b, we also found that people with high sense of moral control were less willing to engage in CDD ($b = -.30$, $p < .001$, $t = -6.70$).

Hypotheses 3a and 3b predicted that the indirect effects of implicit morality beliefs on OCBC and CDD via sense of moral control are contingent on moral identity. Similar to Study 2, we drew on the procedures outlined by Krull and MacKinnon (2001) to test these conditional indirect effects. We found a stronger negative relationship between fixed morality belief and OCBC via sense of moral control in the low moral identity condition (indirect effect = -.064, 95% CI = -.127, -.003) than in the high moral identity condition (indirect effect = .029, 95% CI = -.034, .094). Further, we found a stronger positive relationship between fixed morality belief and CDD via sense of moral control in the low moral identity condition (indirect effect = .043, 95% CI = .001, .088) than in the high moral identity condition (indirect effect = -.020, 95% CI = -.065, .023). Therefore, Hypotheses 3a and 3b were supported.

Discussion

Study 2 replicated Study 1's findings with manipulating moral identity. Specifically, we found that in the low moral identity condition, the more participants believed that morality is malleable, the more control they thought they had over their moral behaviors. However, in the high moral identity condition, participants' beliefs about the malleability of morality were unrelated to their perceived degree of moral control. Further, we found that participants with

high sense of moral control tended to engage in more OCBC and less CDD in the organization. We also found that the negative (positive) indirect effect of fixed morality belief on OCBC (CDD) via sense of moral control was stronger in the low moral identity condition. Taken together, Study 2 extended Study 1 by showing that our findings in Study 1 also hold in a different cultural context.

Study 3

Although Studies 1 and 2 provided causal evidence for the front part of our model, the external validity of the results obtained from two experiments may be limited. Moreover, these studies did not test the moderating effect of group ethical climate. To address these limitations, Study 3 tested our full model in a two-wave, multi-source field study. Specifically, we asked employees to rate their implicit morality beliefs, moral identity, and sense of moral control at Time 1 and their perceived group ethical climate at Time 2. To assess employees' OCBC and CDD, we asked supervisors to provide ratings on these measures at Time 2. Overall, Study 3 aimed to examine the dual-stage moderated mediation model linking employees' implicit morality beliefs to their OCBC and CDD.

Method

Participants and procedure. We collected data from part-time Master of Business Administration (MBA) students enrolled in a management class at a large university in eastern China, and their subordinates. We did not conduct a power analysis to determine the sample size before collecting data, and instead relied on the number of participants available to us at the time. All participants had full-time jobs in diverse industries, including finance, insurance, construction, health care, information technology, and media, and all had subordinates who reported directly to them. In our initial contact with these MBA students, we provided a general

overview of our study (e.g., participants, multi-wave and multi-source data collection, etc.), and asked them to randomly choose at least three subordinates. We compensated each MBA student 75 RMB (approximately US$12 at the time of the study). All participants were guaranteed that their responses to the survey would be kept strictly confidential, and would only be used for the purpose of doing research.

We collected the data in two waves. At Time 1, we distributed separate questionnaires to 39 supervisors (MBA students) and their 218 subordinates. Subordinates completed measures of implicit morality beliefs, moral identity, and sense of moral control, and provided demographic information. Their direct supervisors answered demographic questions. We received 206 subordinate[5] and 39 supervisor responses, yielding response rates of 94.5% and 100%, respectively. At Time 2, approximately one month after Time 1, we distributed questionnaires to all 206 subordinates and 39 supervisors who responded to our Time 1 survey. Subordinates were asked to complete the measure of group ethical climate, whereas supervisors were asked to provide ratings of each subordinate's OCBC and CDD. We finally received responses from 196 subordinates and 39 supervisors, yielding response rates of 95.1% and 100%, respectively. To improve the response rates during this two-wave survey process, a research assistant reminded all participants to complete questionnaires on time.

In the subordinate sample at Time 1, 50.2% were women and 65% held a bachelor's degree. Their age distribution was: 12.3% were below 25 years old, 73.9% were between 25 to 35 years old, and 13.8% were above 35 years old. The average organizational tenure of these subordinates was 5.48 years ($SD = 5.47$). For the supervisor sample at Time 1, 38.5 % were

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[5] We conducted a post-hoc power analysis using the R package 'powerMediation' developed by Qiu (2021). We input sample size = 206, regression coefficient of the mediator = .06, SD of the mediator = 1.09, SD of the random error term = .55, correlation between the independent variable and the mediator = -.22, and alpha = .05. This analysis yielded a power of .38.

women and 61.5 % held a bachelor's degree. Their age distribution was: 2.6% were below 25 years old, 79.5% were between 25 to 35 years old, and 17.9% were above 35 years old. Their average organizational tenure was 5.21 years (SD = 4.09). The results showed that the 196 subordinate participants who comprised the final sample did not differ from the 10 participants who were invited but did not respond at Time 2 in terms of their demographics such as age (t = .34, p = .73) and gender (χ^2 = .54, p = .46).

Measures. We followed translation and back-translation procedures (Brislin 1986) to translate all measures that were originally in English into Chinese. Unless otherwise noted, all measures were rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). All measure items are shown in the Supplementary Material.

Implicit morality beliefs (Time 1). We used the 3-item scale in Studies 1 and 2 (Chiu et al. 1997a) to measure employees' implicit morality beliefs (α = .86). As all items were framed in terms of the fixed belief, higher scores on the scale indicate a more fixed morality belief.

Moral identity (Time 1). We used the 10-item scale in Study 1 (Aquino and Reed 2002) to measure employees' moral identity (α = .94).

Sense of moral control (Time 1). To measure employees' sense of moral control, we adapted Lachman and Weaver's (1998) 8-item *perceived constraints* subscale of the *generalized sense of control* measure (e.g., "I have little control over my moral behaviors"). High scores on this measure represent individual's low sense of moral control (α = .83). For ease of interpretation, we reverse-scored the measure such that higher numbers represent high sense of moral control[6].

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[6] To ensure that our measure of perceived constraints converges with the measure of personal mastery used in Studies 1 and 2, we collected an independent sample to conduct the convergent validity analyses. Results revealed a significant correlation between the *perceived constraints* subscale and the *personal mastery* subscale (r = -.37, p <

Group ethical climate (Time 2). We used the 6-item global ethical climate scale developed by Mayer and colleagues (2010) to measure employees' self-perception of the ethical climate in their workgroup (α = .82) (e.g., "In my group, there is a positive ethical climate," and "In my group, employees continually strive to maintain high ethical standards"). We aggregated the responses of multiple subordinates under a supervisor to create a measure of group ethical climate. Our aggregation was justified by a high average $r_{wg(j)}$ value of .90 (LeBreton and Senter 2008), along with an ICC(1) value (ICC stands for intraclass correlation) of .11, $F(38, 157)$ = 1.68, p = .015, which is a medium effect (Bliese 2002; LeBreton and Senter 2008). The relatively low ICC(2) value of .40 may stem in part from the small number of employees per group (Bliese 2000). However, this low value should not prevent aggregation if it is justified by theory and supported by the high average $r_{wg(j)}$ and significant between-group variance (Chen and Bliese 2002; Kozlowski and Hattrup 1992). Therefore, we aggregated subordinates' responses to ethical climate within each supervisor to obtain a group-level ethical climate score.

OCBC (Time 2). We used the 7-item scale in Study 2 (Williams and Anderson 1991) to measure OCBC (α = .87). Supervisors were asked to rate their subordinates' OCB directed towards coworkers (e.g., "This subordinate helps coworkers who have heavy work-loads" and "This subordinate goes out of way to help coworkers").

CDD (Time 2). We used the 10-item scale in Study 2 (Mitchell and Ambrose 2007) to assess CDD (α = .91). Supervisors were asked to rate how often their subordinates in the past month had engaged in behaviors such as "made fun of his/her teammates at work" and "acted rudely toward his/her teammates" on a 7-point scale ranging from 1 (never) to 7 (always).

.001). Therefore, we reverse-scored the measure of *perceived constraints* to represent personal mastery (i.e., sense of moral control).

Analytical Strategy. Prior to hypotheses testing, we first conducted a series of confirmatory factor analyses (CFAs) using LISREL 8.7 to confirm the discriminant validity of our measures (implicit morality beliefs, moral identity, sense of moral control, ethical climate, OCBC, and CDD).

Given the nested structure of our data (i.e., multiple subordinates reporting to the same supervisor), we used two-level Hierarchical Linear Modeling (HLM2) with HLM 6.08 to test our hypotheses (Raudenbush et al. 2004). We tested Hypotheses 4a and 4b and the second-stage moderation effect in Hypotheses 5a and 5b using the group-mean-centering technique to separate the cross-level from between-group interaction and to avoid detecting a spurious cross-level interaction effect (Hofmann and Gavin 1998). As to the rest of analyses, we used the grand-mean-centering technique to reduce the potential collinearity between Level-2 intercept and slope terms, and to model the potential influences of both within-group and between-group variances (Hofmann and Gavin 1998; Mathieu and Taylor 2007).

Following previous research (e.g., Lam et al. 2015; Walter et al. 2015), we drew on the procedures outlined by Krull and MacKinnon (2001) to test our moderated mediation model described in Hypotheses 5a and 5b. First, we estimated simple slopes of the path *a* that links implicit morality beliefs to sense of moral control at higher (one standard deviation above the mean) and lower (one standard deviation below the mean) values of moral identity. We then estimated simple slopes of the path *b* that links sense of moral control to OCBC/CDD at higher and lower values of group ethical climate. Finally, we used these estimates to derive 95% confidence intervals (CIs) around the population values of the indirect effect (i.e., *ab*) at higher and lower values of the moderators (moral identity and group ethical climate) using Selig and Preacher's (2008) Monte Carlo method.

Results

 Preliminary analyses. The descriptive statistics, correlations, and reliabilities of the variables included in our study are shown in Table 5.

<div align="center"><Insert Table 5 here></div>

 We conducted CFAs to examine the discriminant validity of our measures (implicit morality beliefs, moral identity, sense of moral control, ethical climate, OCBC, and CDD). As shown in Table 6, the results of CFAs suggest that the hypothesized six-factor model fit the data well ($\chi^2_{(876)}$ = 1553.09, CFI = .94, RMSEA = .06) and was significantly better than the five alternative models, providing support for the discriminant validity of our measures.

<div align="center"><Insert Table 6 here></div>

 To assess whether HLM is an appropriate analytic technique for our multilevel data, we ran null models with OCBC and CDD as the dependent variable respectively and no predictors. We found that there was significant between-group variance in OCBC ($\chi^2_{(38)}$ = 462.65, $p < .001$; ICC(1) = .64) and CDD ($\chi^2_{(38)}$ = 1471.45, $p < .001$; ICC(1) = .86), demonstrating that it is appropriate to use HLM to test our hypotheses.

 Hypothesis testing. Hypothesis 1 proposed that moral identity moderates the relationship between employees' fixed morality belief and sense of moral control. As shown in Table 7, the interaction of employees' fixed morality belief and moral identity on sense of moral control was significant ($\gamma = .10$, $p = .027$, $t = 2.23$). Following Aiken and West (1991), we plotted this significant interaction effect and conducted simple slope tests to further interpret it. Figure 4 reveals that when moral identity was low (one standard deviation below the mean), a more fixed morality belief was related with lower sense of moral control ($\gamma = -.32$, $p < .001$, $t = -4.63$); however, when moral identity was high (one standard deviation above the mean), this

<div align="center">31</div>

relationship was nonsignificant (γ = -.07, p = .303, t = -1.04). Therefore, Hypothesis 1 was supported.

<center><Insert Table 7 and Figure 4 here></center>

Hypothesis 2a proposed that sense of moral control is positively related to OCBC. The results showed that employees with high sense of moral control were more likely to engage in OCBC (γ = .07, p = .033, t = 2.21). Therefore, Hypothesis 2a was supported. Hypothesis 2b predicted that sense of moral control is negatively associated with CDD. The results demonstrated that employees' sense of moral control was not related to CDD (γ = -.01, p = .535, t = -.63). Thus, Hypothesis 2b was not supported.

Hypotheses 3a and 3b predicted that the indirect effects of implicit morality beliefs on OCBC and CDD via sense of moral control are moderated by moral identity. The results showed that fixed morality belief was more negatively related to OCBC via sense of moral control when more identity was low (indirect effect = -.023, 95% CI = -.048, -.002) than when it was high (indirect effect = -.005, 95% CI = -.019, .005). Therefore, Hypothesis 3a was supported. Given sense of moral control was not related to CDD, we did not find a significant moderated mediation for CDD (moral identity was low: indirect effect = .002, 95% CI = -.005, .009; moral identity was high: indirect effect = .0005, 95% CI = -.0015, .0033). Therefore, Hypothesis 3b was not supported.

Hypotheses 4a and 4b predicted that group ethical climate moderates the relationship between employees' sense of moral control and OCBC and CDD, respectively. The results in Table 7 showed that the interaction between employee's sense of moral control and group ethical climate was negatively related to OCBC (γ = -.13, p = .016, t = -2.52). As displayed in Figure 5, the simple-slope-test results (Aiken and West 1991) indicated that when group ethical climate

<center>32</center>

was weak (one standard deviation below the mean), sense of moral control was more positively associated with OCBC (γ = .14, p = .009, t = 2.79); however, when group ethical climate was strong (one standard deviation above the mean), this relationship was nonsignificant (γ = -.02, p = .569, t = -.57). Hence, Hypothesis 4a was supported. Nevertheless, the results demonstrated that the interaction between employee's sense of moral control and group ethical climate was not significantly related to CDD (γ = -.01, p = .794, t = -.26). Therefore, Hypothesis 4b did not receive support.

<p style="text-align:center;"><Insert Figure 5 here></p>

Hypotheses 5a and 5b proposed a two-stage moderated mediation model, which predicts that the indirect effect of employees' fixed morality belief on OCBC and CDD via sense of moral control, respectively, is contingent on moral identity and group ethical climate. To test this whole model, we used Krull and MacKinnon's (2001) procedure to compute estimates of the conditional indirect effect of employees' fixed morality belief on OCBC/CDD at low (one standard deviation below the mean) and high (one standard deviation above the mean) values of moral identity and group ethical climate. The results demonstrated that employees' fixed morality belief was more negatively related to OCBC via sense of moral control when moral identity was low and when group ethical climate was weak (indirect effect = -.044, 95% CI = -.084, -.012) rather than when moral identity was high and when group ethical climate was strong (indirect effect = .001, 95% CI = -.005, .011), when moral identity was high and when group ethical climate was weak (indirect effect = -.010, 95% CI = -.034, .009), or when moral identity was low and when group ethical climate was strong (indirect effect = .006, 95% CI = -.015, .030). Accordingly, Hypothesis 5a was supported.

However, given that group ethical climate was not a significant moderator of the relationship between employees' sense of moral control and CDD, we did not find significant two-stage moderated mediation for CDD (moral identity was low and group ethical climate was weak: indirect effect = .001, 95% CI = -.007, .009; moral identity was low and group ethical climate was strong: indirect effect = .003, 95% CI = -.009, .016; moral identity was high and group ethical climate was weak: indirect effect = .0002, 95% CI = -.002, .003; and moral identity was high and group ethical climate was strong: indirect effect = .001, 95% CI = -.003, .005). Thus, Hypothesis 5b was not supported.

Discussion

In support of Hypothesis 1, we found that when moral identity was low, employees with a more fixed morality belief were more likely to have a low sense of moral control. When moral identity was high, this relationship was weaker. These results therefore replicated the findings of Studies 1 and 2, indicating that our results generalize from lab and online experiments to an organizational research setting. Study 3 also replicated Studies 2's findings by showing that employees with high sense of moral control were more likely to engage in OCBC, and that the negative indirect effect of employees' fixed morality belief on OCBC via sense of moral control was stronger when moral identity was lower. Moreover, Study 3 provided evidence for Hypothesis 4a. Specifically, when group ethical climate was weak, employees' sense of moral control resulted in a higher willingness to engage in OCBC than when group ethical climate was strong. Finally, Study 3 provided support for Hypothesis 5a, substantiating the dual-stage moderated mediation effect for OCBC. However, we did not find the same moderating-effect and dual-stage moderated mediation effect pattern for CDD. We explain the absence of this pattern for CDD later in the limitation and future research section.

Although our results provided support for Hypotheses 2a and 4a, these significant effects were detected with low power. A possible explanation for this low power is the relatively small number of groups in our sample (Liao and Rupp 2005). Our low power is also in line with the average power of 40% found in organizational behavior research (Mathieu et al. 2012). As Mathieu and colleagues argued (2012, p. 960), "finding statistically significant effects in spite of low power can also be indicative of the strength of the true population effects."

General Discussion

The current research examined the impact of implicit morality theories on people's moral self-regulation and their subsequent behavior. Specifically, across a laboratory experiment study (Study 1), an online experiment study (Study 2), and a field survey study (Study 3), we found that when moral identity was low, employees with a more fixed morality belief were more likely to have a low sense of moral control. This low sense of moral control in turn resulted in employees' lower willingness to engage in OCBC, particularly when group ethical climate was weak. Although we found in the online experiment that a low sense of moral control can reduce people's willingness to engage in CDD, we did not find this effect in the field survey study. Moreover, the results in the field survey study showed that the effect of employees' sense of moral control on CDD was not influenced by group ethical climate. These findings offer several important implications for management research and practice.

Theoretical Implications

Our research makes a number of theoretical contributions to the extant literature. First and foremost, we contribute to the literature on implicit morality theory by identifying sense of moral control as a novel mechanism that transmits the influence of people's moral beliefs (i.e., implicit morality theories) on their behaviors (i.e., OCBC and CDD). A review of the implicit

morality theory literature shows that the effect of implicit morality theory on people's behavior has mainly been documented in social psychology. For instance, research has shown that implicit morality theories can influence people's discrimination and cheating behavior (Huang et al. 2017), their intention to punish others (Chiu et al. 1997a; Tam et al. 2013), and their tendency to employ traits as the basic unit of analysis in social perception (Chiu et al. 1997b). In recent years, an emerging body of research has examined the role of implicit morality theories as moderators in the organization context. For instance, implicit morality theories moderate the effect of ethical leadership on employees' identification with the leader and with the organization (Zhu et al. 2015), and moderate the effect of leader moral humility on follower moral self-efficacy (Owens et al. 2019). Although this work has enriched our understanding of the effect of implicit morality theories on people's behavior in the workplace context, we have limited knowledge about why this effect happens. The present research proposes sense of moral control as an underlying mechanism that explains the relationship between employees' implicit morality theories and their workplace behaviors, and thus deepens the field's understanding of how employees' implicit morality theories shape their behaviors through moral self-regulatory processes.

Second, we also contribute to the implicit morality theory literature by providing a more nuanced understanding of when implicit morality theories shape employees' moral self-regulation and behaviors. Our research demonstrates that when moral identity is lower, employees with a more fixed morality belief are more likely to have a low sense of moral control, and that this low sense of moral control results in less OCBC, when group ethical climate is lower. By identifying moral identity and group ethical climate as boundary factors of the mediation process linking employees' implicit morality theories to their behaviors through sense of moral control, our research delineates a more comprehensive picture of when and how

employees' implicit morality theories shape their moral self-regulation and behaviors. Further,

by demonstrating both personal (i.e., moral identity) and situational (i.e., group ethical climate)

factors that affect the extent to which individuals' moral beliefs influence moral conduct via their

moral control, we corroborate Bandura's (1991a) interactionist perspective of the social

cognitive theory of morality, which posits that both personal factors and situational influences

operate as interacting determinants of moral conduct.

Third, we contribute to the behavioral ethics literature by investigating employees' moral

self-regulation of behaviors from a multi-level perspective. Extant research has primarily

examined people's moral self-regulatory process at individual level. For instance, research has

shown that soldiers with high moral potency can better self-regulate their behaviors by

increasing their adherence to army values (Hannah and Avolio 2010). Research has also shown

that employees who work under a morally humble leader can better self-regulate their behaviors

by reducing their unethical behavior and increasing their prosocial behavior (Owens et al. 2019).

Given that the social cognitive theory of morality posits that both personal and situational factors

govern people's moral self-regulation and behavior (Bandura 1991a), we link employees'

implicit morality theory to sense of moral control with an individual-level factor—moral

identity. Moreover, we link employees' intrapersonal self-regulatory process (sense of moral

control) to their interpersonal behaviors toward coworkers (OCBC and CDD) with a group-level

factor—group ethical climate. Taken together, our research develops a multi-level framework of

employees' moral self-regulation.

Fourth, we also contribute to the behavioral ethics literature by identifying implicit

morality theories as a novel predictor of employees' ethical behavior. Extant research has

primarily examined cognitive moral development (Ashkanasy et al. 2006), moral attentiveness

(Reynolds 2008), ethical leadership (Brown et al. 2005; Mayer et al. 2012; Mayer et al. 2009), and ethical culture (Schaubroeck et al. 2012) as antecedents of employees' ethical behavior. By examining how employees' implicit beliefs about morality predict their enactment of OCBC and CDD, our research expands the nomological network of employees' ethical behavior. Moreover, by introducing the construct of implicit morality theories from social psychology into the behavioral ethics literature, we answer the recent call from management scholars for "new and exciting "New Ways of Seeing" through cross-disciplinary theory integration" (Shaw et al. 2018, p. 4).

Fifth, we contribute to the self-regulation literature by examining people's self-regulatory process driving their prosocial and antisocial behaviors from a motivational perspective. Extant research has primarily examined people's self-regulatory process in shaping their prosocial and antisocial behaviors from a cognitive perspective. For example, research has demonstrated that when people's self-regulatory resources are depleted, they are less likely to engage in prosocial behaviors and are more likely to engage in antisocial behaviors (Johnson et al. 2014; Klotz et al. 2018; Koopman et al. 2020; Thau and Mitchell 2010), as both prosocial and antisocial behaviors need self-regulatory resources to enact and inhibit, respectively. Departing from this cognitive perspective on explaining people's self-regulation of prosocial and antisocial behaviors, our research accounts for how people's sense of moral control drives their OCBC and CDD from a motivational perspective, which is consistent with the tenet of the social cognitive theory of morality positing that people need to exercise moral self-regulation to regulate their moral behaviors (Bandura 1991a). In doing so, our research supplements the extant self-regulation literature by providing an alternative perspective on explaining people's self-regulation of prosocial and antisocial behaviors.

Finally, we contribute to the OCB and deviance literature by identifying implicit morality theory and sense of moral control as predictors of OCBC and CDD. Although extant research regarding moral antecedents of OCB and deviance has examined people's moral cognition, leaders' moral behaviors, and teams' ethical culture (Ashkanasy et al. 2006; Mayer et al. 2012; Reynolds 2008; Schaubroeck et al. 2012), it speaks little to how people's moral belief (i.e., implicit morality theory) can influence these moral and immoral behaviors. Moreover, as enacting OCB and avoiding deviant behaviors requires self-regulation (Johnson et al. 2014; Klotz et al. 2018), extant research has primarily investigated how employees' depletion of self-regulation resources impacts their engagement in OCB and deviant behaviors (e.g., Koopmann et al. 2019; Thau and Mitchell 2010). Although this line of research sheds light on several factors that either do (e.g., ingratiation behaviors) or do not (e.g., self-promotion behaviors) deplete self-regulation resources, which in turn impact OCB and deviant behaviors, it has yet to examine which factors lead to high moral control, a self-regulation ability to control moral behaviors, and when this would impact OCB and deviant behaviors. In other words, this study examines factors that expand the self-regulation ability or "tank" rather than factors that deplete its self-regulation resources or "gasoline," if you will. Therefore, by examining when employees' growth vs. fixed morality beliefs lead to greater moral control, and under what context this can shape their OCB and deviant behaviors, we expand the nomological network of moral and self-regulation predictors of employees' OCB and deviance.

Limitations and Future Directions

Despite these theoretical implications, our research has some limitations that provide opportunities for future research. First, we measured the independent variable (implicit morality theories), the first-stage moderator (moral identity), and the mediator (sense of moral control)

from the same source (i.e., the employee) at the same wave in Study 3. A potential limitation of this research design lies in the possibility that common source effects may have confounded our findings of Hypothesis 1 in Study 3. Given that the primary focus of our Hypothesis 1 was on testing the interactive effect of individuals' implicit morality belief and moral identity on their sense of moral control, and that interactive effects provide persuasive evidence against common method bias (Evans 1985; Podsakoff et al. 2012; Siemsen et al. 2010), such concern may be minimized. Moreover, Studies 1 and 2 tested Hypothesis 1 using an experimental design. As experimental studies are immune to common method bias (Podsakoff et al. 2003), concerns about common source effects that may have impacted our findings of Hypothesis 1 are to some extent reduced. In spite of these points, future research may benefit from collecting multi-wave, multi-source data for these three variables.

Second, we manipulated implicit morality belief and moral identity in separate studies. We decided to do so because in previous experiments for other projects in our implicit theories program of research, we found that when we tried to simultaneously manipulate two conceptually related constructs, the most recent manipulation ended up overpowering earlier manipulations. We thus decided to manipulate the two constructs in separate studies. Nevertheless, future research can manipulate both variables simultaneously to provide stronger causal evidence for the hypothesized model.

Third, our research is limited in that the moderators we examined are either employee-related moral factors (i.e., moral identity) or group-related moral factors (i.e., group ethical climate). Future research could examine leader-related moral factors. Given that leaders in the organization are often viewed as respected role models for normative behaviors (Mayer et al. 2010), an ethical leader who embodies many positive moral characteristics may serve as a

positive role model for followers' ethical behaviors (Brown et al. 2005; Mayer et al. 2009; 2010).

As such, ethical leadership, defined as "the demonstration of normatively appropriate conduct

through personal actions and interpersonal relationships, and the promotion of such conduct to

followers through two-way communication, reinforcement, and decision-making" (Brown et al.

2005, p. 120), could weaken the indirect effect of followers' fixed morality belief on moral

behaviors via sense of moral control.

Fourth, we exclusively focused on sense of moral control as the moral self-regulatory

mechanism. However, other constructs, such as moral efficacy, also tap on the moral self-

regulatory mechanism (e.g., Hannah and Avolio 2010; Hannah et al. 2011; Owens et al. 2019).

In the present research, we focus on sense of moral control rather than moral efficacy for two

reasons. First, moral control refers to whether individuals believe that they have the ability to

enact moral behaviors (cf. Kraus et al. 2009; Lachman and Weaver 1998; Mittal and

Griskevicius 2014), whereas moral efficacy refers to "one's belief (confidence) in his or her

capabilities to organize and mobilize the motivation, cognitive resources, means, and courses of

action needed to attain moral performance" (Hannah and Avolio 2010, p. 297). Therefore, we

believe that sense of moral control can better capture the moral self-regulatory mechanism than

moral efficacy. Second, past research found that the correlation between people's implicit

morality theories and their moral efficacy is 0.00 (see Owens et al. 2019, Table 1). Therefore,

compared to moral efficacy, sense of moral control is a better candidate to transmit the effect of

people's implicit morality theories on their behaviors. Providing support for our arguments, our

supplementary analyses showed that the hypothesized model held with sense of moral control as

the mediator but not with moral efficacy as the mediator (see the Supplementary Material for

detailed results). These findings demonstrate that sense of moral control, not moral efficacy, is

the self-regulatory mechanism that is implicated in the process by which employees' implicit morality theories influence their behaviors. Future research can further examine the parallel and the diverging roles of moral control and moral efficacy in the moral self-regulatory process.

Fifth, we examined moral identity as a general construct without distinguishing its two dimensions—internalization and symbolization. Internalization refers to the extent to which moral characteristics are central to one's self-concept, whereas symbolization refers to the extent to which moral characteristics are reflected in one's actions in the world (Aquino and Reed 2002). People with high moral identity internalization tend to avoid unethical behaviors and "pay attention to how ethical decisions are made", whereas those with high moral identity symbolization tend to "publicly express to others that aspect of themselves that represents their moral identity" (Zhu et al. 2016, p. 98). As researchers have suggested that the internalization dimension may more directly capture the core definition of moral identity than the symbolization dimension (Reynolds and Ceranic 2007), many studies have primarily focused on the internalization dimension when examining moral identity (e.g., Giessner et al. 2015; Yuan et al. 2018). Moreover, a number of studies have demonstrated that the internalization dimension is a stronger predictor of people's ethical behavior (e.g., Aquino & Reed, 2002; Reed and Aquino 2003; Reynolds and Ceranic 2007). However, our theorizing about the moderating effect of moral identity did not predict different theoretical relationships for the internalization and symbolization dimensions; therefore, we examined moral identity as a whole.

Sixth, our research only focused on coworker-directed discretionary prosocial and antisocial behaviors—OCBC and CDD—as outcomes. In the workplace, apart from coworkers, leaders and clients are other important actors with whom employees regularly engage. Research has suggested that as leaders are the individuals who directly control resources and assess

performance and client relationships are an important factor in performance outcomes, employees may require more self-regulation when interacting with leaders and customers than when interacting with coworkers (Bono et al. 2007; Yam et al. 2016). However, as a consequence, the motives behind these behaviors may also be less prosocial and more self-beneficial (Klotz et al. 2018). As such, future research can examine whether implicit morality theories shape employees' OCB and deviant behaviors toward the leader and clients via sense of moral control, or whether other implicit theories (e.g., implicit followership theories) may be more effectual (Junker and Van dick 2014).

Seventh, although we focused on both OCBC and CDD as outcomes in our model, the second-stage moderating effect only worked out for OCBC, not for CDD, in Study 3. A possible explanation for the absence of this moderating effect for CDD is that our measure of CDD did not tap on unethical behavior. Many items, such as "made fun of his/her teammates at work", "acted rudely toward his/her teammates", and "gossiped about his/her teammates," seem to capture employees' incivility toward coworkers rather than their unethical behavior toward coworkers. Therefore, future research can replicate our model with measures of CDD that refer to behaviors that are clearly immoral in nature (e.g., spreading falsehoods about a coworker).

Finally, the post hoc power analyses showed that the statistical power of detecting the mediation effect in Study 3 was low. This is probably due to the relatively small sample size. However, a low statistical power "does not necessarily imply that the study was underpowered because it may simply reflect a small observed sample effect size" (Maxwell et al. 2008, p. 553). Future research can seek to replicate our Study 3's findings with larger sample size.

Practical Implications

Our research has important implications for managerial practice. First, we have demonstrated that in some situations (i.e., when moral identity is low and group ethical climate is weak), employees with a more fixed morality belief tend to have a low sense of moral control, which in turn reduces their OCBC. This finding ought to serve as a warning to managers to be wary of the negative effect of employees' fixed morality belief on OCBC. Given that OCBCs "immediately benefit specific individuals and indirectly through this means contribute to the organization" (Williams and Anderson 1991, p. 602), managers may adopt measures to eliminate the negative effects brought by fixed morality belief on individuals' OCBC. For example, managers can design training (e.g., self-persuasion principles; Heslin et al. 2005; 2006) or other programs and practices aimed at helping employees develop a growth morality belief, thereby increasing employees' sense of moral control, and, in turn, their OCBC. Indeed, as Study 1 demonstrated, it is possible to change people's fixed-growth beliefs by providing them with information about the reasons why a particular belief is likely to be true. Researchers have successfully altered students' implicit beliefs about intelligence and observed long-term positive outcomes (e.g., Blackwell et al. 2007; Paunesku et al. 2015; Yeager et al. 2016), so similar interventions can be implemented in the morality domain.

Second, we have found that employees' moral identity weakens the negative relationship between their fixed morality belief and sense of moral control, thereby reducing OCBC. That is, when employees' moral identity is low, their strong fixed morality belief more likely leads to low sense of moral control, and in turn reduced OCBC. These findings serve as a warning to managers to be cautious when hiring or promoting employees low on moral identity. To gain the benefits associated with high moral identity (i.e., strong sense of moral control, and consequently, increased prosocial behaviors), managers can measure employees' moral identity

in the recruitment and selection process. By taking this factor into recruitment consideration, mangers can filter out those applicants low on moral identity, for whom they are not good at self-regulating their own moral behaviors (cf. Lee et al. 2016).

Another implication of our research relates to group ethical climate. We found that in groups with a weak ethical climate, employees who lack a sense of moral control are less likely to engage in OCBC. In other words, strong group ethical climate can weaken the negative effect of employees' low sense of moral control on lower OCBC. This finding serves as a signal to group leaders to be aware of the value of creating an ethical climate within the group. For example, group leaders can implement human resource management (HRM) practices and policies to underline the value of being an ethical employee (Mayer et al. 2010). Furthermore, these HRM practices and policies should be highly visible within the group, so that employees can not only learn from their own experiences but also vicariously via other group members' rewards and punishments, and through role models (Mayer et al. 2010). By doing so, group leaders can help their subordinates improve awareness of ethical issues and maintain high ethical standards, thereby creating a positive ethical climate with the group.

Conclusion

Utilizing the social cognitive theory of morality as an overarching theory, we examined *when* and *how* implicit morality theories influenced employees' ethical behaviors. We found that when moral identity was low, individuals with a more fixed morality belief were more likely to have a low sense of moral control than when moral identity was high. People perceiving a lack of moral control in turn were less likely to engage in OCBC, and this effect was exacerbated by a low group ethical climate. However, this interaction effect of group ethical climate and sense of moral control did not hold for CDD. Overall, the present research provides a nuanced

understanding of the complex relationship between individual and contextual morality-relevant factors in shaping people's moral behaviors. We hope that our findings will stimulate future research endeavors to further explore the important role implicit morality theories play in fostering and facilitating employees' ethical behaviors in the workplace.

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Table 1

Means, Standard Deviations, Reliabilities, and Correlations among Variables (Study 1)

Variables	*M*	*SD*	1	2	3
1. Implicit morality beliefs[a]	.50	.50			
2. Moral identity	5.10	.89	.05	(.87)	
3. Sense of moral control	5.71	.95	-.03	.38***	(.85)

Note: n = 201.

[a] Implicit morality beliefs: 0 = growth morality belief, 1 = fixed morality belief.

*** *p* < .001.

Table 2

The Moderating Effect of Moral Identity (Study 1)

| Variables | Sense of moral control | | | |
| | Step 1 | | Step 2 | |
	b	SE	b	SE
Intercept	5.71***	.06	5.70***	.06
Implicit morality beliefs[a]	-.09	.13	-.09	.12
Moral identity	.41***	.07	.42***	.07
Implicit morality beliefs × Moral identity			.30*	.14
$\triangle R^2$	.15***		.02*	

Note: n = 201.

[a] Implicit morality beliefs: 0 = growth morality belief, 1 = fixed morality belief.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3

Means, Standard Deviations, Reliabilities, and Correlations among Variables (Study 2)

Variables	M	SD	1	2	3	4	5
1. Implicit morality beliefs[a]	4.34	1.29	(.85)				
2. Moral identity[b]	.53	.50	.04				
3. Sense of moral control	5.52	1.12	-.05	.03	(.88)		
4. OCBC	5.73	1.05	.03	.18**	.48***	(.95)	
5. CDD	1.61	.94	.03	-.14*	-.36***	-.54***	(.95)

Note: n = 305.

[a] Higher scores on this variable indicate a more fixed morality belief.

[b] Moral identity: 0 = low moral identity, 1 = high moral identity.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4

The Moderating Effect of Moral Identity (Study 2)

Variables	Sense of moral control			
	Step 1		Step 2	
	b	*SE*	*b*	*SE*
Intercept	5.52***	.06	5.51***	.06
Implicit morality beliefs	-.04	.05	-.04	.05
Moral identity[a]	.07	.13	.07	.13
Implicit morality beliefs × Moral identity			.21*	.10
ΔR^2	.003		.01*	

Note: n = 305.

[a] Moral identity: 0 = low moral identity, 1 = high moral identity.

* *p* < .05. ** *p* < .01. *** *p* < .001.

Table 5

Means, Standard Deviations, Reliabilities, and Correlations among Variables (Study 3)

Variables	*M*	*SD*	1	2	3	4	5	6
1. Implicit morality beliefs[a]	4.46	1.64	(.86)					
2. Moral identity	5.45	1.20	.17*	(.94)				
3. Sense of moral control	4.71	1.09	-.22**	.19**	(.83)			
4. OCBC[b]	5.07	.97	-.09	-.04	.08	(.87)		
5. CDD[c]	1.67	.59	-.04	-.08	-.06	-.20**	(.91)	
6. Group ethical climate	5.02	.55	.00	.20**	.13†	-.00	.14*	(.82)

Note: n = (202, 206) (Level 1). Pairwise deletion is used. Correlations summarize bivariate relations at Level 1 and should be interpreted with caution as they fail to account for the nested nature of the data. Level 2 variable (i.e., group ethical climate) was assigned down to Level 1. Reliability estimates (Cronbach alpha coefficients) are presented along the diagonal in parentheses.

[a] Higher scores on this variable indicate a more fixed morality belief.

[b] OCBC = organizational citizenship behavior directed toward coworkers.

[c] CDD = coworker-directed deviance.

† $p < .1$. * $p < .05$. ** $p < .01$.

Table 6

Comparisons of Factor Structures (Study 3)

Models	χ^2	*df*	$\Delta\chi^2(\Delta df)$[a]	CFI	RMSEA
1. Six-factor model	1553.09	876		.94	.06
2. Five-factor model (combing OCBC and CDD)	2570.53	881	1017.44(5)***	.90	.10
3. Four-factor model (combing OCBC and CDD, and combing moral identity and sense of moral control)	3152.38	885	1599.29(9)***	.87	.11
4. Three-factor model (combing OCBC and CDD, and combing implicit morality beliefs, moral identity, and sense of moral control)	3460.79	888	1907.7(12)***	.85	.12
5. Two-factor model (combing OCBC and CDD, and combing implicit morality beliefs, moral identity, sense of moral control, and ethical climate)	4566.32	890	3013.23(14)***	.80	.14
6. Single-factor model	7437.66	891	5884.57(15)***	.69	.19

Note: df = degrees of freedom; CFI = comparative fit index; RMSEA = root mean square error of approximation.

[a] All models were compared with Model 1 (i.e., six-factor model).

*** $p < .001$.

Table 7

Hierarchical Linear Modeling (HLM) Regression Results (Study 3)

Variables	Sense of moral control				OCBC[a]				CDD[b]			
	Step 1		Step 2		Step 1		Step 2		Step 1		Step 2	
	γ	SE	γ	SE	γ	SE	γ	SE	γ	SE	γ	SE
Intercepts	4.72***	.08	4.67***	.07	5.06***	.13	5.06***	.13	1.66***	.08	1.66***	.08
Level 1 variables												
Implicit morality beliefs[c]	-.19***	.04	-.20***	.04								
Moral identity	.23**	.07	.30**	.08								
Sense of moral control					.07*	.03	.06†	.03	-.01	.01	-.01	.01
Implicit morality beliefs × Moral identity			.10*	.05								
Level 2 variables												
Group ethical climate					.09	.16	.10	.16	.12	.12	.12	.12
Cross-level interaction												
Sense of moral control × Group ethical climate							-.13*	.05			-.01	.02
Model deviance[d]	584.96		576.07		422.69		419.52		66.53		66.50	
Pseudo-R^{2e}	.15		.20		.01		.01		.02		.02	

Note: $n = 39$ (Level 2); $n = 203$ (sense of moral control) and 205 (OCBC and CDD) (Level 1).

[a] OCBC = organizational citizenship behavior directed toward coworkers.

[b] CDD = coworker-directed deviance.

[c] Higher scores on this variable indicate a more fixed morality belief.

[d] Deviance is a measure of model fit; it equals -2*the log-likelihood of the maximum-likelihood estimate. The smaller the model deviance is, the better the fit will be.

[e] Pseudo-R^2 is calculated based on proportional reduction of error variance due to predictors in the models of Table 7 (Snijders & Bosker, 1999).

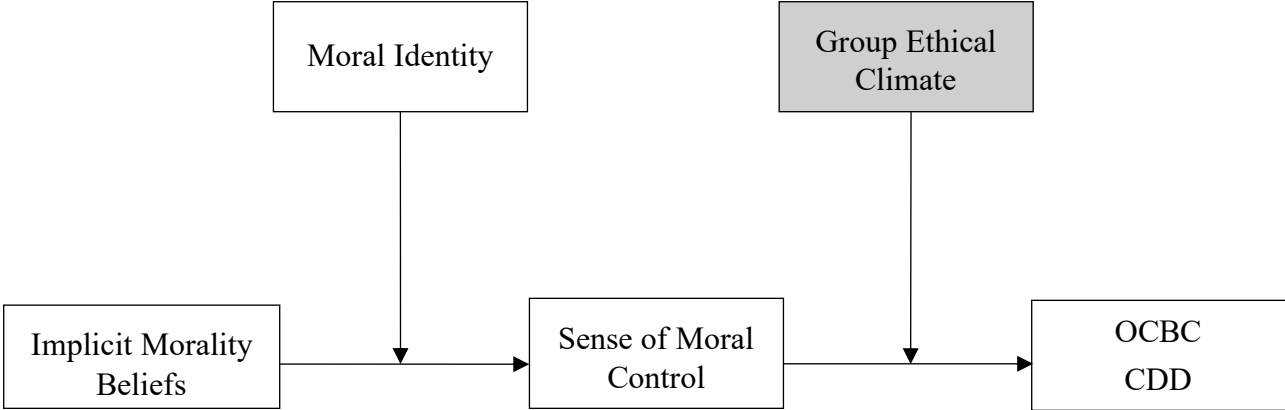† $p < .1$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 1. Theoretical Model. OCBC = organizational citizenship behavior directed toward coworkers. CDD = coworker-directed deviance. Shaded box presents group-level construct; white boxes present individual-level constructs.

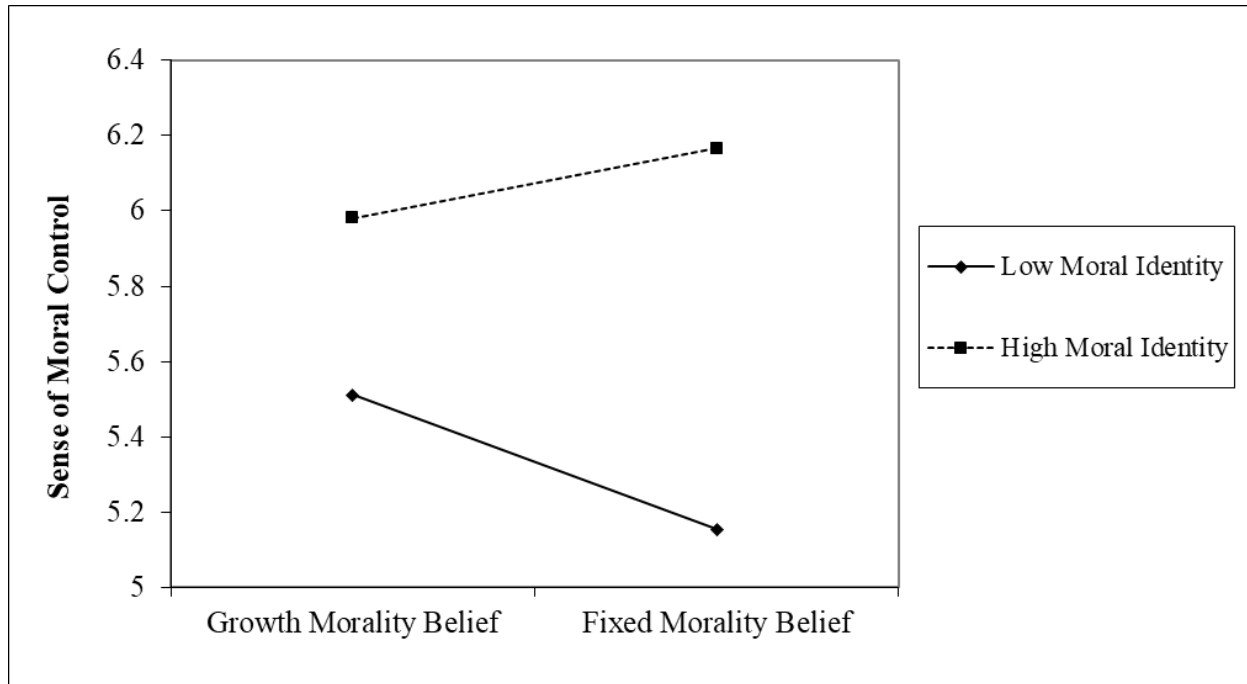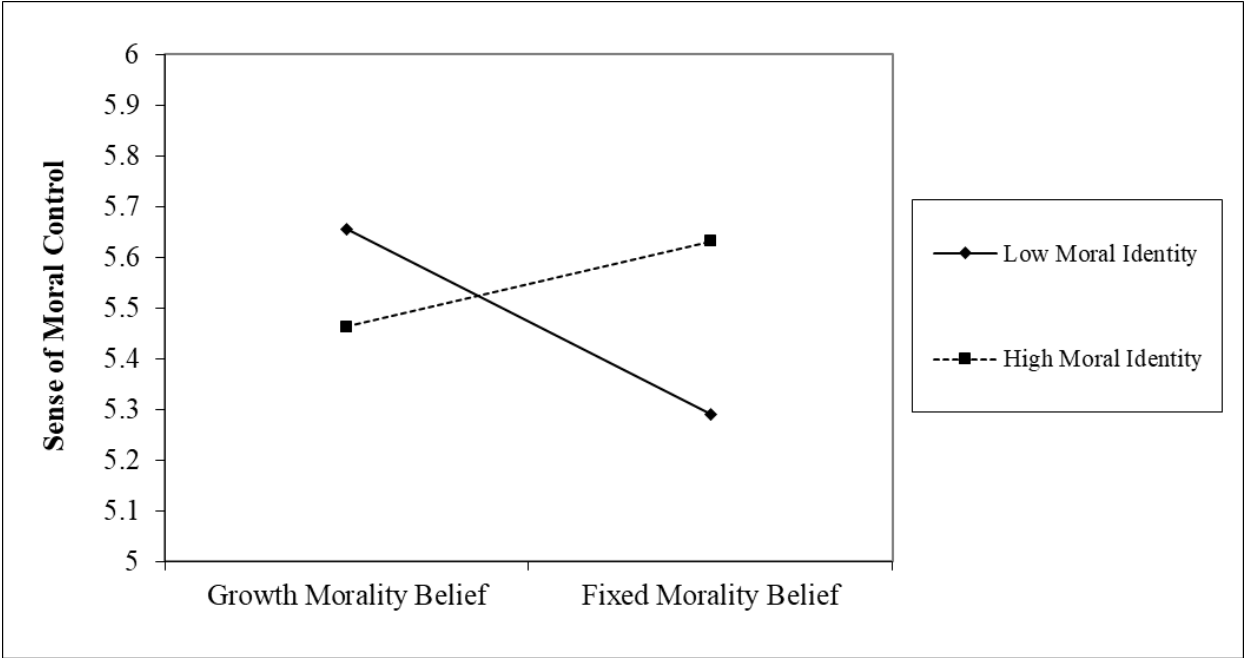*Figure 2.* The Interactive Effect of Implicit Morality Beliefs and Moral Identity on Sense of Moral Control (Study 1).

Figure 3. The Interactive Effect of Implicit Morality Beliefs and Moral Identity on Sense of Moral Control (Study 2).

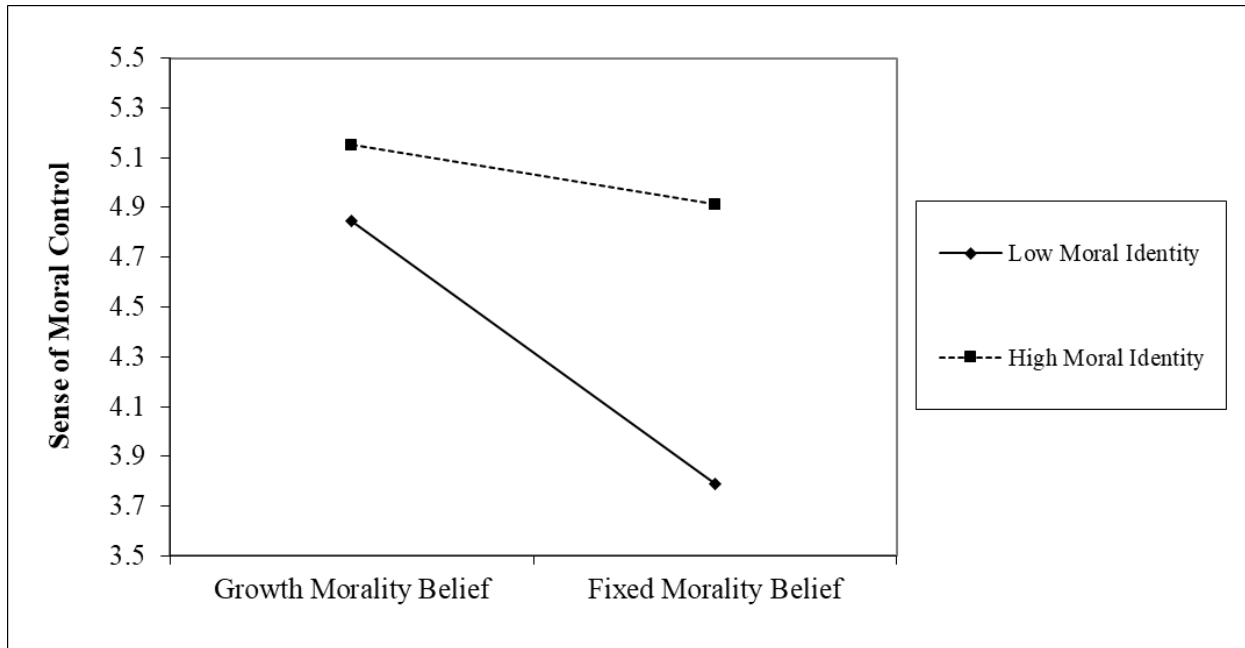*Figure 4.* The Interactive Effect of Implicit Morality Beliefs and Moral Identity on Sense of Moral Control (Study 3).
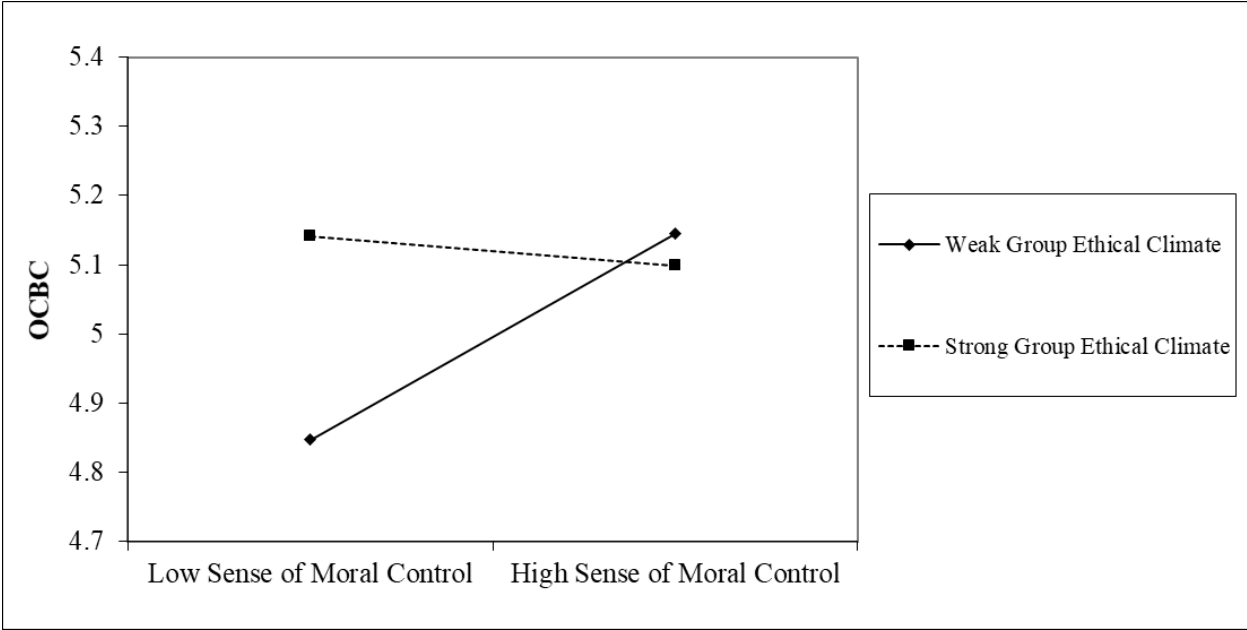
Figure 5. The Interactive Effect of Sense of Moral Control and Group Ethical Climate on OCBC (Study 3).