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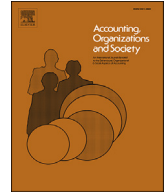
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# Counterproductive work behaviors and work climate: The role of an ethically focused management control system and peers' self-focused behavior



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## ABSTRACT

The importance of curtailing undesirable behaviors and, ultimately, self-focused work climates in organizations is undeniable. This study examines how management control systems (MCSs), as a crucial part of a firm's formal ethical infrastructure, can contribute to this objective. We conceptualize an ethically focused MCS as one that communicates ethical values and motivates employees to act accordingly. Our study is based on data from a sample of 120 department managers from 120 different firms. We show that department managers' perceptions of the extent to which the MCS imposed on them is ethically focused are associated with a reduction in their counterproductive work behaviors (CWBs). We also examine department managers' perceptions of peer managers' self-focused behaviors, as a core part of a firm's informal ethical infrastructure and find that peers' behaviors are not associated with an increase in CWBs of the department manager. However, we find some evidence that the negative association between an ethically focused MCS and managers' CWBs is limited when peers act in ways that are more self-focused. Finally, we find that CWBs of department managers are not only relevant in and of themselves, but they translate into more self-focused behaviors of department employees (as manifested in their work climates). Overall, this study suggests that, while including and emphasizing ethical content in the MCS is associated with less CWB and, in turn, with a work climate less focused on self, peer managers' behaviors are also seemingly important.

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## 1. Introduction

Recent scandals in prominent firms like Volkswagen and Wells Fargo have raised the attention of researchers and the public alike to the importance of better understanding organizational problems such as unethical and counterproductive work behaviors (CWBs) and undesirable work climates. One type of undesirable work climate is egoism, or one where the shared perception that an organizational unit holds regarding the behaviors that an organization rewards, supports, and expects is self-interest (i.e., focus on the best interests of the employees themselves) (Arnaud & Schminke, 2012). While our focus on egoistic work climates is about shared perceptions of a group, CWBs are about the individual

and include behaviors that violate organizational norms and go against the best interest of the organization and/or its members (Robinson & Bennett, 1995). Although unethical behaviors (i.e., the violation of broader societal norms) such as fraud may make headlines as referenced above, our focus at the level of the individual is on CWBs, as they constitute a broader category of undesirable behaviors and are more common occurrences.<sup>1</sup>

Management control systems (MCSs) are formal practices intended to direct the behavior of organization members toward the achievement of organizational goals (Simons, 1995). Literature

<sup>1</sup> Cohen (1993, p. 344) defines unethical conduct as "intentional action which evades responsibility, violates social contracts and, in most situations, results in harm." This definition is similar to that of CWB from Spector and Fox (2002, p. 270) of "voluntary, potentially destructive or detrimental acts that hurt colleagues or organizations." It is not surprising that CWB and unethical behaviors have a considerable overlap, as violations of organizational norms (i.e., CWBs) may also be violations of broader societal norms (i.e., unethical behavior).

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has documented numerous (potentially) undesirable behaviors and outcomes associated with MCSs and practices. For example, budget pressure is linked to compartmentalized thinking (Argyris, 1953) and increased tension (Hopwood, 1972), budget participation is linked to budget slack (Young, 1985), subordinate–superior relationships are linked to manipulation of financial reports (Jollineau, Vance, & Webb, 2012), and the use of financial measures in bonuses is linked to earnings management (HassabElnaby, Mohammad, & Said, 2010) and unethical pro-organizational behavior (Mahlendorf, Matějka, & Weber, 2018). More specifically related to our focus on CWBs and work climates, Kish-Gephart, Harrison, and Treviño (2010), in their meta-analysis, and Vidaver-Cohen (1998), in her conceptual framework, suggest that various organizational practices, including MCSs, are linked to CWBs and work climates, while Burney, Radtke, and Widener (2017) empirically link a MCS, CWB, and an egoistic work climate. We extend this literature by examining whether the content of a MCS (i.e., its specific focus) is linked to a reduction of undesirable behaviors and outcomes. Specifically, we investigate whether managers' individual perceptions of the MCS content<sup>2</sup> are related to a change in their individual behaviors and, in turn, in their employees' behaviors (as manifested in the department's work climate).

While previous studies investigate how the use of MCSs (e.g., enabling or coercive, interactive or diagnostic) helps address specific control problems, like facilitating creativity (Speklé, Van Elten, & Widener, 2017) or innovative behavior (Bedford, 2015), or have focused on specific types of MCSs such as financial versus non-financial performance measures (e.g., HassabElnaby et al., 2010; Mahlendorf et al., 2018), less emphasis has been placed on understanding the role of the content of a combination of control practices that make up the MCS. The content is a MCS design characteristic that refers to the focus of the MCS or the substance of matters embedded in it, for example, when innovativeness, marketing of tried products, or ethical values are the focus of the firm's control environment.<sup>3</sup>

In this study, we examine how a MCS that conveys ethical values<sup>4</sup> (hereafter “ethically focused MCS”), when imposed on department managers (hereafter also “focal” managers), is associated with their CWB; that is, how the MCS communicates ethical values and motivates behaviors consistent with those values. We capture the ethically focused MCS by looking at the perceptions of the emphasis given to the ethical content in the levers of control (LoC) (Simons, 1995). Ethical values are standards that determine the “right” thing to do (Hunt, Wood, & Chonko, 1989) and thus provide guidance to influence how people will act in various circumstances (Mintz & Morris, 2020). The notion that an ethically focused MCS is useful in curbing undesirable behaviors is

consistent with the conceptual work of Tenbrunsel, Smith-Crowe, and Umphress (2003), who argue that firms have formal systems in place that form part of their ethical infrastructure. An ethical infrastructure is “the organizational elements that contribute to an organization's ethical effectiveness” wherein said effectiveness is the ability to influence ethical behavior (Tenbrunsel et al., 2003, p. 286). In this study, we argue that the ethically focused MCS is one important formal system in the firm's ethical infrastructure.

Tenbrunsel et al. (2003) contend that the ethical infrastructure also includes an informal aspect, which, in part, are the casual, easy, everyday conversations and observations of behavior that emanate from peers that informally communicate ethical norms. We capture this informal aspect through our focus on peer behavior. Further, Tenbrunsel et al. (2003) theorize that both the formal and informal aspects work together to affect ethical behavior. Accordingly, all in all, we examine how (1) the focal manager's perception of the MCS (formal aspect), (2) the focal manager's perception of peers' behavior (informal aspect), and (3) their joint effect, is related to the CWB of the focal manager. Finally, to understand the impact that individual CWBs have in the firm, we examine whether the focal managers' CWBs are associated with their departments' work climates (hereafter also “focal” departments).

In sum, this paper addresses the still pressing need for more research on mechanisms that reduce undesirable behaviors at work (Kish-Gephart et al., 2010). Undesirable behaviors constitute “a serious issue for nearly all organizations [...] with prior research suggesting that the majority of employees (between 50 and 75%) have engaged in some type of deviant behavior” with annual costs estimated to be “in the millions for US organizations” (Bennett & Marasi, 2015, p. 722). Specifically, this paper responds to the quest for empirical evidence on the relationship between a firm's ethical infrastructure and undesirable behaviors (Tenbrunsel et al., 2003) and focuses, as suggested by Burney et al. (2017), on the intersection of MCSs, behaviors of organizational members, and work climates. Fig. 1 illustrates the theoretical framework of our model.

Consistent with literature on ethical infrastructure (Tenbrunsel et al., 2003), we propose and find that the focal managers' perceptions of the extent to which the MCS imposed on them is ethically focused are associated with a decrease in their CWBs. Drawing on differential association theory, which suggests that an individual learns new patterns of behavior by observing the behavior of their peers and that group norms of deviant behavior influence individual behaviors, we hypothesize that as focal managers perceive that their peers exhibit more self-focused behaviors, the focal managers follow their peers' behaviors and engage in increased CWBs. While we do not find evidence for this effect, consistent with the groupthink effect (Janis, 1971, 1972), we hypothesize and find a joint effect of an ethically focused MCS and peer managers' self-focused behaviors such that the negative relationship between an ethically focused MCS and the CWB of the focal manager is limited when peers' behaviors are more self-focused.<sup>5</sup> That is, when focal managers perceive that their peers are more self-focused, the focal managers' behaviors will not respond as much to the ethically focused MCS because focal managers will identify a contradiction in signals between the formal (i.e., the MCS) and informal (i.e., peer behavior) elements of the ethical infrastructure. We lastly suggest and find that the CWB of the focal manager is not only relevant in and of itself but is positively

<sup>2</sup> Thus, in line with Tessier and Otley (2012), we focus on individual perceptions and not on the managerial intention of MCSs. We are interested in how a manager's perception of the MCS imposed on the manager by the superior and firm is associated with the manager's behavior.

<sup>3</sup> Our approach to examining the content of the MCS follows the reasoning by Vidaver-Cohen (1998) in her theorizing about how work climates are changed in firms. Vidaver-Cohen (1998, p. 1215) states, “The form and content of these [organizational] processes provide the cues that let employees know how management expects them to (a) establish intentions, (b) consider consequences, (c) observe contracts, (d) determine distribution, and (e) implement procedures” (emphases added). In this line, we claim that a MCS can be captured in a content-free way (e.g., by measuring the emphasis on diagnostic control). However, without looking at the content, we will not know how and in which direction the behavioral change should happen.

<sup>4</sup> We do not examine a specific ethical value such as honesty or integrity because we are not interested in the extent to which a MCS communicates a specific value nor are we interested in the outcomes from one specific value. Instead, we are interested in the intensity with which ethical values in general are considered important in the design of the MCS and perceived as such.

<sup>5</sup> While the joint effect is significant ( $p < 0.05$ ) when controlling for basic contingency variables, other MCS practices, and manager's characteristics, it is marginally significant ( $p < 0.10$ ) in our base model (i.e., in the model without these control variables).

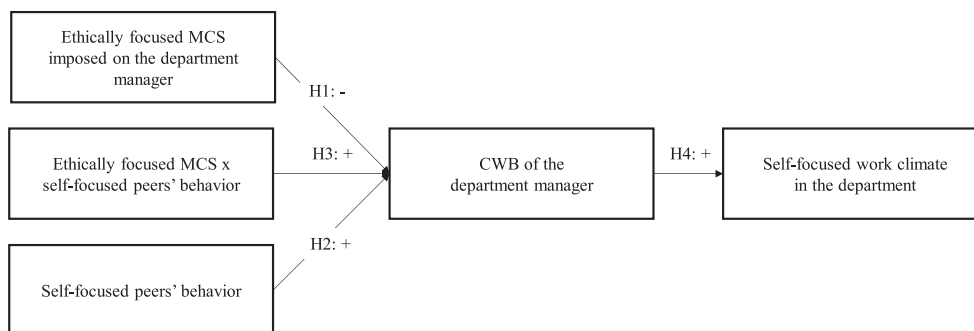


Fig. 1. Theoretical model: Hypothesized paths.

associated with the self-focused work climate of the focal department, as employees in the department learn behaviors from their proximal manager, consistent with social learning theory (Bandura, 1971). We use a path analysis to test our hypotheses above with data from a survey of 120 department managers from 120 distinct firms. We run several alternative models and show that our findings are remarkably robust to changes in the measurement model, to the addition of a wide array of control variables, and to the reversion of the theoretical causal order.

This paper makes three contributions to research and practice. First, we provide some evidence that the relationship between perceptions of an ethically focused MCS and undesirable behaviors (and resulting work climates) is less negative when focal managers perceive that their peers behave in a more self-focused way. This result indicates that the effect of an ethically focused MCS is intertwined with peer managers' behaviors, which is important since nearly all managers have organizational peers. Practically, our paper provides a multi-faceted view of the importance of personnel controls (Merchant & Van der Stede, 2017). Firms can make efforts in an attempt to ensure that the focal managers perceive that their peers behave in a less self-focused way; such perceptions can come about in two ways. Firms may need to try to alter the behaviors of managers by focusing additional attention on hiring, training, and retaining less self-focused managers. Conversely, firms may need to focus on increasing the transparency and recognition of the less self-focused managerial behaviors that already occur. From a theoretical perspective, future research models used to investigate the relationship between a MCS and undesirable behaviors may need to consider the informal ethical infrastructure, as reflected in peers' behaviors, in which these MCSs operate. Overall, we highlight the importance of aligning informal ethical infrastructure elements with formal elements and, specifically, less self-focused behavior among managers with an emphasis on a MCS that conveys ethical values.

Second, this paper contributes to the MCS literature since it focuses on the content of the MCS, instead of on its use. The use (and/or emphasis) of MCSs (e.g., interactive and diagnostic, enabling or coercive) has been intensively researched (e.g., Bedford, 2015; Bisbe & Otley, 2004; Burney et al., 2017; Widener, 2007). At the same time, there is a dearth of studies investigating the effect of specific MCS content. Some exceptions are Chenhall (2005) for integrative information content of performance measurement systems, Henri and Journeault (2010) for environmental information, as well as Bellora-Bienengraber (2019) for product development information. We contribute to this stream of research by examining an ethically focused MCS. We position the ethical content of the MCS as a crucial part of the formal ethical infrastructure of an organization (Rottig, Koufteros, & Umphress, 2011; Tenbrunsel et al., 2003; Vidaver-Cohen, 1998). This is an important theoretical contribution to the MCS and organizational behavior

literatures because we anchor the content of the MCS in the ethical infrastructure of the firm—two areas that have not been integrated previously but may be of help in furthering our understanding of factors associated with undesirable work behavior.

Lastly, our results suggest that ensuring that managers perceive the MCS (conceptualized as a combination of practices) conveys ethical values is important; it can contribute to limiting undesirable behaviors and, in turn, egoistic work climates. So far, especially the goal setting and incentive literatures have focused on how distinct control practices may foster specific undesirable behaviors such as earnings management or building of budget slack (e.g., Argyris, 1953; HassabElnaby et al., 2010; Merchant, 1990; Schweitzer, Ordóñez, & Douma, 2004; Tenbrunsel, 1998; Van der Stede, 2000; Young, 1985). Accordingly, our results have important ramifications for accounting theory. Future research that examines the unintended (dysfunctional) consequences of goal setting and incentives (or other specific control practices) may need to include the extent to which employees perceive the MCS focuses on ethical values as an important covariate. Our results also have important implications for firms that wish to control costs associated with deviant behaviors and self-focused work climates. Firms could work towards increasing the perception of the ethical content of the MCS by department managers. This might include increasing the ethical content of the MCS or implementing enhanced communication processes that make the existing ethical content more salient.

The remainder of the paper is the following. In the next section, we develop the theory and related hypotheses. Next, we discuss our method of data collection, our variables, and our common method bias remedies. We then present and discuss the results and, finally, draw conclusions.

## 2. Background and theoretical development

Before developing our hypotheses, we first provide an overview of MCSs and peer behavior in terms of how each can be part of a firm's ethical infrastructure. We then discuss CWBs and self-focused work climates, before developing our four hypotheses illustrated in Fig. 1.

### 2.1. MCSs and peer managers' behavior as parts of the Firm's ethical infrastructure

This study considers both the content of MCSs and peer behavior as parts of a firm's ethical infrastructure. Tenbrunsel et al. (2003) and Rottig et al. (2011) outline multiple components of an ethical infrastructure, including both formal and informal systems. We contend that MCSs are akin to the formal systems and peer behavior to the informal systems, consistent with Tenbrunsel et al. (2003, p. 288) who define formal systems as “those that are documented and standardized,” and informal systems as “indirect

signals regarding appropriate ethical conduct that are received by the organizational members.”

Rosanas and Velilla (2005) theoretically establish the importance of ethical considerations in the design of MCSs. Since a MCS is constructed to influence human action (and human action inherently contains ethical elements), a MCS without ethical values “depersonalizes” employees and can be the first step toward taking actions without considering the consequences on others. Ethical values are defined as those “standards that delineate the ‘right’ things to do” for a firm (Hunt et al., 1989, p. 80) and are expected to influence its members’ intentions and behaviors in a desirable way (Hunt et al., 1989). Examples of ethical values in today’s business climate include trust and integrity (Ferrell, Fraedrich, & Ferrell, 2015).<sup>6</sup>

Rosanas and Velilla (2005) suggest that Simons’ (1995) LoC framework can be used to describe how firms employ an MCS to communicate ethical values to employees and motivate them to behave accordingly. They specifically focus on the role of beliefs control. We move their work forward by examining the broader MCS (as operationalized by the LoC). The LoC is comprised of beliefs, boundaries, and diagnostic and interactive uses of management control practices (Simons, 1995). Beliefs control aspires to motivate employees to engage in desired strategically aligned behaviors for the organization by communicating the organization’s core values. Boundary control informs employees of activities that are off limits and constrains employees’ high-risk behaviors. Diagnostic control use motivates employees by monitoring performance variables derived from organizational goals. Interactive control use focuses on communication throughout the organization to enable new strategic design.

Many studies have examined MCSs (e.g., Bedford, 2015; Widener, 2007); however, few if any have focused on providing insights into their content, especially as it relates to ethics.<sup>7</sup> We draw on Simons’ (1995) definitions of the LoC and on the ethical infrastructure literature (Rottig et al., 2011; Tenbrunsel et al., 2003) to define an ethically focused MCS as comprised of: (1) ethically focused beliefs control – the explicit set of organizational definitions that senior managers communicate formally and reinforce systematically to provide basic ethical values, ethical purpose, and ethical direction for the organization, (2) ethically focused boundary control – a set of rules delineating the ethically unacceptable domain of activity for organizational participants, (3) ethical awareness in the diagnostic use of key performance measures – predictable goal achievement is ensured taking into consideration the ethical values of the firm, and (4) ethical awareness in the interactive provision of strategic direction – dealing with strategic uncertainties is accompanied by an emphasis on ethical considerations. Thus, we focus on how the LoC communicates ethical values, motivates employees to consider their actions in light of those ethical values, and defines behaviors that are not ethically

acceptable. The formalized infusion of ethical values into the LoC is akin to documented and standardized communication of ethical content within an ethical infrastructure, as a part of the formal ethical infrastructure of the firm (Rottig et al., 2011; Tenbrunsel et al., 2003).

To illustrate the practical relevance of this conceptualization, we provide several examples.

Shapiro and Naughton (2015) and Shapiro (2016) investigate Reell Precision Manufacturing, Inc. (hereafter Reell) in terms of how ethical components can be incorporated into Simons’ (1995) LoC framework. Included in Reell’s beliefs control are a Direction Statement (with statements such as “Do what is right” and “Treat others as we would like to be treated”) and a Declaration of Belief (which includes “All activities, objectives and policies are to be ordered toward individual development and the common good”) (Reell Inc., 2019). Boundary control includes a Coworker Policy Manual that contains layoff avoidance policies that place the good of employees ahead of the short-term good of the company and, thus, implicitly stresses that behaviors (including layoff decisions) that are likely to harm the dignity of employees are off-limits. Diagnostic control use includes attempts to ensure performance evaluations are handled consistently and ethically. Interactive control use stresses the importance of face-to-face meetings, review of potential future trends, and the evaluation of employee behavior with respect to the Direction Statement and boundary control policies. Examples also exist in our sample.<sup>8</sup> One firm conveys ethical values by using its code of conduct to communicate values such as integrity and to provide direction to its employees when making decisions. Another firm highlights the importance of honesty in its corporate culture. Finally, a third firm emphasizes such ethical values as honesty, loyalty, and mutual respect. These examples are not isolated incidences, as shown by the Ethisphere Institute which provides an annual list of the world’s most ethical firms based on an evaluation requiring firms to have several components of an ethically focused MCS in place (Ethisphere Institute, 2019).

At the same time, there are also examples of seemingly missed opportunities to incorporate ethical content into MCSs—or at least to make this content salient. For example, consider the scandal at Temple University where the director of its MBA Online program chased coveted U.S. News’ rankings by significantly overstating the number of new students who submitted GMAT scores (Byrne, 2018). While the director likely knew that misreporting was wrong, having superiors give more emphasis to the ethical values in the MCS may have functioned as a deterrent against such behavior. For example, Temple could have conveyed the ethical values of approaching all matters with integrity and honesty (beliefs), stressed that misreporting information is a behavior that is off-limits (boundary), only rewarded achievement against performance targets when reached with integrity and in an honest way (diagnostic), and pursued strategic opportunities only when ethical values could be adhered to (interactive). This example specifically highlights the importance of ethical values in the MCS, as in this case employees were seemingly focused on the performance expectations of the university, but lost sight of the importance of achieving said expectations via ethical means. In sum, although some organizations strongly convey ethical values through their MCSs, other organizations may lack such emphasis, indicating there is variance in firms’ emphasis on an ethically focused MCS.

As mentioned earlier, the ethical infrastructure literature

<sup>6</sup> In comparison, core values are the qualities a company embraces. They define “the standards that guide the external adaption and internal integration of organizations” (Hunt et al., 1989, p. 79). They often include such things as teamwork, open communication, customer orientation, flexibility, and efficiency (Kaptein, 2004). Thus, a mission statement that inspires behavior in accordance with a firm’s ethical values can be thought of as the underpinning of a firm’s core values.

<sup>7</sup> Notable exceptions include a focus on a specific control practice such as corporate codes of ethics (Mahlendorf et al., 2018; Somers, 2001). In addition, Mahlendorf et al. (2018) highlight different behavioral consequences of financial and non-financial targets, implicitly alluding that non-financial targets (as opposed to financial targets) may signal other concerns of the firm, including ethical values. We complement these studies by using a broader theoretical approach which captures a design element of a combination of control practices that makes up the MCS (i.e., the ethical content that permeates its elements) and by examining outcomes of an explicitly theorized and measured ethically focused MCS.

<sup>8</sup> Since we know the names of the respondent firms, we are able to search online and provide concrete examples. However, we cannot provide firm names since we guaranteed our respondents anonymity.

(Tenbrunsel et al., 2003) suggests that it is comprised of both formal and informal aspects. The informal part sends a powerful signal regarding behaviors firms consider ethically appropriate that nuances signals communicated through the formal ethical infrastructure. It is a classic case of the adage that top management and others in the firm must “walk the talk.” To illustrate, consider Ed Bastian, CEO of Delta Airlines. As CEO, he severed ties with the National Rifle Association (NRA) in the wake of the Parkland, Florida, high school shooting. Citing the “divisive rhetoric” of the NRA, he stated, “At Delta, our values are everything. It’s the culture of the company. It allows us to be who we are” (Schwantes, 2018). Bastian understood that employees look to leaders and others in the firm to model behaviors that convey the firm’s true values. Our focus is on the focal manager’s peers. Similar to leaders of firms, peers signal behavior in many ways, including through informal conversations that occur in the hallway or around the water cooler, or through behaviors and communications at firm-wide meetings. This behavior is observed by others in the firm who believe the behaviors of their peers provide a true signal of the firm’s behavioral expectations. For example, evidence shows that even honest employees will engage in undesirable behaviors when working alongside dishonest peers (Dimmock & Gerken, 2018); they “found that financial advisors are 37% more likely to commit misconduct if they encounter a new co-worker with a history of misconduct” and were able to demonstrate that at least part of the effect was due to peer effects (as opposed to, for example, incentive effects). In sum, the observation of peer behavior is an influential mechanism that informally communicates the importance (or lack thereof) of a firm’s ethical values from which others learn how it is that they are expected to behave (Tenbrunsel et al., 2003).

## 2.2. CWBs and self-focused work climates

In this study, we are interested in examining CWBs of the focal managers and self-focused work climates in their departments. Robinson and Bennett (1995) develop a typology of behaviors that comprise CWBs, categorizing behaviors based on its target. Our study focuses on those behaviors directed towards the organization (as opposed to those directed towards other employees) (Robinson & Bennett, 1995). Organizational CWBs<sup>9</sup> include such behaviors as missing work appointments, complaining about insignificant things at work, and misuse of firm resources (Robinson & Bennett, 1995). A large body of research has focused on understanding antecedents of deviant behavior, including individual characteristics and situational factors (Mackey, McAllister, Ellen, & Carson, 2019), however, this literature stream focuses primarily on understanding a singular type of specific behavior (Bennett & Marasi, 2015). Bennett and Marasi (2015, p. 723) suggest that studying a broader theoretical conceptualization of deviant behaviors, such as CWBs aimed at the organization, facilitates identification of “an underlying root cause [that] provides theoretical integration.” This suggestion is consistent with Mackey et al. (2019) who contend that our understanding of workplace deviance is incomplete; thus, examining how an ethically focused MCS and self-focused peers influence CWBs targeting the organization can help provide a more complete picture of workplace deviance. An example of an organizational CWB is former Tyco CEO Dennis Kozlowski’s infamous \$6000 shower curtain, which was acquired using Tyco corporate assets (DeBaise, 2003). This, without question, was a misuse of firm resources.

Research has traditionally focused on examining types of

<sup>9</sup> The literature (e.g., Bennett & Marasi, 2015) uses “deviant behavior” and “CWBs” interchangeably, as we do in this paper.

deviance that harm the organization; however, research is beginning to examine pro-organizational unethical behaviors (Umphress, Bingham, & Mitchell, 2010). For example, Mahlendorf et al. (2018) investigate behaviors such as withholding negative information about the company from customers and clients. Although both traditional deviance and pro-organizational unethical behaviors violate organizational norms, the latter result from employees believing that this type of behavior is expected from them and is good for the firm, even if it, ultimately, harms organizational and/or broader societal norms (Umphress et al., 2010). Our focus is on the more traditional deviant behaviors and outcomes. However, in contrast to the mainstream MCS research relating control practices to an increase in deviant behaviors, we aim to provide evidence on how the design of the MCS and peers’ behaviors can limit these deviant behaviors and undesirable work outcomes.

Self-focused work climates are drawn from Kohlberg’s first (i.e., pre-conventional) level of moral reasoning (i.e., egoism) (Kohlberg, 1984).<sup>10</sup> A prominent example of a firm that experienced a self-focused work climate is Deutsche Bank. In the words of Heuser and Storn (2014, May 15):

Actually, Anshu Jain is the God of the traders. As a long-time head of Investment Banking, he has created for them the opportunity to compete with and defeat the world’s leading financial institutions. In return, they have provided the bank with big profits and see themselves as elite, selfish, arrogant, successful. But then came the crisis, the Indian-born Briton became CEO in 2012, together with the German Jürgen Fitschen, and he decreed the bank a cultural change. Stop the silo mentality, in which everyone thinks only of themselves, no more dubious deals, all should work together in the best interest of customers.<sup>11</sup>

In the above example, we can speculate that the self-focused work climate may have been associated with several of Deutsche Bank’s scandals (e.g., money laundering, Libor interest rate scam, sale of bad mortgage-backed securities). This speculation is borne out by empirical research. Based on the results of a meta-analysis of studies from over 30 years, Kish-Gephart et al. (2010) show that more egoistic work climates are associated with more undesirable decision-making. In addition, Arnaud and Schminke (2012) use survey results to confirm the premise that a self-focused work climate is significantly associated with employees’ undesirable behavior, such as with CWBs (see also Abernethy, Bouwens, Hofmann, & van Lent, 2018; Burney et al., 2017; Chen, Chen, & Liu, 2013). These studies examine how the firm’s work climate is related to managers’ behaviors. It is important to note that we are interested in extending the process to consider how manager’s behavior (i.e., CWB), in turn, is related to their employees’ behaviors, which manifest themselves in the department’s work climate.

<sup>10</sup> We explicitly do not equate a low level of self-focused work climate with an other-focused work climate. This has both theoretical and empirical reasons. From a theoretical lens, the three levels of moral reasoning developed by Kohlberg (1984) are not parts of a continuum, as moral philosophy does not consider them to be hierarchically ordered (Ferrell et al., 2015). This is corroborated by the empirical findings by Arnaud and Schminke (2012, p. 1777), who derive from their analyses that “self-focused and other-focused climates are not simply two sides of the same coin” and that “their distinctiveness is marked by the moderate degree to which they are correlated.”

<sup>11</sup> This citation is a translation from the German original text.

### 2.3. Ethically focused MCS imposed on the focal managers and their CWB

We begin by hypothesizing that focal managers' perceptions of an ethically focused MCS are associated with their behavior. Conceptual work derives that an organization with a weak (formal) ethical infrastructure will experience more unethical behaviors from its employees since the organization is not providing proper guidance to them in terms of the type of behavior it wants (Tenbrunsel et al., 2003). Although not all CWBs are characterized as unethical (e.g., complaining behavior), they are all undesirable. As such, literature has linked an ethical infrastructure to CWBs. For example, Peterson (2002) contends, and empirically shows, that since unethical behavior and deviant workplace behaviors (such as CWBs) both violate norms, a link exists between the ethical infrastructure and CWBs.<sup>12</sup>

Organizations that follow "the ends justify the means" approach and that lack norms of trustworthy relationships often have high rates of misconduct (Cohen, 1992, 1993, 1994). Empirical results support this proposition. For example, Merchant (1990) suggests that when firms strongly emphasize the achievement of only financial targets in employees' performance targets, employees' manipulation of short-term performance measures and myopic behavior increases. Guidry, Leone, and Rock (1999) confirm that this myopic behavior is prevalent when business-unit managers' bonuses are linked to financial performance and they are in the bonus-maximizing area of the pay plan.

Closer to our lens of formal ethical infrastructure, Mahlendorf et al. (2018) find that unethical pro-organizational behavior (such as withholding negative information about the firm from customers and clients) is lower in companies with explicit ethics codes, a type of boundary control, as compared to companies without such codes. Additionally, Somers (2001) finds less perceived wrongdoing by employees in firms with corporate codes of ethics that include both information on ethical values and off-limits behavior, thus akin to both beliefs and boundary controls.

Following the logic of these studies and the reasoning by Rottig et al. (2011) that a decrease in the emphasis on the formal ethical infrastructure increases the intention to engage in unethical behaviors (and adhering to Rest's (1986) logic that intention to act precedes behavior), we suggest that an increase in focal managers' perceptions of the emphasis on an ethically focused MCS is associated with a decrease in their CWB. Thus, we hypothesize the following relationship:

**H1.** *Ceteris paribus*, the emphasis on an ethically focused MCS imposed on the focal manager is negatively associated with the CWB of the focal manager.

### 2.4. Peer managers' behaviors and focal managers' CWB

We now turn our attention to peer managers, who we define as managers in the same organization and at the same level as the focal manager. This is consistent with Zey-Ferrell and Ferrell (1982, p. 592), who define peers as "referent others of the same status." The influence of peers on co-workers is well known. Based on meta-analytic results, Chiaburu and Harrison (2008) investigate an array of outcomes to peer relationships and find that individual job effectiveness and work attitudes including job satisfaction, job

<sup>12</sup> See also Henle, Giacalone, & Jurkiewicz (2005, p. 219) who advocate for the link between "ethical ideology and workplace deviance." As well, see earlier work linking the ethical work climate to CWB (Abernethy et al., 2018; Burney et al., 2017; Chen et al., 2013). These studies support the link between various ethical dimensions and CWBs.

involvement, and organizational commitment are all positively related to coworker support.

Differential association theory (Sutherland & Cressey, 1970) holds that deviant behavior is learned through direct, close relationships, such as through interactions with peers. In this line, Zey-Ferrell and Ferrell (1982, p. 601) investigate multiple predictors of (un)ethical behavior and conclude, "Peers, the reference group closest to the focal person, is the strongest predictor of their ethical/unethical behavior."<sup>13</sup> Differential association theory does not suggest that learning from peers' behaviors is necessarily the basis for an internalization of the norms implied by the peers' behavior, but does suggest that the focal person will adapt behaviors to conform to the reference group.

Multiple studies have shown that when managers observe their peers engaging in undesirable behavior, the likelihood that they will also engage in undesirable behavior increases. For example, Jones and Kavanagh (1996) find that peer influence has a significant effect on individuals' behavioral intentions when asked about falsely increasing an expense report, while Robinson and O'Leary-Kelly (1998) find that individual antisocial behavior is significantly associated with antisocial behavior among coworkers. Johnson, Fleischman, Valentine, and Walker (2012) find that the social consensus about the ethicality of earnings management is a major factor in managers' ethical judgements and intentions to intervene.

Given this prominent role of peer behavior, we expect that as a focal manager perceives that his/her peers engage in more self-focused, undesirable behaviors, the focal manager will follow suit and also engage in more undesirable behaviors. Thus, we expect the following:

**H2.** *Ceteris paribus*, peer managers' self-focused behaviors are positively associated with the CWB of the focal manager.

### 2.5. The joint effects of MCS and peer managers' behaviors on focal managers' CWB

Just because the MCS is ethically focused, there is no guarantee that the focal managers will decrease their CWB. Other factors can affect the ability of the MCS to align managers' behaviors (Ferrell & Gresham, 1985). On the one hand, managers may be accepting of an ethically focused MCS and, as a result, reduce their CWB. On the other hand, managers may resist or resent the imposition of an ethically focused MCS and revolt or act out against it by engaging in CWB (as is the case with respect to coercive use of controls likely resulting in negative behaviors (Adler & Borys, 1996)). Take, for example, the recent woes of Starbucks, a firm included in Ethisphere's 2018 list of the world's 135 most ethical firms (Ethisphere Institute, 2019) and, thus, likely to have intensively infused ethical content in their MCS and to have made this content salient to its employees. The firm recently faced a public relations nightmare when "A Starbucks manager called 911 to have police forcibly remove two black men from the store for doing nothing wrong but not buying drinks while waiting for a friend" (Danziger, 2018). Thus, an undesired behavior may occur even when organizational conditions are designed to avoid it (Vidaver-Cohen, 1998).

We posit that how managers perceive their peers are behaving is a crucial factor that is associated with the ability of an ethically focused MCS to align managers' behaviors (and, thus, result in an

<sup>13</sup> While it is possible that the behavior of the peer managers may also be influenced by the focal manager's behavior, it is not likely since the behavior of one peer may not, when taken alone, be strong enough to influence a multitude of peers. Therefore, the direction of our hypothesis is from the peers' behavior to the focal manager's behavior.

event like the one at Starbucks). In our study, we draw on the groupthink effect (Janis, 1971, 1972) to suggest that the ethically focused MCS imposed on focal managers and their peers' self-focused behaviors exert a joint effect on the focal managers' CWB. Specifically, we predict that the beneficial effects of an ethically focused MCS on the CWB of the focal managers will decrease as they perceive their peers' behaviors become more self-focused (and vice versa). Janis (1971, p. 84, italics original) defines groupthink as "the mode of thinking that persons engage in when *concurrency-seeking* becomes so dominant in a cohesive in-group that it tends to override realistic appraisal of alternative courses of action." Hart (1991) suggests that groupthink promotes consideration of the group at the expense of potential negative decision consequences for individuals outside of the group. It is important to note that while peer group influence can encourage managers to follow either good or bad peer behavior (Zey-Ferrell & Ferrell, 1982), groupthink induces managers to follow behavior that favors the group at the expense of other organizational members. Indeed, when Booth and Schulz (2004, p. 478) discuss how peer group influence impacts ethical behavior, they suggest that groupthink can promote a "risky shift" group effect" wherein individuals are induced to make decisions they would not make on their own, as they feel less responsibility for the group outcome.

In line with the groupthink's notion of the importance of peers' behaviors, Tenbrunsel et al. (2003, p. 299) suggest that "formal systems are weaker than informal systems because the principles that are conveyed through formal systems are less entrenched in an employee's organizational experience and hence the furthest removed from that individual." This suggestion supports the idea that there is a joint effect of the ethically focused MCS (i.e., the formal infrastructure) and peers' behaviors (i.e., the informal infrastructure) on CWB and that the signal of peers' behaviors will override the signal by the ethically focused MCS if they are discordant. While not specifically related to groupthink or ethical infrastructure, Izraeli (1988) surveyed 97 managers and found that their responses to twelve different behavioral situations were primarily dependent on what they believed their peers would do in the situations. Importantly, the perceived influence of peer behavior had a greater impact than the existence of a clear organizational policy concerning the behavioral situations.

In sum, we suggest that peer managers are one such group that induces focal managers to disregard the signals about desirable behaviors they perceive emanate from the ethically focused MCS imposed on them. Instead, in the presence of highly self-focused peers, groupthink will induce focal managers to conform to the more self-focused norms of their peers, thus engaging in more CWBs. Accordingly, we hypothesize the following:

**H3.** As peer managers' self-focused behaviors increase, the effect of an ethically focused MCS on the focal manager's CWB is less negative.

### 2.6. Focal managers' behaviors and self-focused work climate

To complete our model, we theoretically establish the role that the focal managers' CWBs play in forming their departments' work climates. Prior research has examined how work climates shape individual work behaviors at lower levels in the organization (Kuenzi & Schminke, 2009). In contrast, we examine how upper level behaviors shape lower level work climates. Social learning theory (Bandura, 1971) has been used to explain how managers serve as role models for employees (Mayer, Kuenzi, Greenbaum, Bardes, & Salvador, 2009; Shin, 2012; Shin, Sung, Choi, & Kim, 2015). We investigate whether managers will observe a transference of their actions to their employees' actions as reflected in

the collective departmental work climate.<sup>14</sup> Social learning theory suggests that employees learn from and seek to emulate the behaviors they observe in their manager (Bandura, 1971), expecting they will be rewarded for emulating their managers' behaviors and punished for acting in an inconsistent manner. Prior research has primarily investigated the effect of top management's behavior on work climate and employee behavior at all levels. For example, ethical leadership (i.e., ethical behavior of top management) has been found to be positively associated with voluntary acts that benefit the organization (i.e., organizational citizenship behavior) (Shin et al., 2015), with ethical climate perceptions (Shin, 2012), and with less CWB (Mayer et al., 2009). However, Mayer et al. (2009) investigates the trickle-down effect wherein ethical leadership flows from the top down through successive management ranks. Importantly, Mayer et al. (2009, p. 11) state "immediate supervisors are the lens through which employees see what the organization values and therefore they likely have the most direct influence on employee ethical behavior" (as opposed to top management's ethical behavior that was the primary focus of Shin (2012) and Shin et al. (2015)).

We draw on this work to propose that focal managers' behaviors are perceived as expected behavior by their employees. Employees then engage in observable behaviors that conform to this expectation, which manifest in the shared understanding that provides the basis for the work climate. Thus, we propose that the focal manager's CWB is associated with the departmental work climate such that increased CWB is related to a more self-focused work climate. Formally stated:

**H4.** Ceteris paribus, the CWB of the focal manager is positively associated with the self-focused work climate of the focal department.

## 3. Research methods

### 3.1. Data collection procedure

We generated a survey based on previously used measures in order to ensure content validity of our measurement. Next, we conducted an extensive pretest in Amazon MTurk. The purpose of the pretest was to (a) gain initial evidence about internal consistency, convergent, nomological, and discriminant validity of the measures; (b) get a first impression of the face validity of the questionnaire by asking the respondents to provide comments about their perceptions of the questionnaire; and (c) estimate the time required to fill in the questionnaire. Eighty-seven useable responses were returned.<sup>15</sup> The pretest led to slight modifications in the wording of our validation questions and in the length of the questionnaire. Since we used German respondents, while both the original measures and the MTurk pretest were in English, we took particular care in translating the questionnaire. One of the authors translated the survey into German. An accounting researcher not belonging to the author team back-translated the survey into English (Brislin, 1970). Careful comparison of the original and translated measures led to small adaptations that ensured language equivalence.

<sup>14</sup> Meta-analytic results of more than 30 years of research establish a clear and stable relationship between work climate in an organizational unit and behavior within this organizational unit's members, thus establishing this general relationship (Kish-Gephart et al., 2010).

<sup>15</sup> One common criticism about MTurk is the lack of control over who the respondents are. We used four screening questions aimed at selecting respondents who were within the scope of our analyses (i.e., managers). The high number of MTurkers who tried to fill in the survey (n = 1138) but failed to pass the screening questions confirms the necessity of this procedure and provides credibility to our pretest findings.



A focal point of our study is to understand an individual's behavior. Therefore, we want to capture an individual's perceptions of the MCS and his/her peers' behavior. Given our focus on the individual, we choose to use one single, knowledgeable respondent from each target firm to answer our questionnaire. The respondents for our survey are department managers, who are ideal for several reasons. First, we want to understand the degree to which ethical values play a role in the MCS imposed on the manager. Department managers have the knowledge and ability to describe their perception of the MCS they are subject to. It is well-established in organizational behavior research that perception drives behavior of organizational members (Robbins & Judge, 2013). Tessier and Otley (2012) have highlighted the need to differentiate between intention and perception in MCS research. Our study is not interested in the intention with which the MCS imposed on focal managers was designed, but in how this MCS design is perceived, and, thus, how this perception is associated with behavior. Therefore, we exclude senior managers from our survey as they generally design the MCS that is imposed on department managers and, thus, could only report about the intention, but not about the perception of the MCS. Second, following the same logic that focal managers' behaviors are driven by their perceptions of organizational conditions, we want to learn how focal managers' behaviors are related to their perceptions of peers' behaviors and, therefore, ask these focal managers for their assessment. Surveying peers instead of focal managers would lead to a singular view of the perception of the peers' own behavior, which is not relevant to the behavior of focal managers. Third, we are interested in the focal managers' CWBs. As CWBs may be covered up so peers and superiors are not able to attribute all CWBs to specific individuals, we rely on the focal managers' own—confidential—description of their behaviors. Finally, we want to learn how the individual manager's behaviors are related to his/her department's work climate. While department work climates are best captured by surveying multiple employees of the department, for reasons of feasibility, we asked each department manager (i.e., our focal managers) to report on his/her department's work climates. While a different approach may have been preferable, we propose that a manager is better able to assess the overall work climate of the department than a single employee who is likely to have a very narrow and singular view of the work climate. Overall, we consider department managers to be the respondents who have the appropriate knowledge to answer all our questions, thus reducing potential bias.

Out of a population of 8632 German firms with at least 250 employees identified through the Dafne database,<sup>16</sup> we randomly sampled 998 firms.<sup>17</sup> For each of these firms, we identified the contact details of one suitable respondent through data available in

the database, through an extensive internet search, and through phone calls to the firms. We administered the survey online via LimeSurvey.<sup>18</sup> The data collection procedure included a postal pre-notification, an e-mail invitation, a postal and several e-mail reminders, and a phone call to solicit responses. As an incentive to participate, we donated € 1 to a charitable organization for each addressed respondent and € 5 for each fully completed questionnaire. Our data collection procedure led to 120 useable responses from department managers from 120 distinct firms, equaling a useable response rate of 12.02%.<sup>19</sup> This response rate is within the range of response rates achieved in similar organization studies (Van der Stede, Young, & Chen, 2005).

We summarize the respondents' characteristics in Table 1. Panel A shows that, on average, the respondents have an overall work experience of 23.45 years, have been working as a manager for 11.13 years,<sup>20</sup> and are currently supervising 17.84 employees. These characteristics support the suitability of the respondents for our survey. Panel B highlights that, while 72.5% of the respondents have budget responsibility, only 19.5% are responsible for both expenses and revenues. The majority (67.0%) have not received any ethics training from their current firm. Panel C shows the distribution of the functional areas in which the respondents operate, with Human Resources (HR) ranking first (42.5% of respondents), Marketing ranking second (10.0%), and Sales ranking third (7.5%).<sup>21</sup> Overall, this sample includes a wide array of department managers with heterogeneous professional experiences, responsibilities, and functional backgrounds, providing evidence for the relevance of our sample (Speklé & Widener, 2018).

Our sample's relevance is also confirmed by the wide array of firms that responded to our survey (e.g., in terms of size and industry). Additionally, the respondent firms compare well with the addressed non-respondents and with the non-addressed population. As displayed in Panel A of Table 2, at the 5% level, there are no significant differences between respondents and addressed non-respondents in terms of sales, profit, return on assets, return on equity, and number of employees. Our respondent firms have significantly higher sales and number of employees (at 10% significance level) than the non-addressed population, but do not display significant differences from the non-addressed population in terms of profit and return measures. In untabulated results, we compare the industry distribution of respondent and non-respondent firms. Compared to addressed non-respondents, the respondent firms compare very well, except for a significant overrepresentation of the construction industry. Compared to the non-addressed population of firms, the construction, electricity, and manufacturing industries are significantly overrepresented, while the financial and insurance activities industry and the administrative and support service activities industry are significantly underrepresented. However, all other proportions of industries included in our study compare well, at the 5% significance level, with the non-respondents. To further corroborate our unit non-response analysis, we compare the construct values of early and late respondents as shown in Panel B, with the

<sup>16</sup> Bureau van Dijk—A Moody's Analytics Company provides Dafne, which is a database that contains contact and financial information on firms located in Germany.

<sup>17</sup> We originally sampled 1000 firms but were informed during the survey procedure that two firms had failed in the meantime.

<sup>18</sup> LimeSurvey is an open-source online survey tool.

<sup>19</sup> We asked respondents "are there managers at the same level as you in the firm?" Overall, we received 152 responses (15.23% response rate), but 32 respondents declared that there were no other managers at their same level in the firm. As self-focused peer managers' behaviors is a crucial variable in our hypotheses, we removed these respondents from further analyses. The 120 responses used in the main analyses leave us with a ratio of 13.33 observations per estimated parameter. This value is well above the threshold of ten observations per estimated parameter needed to lend trustworthiness to the results of structural equation models (Jackson, 2003; Kline, 2011). In a robustness test, we use data from all 152 respondents to test that part of the model for which the peer behavior variable is not relevant (i.e., for H1 and for H4). The results are consistent with the results from the model tested with 120 respondents.

<sup>20</sup> We allowed the respondents to state the number of years they have been working as a manager in integers. Therefore, six respondents who had less than a year of working experience as a manager chose "0" as their entry. While we are confident that these entries are accurate, we nevertheless test the robustness of our results by using only the responses by managers who have at least one year of work experience as a manager. Our statistical inferences are unchanged.

<sup>21</sup> To account for the high presence of HR managers in our sample, we add an HR functional background dummy as a control variable to our model (see Model 5 later in the paper). Adding this control variable (together with others) to the model does not change our inferences. The dummy variable is not significantly associated with any of our variables in the theoretical model. Thus, we are confident that the strong presence of HR managers in our sample is not a boundary condition to our inferences.

**Table 1**  
Respondents' characteristics.

Panel A. Work experience and position of respondents in the firm's hierarchy					
Variable	n	Min	Max	Mean	Standard deviation
Overall work experience in years	114	3	45	23.45	10.00
Work experience for your current firm	114	0	43	14.22	10.63
Years working in your current position	114	0	29	7.88	6.89
Years working as a manager	115	0	33	11.13	8.95
Hierarchical levels above the respondent in her current position	114	1	5	1.82	0.89
Number of employees in the department supervised by the manager	114	1	220	17.84	35.47
Panel B. Responsibility and ethical training received by the manager					
Variable	Yes		No		
Do you have budget responsibility for your department? (n = 120)	87 (72.5%)		33 (27.5%)		
Is your department a profit center (i.e., are you responsible for both expenses and revenues)? (n = 118)	23 (19.5%)		95 (80.5%)		
Have you received any ethics training from your current firm? (n = 115)	38 (33.0%)		77 (67.0%)		
Panel C. Functional areas of the respondents					
Functional area	n	%			
Accounting	3	2.50%			
Human Resources	51	42.50%			
Information Technology	1	0.83%			
Marketing	12	10.00%			
Procurement	1	0.83%			
Production	2	1.67%			
Sales	9	7.50%			
Other	34	28.33%			
Missing	7	5.83%			
Total	120	100.0%			

Note: n varies due to missing values. Panel C displays self-reported functional areas in which the respondents work.

early respondents being those respondents who submitted the survey before the postal reminder and the late respondents being those who submitted the survey after the postal reminder. We use late respondents as a proxy for non-respondents. There are no significant differences in the responses between early and late respondents. Overall, these analyses provide support for the relevance and representativeness of our results.

Item non-response can hamper the usability of the responses. Therefore, we investigate missing values in the received questionnaires. As recommended by Hair, Black, Babin, and Anderson

(2019), we first determine the extent of missing data. We find that it is very limited, with 15 out of the 29 items needed to test our theoretical model displaying no missing values and the highest amount of missing values per item being two (i.e., 1.7% of responses). This value is well below the commonly employed threshold of 10% of missing responses, thus allowing the use of any of the technically feasible imputation procedures without inducing biased findings (Hair et al., 2019). We use the expectation-maximization procedure to impute missing values at the item level.

**Table 2**  
Unit non-response analysis.

Panel A. Comparison of characteristics of the firms					
Variable	Respondents	Addressed non-respondents	Non-addressed population	T-test respondents vs. addressed non-respondents	T-test respondents vs. non-addressed population
Sales in thousands EUR	868,289.64 (n = 112)	1,737,822.18 (n = 807)	367,760.95 (n = 4681)	T = -0.820, p = 0.413	T = 2.243, p = 0.027
Profit in thousands EUR	21,967.23 (n = 112)	65,588.38 (n = 849)	8,197.82 (n = 4840)	T = -0.926, p = 0.354	T = 0.925, p = 0.357
Return on assets in %	10.11 (n = 117)	15.01 (n = 849)	15.65 (n = 4839)	T = -1.280, p = 0.201	T = -1.385, p = 0.166
Return on equity in %	15.21 (n = 118)	25.68 (n = 847)	28.43 (n = 4815)	T = -1.270, p = 0.204	T = -1.541, p = 0.123
Employees	2,859.95 (n = 119)	4,985.15 (n = 860)	1,393.04 (n = 5897)	T = -0.742, p = 0.458	T = 1.690, p = 0.094
Panel B. Comparison of construct means of early and late respondents					
Construct	Early respondents (n = 72)	Late respondents (n = 48)	T-test early vs. late respondents		
Ethical beliefs	-0.07	0.10	T = -0.880, p = 0.381		
Ethical boundary	-0.10	0.16	T = -1.411, p = 0.161		
Ethical diagnostic	-0.03	0.04	T = -0.367, p = 0.714		
Ethical interactive	-0.10	0.16	T = -1.411, p = 0.161		
Self-focused peers' behavior	0.01	-0.02	T = 0.179, p = 0.859		
CWB	2.11	1.95	T = 1.285, p = 0.201		
Self-focused work climate in the department	-0.10	0.15	T = -1.394, p = 0.166		

Note: Panel A reports the mean value of the variables based on data from the Dafne database by Bureau van Dijk—A Moody's Analytics company. The size of the groups varies depending on data availability for each variable in the database. Two-tailed t-test values are reported. Levene's test for equality of variances considered.

Panel B (n = 120) reports the mean construct values for early and late respondents. For the reflective constructs, the table reports descriptive statistics based on the standardized factor scores generated through a principal component analysis (regression method). For formative constructs, the table reports descriptive statistics for the average value of the items. Early respondents are those respondents who returned the questionnaire until the postal reminder, late respondents are those who returned it after it. Two-tailed t-test values are reported. Levene's test for equality of variances considered. Ethical beliefs = ethically focused beliefs control; ethical boundary = ethically focused boundary control; ethical diagnostic = ethical awareness in the diagnostic use of key performance measures; ethical interactive = ethical awareness in the interactive provision of strategic direction.

### 3.2. Variable measurement

This study relies on perceptual survey data. Table 3, Panel A summarizes the descriptive statistics for the items used to measure the constructs needed to test our hypotheses. We provide a rigorous validation of all constructs by demonstrating both their convergent and nomological validity, the latter being quite rare in the empirical MCS literature (Bedford & Speklé, 2018). Panel B of Table 3 displays the correlations between the construct values and related validation questions. In the following description of variables, we discuss the significant validity checks. Construct measures and validation questions employ different scales (1–7 and 0–100, respectively). Finally, Panel C of Table 3 summarizes the results of an exploratory factor analysis for the reflective constructs in our model.

### 3.3. The emphasis on an ethically focused MCS

We measure the extent to which an ethically focused MCS is imposed on focal managers by adapting measures that have been used in previous literature to capture the emphasis placed on the MCS in terms of the LoC framework (Simons, 1995). The LoC is formed by the emphasis placed on the extent to which the beliefs, boundary, diagnostic, and interactive control levers communicate ethical values and motivate employees to act accordingly.

We capture the emphasis with which the ethical values<sup>22</sup> of the firm are communicated to the workforce by adapting the items used by Widener (2007), who measured the general emphasis with which beliefs control is implemented. We ask the respondents the extent to which they agree or disagree with statements like “Our mission statement clearly communicates our firm’s ethical values to our workforce.” Our principal component analysis on these items shows that they reflect one factor.<sup>23</sup> Cronbach’s Alpha (Alpha = 0.94) supports the internal consistency of this factor.<sup>24</sup> We provide support for construct validity by showing that both our convergent validity question (referring to the workforce’s understanding of the firm’s ethical values) ( $r = 0.664, p = 0.000$ ) and our nomological validity question (addressing the ethical decisions made by the workforce as a consequence of the ethical direction received by the firm) ( $r = 0.646, p = 0.000$ ) are significantly related to the construct value.

We capture the emphasis with which the firm communicates to the workforce the domain of activities that is ethically unacceptable

<sup>22</sup> We are confident that our respondents are aware of what ethical values are. To validate this claim, we search the websites of the responding firms (given that we know the name of the respondent firms) and check whether we can identify their codes of conducts and/or mission statements. We are able to do so for 81 firms. Through a qualitative review, we find that the 81 firms state ethical values on their websites, leaving us confident that respondents were able to validly answer our questionnaire. As an additional validation that respondents understood the meaning of the items in our questionnaire, we find that these 81 firms scored high on the 1 to 7 scale for the beliefs control item “Our mission statement clearly communicates our firm’s ethical values to our workforce,” with a mean of 4.98 and a median of 6.

<sup>23</sup> Panel C of Table 3 shows that ethical beliefs and ethical boundaries build one construct if considered together. Based on the more than two decades of empirical research on the LoC framework (Martyn, Sweeney, & Curtis, 2016; Simons, 1995), we argue that beliefs and boundaries are conceptually distinct and, thus, treat them in the following as such. However, we re-run our hypotheses tests treating ethical beliefs and ethical boundaries as one factor. Our results regarding all our hypotheses remain statistically unaffected.

<sup>24</sup> We acknowledge that this high level of internal consistency, which we find for most of our construct measurements, might be considered as an indication of a narrow construct measurement. Clark and Watson (1995) argue that if the construct measurement is narrower than the construct domain itself, the construct validity of the measurement is compromised. In our extensive tests for convergent and nomological validity (see Table 3, Panel B) we are able to rule out construct validity concerns.

by adapting the items used by Widener (2007) to measure business conduct boundaries. We ask the respondents the extent to which they agree or disagree with statements like “Our firm relies on a code of conduct to define ethically inappropriate behavior for our workforce.” The principal component analysis shows factor loadings above 0.5; Cronbach’s Alpha (Alpha = 0.79) is satisfactory. Our convergent validity question (referring to the workforce’s understanding of the firm’s ethical boundaries) is significantly related to the construct value ( $r = 0.450, p = 0.000$ ).

We highlight the ethical dimension of diagnostic control by asking the degree to which the manager perceives it is important to make progress on key performance measures using behavior that is consistent with ethical values. To capture this construct, we adapt four items used by Henri (2006) and Widener (2007) and one item used by Speklé et al. (2017) to the ethical control context of this study. For example, one question asks: “Please rate how important it is that you have behaved in accordance with the ethical values of your firm when your superior uses key performance measures to track your progress towards goals,” with answer options ranging from “not at all” to “to a great extent.” All items reflect one factor, with a high level of internal consistency (Alpha = 0.97). We provide evidence supporting the construct validity of the measurement, both in terms of convergent (asking for the superior’s ethical considerations in performance evaluation) ( $r = 0.825, p = 0.000$ ) and nomological validity (referring to the perceived fairness in performance evaluations as a consequence of our construct) ( $r = 0.519, p = 0.000$ ).

Interactive control is thought to be multidimensional (Bisbe, Batista-Foguet, & Chenhall, 2007; Kruijs, Speklé, & Widener, 2016; Tessier & Otley, 2012).<sup>25</sup> We capture the emphasis with which the respondents’ superiors display ethical awareness in the interactive provision of strategic direction. We use the items from Kruijs et al. (2016) and adapt them to focus on the ethical content. For example, one question asks, “Please rate the extent to which your supervisor emphasizes ethical considerations when signaling key strategic areas for improvement” with answer options ranging from “not at all” to “to a great extent.” Both the loadings from the principal component analysis and Cronbach’s Alpha (Alpha = 0.97) support the unidimensionality and internal consistency of the measurement, respectively. The results from the convergent validity question (addressing the inclusion of ethical considerations in the strategic direction given by superiors) ( $r = 0.574, p = 0.000$ ) and nomological validity questions (referring to organizational learning as a result of strategic orientation) ( $r = 0.531, p = 0.000$ ) support the measurement employed.

We are interested in measuring the focal managers’ perceptions of the MCS imposed on them. The MCS may be partially rooted in the firm, as may be the case for beliefs and the boundary controls, since both mission statements and codes of conducts are likely to be formulated and communicated for the entire firm. The MCS may be also partially rooted in the focal managers’ superior, as is the case for interactive and diagnostic control, since it is the manager’s direct superior who decides on the approach he/she wishes to employ when using performance measures. Together, the four types of controls form the MCS imposed on the focal manager. Our study hypothesizes that it is the ethical content of the MCS operationalized as the combination of control practices, as opposed to the individual levers per se, that is related to behavioral consequences for the focal manager. Thus, we model the emphasis on the

<sup>25</sup> Tessier and Otley (2012) argue that previous literature has confounded two distinct concepts of interactive controls, the intensity of use of controls and the strategic validity controls. As our paper does not focus on the use, but rather on the content of the MCS, we focus on the interactive provision of strategic direction (i.e., on the strategic validity control).

**Table 3**  
Composition and validity of multi-item constructs.

Panel A. Descriptive statistics								
Construct and Items	Min	Max	Mean	Standard deviation	Skewness	Kurtosis	Factor loading	Cronbach's Alpha
Ethically focused MCS ( <i>second-order formative construct</i> )	-2.03	1.55	0.00	0.82	-0.58	-0.17	NA	NA
Ethical beliefs ( <i>reflective construct</i> )	-2.08	1.38	0.00	1.00	-0.65	-0.65	NA	0.94
Our mission statement clearly communicates our firm's ethical values to our workforce.	1	7	4.90	1.89	-0.76	-0.61	0.91	
Top managers communicate ethical values to our workforce.	1	7	4.32	1.89	-0.44	-1.03	0.92	
Our workforce is aware of our firm's ethical values.	1	7	4.75	1.84	-0.79	-0.43	0.92	
Our mission statement inspires our workforce to behave in accordance with our firm's ethical values.	1	7	4.49	1.87	-0.54	-0.79	0.95	
Ethical boundary ( <i>reflective construct</i> )	-2.49	1.45	0.00	1.00	-0.81	-0.13	NA	0.79
Our firm relies on a code of conduct to define ethically inappropriate behavior for our workforce.	1	7	4.88	1.89	-0.77	-0.57	0.90	
Our code of conduct informs our workforce about behaviors that are ethically off-limits.	1	7	5.21	1.88	-0.97	-0.19	0.90	
Our firm has a code of conduct that communicates to our workforce behaviors that will put them at risk of violation of our firm's ethical values.	1	7	3.53	2.20	0.16	-1.45	0.52	
Our workforce is aware of our firm's code of conduct.	1	7	4.90	1.64	-0.65	-0.36	0.84	
Ethical diagnostic ( <i>reflective construct</i> )	-1.87	1.58	0.00	1.00	-0.54	-0.70	NA	0.97
Please rate how important it is that you have behaved in accordance with the ethical values of your firm when your superior uses key performance measures to ...								
... track your progress towards goals.	1	7	4.25	1.86	-0.40	-0.95	0.96	
... monitor your results.	1	7	4.20	1.82	-0.43	-0.90	0.98	
... compare your outcomes to expectations.	1	7	4.25	1.79	-0.58	-0.75	0.98	
... review your key measures.	1	7	4.09	1.80	-0.36	-0.90	0.94	
... evaluate your performance.	1	7	4.45	1.85	-0.63	-0.76	0.91	
Ethical interactive ( <i>reflective construct</i> )	-1.66	1.80	0.00	1.00	-0.15	-0.98	NA	0.97
Please rate the extent to which your supervisor emphasizes ethical considerations when ...								
... signaling key strategic areas for improvement.	1	7	3.78	1.77	-0.03	-1.03	0.97	
... signaling new strategic challenges we need to face.	1	7	3.98	1.79	-0.19	-0.97	0.98	
... discussing the impact of potential changes in our competitive environment.	1	7	3.86	1.79	-0.03	-1.03	0.97	
Self-focused peers' behavior ( <i>reflective construct</i> )	-1.42	2.65	0.00	1.00	0.30	-0.82	NA	0.96
In my firm the primary concern of the managers at my level is their personal benefit.	1	7	3.17	1.61	0.22	-1.06	0.90	
In my firm, managers at my level think of their own welfare first when faced with a difficult decision.	1	7	3.31	1.61	0.28	-0.99	0.94	
In my firm, managers at my level are very concerned about what is best for them personally.	1	7	3.28	1.63	0.12	-1.17	0.96	
In my firm, managers at my level protect their own interest above everything else.	1	7	2.99	1.56	0.42	-0.68	0.92	
In my firm, managers at my level are mostly out for themselves.	1	7	2.73	1.53	0.59	-0.51	0.92	
CWB ( <i>formative construct</i> )	1	4	2.04	0.65	0.57	-0.06	NA	NA
Cared about efficient use of my firm's resources [data reverse coded]	1	7	2.58	1.33	0.97	0.53	NA	
Missed work appointments without prior acknowledgment	1	5	1.33	0.64	2.51	8.84	NA	
Complained about insignificant things at work	1	5	2.23	0.88	0.51	0.37	NA	
Self-focused work climate in the department ( <i>reflective construct</i> )	-1.17	2.74	0.00	1.00	0.71	-0.46	NA	0.92
In my department employees' primary concern is their personal benefit.	1	7	2.64	1.55	0.73	-0.45	0.80	
Employees in my department think of their own welfare first when faced with a difficult decision.	1	6	2.76	1.42	0.42	-0.89	0.91	
Employees in my department are very concerned about what is best for them personally.	1	6	2.50	1.49	0.88	-0.29	0.92	
Employees in my department protect their own interest above everything else.	1	7	2.44	1.45	0.86	-0.04	0.92	
Employees in my department are mostly out for themselves.	1	6	1.94	1.20	1.29	1.12	0.82	
Panel B. Correlations among construct means and validation questions								
Construct and validation questions (For the 0–100% questions: What percentage of the ....)	Type of validation question	Scale	N	r	p			
Ethical beliefs								
Workforce do you feel has a clear understanding of the ethical values that provide direction for your firm?	Convergent validity	0–100%	100	0.664	0.000			
Decisions the workforce takes at work have a clear ethical direction from your firm?	Nomological validity (ethical decisions)	0–100%	95	0.646	0.000			
Ethical boundary								
Workforce do you feel has a clear understanding of actions they might take that would be contrary to your firm's ethical values?	Convergent validity	0–100%	97	0.450	0.000			
What percentage of activity within the workforce is contrary to your firm's ethical values?	Nomological validity (unethical actions)	0–100%	102	-0.086	0.196			
Ethical diagnostic								
Time does your superior incorporate ethical considerations when evaluating your performance?	Convergent validity	0–100%	100	0.825	0.000			
What percentage of the time do you feel treated fairly by your superior when he/she evaluates your performance?	Nomological validity (perceived fairness in evaluation)	0–100%	107	0.519	0.000			
Ethical interactive								
Strategic directions you receive from your supervisors take into account ethical considerations?	Convergent validity	0–100%	103	0.574	0.000			
Routines in your firm on how to manage ethical issues are continuously improving?	Nomological validity (organizational learning)	0–100%	86	0.531	0.000			
Self-focused peers' behavior								
Managers at your own level focus on the welfare of others?	Convergent validity	0–100%	101	-0.448	0.000			
Your variable pay is based on performance relative to your peer managers?	Nomological validity (relative performance pay)	0–100%	64	0.002	0.494			
CWB								

(continued on next page)

Table 3 (continued)

Panel B. Correlations among construct means and validation questions						
Construct and validation questions (For the 0–100% questions: What percentage of the ....)	Type of validation question	Scale	N	r	p	
Time do you engage in activities that go against your firm's best interest?	Convergent validity	0–100%	117	0.250	0.003	
Organizational citizenship behavior (organizational), with items from Williams and Anderson (1991)	Nomological validity	1–7	120	–0.496	0.000	
Self-focused work climate in the department						
Your department's focus is on the welfare of the group?	Convergent validity	0–100%	102	–0.175	0.039	
Variable pay of the employees in your department is based on the achievement of your entire department?	Nomological validity (individual-based variable pay)	0–100%	109	0.106	0.109	
Panel C. Exploratory factor analysis for the reflective constructs						
Factor	1	2	3	4	5	
Eigenvalue	9.338	5.776	2.701	2.195	1.151	
Variance explained (%)	35.91	22.21	10.40	8.44	4.42	
Factor 1: Ethical beliefs and ethical boundary						
Our mission statement clearly communicates our firm's ethical values to our workforce.	0.860					
Top managers communicate ethical values to our workforce.	0.878					
Our workforce is aware of our firm's ethical values.	0.910					
Our mission statement inspires our workforce to behave in accordance with our firm's ethical values.	0.860					
Our firm relies on a code of conduct to define ethically inappropriate behavior for our workforce.	0.768					
Our code of conduct informs our workforce about behaviors that are ethically off-limits.	0.779					
Our firm has a code of conduct that communicates to our workforce behaviors that will put them at risk of violation of our firm's ethical values.					–0.385	
Our workforce is aware of our firm's code of conduct.	0.909					
Factor 2: Self-focused work climate in the department						
In my department employees' primary concern is their personal benefit.		0.775				
Employees in my department think of their own welfare first when faced with a difficult decision.		0.936				
Employees in my department are very concerned about what is best for them personally.		0.921				
Employees in my department protect their own interest above everything else.		0.876				
Employees in my department are mostly out for themselves.		0.815				
Factor 3: Ethical diagnostic						
Track your progress towards goals					–0.878	
Monitor your results					–0.935	
Compare your outcomes to expectations					–0.927	
Review your key measures					–0.898	
Evaluate your performance					–0.880	
Factor 4: Self-focused peers' behavior						
In my firm the primary concern of the managers at my level is their personal benefit.					0.852	
In my firm, managers at my level think of their own welfare first when faced with a difficult decision.					0.873	
In my firm, managers at my level are very concerned about what is best for them personally.					0.943	
In my firm, managers at my level protect their own interest above everything else.					0.942	
In my firm, managers at my level are mostly out for themselves.					0.968	
Factor 5: Ethical interactive						
Signaling key strategic areas for improvement					0.840	
Signaling new strategic challenges we need to face					0.835	
Discussing the impact of potential changes in our competitive environment					0.813	

Note: n = 120. Panel A reports the empirical range of the items, mean value, standard deviation, skewness, and kurtosis. Moreover, it displays the factor loadings of principal component analyses with oblimin rotation for each theoretical construct and Cronbach's Alpha values. Factor loadings and Cronbach's Alpha are not a meaningful statistic for formative constructs. The Table also reports descriptive statistics at the construct level. For the reflective constructs, the Table reports descriptive statistics based on the standardized factor scores generated through a principal component analysis (regression method). For formative constructs, the Table reports descriptive statistics for the average value of the items. Ethical beliefs = ethically focused beliefs control; ethical boundary = ethically focused boundary control; ethical diagnostic = ethical awareness in the diagnostic use of key performance measures; ethical interactive = ethical awareness in the interactive provision of strategic direction.

Panel B reports Pearson's correlation coefficients (with one-tailed significance tests) among construct values and validation questions. For the reflective constructs, the construct values are based on the standardized factor scores generated through a principal component analysis (regression method). For formative constructs, construct values are the average value of the items. Validation questions include both convergent and nomological validity questions. For nomological validity questions, the construct captured in the question is displayed in brackets. n varies due to missing values in the validation questions. Ethical beliefs = ethically focused beliefs control; ethical boundary = ethically focused boundary control; ethical diagnostic = ethical awareness in the diagnostic use of key performance measures; ethical interactive = ethical awareness in the interactive provision of strategic direction.

Panel C (n = 120) reports the results for a principal component analysis with oblimin rotation including all items for the reflective constructs in our model. Factor loadings <0.3 omitted. Ethical beliefs = ethically focused beliefs control; ethical boundary = ethically focused boundary control; ethical diagnostic = ethical awareness in the diagnostic use of key performance measures; ethical interactive = ethical awareness in the interactive provision of strategic direction.

ethically focused MCS as a second-order formative construct with four reflective first-order constructs (Jarvis, Mackenzie, & Podsakoff, 2003), since the ethical content might be emphasized in the different levers to a different extent. This construct proxies for an ethically focused MCS. We include the ethically focused MCS in our path model estimation by ex-ante calculating the first-order factor scores (i.e., the ethically focused control levers scores) through a principal component analysis (Howell, Breivik, & Wilcox, 2007) and by summing and averaging these scores (i.e., implying equal weights for each lever) (Bagozzi, 2007) to receive the second-order formative factor value.

### 3.4. Self-focused peer behavior

We capture the manager's perception of the degree to which their peers behave in an egoistic way by adapting Arnaud and Schminke's (2012) measure of self-focused work climate.<sup>26</sup> The

<sup>26</sup> We are asking about peer managers who work across different departments. Thus, there is not a shared work climate among these managers. Therefore, we label the construct "self-focused peers' behaviors" instead of "self-focused peer work climate."

questions ask focal managers about their perceptions of the degree of agreement or disagreement to statements like “In my firm the primary concern of the managers at my level is their personal benefit.” The measures are reflections of the underlying construct; thus, we use the principal component analysis factor scores as construct values in the path analysis. Factor loadings suggest the construct is unidimensional while the Cronbach's Alpha value of 0.96 provides support for the internal consistency of the measures. The convergent validity question (capturing managers' perceptions of the extent to which their peer managers are focused on the welfare of others) is significantly related to the construct value ( $r = -0.448$ ,  $p = 0.000$ ).

### 3.5. Counterproductive work behavior

CWB is conscious behavior that stands in contrast to the goals of the firm (Spector et al., 2006; Spector & Fox, 2005). We use the items on CWBs that target the organization (Spector, Bauer, & Fox, 2010), which have previously been used in MCS research (Burney et al., 2017). Our final measure includes three items asking how frequently the respondent has engaged in inefficient use of resources and withdrawal in his/her present job over the past year, with items like “Missed work appointments without prior acknowledgment” and answer options ranging from “never” to “always.”<sup>27</sup> Kurtosis and skewness values suggest slight deviations from normal distribution; thus, we also bootstrap our results in the AMOS estimation. In line with the guidelines by Jarvis et al. (2003), we construct CWB as a formative construct.<sup>28</sup> This is supported by the low and mostly insignificant correlations between the items. We average the items of the construct and use this value in AMOS. Both the convergent (referring to the time the respondent engages in activities that go against his/her firm's best interest) ( $r = 0.250$ ,  $p = 0.003$ ) and nomological validity questions (the average of the items used to measure the organizational dimension of organizational citizenship behavior) ( $r = -0.496$ ,  $p = 0.000$ ) support the suitability of our items.

### 3.6. Self-focused work climate in the department

The degree to which egoism is the predominant attitude in the department is captured by items developed by Arnaud and Schminke (2012) and later used in the MCS context by Burney et al. (2017). The items ask for the degree of agreement or disagreement to statements like “In my department employees' primary concern is their personal benefit.” The factor loadings of this reflective construct are high and Cronbach's Alpha suggests a good level of internal consistency (Alpha = 0.92). We use the principal component analysis factor scores for the following path analysis. The convergent validity question (referring to the department's focus on the welfare of the group) provides support for the construct validity of our measurement ( $r = -0.175$ ,  $p = 0.039$ ).

### 3.7. Common method bias

Our data are perceptual. However, relying on one source for measurement might introduce common method bias in the findings if the variables of interest are contaminated by the method

variance in the same way (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Speklé & Widener, 2018). To acknowledge this possibility, we used both procedural and statistical remedies, as displayed in Appendix A, to rule out the risk that common method bias drives our findings. Overall, with the appropriate degree of caution, we conclude that this risk is rather limited.

## 4. Results

### 4.1. Main analyses

The correlation matrix is shown in Table 4. An ethically focused MCS imposed on focal managers is significantly negatively correlated with their CWBs ( $r = -0.217$ ,  $p = 0.017$ ) and with self-focused peer behaviors ( $r = -0.209$ ,  $p = 0.022$ ). Self-focused peer behavior is significantly positively correlated with self-focused work climate in the focal manager's department ( $r = 0.393$ ,  $p < 0.001$ ). The focal manager's CWBs are significantly positively correlated with the self-focused work climate in their departments ( $r = 0.169$ ,  $p = 0.065$ ). Overall, the correlation coefficients denote small to medium effect sizes (Cohen, 1988), giving a first impression of discriminant validity among the constructs of interest and providing indication that the variables are behaving in a plausible way. Moreover, Table 4 displays the average variance extracted (AVE) and its squared root for the reflective constructs. The squared root of the AVE is consistently higher than the bivariate correlations of the variable (Fornell & Larcker, 1981), substantiating discriminant validity.

We conduct the multivariate analyses using the maximum likelihood estimation in AMOS 25.<sup>29</sup> We estimate a path model to increase the power of the model. We use factor scores from a principal component analysis for reflective constructs and the average value of the items for the formative constructs.<sup>30</sup> The analyses proceed in two steps. First, we start with a just-identified model including our four hypothesized paths and all control paths.<sup>31</sup> We stepwise trim the model for insignificant control paths. Model trimming derives a parsimonious and well-fitting model (Kline, 2011). We label the resulting model “base model.” We use these results to discuss our hypotheses tests. Second, with the base model as a starting point, we estimate five alternative models (labeled Models 2 to 6), and a model disentangling the four levers, as robustness tests. Table 5, Panel A, summarizes the direct path model relationships for the base and the alternative models; Panel B reports the correlations among the variables in the different models; Panel C reports the model fit measures.

Fig. 2 visualizes the base model results. Both the exact fit test and the approximate fit indexes support the appropriateness of our

<sup>29</sup> The inspection of the outliers' analysis in AMOS, together with careful inspection of the data, does not suggest the existence of outliers in our data. The normalized estimate of multivariate kurtosis is 7.164, which is barely above the common cutoff value of 7.0 (Byrne, 2010). Table 3, Panel A, showed that univariate kurtosis and skewness at the level of the construct values do not provide evidence of major deviations from a normal distribution. Nevertheless, to account for the potential influence of multivariate non-normality, we also bootstrap our base model. We find that all inferences are unchanged. We conclude that deviations from a normal distribution do not affect our findings.

<sup>30</sup> We also re-run the analyses using principal axis factoring to calculate the construct values (instead of principal component analysis) for reflective constructs. All our statistical inferences are unchanged.

<sup>31</sup> Control paths are those paths that are not hypothesized but relate the variables until the model becomes just-identified. In addition to the hypothesized paths, the just-identified model includes the correlations between the exogenous variables (i.e., ethically focused MCS, self-focused peer behavior, and their interaction (i.e., ethically focused MCS x self-focused peer behavior) as well as the association between the exogenous variables and self-focused work climate.

<sup>27</sup> One of the items has an unacceptable empirical range of only one point with responses ranging from 1 to 2 (“Stayed at home from work and said I was sick when I wasn't”) and is thus dropped from further analyses. Another item (“Told people outside the job what a lousy firm I work for”) displayed an extremely high kurtosis value (15.470) and is thus also dropped from further analyses.

<sup>28</sup> A person may engage in one of the CWBs without necessarily engaging in all of them in a systematic pattern.

**Table 4**  
Correlation matrix.

Construct	(1) Ethically focused MCS	(2) Self-focused peers' behavior	(3) CWB	(4) Self-focused work climate in the department
(1)	NA			
(2)	-0.209**	0.66 (0.81)		
(3)	-0.217**	0.143 <sup>ns</sup>	NA	
(4)	0.084 <sup>ns</sup>	0.393***	0.169*	0.55 (0.74)

Note: n = 120. The table contains the Pearson's correlation coefficients between the construct values of our analysis (with two-tailed significance test). For the reflective constructs, the construct values are based on the standardized factor scores generated through a principal component analysis (regression method). For formative constructs, construct values are the average value of the items. The diagonal contains the values for the average variance extracted (AVE) as well as the squared root of the AVE in parentheses. AVE is omitted for ethically focused MCS and CWB, as it is not a meaningful statistic for formative constructs.  
ns = insignificant; p < 0.10: \*; p < 0.05: \*\*; p < 0.01: \*\*\*.

base model to describe the data. The chi square test is insignificant (chi square = 2.703, df = 2, p = 0.259). The approximate fit indexes are within the common thresholds.

As suggested in H1, there is a significant negative association between an ethically focused MCS imposed on focal managers and their CWBs ( $\beta = -0.219, p = 0.008$ ). Linked to literature in the field of organizational behavior on firms' formal ethical infrastructure, the more focal managers perceive the MCS communicates ethical values, the more they reduce their CWBs. In H2, consistent with the logic of firms' informal ethical infrastructure and with differential association theory, we hypothesize the existence of a positive relation between peer managers' self-focused behaviors and the focal managers' CWBs; however, our data do not provide evidence for H2 ( $\beta = 0.103, p = 0.127$ ). In H3, we argue that an ethically focused MCS imposed on focal managers and the focus-on-self of peer managers also have a joint effect on focal managers' CWBs, consistent with conceptual literature about the relationship between formal and informal elements of the firm's ethical infrastructure and with the groupthink effect. In support of this argument, we find that the joint effect is marginally significant and positive ( $\beta = 0.118, p = 0.096$ ). Table 5, Panel D, shows how the association between an ethically focused MCS and the focal managers' CWBs unfolds at three different values of self-focused peers' behavior. While the negative association detected in H1 holds for low and medium values of self-focused peers' behavior, the association turns insignificant for high values of self-focused peers' behavior. These findings make visible that, if congruence between the elements is missing (i.e., an increase in an ethically focused MCS accompanied by highly self-focused peers), the mixed message perceived by managers reduces the impact of the formal ethical infrastructure on (un)desirable behaviors. Finally, in H4, consistent with social learning theory, we postulate that the more focal managers reduce their CWB, the more their employees will emulate their behavior, making the work climates in their departments less self-focused. The results show a significantly positive association between CWBs of the focal managers and focus-on-self in their departments ( $\beta = 0.154, p = 0.033$ ), thus, providing support for H4.

Our hypotheses, taken together, suggest that an increase in the emphasis on an ethically focused MCS as perceived by the focal manager is associated with a reduction of the focal manager's CWBs. Moreover, this relationship is less negative as focal managers perceive their peers' behaviors are more focused on themselves. Finally, a focal manager's CWBs are not relevant only in and of themselves but are positively associated with the focus-on-self in the work climate of the focal manager's departments.

4.2. Alternative models

In this section, we assess the robustness of our results by analyzing five alternative models (labeled Models 2 to 6) presented

in Table 5, Panels A, B, and C, and by disentangling the four levers (untabulated results). Since we estimate our base model as a path model, we re-run it (Model 2) letting AMOS estimate the full measurement model for the reflective constructs (i.e., self-focused peers' behaviors, self-focused work climate, and the interaction between an ethically focused MCS and self-focused peers' behaviors). Fit and parsimony, expectedly, decrease, as made visible by the predictive fit indexes AIC (Akaike Information Criterion) and CAIC (Consistent AIC).<sup>32</sup> Model 2 confirms our findings for the hypotheses tests from the base model. Therefore, we are confident that the estimation procedure does not affect our results.

In Models 3, 4, and 5 we replicate our base model and successively add three types of additional exogenous variables, modeling their effects as direct paths to CWB and self-focused work climate. We stepwise trim insignificant non-hypothesized paths before analyzing the results. In all comparisons, we find that the base model has better predictive fit indexes. Model 3 adds contingency variables (i.e., number of firm and department employees, firm and department decentralization, budget responsibility of the department, number of hierarchical levels above the department, and the manager's age and experience in the position). Model 4 adds other MCS practices (i.e., variable pay, financial incentive pressure, incentive pressure to receive recognition, and punishment in case of violation of ethical values) to Model 3. Model 5 adds managers' characteristics (i.e., HR functional background, ethics training received, Machiavellianism as distrust of others, and Machiavellianism as amorality) to Model 4. For all three models, we find that our statistical inferences from the base model are unchanged, showing a remarkable stability of the models when including an encompassing variety of control variables. These results help limit the possibility of correlated omitted variables.

The above models reveal two important points. First, after accounting for an encompassing variety of control variables, the formerly marginally significant (p < 0.10) joint effect of an ethically focused MCS and self-focused peer managers' behavior on CWB turns clearly significant (p < 0.05), lending further support to H3 (see Table 5, Panel B, Model 5). Second, the formerly significant correlation between an ethically focused MCS and self-focused peers turns insignificant (i.e., Table 5, Panel B, Model 5 reveals that this correlation is not significant since it is trimmed from the model). Thus, the control variables account for the correlation present in the base model.

Model 5 (see Table 5, Panel B) also highlight several interesting associations between the control variables and an ethically focused MCS. An examination of the inclusion of contingency variables and other MCS practices reveals that decentralization, the number of

<sup>32</sup> An increase in AIC and CAIC demarks a worsening of fit of the model to the data and of parsimony of the model. CAIC penalizes model complexity more strongly than AIC. AIC and CAIC are useful in comparing alternative nonhierarchical models (Kline, 2011).

**Table 5**  
Path model results and model fit measures.

Panel A. Direct path model relationships								
Independent variable	Dependent variable	Hypothesis and expected sign	Base model	Model 2	Model 3	Model 4	Model 5	Model 6
<i>Hypothesized effects</i>								
Ethically focused MCS	CWB	H1:	-0.219***	-0.221***	-0.198**	-0.309***	-0.300***	-0.242***
Self-focused peers behavior	CWB	H2: +	0.103 <sup>ns</sup>	0.096 <sup>ns</sup>	0.098 <sup>ns</sup>	0.095 <sup>ns</sup>	0.054 <sup>ns</sup>	0.033 <sup>ns</sup>
Ethically focused MCS x Self-focused peers behavior	CWB	H3: +	0.118*	0.123*	0.132*	0.117*	0.151**	0.094 <sup>ns</sup>
CWB	Self-focused work climate	H4: +	0.154**	0.167**	0.174**	0.181***	0.177***	
<i>Control and alternative paths effects</i>								
Ethically focused MCS	Self-focused work climate		0.203**	0.234***	0.161**			
Self-focused peers behavior	Self-focused work climate		0.414***	0.428***	0.425***	0.399***	0.279***	
Self-focused work climate	Ethically focused MCS							0.131 <sup>ns</sup>
Self-focused work climate	Self-focused peers behavior							0.403***
Self-focused work climate	Ethically focused MCS x Self-focused peers behavior							0.150*
Self-focused work climate	CWB							0.161*
<i>Significant control variables effects – basic contingency variables</i>								
Firm employees	Self-focused work climate				0.153**	0.150**	0.135*	
Firm decentralization	Self-focused work climate				0.191**	0.226***	0.172**	
Budget responsibility	CWB				-0.190**	-0.188**	-0.174**	
Department decentralization	Self-focused work climate				-0.226***	-0.285***	-0.235***	
Manager age	Self-focused work climate				-0.172**	-0.179**	-0.190***	
<i>Significant control variables effects – MCS practices</i>								
Incentive pressure - financial	CWB					0.206**	0.184*	
Incentive pressure - recognition	CWB					-0.188**	-0.203**	
Incentive pressure - recognition	Self-focused work climate					0.193**	0.182**	
Punishment	CWB					0.185*	0.167*	
<i>Significant control variables effects – manager's characteristics</i>								
Mach - distrust of others	Self-focused work climate						0.270***	
Mach - amorality	CWB						0.215**	
Panel B. Correlations among variables in the path models								
Variable	Variable	Base model	Model 2	Model 3	Model 4	Model 5	Model 6	
<i>Significant correlations between independent variables of the base model</i>								
Ethically focused MCS	Self-focused peers behavior	-0.201**	-0.212**	-0.165**	-0.130*		<sup>a</sup> -0.159***	
Ethically focused MCS	Ethically focused MCS x Self-focused peers behavior	0.193**	0.201**	0.174**	0.213***	0.225***	<sup>a</sup> 0.103**	
<i>Significant correlations between independent variables of the base model and basic contingency variables</i>								
Firm decentralization	Ethically focused MCS			0.256***	0.253***	0.245***		
Firm decentralization	Ethically focused MCS x Self-focused peers behavior			0.186**	0.185**	0.193**		
Department employees	Ethically focused MCS x Self-focused peers behavior			-0.204**	-0.231***	-0.223***		
Department decentralization	Self-focused peers behavior			0.148*				
Hierarchical levels above	Ethically focused MCS			0.226***	0.135**	0.154**		
Manager work experience	Ethically focused MCS			-0.183**				
<i>Significant correlations between independent variables of the base model and MCS practices</i>								
Variable pay	Ethically focused MCS x Self-focused peers behavior				-0.162**	-0.158**		
Incentive pressure - financial	Ethically focused MCS				0.431***	0.413***		
Incentive pressure - recognition	Ethically focused MCS				0.202***	0.206***		
Punishment	Ethically focused MCS				0.451***	0.442***		
Punishment	Ethically focused MCS x Self-focused peers behavior				0.139*	0.145**		
<i>Significant correlations between independent variables of the base model and managers' characteristics</i>								
Ethics training	Ethically focused MCS					0.310***		
Mach - distrust of others	Ethically focused MCS					0.167**		
Mach - distrust of others	Self-focused peers behavior					0.471***		
Mach - distrust of others	Ethically focused MCS x Self-focused peers behavior					0.185**		
Mach - amorality	Self-focused peers behavior					0.153*		
Mach - amorality	Ethically focused MCS x Self-focused peers behavior					-0.164**		
Panel C. Model fit measures								
	Base model	Model 2	Model 3	Model 4	Model 5	Model 6		
Chi square (df)	2.703 (2) <sup>ns</sup>	272.038 (113)***	36.212 (50) <sup>ns</sup>	88.162 (91) <sup>ns</sup>	135.661 (151) <sup>ns</sup>	0.896 (1) <sup>ns</sup>		
AGFI	0.933	0.742	0.920	0.875	0.860	0.955		
CFI	0.982	0.925	1.000	1.000	1.000	1.000		
RMSEA	0.054	0.109	0.000	0.000	0.000	0.000		
SRMR	0.030	0.064	0.062	0.074	0.075	0.020		
AIC	28.703	352.038	118.212	212.162	295.661	28.896		
CAIC	77.941	503.537	273.499	446.986	598.660	81.921		



**Panel D. Effects of ethically focused MCS on CWBs conditional on self-focused peers' behavior**

Self-focused peers' behavior	Conditional effects	Confidence interval lower bound	Confidence interval upper bound
-1.000	-0.258	-0.471	-0.044
0.000	-0.174	-0.320	-0.027
+1.000	-0.090	-0.265	0.085

Note: n = 120. Panel A of the Table reports the standardized path coefficients and related significance levels (one-tailed significance tests for hypothesized paths, two-tailed for the remaining paths) estimated with AMOS 25. Correlations between the independent variables as well as between the independent variables and the control variables are included in all models and trimmed to the significant ones. Panel B of the Table reports the significant correlations.

ns = insignificant; p < 0.10: \*; p < 0.05: \*\*; p < 0.01: \*\*\*.

Base model: Includes all paths as hypothesized as well as significant control paths. Findings are depicted in Fig. 2.

Model 2: The base model is modelled with a full measurement model for the reflective constructs (i.e., self-focused peers behavior, self-focused work climate, as well as the interaction between ethically focused MCS and self-focused peers behavior). Variables for the interaction terms are mean centered before building the interaction term.

Model 3: Includes the base model as well as general contingency control variables (i.e., firm employees, firm decentralization, department employees, budget responsibility of the department, department decentralization, number of hierarchical levels above the department, the manager's age, and the manager's work experience in the position). Control variables have direct paths to CWB and self-focused work climate. We trim and thus do not report insignificant non-hypothesized paths.

Model 4: Includes the base model, the general contingency control variables, as well as control variables pertaining to the MCS practices (i.e., variable pay, financial incentive pressure, incentive pressure to receive recognition, and punishment in case of violation of ethical values). Control variables have direct paths to CWB and self-focused work climate. We trim and thus do not report insignificant non-hypothesized paths.

Model 5: Includes the base model, the general contingency control variables, control variables pertaining to the MCS practices, as well as control variables pertaining to manager's characteristics (i.e., Human Resources functional background, ethics training received, Machiavellianism as distrust of others, and Machiavellianism as amorality). Control variables have direct paths to CWB and self-focused work climate. We trim and thus do not report insignificant non-hypothesized paths.

Model 6: This model considers self-focused work climate in the department as antecedent to ethically focused MCS, self-focused peers behavior, as well as the interaction between ethically focused MCS and self-focused peers behavior. These latter variables are antecedents to CWB of the manager. The association between ethically focused MCS, self-focused peers' behavior, as well as their interaction is modelled with reciprocal paths constrained to be equal. Only significant control paths are retained in the model. Findings are depicted in Fig. 3.

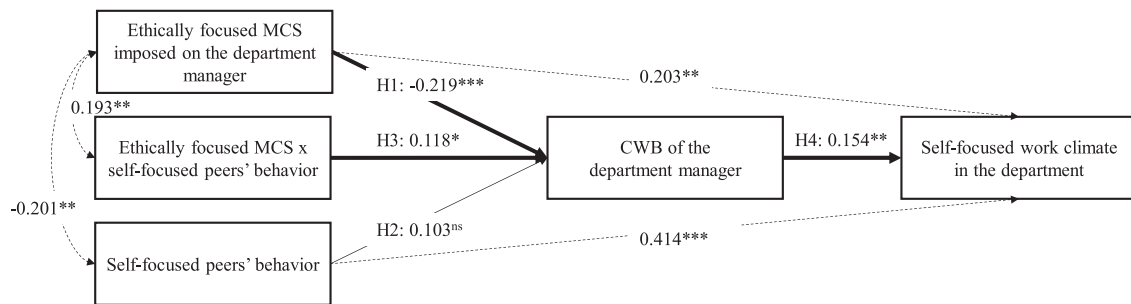
Panel B of the Table reports the significant correlations between the independent variables as well as between the independent variables and the control variables for all models. To enhance readability, significant correlations among the control variables are not tabulated. Insignificant correlations are trimmed. Significance levels are two-tailed.

ns = insignificant; p < 0.10: \*; p < 0.05: \*\*; p < 0.01: \*\*\*.

Panel C of the Table reports chi square test statistics, approximate fit indexes, as well as predictive fit indexes. The thresholds for the approximate fit indexes are: AGFI > 0.9 (Bagozzi & Yi, 1988); CFI > 0.95 (Hu & Bentler, 1999); RMSEA < 0.08 (Browne & Cudeck, 1993); SRMR < 0.08 (Hu & Bentler, 1999). In some models, the fit indexes CFI and RMSEA display (artificial) perfect fit of the model to the data, a finding that is not uncommon in path models with a limited number of degrees of freedom (Kline, 2011). Predictive fit indexes (i.e., AIC and CAIC) are used to compare alternative nonhierarchical models. Lower index values indicate better model fit and higher parsimony (Kline, 2011). The according model comparison reveals that the base model outperforms all other models.

Panel D of the Table reports the effects of ethically focused MCS on CWBs of the manager, conditional on the value of self-focused peers' behavior. The three values of self-focused peers' behavior are the mean (0.000) and the ±1 standard deviation (the variable is based on standardized principal component factor values). The 95% confidence intervals are bootstrap confidence intervals based on 5000 bootstrap samples.

<sup>a</sup> The highest standardized reciprocal path coefficient is reported; unstandardized path coefficient are constrained to be equal.



Note: The figure reports the standardized path coefficients and significance levels estimated with AMOS 25.0. Significant hypothesized paths are shown in bold. Dashed lines represent non-hypothesized, significant control paths. We start with a just-identified model. In addition to the hypothesized paths, the just-identified model includes control paths (i.e., the association between ethically focused MCS and self-focused work climate, the association between the interaction effect (i.e., ethically focused MCS x self-focused peer behavior) and self-focused work climate, as well as the correlations between the exogenous variables (i.e., ethically focused MCS, self-focused peer behavior, and their interaction)). Then, we trim the model to the hypothesized paths as well as to the significant control paths, leading to the model depicted in this figure. ns = insignificant; p < 0.10: \*; p < 0.05: \*\*; p < 0.01: \*\*\* (one-tailed for hypothesized paths, two-tailed for non-hypothesized paths).

Fig. 2. Empirical results.

hierarchical levels above the focal manager, and incentive pressure, both financially and in the form of recognition, are all positively associated with perceptions of an ethically focused MCS. As managers have more decision-making rights and are further out-of-sight from the top, they may have more room to engage in opportunistic behavior. Further, as managers face more incentive pressure, they may feel more pressure to engage in such behaviors. Firms seem to understand that the potential for undesirable behaviors may occur and, thus, feel the need to make the existing

ethical content of the MCS more salient or to infuse more ethical content in the MCS, resulting in managers' perceptions that the MCS has an increased focus on ethical content. The results also show that threat of punishment in case of violations of ethical norms, another MCS practice, is positively associated with managers' perceptions of an ethically focused MCS. This threat of punishment seems to make the ethically focused MCS more salient in the eyes of department managers. Finally, the results show that certain managerial characteristics matter to the perceptions of an

ethically focused MCS. Managers who have received ethics training or are higher in their distrust of others perceive that the MCS is more ethically focused. These results seem to suggest that firms could implement ethics training as a practical mechanism to make the ethically focused MCS more salient. Moreover, managers that maintain a skepticism of others' intentions and may devote stronger attention to potentially manipulative behaviors of others appear to have a stronger sensibility to ethical values.

An alternative theoretical argument about the relationship between an ethically focused MCS, CWB, and self-focused work climate might suggest that self-focused work climates drive firms to more heavily emphasize an ethically focused MCS on the focal manager, who, in turn, adapts his/her behavior accordingly. Therefore, we run an alternative model (Model 6) that uses the self-focused department work climate as an antecedent to an ethically focused MCS (among other variables). The results (depicted in Fig. 3) show that a self-focused work climate and an ethically focused MCS are not significantly associated ( $\beta = 0.131$ ,  $p = 0.149$ ); thus, there is no support for this alternative theoretical argument. Moreover, Model 6 displays a worse fit and parsimony than our base model. Overall, we believe that the five alternative models presented lend credibility to our findings from the base model.

Finally, we decompose the measurement of the ethically focused MCS into its underlying dimensions (i.e., control levers). Our theory focuses on the emphasis given to the ethical values and how they permeate the MCS (as operationalized by the LoC) consistent with the literatures on both ethical infrastructure (Rottig et al., 2011) and control systems (e.g., Chenhall, 2003; Malmi & Brown, 2008; Simons, 2000; Speklé et al., 2017). For our research question, therefore, it is not important to disentangle the components of the formal ethical infrastructure (i.e., the MCS) the firm uses to convey ethical values because we propose that it is the ethical content of the more holistic MCS that is associated with a reduction in undesirable behaviors. However, we also do not necessarily expect all four levers to have the same effect if employed in isolation. To uncover such isolated effects, we re-run the base model four times, each with one of the isolated ethically focused levers instead of the ethically focused MCS construct.

In untabulated results, we find that the statistical inferences from the model with the ethical beliefs control replicates our findings from the base model. In the ethical boundary model, H2 turns significant, while H3 turns insignificant. In the ethical diagnostic model, only H4 remain significant, while H1 and H3 turn insignificant and H2 turns significant. Finally, in the ethical interactive lever model, H3 turns insignificant. Overall, it seems that the relationships described by our base model are consistent with the results found in the beliefs control model. However, caution is needed, as firms will generally implement a more holistic MCS<sup>33</sup> and, thus, emphasizing ethical content only in the beliefs system may have side effects that are not visible when looking at the isolated effect of one single lever. The results reveal two other interesting insights. First, conveying ethical values solely through the diagnostic control lever is not associated with curbing the focal manager's CWB. Second, when ethical values are conveyed through the more 'negative' levers of diagnostic and boundary control, the effect of the self-focused behavior of peer managers flourishes and is positively associated with the focal manager's CWB. In contrast, this effect is not found in the models when ethical values are conveyed through the more 'positive' levers of beliefs and interactive control. Overall, the idiosyncrasies in the effects of the isolated levers strengthen our argument that it is the ethical content of the more holistic MCS and its conjunction with peers' behaviors

that matters for curbing undesirable behaviors in the firm. Moreover, caution is needed when interpreting the results due to correlated omitted variables.<sup>34</sup>

## 5. Conclusion

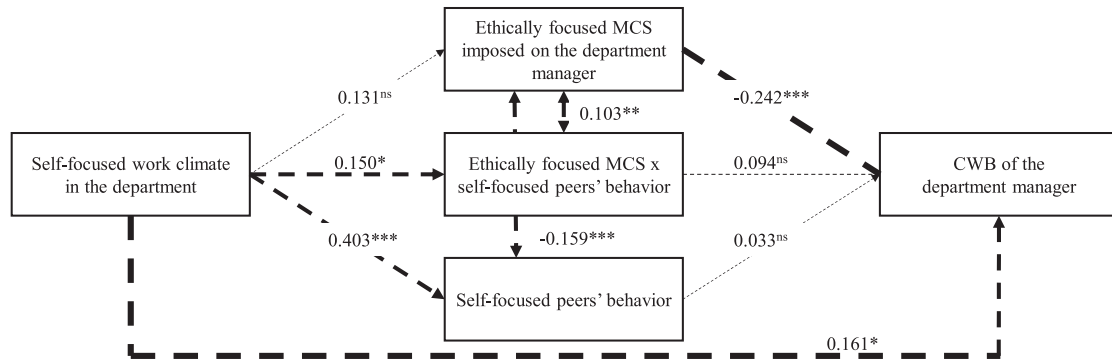
In this study, we investigate the extent to which a focal manager's perceptions of an ethically focused MCS imposed on him/her and of his/her peers' focus-on-self are related to the focal manager's CWBs and, ultimately, his/her department's work climates. Our results show that the more an ethically focused MCS imposed on the focal managers is emphasized, the less they engage in CWB, which, in turn, is associated with a less self-focused department work climate. The implication is that embedding more ethical content into the MCS and/or making the ethical content more salient to managers actually matters. Additionally, we find some evidence that peer managers' behaviors are important because this signal appears to offset the signal from the ethically focused MCS. The takeaway is that while an ethically focused MCS matters, the behavior of peers is also important, as it seems to impact the effectiveness of an ethically focused MCS.

This study is not without its limitations. First, it uses survey measures, which may be subject to noise and biases. However, we run and make transparent the findings from robustness tests and validation procedures, leaving us confident that the likelihood that our results are driven by noise and biases is low. Second, our study is based on a key respondent approach. This is in line with previous management accounting and control studies (Van der Stede et al., 2005). When designing this study, we reflected on the best possible informant(s) for our constructs and we believe that the focal managers are best positioned to report about their perception of organizational conditions (i.e., ethically focused MCS and peers' behaviors) and their behavioral response (i.e., CWB). However, we acknowledge that the department's work climate could have been better captured through an extensive survey of department employees (Speklé & Widener, 2018). Future studies could investigate the feasibility of multiple-source designs, especially with regards to the measurement of departmental work climate. We also acknowledge the possibility of common method bias, although we made extensive efforts to minimize biases caused by the use of a single informant per firm by using both statistical and procedural remedies to reduce the likelihood of common method bias, as described in Appendix A. Finally, the path model and any statements in the paper that suggest some sort of causality have been formulated based on theory; since this study uses a cross-section of responses at one point in time, we cannot demonstrate cause-and-effect relationships empirically. However, the estimation of the alternative models and our supplemental analyses are intended to generate a more credible and fine-grained understanding of the relationships.

Beyond the study's limitations, we contribute to the MCS research and practice in several ways. First, we find some indication of the importance of peer behavior. Our results imply that research that examines how a MCS is associated with an undesirable outcome should consider a broader range of control mechanisms, specifically peer behavior. For example, consider the HassabElnaby

<sup>34</sup> Please note that we would prefer to run a model with all four levers and the four interaction terms simultaneously. However, even after trimming the model to the hypothesized paths and to the significant control paths (including the correlations between the independent variables), the model requires the estimation of 41 parameters. Given our sample size of  $n = 120$ , this would leave us with a ratio of 2.93 observations per estimated parameter, which is considerably below the threshold of ten observations per estimated parameter needed to lend trustworthiness to the results of path models (Jackson, 2003; Kline, 2011).

<sup>33</sup> Indeed, Simons advocates that the four levers are used in combination.



Note: The figure reports the standardized path coefficients and significance levels (two-tailed significance tests), estimated with AMOS 25.0. Dashed lines are used to represent the fact that paths in this model are not hypothesized. Significant paths are shown in bold. The correlations are modelled as reciprocal paths constrained to be equal. ns = insignificant; p < 0.10: \*; p < 0.05: \*\*; p < 0.01: \*\*\*.

Fig. 3. Empirical results for Model 6.

et al. (2010) study. It would be interesting to extend their study and examine whether their results hold if peer managers' behaviors were considered. Would managers still engage in earnings management to obtain a larger bonus if their peers were not? Would managers engage in earnings management even more if their peers were as well? Also, consider the literature on budgeting where budget slack has been shown to be an ethically related issue (Abdullah & Brink, 2017). Given the apparent importance of peer interactions, future research can explore whether our findings hold in a budget slack situation wherein peer managers engage in the creation of slack, but an ethically focused MCS contains both boundaries prohibiting and beliefs condemning the creation of slack. Also, consider whether the findings of Young (1985) that budget participation is linked to increased budget slack would hold if peer managers' behaviors were focused less on themselves. A practical implication is that firms interested in reducing their undesirable behaviors and the focus-on-self in their work climates now know that ensuring that their department managers perceive that the MCS imposed on them conveys ethical values is not sufficient in and of itself. Instead, firms may need to implement personnel controls specifically designed to hire, train, and retain peers who are less self-focused or make such behaviors more transparent and salient so that the department managers perceive them as such. In sum, the alignment of informal with formal ethical infrastructure elements appears valuable.

Second, we highlight the importance of the content of MCSs as one crucial design issue. We focus on the role the MCS can play as a building block of the formal ethical infrastructure of the firm, when its emphasis is on conveying ethical values and motivating ethically consistent behaviors. As such, our results demonstrate that it can help reduce undesirable behaviors and, in turn, work climates. Thus, future research examining the undesirable consequences of MCSs may need to include the extent to which managers perceive the MCS conveys ethical values as an important covariate or interacting variable. For example, HassabElnaby et al. (2010) find that the use of financial measures is linked to earnings management, but it is possible that this effect could be limited by other controls that convey the importance of ethical behaviors. A practical implication is that firms looking for ways to set up or complement their already existing methods to promote managerial behaviors and a work climate with less focus-on-self within the organization can look to their MCS ethical content and its saliency as one important mechanism.

Third, we demonstrate that the extent to which managers perceive organizations emphasize ethical values in the MCS is related to their CWBs and, in turn, their departments' work climates. Management

accounting literature has primarily focused on examining deviant behaviors that go against the best interest of the firm (e.g., Burney et al., 2017), although, more recently, some literature (e.g., Mahlendorf et al., 2018) examines pro-organizational unethical behaviors. While our focus remains on the more traditional deviant behaviors and outcomes, in contrast to providing evidence on how specific MCS elements increase undesirable behaviors and outcomes, our findings extend related literature (e.g., Argyris, 1953; HassabElnaby et al., 2010; Young, Young, 1985) by showing how an MCS conceptualized as a combination of control practices can be designed to limit or decrease undesirable behaviors and outcomes. Moreover, prior management accounting literature (e.g., Abernethy et al., 2018) suggests that the self-focused work climate of a firm influences its managers to behave in undesirable ways. We extend this literature to show that once these managers behave in undesirable ways, it translates to the next lower level of organizational climate; CWBs of department managers are not only relevant in and of themselves, but they translate into more self-focused behaviors of department employees. This result also informs literature which suggests that it is the context of organizational processes that signal desired behaviors and outcomes (e.g., Kish-Gephart et al., 2010; Vidaver-Cohen, 1998), by providing evidence on a specific organizational practice, (i.e., an ethically focused MCS). The practical implication is nontrivial, as determining the antecedents of undesirable behaviors and, ultimately, work climates is an area that has been under-investigated (e.g., Kish-Gephart et al., 2010; Shin, 2012; Vidaver-Cohen, 1998). Our results support the premise that if an organization can undertake efforts to attempt to ensure that their managers perceive that the MCS conveys ethical values, a less self-focused work climate is likely to evolve in the departments because of the behavior of the manager leading the department. This finding makes visible the importance of motivating less CWBs by managers.

Future research could delve into other elements of the ethical infrastructure, for example, examining sanctioning systems (Tenbrunsel et al., 2003). This study provides evidence and insight on whether using the MCS to communicate the importance of ethical values is linked to a reduction in managers' undesirable behavior. But are managers sanctioned if they act contrary to the ethical values conveyed in the MCS and, if so, what is the mechanism? For example, researchers could examine whether firms use such formal control practices as penalty contracts to sanction such unwanted behavior. Researchers could also examine the consequences of violations of the individual control levers exploring what, if any, are the mechanisms firms use to sanction employees for violating an ethically focused boundary system or for managers

that game performance metrics acting unethically to achieve superior results. The informal elements of the ethical infrastructure are also ripe for examination. Researchers could examine whether peers engage in informal sanctions by reducing cooperation with peers that do not act in accordance with an ethically focused MCS or whether clan control evolves such that it sanctions violations. Investigation of these informal systems is likely an area wherein multiple data gathering methods, including interviews and/or experiential questionnaires, could provide rich insights.

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## Appendix A. Procedural and statistical remedies to address the potential of common method bias

### Panel A. Procedural remedies taken ex-ante during the design of the study

1. The respondents were carefully chosen to ensure adequate knowledge of survey questions.
2. The survey was ambitiously pretested using a relatively large sample from Amazon MTurk. Wording was carefully assessed to ensure clarity and lack of ambiguity and preliminary construct validity tests were performed.
3. The survey was labeled in very general terms as a survey on "employee behavior."
4. The instructions did not suggest the relationships of interest.
5. The respondents were informed in the instructions that there were no right or wrong answers; we were only interested in their personal opinion.
6. We ensured anonymity of responses.
7. We separated and mixed the variables of interest within the questionnaire.
8. As described in the section on variable measurement, we validated the answers to our 7-point scale with convergent and nomological validity answers on a 100 point slider scale.

### Panel B. Statistical remedies taken after data collection

1. Haman's single-factor test suggests that more than one (method) factor is necessary to explain the variance of the data (see Table 3 Panel C).
2. We investigated whether CWB of the focal manager and self-focused work climate of his or her department have appropriate discriminant validity by inspecting the scatterplot of these two variables (in an untabulated analysis). The scatterplot shows that multiple respondents report either a high personal CWB, but a low focus-on-self in their department, or a low personal CWB, but a high focus-on-self in their department.
3. We partialled out social desirability ("I never cover up my mistakes," "I always obey laws, even if I'm unlikely to get caught," and "When I hear people talking privately, I avoid listening." Items are taken from Dalton and Ortegren (2011) as a surrogate for method variance. We include direct paths from this variable to CWB and self-focused work climate in our base model. The statistical findings for all hypotheses are unchanged.
4. We partialled out marker variables (i.e., variables that are theoretically unrelated to the construct of interest, but subject to the same sources of method variance). In particular, we use one marker variable to capture general impression management ("When I interact with others, I try to influence their impressions of me"). Findings are unaffected. We use one marker variable to capture impression management at work ("I pretend to be busy at work even if I'm not") and found again the findings are unaffected. Finally, we capture the tendency of self-promotion ("I like to make people aware of my accomplishments") and found that our finding for H3 weakened (with  $p = 0.100$ ). For all tests, we included direct paths from the marker variable to CWB and self-focused work climate in our base model.

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