



The Effects of Performance Management on Relational Coordination in Policing: The Roles of Content and Process

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**The Effects of Performance Management on Relational
Coordination in Policing: The Roles of Content and Process**

For Peer Review Only

To guarantee team performance, employees should demonstrate high levels of relational coordination, which refers to the relational and communicational ties among employees. It is therefore essential to effectively manage relational coordination. This study examines how performance management generates relational coordination by focusing on both the content and the process of performance management. Specifically, when performance management discusses aspects related to the team in which the employee works (i.e., team-related objectives) combined with a clear, understandable and relevant implementation of performance management (i.e., performance management distinctiveness), we expect a positive effect on relational coordination. Furthermore, we expect that this relationship is explained by an increased awareness of employees' own responsibility for the team, i.e., a decreased perception of diffused responsibility for team objectives. Two empirical studies of the Belgian Police demonstrate that performance management distinctiveness moderates the relationship between team-related objectives of performance management and relational coordination. Study 2 indicates that performance management distinctiveness is indirectly related to relational coordination through a decreased diffusion of responsibility. Attention to both the content and the process of performance management will benefit relational coordination in work teams.

Keywords: Performance Management, HRM System Strength, Relational Coordination, Goal-setting Theory, Diffusion of Responsibility.

INTRODUCTION

Multiple organizations face the challenges of service-oriented tasks that are highly uncertain, time-constrained and in need of interdependency among employees (Gittell, 1999). These organizations benefit from high levels of relational coordination, which reflects human capital that is characterized by a strong awareness of relationships with the overall work processes and other employees who participate in these processes. Specifically, relational coordination is the behaviour of frequent, timely, problem-solving communication that demonstrates mutual respect and the sharing of goals and knowledge (Gittell, 2000). Relational coordination theory, which predicts the importance of effective relational and communication ties for team effectiveness, has been tested and verified in numerous studies (Gittell, 1999, 2000; Gittell, Seidner, & Wimbush, 2010; McDermott, Conway, Cafferkey, Bosak, & Flood, 2018). Employees who demonstrate relational coordination are capable of creating and maintaining a network of communication and relational ties.

A police force is an organization in need of relational coordination as teams are essential for safety reasons and for highly uncertain, time-constrained tasks (Driskell et al., 2017). For instance, when confronted with an armed robbery, police officers need to count on their colleagues to neutralize the highly demanding situation on the spot while preventing casualties. Police teams perform best when team members know they can rely on their colleagues and how they will (re)act during interventions and when they communicate well with each other (Block, 2008). Recently, police teams have also been expected to maintain order in a community-oriented way, which implies a service-oriented approach (Fielding & Innes, 2006). These indications of effectiveness strongly correspond to relational coordination theory (Gittell et al., 2010). Policing is therefore an interesting subject in the study of how relational coordination can be managed.

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3 It is important to identify the managerial antecedents of relational coordination. An HR practice
4 that manages relational coordination is performance management (McDermott, Conway,
5 Cafferkey et al., 2019). As in many organizations, police forces implement this management
6 practice to set goals and to monitor and evaluate their employees according to organizational
7 objectives (Decramer et al., 2015). Recently, questions have been raised regarding the
8 effectiveness of performance management in more service-oriented, collaborative work
9 environments that require relational coordination (Decramer et al., 2015; Gittell et al., 2010;
10 Van Thielen, Decramer, Vanderstraeten & Audenaert, 2018). Some scholars argue that in these
11 environments, performance management may be ineffective as it was designed to manage
12 performance for less complex and more individually oriented tasks (Mendibil & MacBryde,
13 2006). This assumption is strengthened by scholars who identify undesired negative effects
14 generated by performance management, such as unethical behaviour (Ordóñez & Schweitzer,
15 2009) or frustration towards performance management (Coutts & Schneider, 2004).

16
17 Other scholars argue that performance management can be beneficial for new work structures,
18 although the benefit strongly depends on its design and implementation (Aguinis., 2019). This
19 understanding corresponds to the recent trend in the strategic Human Resource Management
20 (HRM) literature to focus on HRM implementation as an explanation for HRM effectiveness
21 (Bondarouk et al., 2016; Bowen & Ostroff, 2004). The belief that performance management
22 effectiveness depends on implementation is supported by recent research, which finds that
23 differences in performance management implementation, such as how consistently the system
24 is applied (Audenaert et al., 2016) or how fairly the system is perceived (Bauwens et al., 2017),
25 explain its effectiveness.

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27 The current study adopts this research perspective to address the ongoing debate regarding
28 whether performance management is beneficial for new, service-oriented work structures. To
29 study performance management implementation, we build on both goal-setting theory (Latham
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& Locke, 2007) and HRM system strength theory (Bowen & Ostroff, 2004). The content of performance management is strongly determined by the content of goals, which are the main topic during the first goal-setting stage and further determine the monitoring and evaluation stage of performance management (Aguinis, 2019). Goals can have different content, such as behavioural goals, results or team objectives (Aguinis, 2019). Goal-setting theory examines how goals foster employee motivation and effectiveness (Latham, Seijts, & Crim, 2008) and reveals that the content of goals determines their effectiveness (Seijts & Latham, 2005). Despite this knowledge, the performance management research field has largely ignored content when examining performance management effectiveness (Brown, O’Kane, Mazumdar, & McCracken, 2018). We examine whether team-related objectives of performance management, referring to aspects that involve individual-level objectives, behaviour and attitudes related to the team and overall team performance (Aguinis, 2019), affect relational coordination. As such, we increase the robustness of previous findings in the goal-setting literature that are based on student samples (Latham & Brown, 2007).

In this study, goal-setting theory is combined with HRM system strength theory in response to the call by Ostroff and Bowen (2016) to simultaneously examine the effects of the content and the implementation of HRM systems. The HRM system strength theory is a leading theory in the HRM implementation literature (Bowen & Ostroff, 2004; Sanders & Yang, 2015) that argues that strong HRM systems, i.e., HRM systems that are implemented consistently and distinctively and supported by consensus in an organization, are more likely to generate desired responses (Bowen & Ostroff, 2004). This theory has been used to explain the positive effects of HRM systems in general (Sanders, Dorenbosch & De Reuver, 2008) and performance management more specifically (Audenaert et al., 2016; Van Thielen et al., 2018). This study explicitly focuses on one part of HRM system strength (Bowen & Ostroff, 2004), i.e., performance management distinctiveness. Performance management distinctiveness is the

conceptualization of how clear, understandable and relevant performance management is. Distinctiveness is considered the most crucial aspect of HRM system strength (Bowen & Ostroff, 2004) as employees can only change their behaviour when they know and understand what is expected of them (Sanders & Yang, 2015). We study how the relationship between team-related objectives of performance management and relational coordination is affected by performance management distinctiveness.

Furthermore, we are interested in how performance management can initiate mechanisms within an employee to foster relational coordination. We decided to focus on the diffusion of responsibility for team objectives as this is “*a cognitive process through which accountability for work outputs is transferred to others*” (Alnuaimi, Robert, & Maruping, 2010, p. 209) and, as such, influences how willing employees are to contribute to the team. The diffusion of responsibility for team objectives refers to an employee’s perception that others, rather than themselves, are responsible for team objectives. This diffusion of responsibility is undesirable when the aim is relational coordination as it results in employees who feel less accountable to the team (Alnuaimi et al., 2010). The diffusion of responsibility may unintentionally be increased by performance management when the HRM system only emphasizes individual task performance, thus ignoring the team (Aguinis, 2019). We explore whether an appropriate design of performance management is able to increase a sense of responsibility for team objectives, i.e., decrease the perception of a diffused responsibility for team objectives and, as such, relational coordination.

Hence, we combine goal-setting theory applied to performance management (Aguinis et al., 2013) with HRM system strength theory (Bowen & Ostroff, 2004) by simultaneously examining team-related objectives of performance management and performance management distinctiveness. Furthermore, we explain this relationship with the cognitive process of diffused responsibility for team objectives.

THEORICAL FRAMEWORK

Relational coordination theory was developed by Gittell (1999) and relates to the communication and relational ties that employees have in relation to (others involved in) their work processes to foster performance. Several aspects are proposed to foster relational coordination behaviour, such as the HR practices of selection and conflict resolution (Gittell, 2000) or high-performance work systems (Gittell et al., 2010; McDermott et al., 2018). Gittell (2000) also addressed the importance of performance appraisal, which is a part of performance management (Aguinis, 2019), when desiring relational coordination. Others have focused on the benefits of the cross-functional nature of performance management to foster relational coordination (e.g., Gittell, et al., 2010; McDermott et al, 2018; Lee & Kim, 2019). However, no in-depth reflection on the implementation of performance management in relation to relational coordination has been conducted.

Team-related Objectives of Performance Management

We assume that performance management can affect relational coordination when it incorporates team-related objectives. By team-related objectives of performance management, we mainly refer to behaviour or attitudes related to the individual contribution to the team and overall team performance. Aguinis et al. (2013) distinguish three types of performance within a team: individual-level task performance, team performance and individual-level contextual performance, which “refers to specific activities that contribute to team performance, such as team members cooperating with each other” (Aguinis et al., 2013, p. 507). We conceptualize such individual-level contextual performance as team-related objectives of performance management to emphasize the relationship with the team. Team-related objectives of performance management refer to the types of objectives, behaviour and attitudes related to an individual’s contribution to the team that are discussed during the overall performance

management process of setting goals and monitoring and evaluating employees, such as providing more feedback to others, creating better communicational ties or contributing to the overall objective of increasing safety in the team. This is the opposite of individual-oriented objectives, such as a programmer who needs to learn a new software program (Aguinis et al., 2013).

Building on goal-setting theory (Latham & Locke, 2007; Latham, Seijts, et al., 2008), we assume that team-related objectives of performance management will make an employee more aware of the team and how he or she can contribute to the team. Employees are provided with clear directions on the behaviours that are considered important for the team (Latham & Locke, 2007) that will be further monitored and eventually evaluated. By including team-related objectives in performance management, the team on which employees work becomes the object of focus, and their individual-level behaviour and attitudes towards the team are made explicit. By setting the goal, for instance, of providing more feedback to other team members, the employee will be more aware of his or her own relational and communication ties with the other team members.

The importance of team-related objectives of performance management has been theoretically advocated (Aguinis et al., 2013; Aguinis, 2019) but not empirically tested (Brown et al., 2018). However, research has focused on the importance of cross-functional performance appraisals (Gittell, 2000; Gittell et al., 2010; McDermott et al., 2018) to increase the awareness of ties among employees. In the goal-setting literature, behavioural goals are identified as having the strongest effect on teamwork behaviour (Brown & Latham, 2002). In addition, Chen, Wu and Leung (2011) indicate that cooperative goals buffer negative reactions towards the team.

Hypothesis 1: There is a positive relationship between team-related objectives of performance management and relational coordination.

Performance Management Distinctiveness

Building on HRM system strength theory (Bowen & Ostroff, 2004), we further assume that performance management distinctiveness may complement the positive effect generated by team-related objectives of performance management on relational coordination.

HRM distinctiveness refers to how clear, understandable and relevant the HRM system is (Bowen & Ostroff, 2004). When a distinctive performance management system also has team-related objectives, employees will be more aware of which individual-level contextual behaviour is expected of them (Bowen & Ostroff, 2004). Consequently, an employee is likely to be more encouraged to demonstrate that behaviour (Kelley, 1976). Performance management distinctiveness also clarifies how personal efforts contribute to team or organizational performance. This is likely to further motivate employees to display the expected behaviour (Bowen & Ostroff, 2004). Thus, when team-related objectives of performance management are perceived as relevant, the likelihood of demonstrating relational coordination further increases.

Conversely, when performance management has team-related objectives but is not perceived as distinctive, it will be more difficult for the employee to understand which behaviour is desired and why it is relevant to demonstrate such behaviour (Bowen & Ostroff, 2004). Such low levels of distinctiveness are likely to obscure the message that performance management wants to convey, and given that employees only change their behaviour when they actually understand what is expected of them (Sanders et al., 2008), relational coordination is less likely to be fostered. Furthermore, the relevance of team-related behaviour or attitudes for the team or organization is not clarified, which is likely to decrease employees' motivation to actually demonstrate the demanded behaviour (Kelley, 1976). Hence, we assume that the effects of team-related objectives of performance management on relational coordination will become obscured when performance management is not implemented in a distinctive way.

Recent studies find direct, positive effects of distinctive HRM systems, such as a decrease in intentions to leave the organization (Sanders et al., 2008) and an increase in team effectiveness (Van Thielen et al., 2018).

Hypothesis 2: The positive relationship between team-related objectives of performance management and relational coordination is moderated by performance management distinctiveness such that the relationship is stronger when distinctiveness is high.

Explaining this Relationship through a Decreased Diffusion of Responsibility

We are also interested in how a decrease in the cognitive process of diffused responsibility for team objectives may explain the relationship between performance management and relational coordination. Alnuaimi et al. (2010) define the diffusion of responsibility as a cognitive process through which the responsibility for team output is transferred to others. Diffused responsibility obscures employees' personal agency in team objectives, consequently weakening their perception of personal responsibility for those team objectives (Alnuaimi et al., 2010).

We propose that team-related objectives of performance management, in conjunction with performance management distinctiveness, may be able to decrease the undesirable psychological mechanism of diffused responsibility for team objectives. First, when employees are made aware of how performance management is related to the team, individual employees' contributions to the team are made explicit (Aguinis, 2019). As suggested by goal-setting theory (Brown & Latham, 2002; Chen et al., 2011), such an explicit link to the team will increase employees' cognitive awareness of responsibility for the team. Furthermore, performance management distinctiveness is likely to clarify team-related objectives of performance management, increasing the likelihood that the intended message of performance management, i.e., a team-related effort, is understood correctly (Bowen & Ostroff, 2004). This will further

increase awareness of the team and is likely to increase the perception of personal responsibility for team objectives.

In addition, performance management distinctiveness clarifies the relevance of personal efforts to higher-level performance (Ostroff & Bowen, 2016). This is assumed to further decrease the psychological mechanism of diffusing responsibility (Alnuaimi et al., 2010). Thus, employees are more likely to understand the importance of the team and to contribute to team objectives, which evolve in more relational coordination (Grant & Parker, 2009). When employees are unaware of how their own efforts contribute to the team, they will feel less connected to the team and less willing to work towards team objectives (Bowen & Ostroff, 2004). The diffusion of responsibility has been found to explain the demonstration of less helping behaviour (Schwartz & Clausen, 1970) or more social loafing (Alnuaimi et al., 2010) in teams.

Hypothesis 3: The positive relationship of team-related objectives and performance management distinctiveness on relational coordination is mediated by a decrease in the diffusion of responsibility for team objectives.

METHOD

To test this theoretical model, we conducted two studies. The first cross-sectional survey study tested hypotheses 1 and 2. A second study with an experimental research design attempted to reconfirm hypotheses 1 and 2 and to test hypothesis 3.

Study 1

Study 1 is built upon data of employees working in police forces in Belgium. Some of these data were previously used (Authors, 2018); however, the previous study is related to a different

theoretical framework, and none of the variables of the theoretical framework are included in this study.

After receiving approval to conduct the survey at the Belgian Police Force, we contacted 3,391 employees working at 18 different police forces throughout Belgium in 2017. The questionnaires were distributed (1) through email containing a link to the online survey on the Qualtrics software interface or (2) by paper and pencil, depending on the preference of the police force. When requested, we visited the police force to explain the purpose of the study. In other cases, the police force itself notified the employees and asked them to participate.

We always guaranteed full anonymity when completing the questionnaires. We also ensured that respondents had a common frame of reference when answering questions about their team (1) by addressing the introduction letter or mail personally and mentioning the team in which the respondent worked and (2) by including introductory text within the questionnaire that indicated what is considered a team in a police context. We asked the respondents to think about the colleagues with whom they regularly cooperated and had work-related contact.

To prevent common method variance, we took into account several recommendations from Podsakoff, Mackenzie and Podsakoff (2012). We avoided priming effects by letting respondents answer the dependent variable first. We also separated questions by dividing them into different themes (i.e., team output, HR practices, demographic information). We constructed different scale properties by using different anchor labels. The items themselves were kept as simple, specific and concise as possible. We were attentive to item wording to avoid stimulating socially desirable responses. Reverse-scored items were included on some scales.

We ultimately obtained 1,068 fully completed respondent questionnaires, resulting in a response rate of 31.49%, which is higher than that of most research in policing (Rotenberg, Harrison, & Reeves, 2016). However, as there was still a high percentage of non-respondents,

we compared answers from respondents who completed the questionnaire with those who did not fully complete the survey to check for response bias. The results of these independent-sample t-tests did not raise any concerns. For instance, performance management distinctiveness had an insignificant simple t-test of -1.48 ($p = 0.12$) between incomplete surveys (mean = 3.78) and completed surveys (mean = 3.97), and relational coordination had an insignificant simple t-test of -0.69 ($p = 0.08$) between incomplete surveys (mean = 4.96) and completed surveys (mean = 5.00).

Most respondents performed an operational task related to work in uniform that involved the actual enforcement of the law (84%) rather than a support task, which relates to logistic, support and administrative tasks at the police force. This ratio corresponds to the overall figures of the Belgian Police (74.99% operational and 26.01% support staff) (Politie, 2017). Of the respondents, 59% had no education past high school. The gender ratio was almost the same as that of the Belgian Police (74.27% male and 26.73% female; Politie, 2017), 75.9% males and 24.1% females. On average, the respondents had a team tenure of 6.52 years ($SD = 5.6$) and were 44.41 years old ($SD = 9.64$).

Measures

We used validated scales translated from English to Dutch and French, the most commonly spoken languages in Belgium. The Dutch version was back-translated by a professional translator (Chi & Liang, 2013). The French questionnaire was compared with the Dutch questionnaire and critically evaluated by multiple bilingual experts.

Relational coordination. We used the validated scale of Gittell et al. (2010) consisting of seven questions that assess individual and team behaviour and create an overall picture of relational coordination. We adapted the original scale by using a seven-point Likert scale instead of a five-point scale, and we related the questions to one team instead of asking about each

workgroup involved in the process separately. An example item is “Does your team know the work that you perform?” (answers from one (“never”) to seven (“always”)).

Team-related objectives of performance management. We modified the scale of Decramer et al. (2012) as the original scale relates to individual tasks, behaviour or performance. We adjusted the scale to nine items referring to aspects that are discussed during performance management and are related to the team, which respondents could answer on a scale from one (“never”) to seven (“always”). As this is a relatively new scale, we performed a principal components exploratory factor analysis with varimax rotation (Ng, 2005) to validate our modified scale. The Kaiser-Meyer-Olkin measure was 0.88 and Bartlett’s test of sphericity was significant, indicating the adequacy of the total variance explained by one component, which was 73.45%. Every item loaded with a minimum of 0.83, so no items were excluded.

Performance management distinctiveness. We used part of the validated scale of Bednall, Sanders and Runhaar (2014) that reflects on the distinctiveness of HRM systems, as conceptualized by Bowen and Ostroff (2004), and contains six items. An example item is “The performance management system is clear”. The scale ranged from one (“totally disagree”) to seven (“totally agree”).

Control variables. Based on the relevant literature, we included several control variables. First, we controlled for the other characteristics of HRM system strength: consistency and consensus (Bowen & Ostroff, 2004). Bowen and Ostroff (2004) conceptualized the construct of HRM system strength based on three meta-features that establish a strong HRM system. The most important one is distinctiveness (Sanders & Yang, 2015), but the others may also affect our relationships. Performance management consistency relates to whether the goals that are set are the same aspects that are subsequently monitored and evaluated. This scale is also based on Bednall et al. (2014) and contains six items, such as “Performance management stimulates desired behaviour”. Consensus about performance management relates to the amount of

agreement with respect to performance management among different actors in the organization (e.g., the HR manager, the CEO, the line managers and the employees.). This construct was measured with four items from the same scale (Bednall et al., 2014); an example is “The ones who decide on performance management make decisions impartially”.

We also included the three-item scale of team interdependency developed by Morgeson and Humphrey (2006) as a control variable. In addition, we included some individual demographic characteristics that may affect relationships caused by HRM (Seibert, Wang, & Courtright, 2011), such as the gender (0= female; 1= male), as females are likely to self-report more positive outcomes (Alfes et al., 2013; Paauwe, 2004) and educational level (0= maximum educational level is high school; 1= higher educational studies completed) of the respondents.

RESULTS

Measurement model

To test the fit of the hypothesized model, i.e., whether the items actually measure what we aim to measure, we performed confirmatory factor analysis (CFA) with the software program R. The comparative fix index (CFI) of our hypothesized model of 0.83 showed a marginal fit (Chen et al., 2011). One reverse-scored item of relational coordination had a factor loading of only .44 (“When an error has been made, do people in your team blame each other rather than taking shared responsibility?”). When this item was excluded, the fit of the model significantly improved (chi-square diff. 114, $p < .00$). The CFI of .84 remained marginal, but the chi-square of 3,236.19 was acceptable, and the SRMR of .05 was good (Hu, Stewart-Brown, Twigg, & Weich, 2007). The significantly better fit with the one-factor model (chi-square=8,664.56, chi-square diff.=5,313.1, CFI=0.56; SRMR=0.15) also reduced possible issues of common method

bias (Podsakoff, Mackenzie, Paine, & Bachrach, 2003). Table 1 provides the correlations and descriptive information of the continuous variables.

The Structural Model

We performed multiple linear regression analyses to test our hypotheses with the software program SPSS, which we complemented with the macro “processes” of Hayes (2013). This macro provides an easier and more advanced technique, including a bootstrapping approach, to estimate and probe for interactions in moderation analyses (Hayes, 2013).

Model 1 of Table 2 reports the effects of the control variables on relational coordination. When employees perceived high levels of interdependency or consensus, they were more likely on average to experience relational coordination. Male police officers reported experiencing higher levels of relational coordination from their team members than their female colleagues. This effect was marginally significant.

In model 2 of Table 2, we find the results for the first hypothesis. As the coefficient for team-related objectives of performance management was significantly related to relational coordination ($B=0.09$ ($SD=0.02$)), we can confirm hypothesis 1.

Model 3 of Table 2 shows a significant effect of the interaction term of performance management team-related objectives and distinctiveness ($B=0.03$ ($SD=0.02$)). To interpret this finding, we plotted the results in Figure 1 by calculating the regions of significance following the Johnson-Neymann technique (Preacher, Curran, & Bauer, 2006). We found that the relationship between team-related objectives of performance management and relational coordination significantly increased in positivity when the value of performance management distinctiveness exceeded -1.64 (2.40 in absolute values). These results confirm hypothesis 2.

Insert Figure 1 around here

Additional Analyses

As the data may be affected by team membership, we additionally calculated the intraclass correlations (ICC) and the within-group interrater reliability statistics (Rwg) of our variables. Based on the organogram of each police office, we were able to cluster the data into teams. The ICC(1)-values, i.e., the proportion of variance due to team membership, were low for all measures, varying between 0.04 and 0.08. The ICC(2)-values, representing the reliability of the group means, varied between 0.34 and 0.52, which are also well below the conventional cut-off value of 0.70 (Bliese & Ployhart, 2002). The Rwg values indicate agreement among team members in their responses, which we calculated with the tool of Biemann, Cole and Voetpel (2012). Only performance management distinctiveness had an acceptably high Rwg value (0.82) (Bliese & Ployhart, 2002; James, Demaree, & Wolf, 1993), but due to the low reliability of this group mean (ICC(2)=0.34), aggregation was still not preferred.

The appropriateness of analysing our model at the individual level was reconfirmed by running within-between specifications when using HLM. Controlling for the cluster means of the predicting variables on the team level resulted in the same significant coefficient estimates on the individual level, confirming no issues of endogeneity caused by higher-level effects (MCNeish & Kelley, 2018). Finally, multicollinearity was not a concern in our analyses as the VIF values never exceeded 3.58.

Insert Tables 1 and 2 around here

DISCUSSION OF STUDY 1

This first study demonstrates that the interaction between team-related objectives of performance management and its distinctiveness has a significant effect on relational coordination. However, the study is unable to exclude reverse causality, and common method variance may also be an issue in this study. In addition, we have not yet tested the mediating aspect of the diffusion of responsibility. Our second study attempts to overcome these limitations (1) by using a vignette experiment to test the causality of the relationships and (2) by exploring how a decrease in diffused responsibilities may explain the relationship between performance management and relational coordination.

STUDY 2

Procedure, Design and Materials

A vignette experiment consists of a short scenario in which respondents imagine themselves working while answering the subsequent questions (Aguinis & Bradley, 2014). Our vignette experiment adopted a 2x2 between-subject factorial design. We developed four scenarios that differed in performance management content (i.e., team-related or individual-oriented) and process (i.e., (not) distinctive). The scenarios were based on the related theories of HRM system strength and goal setting (Bowen & Ostroff, 2004; Latham & Brown, 2002) and are included in the appendix.

We first tested the different scenarios of our vignette study in a group of master's students (N = 53). The manipulation indicated that the scenarios of individual versus team-related objectives differed significantly ($t(40) = -2.26$, $p = 0.03$). The credibility of the condition of performance management distinctiveness was tested with the scale of Bednall et al. (2014), similar to the first study, also demonstrating that a performance management system with high distinctiveness (mean = 5.09 ($SD = 0.76$)) differed significantly from a system with low distinctiveness (mean = 3.26 ($SD = 1.07$), $t(42) = 6.41$, $p = .00$).

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To collect data from police officers, we contacted Dutch-speaking police departments that had not yet participated in our research. We used the online interface of Qualtrics and approached participants by mail after receiving agreement from the management of eight local police departments. To direct respondents to the mindset of working in a team, we (1) first provided our definition of a team (i.e., “your team consists of those people with whom you work every day, on the road or at the office”) and (2) asked them to indicate the number of team members with whom they worked. After this introduction, Qualtrics randomly assigned people to one scenario such that each scenario was read by an equal number of respondents. After reading the scenario, the participants were redirected to the questions that they needed to answer as if they were actually confronted with the situation described.

Measurements. To measure relational coordination, we reused the same scale used in the previous study (Cronbach’s alpha=.86). Items were slightly adjusted to have a clear reference to individuals’ own behaviour, thus rendering the findings in study 1 more robust in relation to a change in *individual* behaviour. The diffusion of responsibility was based on the scale developed by Alnuaimi et al. (2010), containing four items. An example item is “I would experience limited responsibility for achieving team objectives”, measured on a scale from one (“totally disagree”) to seven (“totally agree”). We excluded one item (“In the described situation, I would find it unfair to blame an individual group member who had only a small part in the group task if the task was not performed well”) to generate a reliable scale, leading to a Cronbach’s alpha of 0.71.

Control variables We chose most of the same control variables used in our first study. We controlled for education level (0=no higher education; 1=higher education) and gender (0=female; 1=male), which may affect relationships caused by HRM (Seibert et al., 2011). Instead of measuring team interdependency with a scale such as the ones used in the first study,

we asked about the number of colleagues with whom they worked on a daily basis, which, based on the theory, is an important proxy for interdependency (Acuña, Gómez, & Juristo, 2009). We excluded respondents who indicated zero or one on this question as teams require a larger membership (Kozlowski & Bell, 2003). We did not include performance management consistency and consensus as control variables for these analyses as these characteristics of performance management are not included and not manipulated in the scenarios of this experiment. The focus lies on how distinctive (or not distinctive) performance management is perceived by the respondents, which is the most crucial aspect of HRM system strength following Bowen and Ostroff (2004) and has been validated as a separate condition in previous experiments (Bauwens, 2019; Van Waeyenberg, 2018). Finally, to further increase the robustness of our initial findings, we added the control variable of employees' tasks (0=support staff; 1=operational staff). Different tasks require different interactions and cooperation from employees (Kozlowski & Ilgen, 2006). By controlling for the differences in tasks, we were able to provide statements about performance management effectiveness across different types of teamwork at the police force.

RESULTS

Test of measurement model. The CFA of the two-factor model, including both the diffusion of responsibility and relational coordination, showed a satisfactory fit (CFI=0.92, SRMR=0.07) that was better than the one-factor model (CFI=0.82 and SRMR=0.10) and posed no reason for concern about common method bias (Podsakoff et al., 2013).

Participants. The sample consisted of police officers working in Flanders, the Dutch-speaking part of Belgium. Of the 241 surveys that were initiated, 108 were completed. Of the respondents, 29% were female, 60.7% had no higher education, and their average age was 40.82 years. Of the sample, 65% worked as operational police officers in uniform instead of providing

supportive or logistical tasks at the police force. As we also had incomplete surveys in this second study, we checked for non-response bias by comparing the completed surveys with the incomplete surveys. There was no reason for concern because relational coordination had an insignificant simple t-test of -1.70 ($p = .09$) between incomplete surveys (mean = 4.95) and completed surveys (mean = 5.23), and diffusion of responsibility had an insignificant simple t-test of -1.37 ($p = .17$) between incomplete surveys (mean = 3.93) and completed surveys (mean = 4.17).

Manipulation check. We asked whether the objectives were more individually related or team-related. An independent-sample t-test indicated a significant difference in responses for this manipulation ($t(107)=5.26, p=.00$). The majority of the respondents indicated that performance management was related to the appropriate content. To check the manipulation of performance management distinctiveness, we used the same scale used in Study 1 (Bednall et al., 2014) (Cronbach's $\alpha=.91$). Respondents who read the scenario with low performance management distinctiveness reported a mean ($M=4.08, SD=1.11$) that was significantly lower ($t(104)=2.6; p=.00$) than that of the group that read a scenario describing a highly distinctive performance management system ($M=5.31, SD=0.97$).

We conducted a 2 x 2 analysis of variance to examine whether team-related objectives of performance management (0=no team-related objectives; 1=team-related objectives) and performance management distinctiveness (0=no distinctiveness; 1=distinctive) interacted with relational coordination. Building on the estimated means corrected by the covariance of the control variables, both main effects were insignificant. The participants in the team-related objectives condition did not report significantly ($F(97)= 1.07, p = 0.30$) more relational coordination ($M=5.35, SD=0.11$) than those with an individual-related content of performance management ($M=5.18, SD=0.10$). We were not statistically able to reconfirm hypothesis 1, but

the higher mean for those who read the team-related objectives vignette indicates some type of positive effect.

We found support for hypothesis 2. The information on the analysis of variance and the eta-squared statistics can be found in Table 3. We conducted pairwise comparisons based on the estimated marginal means of the moderator. We identified a significant difference ($F = 6.07$, $\eta^2 = 0.06$, $p = .02$) in means between team-related objectives (mean=5.43) or the lack thereof (mean= 4.87) when there was no performance management distinctiveness $| 0.56 |$ ($SE=0.24$, $p=0.02$). When performance management distinctiveness was high, no significant difference was detected for the content of performance management $| 0.23 |$ ($SE=0.21$, $p=0.27$). In the condition in which there were no team-related objectives, we observed a significant difference when distinctiveness was present (mean=5.49) or not $| 0.61 |$ ($SE=0.22$, $p=.01$). In the team-related condition, there were no significant differences $| -0.17 |$ ($SE=0.23$, $p=0.46$). These results correspond to some extent to those of Study 1. In both situations, the absence of team-related objectives and performance management distinctiveness was the most negative. However, the survey demonstrated that when distinctiveness exceeded an absolute value of 2.40 the relationship between team-related objectives and relational coordination became significantly more positive, and the experiment demonstrated a buffer effect in which the absence of both factors was detrimental for relational coordination.

We also aimed to examine whether lower diffusion of responsibility mediates the relationship between the interaction of team-related objectives, performance management distinctiveness and relational coordination. We used the PROCESS macro for SPSS (Hayes, 2013) to examine moderated mediation or possible mediated moderation. M 7 and 8 of the macros that test such complex models (Hayes, 2013) demonstrated insignificant relationships. M7 revealed that performance management distinctiveness did not moderate the relationship between team-related objectives and diffusion of responsibility ($B=0.09$ ($SD=0.41$), $p=.83$). Diffusion of

responsibility had a direct effect on relational coordination ($B=-0.28$ ($SD=0.07$), $p=.00$). M8 did not reveal a moderating effect on diffusion of responsibility ($B=0.09$ ($SD=0.41$), $p=.82$) or indirect mediation ($B=-0.02$ ($SD=0.13$), 95% conf. interval $[-.26;.21]$ between team-related objectives and the distinctiveness of performance management and relational coordination. As such, hypothesis 3 was not supported.

Insert Table 3 around here.

Additional Analyses

When testing for hypothesis 3, we observed a significant effect between performance management distinctiveness and the diffusion of responsibility ($B=-0.49$ ($SD=0.20$), $p=.02$). Therefore, we tested for an indirect relationship among performance management distinctiveness, the diffusion of responsibility and relational coordination. M4 of the PROCESS macro (Hayes, 2013) indicated a significant effect between performance management distinctiveness and diffusion of responsibility ($B=-0.45$ ($SD=0.20$), $p=0.03$), which in turn had a negative effect on relational coordination ($B=-0.29$ ($SD=0.15$), $p=.00$). As the 95% confidence interval did not include zero $[0.02;0.33]$, a significant indirect relationship was statistically confirmed. The direct effect was insignificant ($B=0.12$ ($SD=0.15$), $p=.43$), which corresponds to the results of Study 1. Similar effects for team-related objectives of performance management were not found ($B=0.12$ ($SD=0.15$), $p=.46$).

DISCUSSION

This paper examines whether performance management fosters relational coordination through a decreased diffusion of responsibility for team objectives. By means of two studies, we find that an interaction between team-related objectives of performance management and its distinctiveness affects relational coordination. In addition, we are able to confirm an indirect, positive relationship among performance management distinctiveness, shared responsibility and relational coordination.

Theoretical Implications

Performance management has been studied extensively and in great detail. However, previous studies consider performance management and its effects in traditional work settings (Brown et al., 2018), ignoring the changing work environment of increased collaboration and service-oriented tasks (Gittell et al., 2010). This study complements the current literature by explicitly focusing on relational coordination as an important form of human capital for service-oriented organizations that demand high levels of collaboration among employees.

First, this study contributes to the broader HRM system research field by responding to the recent call by Bowen and Ostroff (2016). This call advocated a complementary approach to the study of HRM systems by considering their content and process simultaneously. Our theoretical model explores whether team-related objectives of performance management interact with performance management distinctiveness to foster relational coordination. Both studies indicate that performance management content and process interact to affect relational coordination. We are able to confirm that content matters for performance management and should be considered simultaneously with its implementation. We contribute to goal-setting theory by (1) demonstrating the importance of team-related objectives for relational coordination and (2) testing this model in an actual work setting, complementing the experiments conducted among students (Latham & Brown, 2002).

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Second, we include the diffusion of responsibility for team objectives as an explanatory cognitive mechanism between performance management and relational coordination. There is no effect of the interaction on diffusion of responsibility. A possible theoretical explanation may be that team-related objectives of performance management relate to a different type of performance than the performance linked to the diffusion of responsibility for team objectives. Team-related objectives of performance management are related to the *individual-level* contextual contribution to the team (Aguinis, 2019). For instance, providing more feedback to others or communicating more with other team members are linked to a change in an individual’s mindset towards the team. In contrast, the diffusion of responsibility is most closely related to overall team objectives (Aluaini et al., 2011), such as having a high trust environment in the team or increasing the overall sales performance of the team. Due to the proven distinction between these types of performance (Aguinis, 2019), the diffusion of responsibility is found to not be the best explanatory mechanism in our theoretical model. This finding signals the need for careful content-related decisions when performance management is examined. We find a positive indirect relationship among performance management distinctiveness, diffused responsibility and relational coordination, thus contributing to the literature on why performance management implementation generates positive effects.

Third, this paper also contributes to the literature on relational coordination, which is an important predictor of team performance. We can theoretically and empirically confirm that despite earlier assumptions (Mendibil & MacBryde, 2006), performance management is suitable for collaborative, service-oriented work settings. We also contribute to relational coordination theory, which holds that cross-functional accountability in the form of performance management strengthens relational coordination (Gittell et al., 2010). This paper proposes and empirically confirms a deeper theoretical explanation of how performance management supports relational coordination (Gittell, 2000; McDermott et al., 2018).

Practical Contributions

Relational coordination has recently increased in importance as organizations face an increased need for service orientation, which requires complex collaborations. Relational coordination is found to foster team performance by optimizing relational and communicational ties. When organizations desire more relational coordination from their work teams, they should focus on performance management and implement it to foster relational coordination. These goals can be achieved by following recommendations.

Building on our findings, mechanisms that incorporate team-related objectives into performance management will benefit relational coordination. This means that individual-level contextual performance should be emphasized in the performance management process (Aguinis, 2019). In addition, performance management should be communicated clearly and understandably by every HR professional in the organization. As a result, distinctive performance management can emerge in the organization, which is found to benefit and strengthen the relationship between performance management and relational coordination.

Even though performance management is often determined at a higher level, middle management (i.e., supervisors, line managers and team leaders) must actually implement it. Therefore, a substantial amount of attention should be given to middle managers when striving to effectively implement performance management (Ribeiro, Coelho, & Gomes, 2011).

Building on our findings, training should be provided to middle managers with the objective of increasing these leaders' ability to incorporate team-related objectives into performance management. In addition, team leaders should be trained in implementing performance management in a clear, understandable and relevant way. As such, the likelihood increases that employees are provided with effective performance management techniques, thus fostering relational coordination.

Limitations and Further Research

To interpret our results appropriately, we indicate the limitations of the paper and highlight further research that can overcome these limitations. First, the results of the moderation are both significant but slightly different in both studies. The survey indicates a strengthened effect of the relationship between team-related objectives and relational coordination when performance management distinctiveness increases in value. The experiment indicates more of a buffer effect of performance management distinctiveness. We attempt to explain these differences in two ways. (1) A lack of nuance in the experiment restricts us from comparing means in absolute terms (i.e., team-related objectives or not or a distinctive performance management system or not). (2) The experiment compares individual with team-related objectives, whereas the survey measures the degree of team-related objectives. This difference may explain why the condition without team-related objectives generates such significantly different effects of performance management distinctiveness. An experimental vignette design incorporating more degrees of team-related objectives may accurately reproduce the situations encountered by employees. Furthermore, we included the diffusion of responsibility as a mediator between performance management and relational coordination but were unable to identify a mediating effect. A diffusion of responsibility may not be the best way to explain the effect of team-related objectives of performance management on relational coordination. We therefore advocate the consideration of other possible cognitive mediating mechanisms to explain why performance management enables relational coordination. For instance, self-efficacy for teamwork may explain why team-related objectives of performance management foster teamwork behaviour (Hertel, Konradt, & Orlikowski, 2004). By highlighting the individual contribution of employees through a distinctive performance management system with team-related objectives, employees may feel more confident in their own teamwork behaviour and, as such, may be

more inclined to demonstrate relational coordination. Such research may further shed light on how performance management changes the behaviour of employees on a team.

CONCLUSION

This study examines whether and how performance management enables relational coordination. Building on goal-setting theory and HRM system strength theory, two empirical studies find a relationship between team-related objectives of performance management in conjunction with performance management distinctiveness and relational coordination. The second study adds to these findings by indicating that performance management distinctiveness is also indirectly related to relational coordination through a decrease in the diffusion of responsibility. As such, the study confirms that an appropriate design of performance management can strengthen employees' relational coordination.

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Table 1. Study 1: Correlation table

	M	SD	1	2	3	4	5	6
1. Relational coordination	5.10	1.01	(.89)					
2. Team-related objectives of performance management	3.98	1.28	.37**	(.96)				
3. Performance management distinctiveness	4.05	1.16	.35**	.57**	(.91)			
4. Performance management consistency	3.59	1.36	.28**	.47**	.80**	(.95)		
5. Performance management consensus	3.68	1.28	.36**	.46**	.75**	.75**	(.86)	
6. Team interdependency	5.14	1.15	.64**	.33**	.32**	.27**	.32**	(.74)

N=1068; ** p-value < .01 (2-tailed). Cronbach's alphas of the scales are reported between parentheses.

Table 2. Study 1: Regression analyses for the outcome relational coordination

	Relational coordination		
	Model 1	Model 2	Model 3
Intercept	-0.09(0.05)	-0.08(0.05)	2.15(0.22)***
Team interdependency	0.51(0.02)***	0.48(0.02)***	0.48(0.02)***
Gender	0.11(0.05)†	0.09(0.06)	0.09(0.05)
Education	0.02(0.05)	0.02(0.05)	0.02(0.05)
Performance management consistency	0.01(0.03)	-0.05(0.03)	-0.05(0.03)
Performance management consensus	0.13(0.03)***	0.10(0.03)***	0.09(0.03)**
Team-related objectives of performance management		0.09(0.02)***	-0.01(0.81)
Performance management distinctiveness		0.06(0.04)	-0.03(0.06)
Team-related objectives * performance management distinctiveness			0.03(0.02)*
F-value	162.58***	122.95***	108.47***
Adjusted R ²	0.43	0.44	0.45

N=1,068; p-value *** <.000; ** < .01; * < 0.05; †< .10.

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Table 3. Study 2: analysis of variance results for relational coordination

Variable	F	η^2
Higher education	1.28	.01
Gender	2.75	.03
Supportive or Operational task	0.00	.00
Team size	0.39	.00
Team-related objectives of performance management	1.07	.01
Performance management distinctiveness	1.93	.02
Team-related objectives * Performance management distinctiveness	6.07	.06*

Note. N = 108; p-value *** <.000; ** < .01; * < 0.05; † < .10.

Figure 1. Interaction between a team-related content of performance management and performance management distinctiveness on relational coordination (Johnson-Neyman technique)

