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Setting the Tone for the Team: A Multi-Level Analysis of Managerial Control, Peer Control, and their Consequences for Job Satisfaction and Team Performance

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ABSTRACT In this study, we develop a multi-level theoretical framework linking antecedents and outcomes of peer control, defined as team members at the same hierarchical level noticing and responding to their peers' behaviour or performance. Analysing multi-level data from 356 volunteers and 58 regional teams in a non-profit organization, we examine top-down managerial controls as antecedents of lateral peer control, both directly (i.e., monitoring and responding directly to peers) and indirectly (i.e., gossiping about and avoiding underperforming peers), and peer control's effects on individual- and team-level outcomes. In line with our predictions, we find formal managerial control and clan control to be antecedents of peer control, albeit with differential effects on direct and indirect peer control. We also find a significant association between peer control and both individual-level job satisfaction and team-level performance, but again, with crucial differences between the two types of peer controls and the two outcomes. Our study contributes to the development of a better theoretical understanding of peer control, sheds light on inconsistent findings across prior studies, provides novel insights into how team leaders can influence team members' individual satisfaction and team-level performance via peer control, and reveals important trade-offs with regards to peer control's influence on individual- and team-level outcomes.

Keywords: formal and informal (clan) control, job satisfaction, multi-level analysis, non-profit organizations, organizational control, peer control, team performance, volunteers

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INTRODUCTION

Organizational control addresses the fundamental managerial problem of aligning employee activities with organizational goals (De Jong et al., 2014; Sitkin et al., 2010). Recent trends in organizations toward flatter hierarchies and the increasing use of teams, electronic communication, and social media (Colbert et al., 2016; Kirsch et al., 2010; Loughry, 2010) have brought organizational control back into the spotlight (Cardinal et al., 2017). Contemporary organizational control work falls broadly into two literature streams. The first stream is focused on examining combinations of different types of top-down managerial control, both formal (i.e., measuring and rewarding team members' behaviour or the outcomes of this behaviour) and informal (i.e., establishing shared norms, values, and vision to guide behaviours), and their influence on performance outcomes (e.g., Cardinal et al., 2004, 2010; Kreutzer et al., 2015, 2016; ; Sihag and Rijsdijk, 2019). The second stream is focused on lateral peer control among people who are at the same organizational level and who thus have no formal authority over one another (e.g., De Jong et al., 2014; De Klepper et al., 2016; Lange, 2008; Loughry, 2010; Loughry and Tosi, 2008; Stewart et al., 2012).

Despite the important insights these studies have generated, how managerial and peer controls influence each other, and what their individual- and team-level outcomes are, remain open questions for which little theoretical or empirical guidance exists. While some studies have found that managerial and peer controls can serve as substitutes for each other (e.g., Loughry and Tosi, 2008), others suggest that managerial control choices serve as antecedents of peer control (De Jong et al., 2014; Kirsch et al., 2010; Lange, 2008; Loughry, 2010). Moreover, peer control's effect on team-level outcomes remains ambiguous, with prior studies finding positive effects (Loughry and Tosi, 2008; Stewart et al., 2012), non-significant effects (Loughry and Tosi, 2008), and contingent effects (Kohli and Jaworski, 1994; Welbourne and Ferrante, 2008) of peer control on team performance. Peer control's effects on individual-level outcomes, such as job satisfaction, are similarly ambiguous (see, e.g., Kohli and Jaworski, 1994). Lastly, with one notable exception (Stewart et al., 2012), prior peer control studies have focused on either the individual or the team level, despite recurring calls for 'more research on how control functions at different levels of analysis and how its determinants and effects cross levels' (Sitkin et al., 2010, p. 13).

Complementing and extending both literature streams, we focus on peer controls and their antecedents and consequences at the individual and team level. We examine formal managerial control and clan control as antecedents of direct (i.e., monitoring and responding directly to peers) and indirect peer control (i.e., gossiping about and avoiding underperforming peers). We further examine how peer control affects individual satisfaction and team performance. We offer three contributions: First, by providing novel insights into both its antecedents and outcomes, we contribute to a better theoretical understanding of peer control, which is of increasing relevance in team-based and knowledge-intensive work environments where 'a much greater emphasis is placed on control within rather than from outside the group' (Manz and Sims, 1987, p. 107), and where 'evaluation processes will need to evolve to include more peer- and project-based reviews, as opposed to the lines of traditional reporting' (Beardsley et al., 2006, p. 61).

Second, acknowledging Sewell's (1998, p. 410) conclusion that 'vertical surveillance […] cannot be separated from the horizontal surveillance of peer group scrutiny', this is one of the first studies that simultaneously examine peer and managerial controls (see, Loughry and Tosi, 2008, for an exception). In our theorizing, however, we complement and extend this study's finding of peer and formal managerial control as substitutes for each other in their performance effects by analysing the role of managerial controls as antecedents of peer control. We address the question of whether and to what extent organizational leaders can influence peer control by appropriately designing managerial controls. We thus address 'the need for traditional control theory to be significantly – even radically – rethought to account for new organizational forms, non-hierarchical sources of control; and the use of multifaceted control choices by managers, peers, and others' (Sitkin et al., 2010, p. 13).

Third, by examining the effects of organizational control on both individual-level job satisfaction and team-level performance, this is one of very few multi-level organizational control studies (see Stewart et al., 2012, for a notable exception). We not only answer recurring calls to include individual-level outcomes into organizational control research (Loughry and Tosi, 2008; Sitkin et al., 2010), our finding that peer control has differential effects at the individual and team level further highlights the need to examine organizational control at different levels of analysis. Combining these findings with the antecedent role of managerial control reveals important insights into how team leaders can influence their team members' job satisfaction and team performance via peer control, but also highlights a potential trade-off between achieving positive outcomes at the individual versus the team level: While team leaders have the power to influence peer control within their teams with their choice of managerial controls, our findings suggest that a focus on enhancing job satisfaction among team members can come at the expense of team performance, and vice versa. Our multilevel theory and findings, therefore, help 'illuminate the steps organizational actors may take, individually and collectively, to yield organizational benefits' (Klein et al., 1999, p. 243), and the trade-offs we uncover between levels add an important nuance to both individual-level and team-level studies of organizational control.

THEORY AND HYPOTHESES

We focus on team member-designed and -implemented peer control, which occurs laterally between employees with no formal authority over one another (De Jong et al., 2014; Loughry, 2010; Loughry and Tosi, 2008; Stewart et al., 2012). Loughry and Tosi (2008, pp. 885–6) have shown that peer control comprises two distinct dimensions: It can be *direct* when it 'involves noticing peers' behaviour or results and responding directly and openly, such as praising team members when they do a good job, correcting team members when they make mistakes, reporting dishonest team members, and discussing how everyone does the job', or *indirect*, 'when workers gossip about or avoid poorly performing peers'. Like other forms of control, peer control serves both a monitoring function by giving organizations better information about team members' behaviour and performance – thereby reducing opportunities to engage in dysfunctional behaviour – and an incentive

function by motivating employees to engage in behaviours beneficial for the organization (Loughry and Tosi, 2008).

Peer control is increasingly common across all types of organizations (Kirkman and Rosen, 1999; Loughry, 2010). This proliferation can be attributed to the greater use of teams and self-managed work groups, which has increased the importance of peers when it comes to directing and motivating work in organizations (Loughry, 2010). The increasingly complex nature of team work, however, makes it more difficult for team leaders to identify members' individual contributions (Kirsch, 2004). Peers, on the other hand, enjoy information advantages over their team leaders and can bring these to bear in a peer control regime (Fama and Jensen, 1983; Welbourne and Ferrante, 2008). Moreover, email and social media provide more opportunities to influence large numbers of team members efficiently and in a timely manner, thus further expanding peer control's reach (Kirsch et al., 2010). And lastly, whereas economic and competitive conditions might constrain organizations' abilities to offer substantive monetary incentives, informal rewards and sanctions among team members are not only free but exert a meaningful influence on team members' motivations (Loughry, 2010).

In spite of peer control's increasing importance in organizational practice and the recent surge in academic interest (e.g., De Jong et al., 2014; Stewart et al., 2012), our theoretical understanding of this topic is still limited, especially when it comes to antecedents and consequences. In the following section, we will develop and test a theoretical framework linking direct and indirect peer control to its antecedents and outcomes. For antecedents, we follow the traditional view of organizational control – rooted in organization and agency theory – which has long distinguished between two main types of control. *Formal managerial control* relies either on the direct surveillance of employee behaviour or on measuring the outcomes of employee behaviour, coupled with rewards for good and sanctions for inacceptable behaviour and performance (Eisenhardt, 1985; Ouchi, 1979; Ouchi and Maguire, 1975). Informal managerial control or *clan control* emphasizes the role of shared norms, values, and vision in guiding and influencing behaviour, such that individual objectives become congruent with the organization's goals (Kirsch, 1996; Ouchi, 1979). While adherence to such shared norms and values is enforced by both team leaders and peers (Kirsch, 2004), many important parts of clan control, such as socialization using rituals and ceremonies, are under the control of hierarchical management in most organizations (Loughry, 2010). That is, team leaders facilitate and institutionalize an organization's clan control (Kirsch et al., 2010; Turner and Makhija, 2006), which is why we subsumed it under top-down managerial control for our study. Our focus on the two most prominent managerial control types in the literature (see Cardinal et al., 2017; Sihag and Rijsdijk, 2019, for recent reviews) allows us to examine the extent to which team leaders can influence peer control by designing their organization's managerial control regimes. Each type represents a different focus of organizational control – i.e., surveillance of behaviour/outcomes versus socialization – , each has its own advantages and disadvantages (e.g., Kreutzer et al., 2015), and each has been deemed more or less appropriate for different organizational settings (e.g., Eisenhardt, 1985). These differences would suggest different theoretical logics and mechanisms responsible for their effects on peer control.

Regarding the outcomes of peer control, we acknowledge the multi-level nature of organizational control (Cardinal et al., 2017; Loughry and Tosi, 2008; Sitkin et al., 2010; Stewart et al., 2012). At the individual level, we focus on *job satisfaction*, defined as 'a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences' (Locke, 1976, p. 1304). Besides being a crucial outcome in and of itself, job satisfaction is also an important determinant of people's intentions to remain at their current organization and has been identified as particularly relevant in the context of peer control (Boezeman and Ellemers, 2009; Loughry, 2010). At the team level, we follow recent work on peer control (De Jong et al., 2014; Loughry and Tosi, 2008; Stewart et al., 2012) and focus on *team performance*, defined as the extent to which a team's productive output meets, or exceeds, the performance standards of those who review and/or receive the output (Hackman, 1987).

Managerial Control as Antecedent of Peer Control

Classic work on the antecedents of organizational control has focused on the observability of controlees' behaviours – i.e., understanding the process through which inputs are transformed into outputs – and on the measurability of the outcomes of this process (Eisenhardt, 1985; Ouchi, 1979). As means-ends relationships become more ambiguous, process or behaviour control becomes less effective; and as the reliability and validity of outcome measures decrease, outcome control is deemed infeasible. If neither behaviour nor outcomes are observable, informal or clan control becomes the only feasible control choice (Ouchi, 1979). As a result, these early scholars have generally advocated for one type of control over the other, dependent on the characteristics of the tasks people perform. More recent work has argued, however, that this focus on task characteristics only partially explains the use and effectiveness of different control types (Cardinal et al., 2017). Control is an inherently social or team phenomenon, and thus the teams' social context plays a role. While peer control is ultimately exercised by the social interactions between team members, team leaders can influence it (e.g., Barker, 1993; Lange, 2008; Loughry, 2010): They can '*initiate* peer controls by prescribing norms of appropriate behavior for their teams, *authorize* peer control by delegating control responsibilities to their teams, or *facilitate* peer control opportunities by restructuring team work patterns' (De Jong et al., 2014, p. 1704, emphases in original). Peer control is, therefore, an outcome of managerial choices, and '[t]he role of team members primarily lies in the subsequent stages and involves accepting, taking part in, and maintaining peer control once it is in place' (De Jong et al., 2014, p. 1704). Building on this line of reasoning, we examine whether and to what extent peer control is influenced by the organizational and social context set by formal managerial and clan control.

Formal managerial control. By examining formal managerial control as an antecedent of peer control, we deviate from prior research's predominant conceptualization of peer and managerial controls as substitutes for each other (e.g., Fama and Jensen, 1983). In line with this substitution logic, Loughry and Tosi (2008) found support for their hypothesis that peer and formal managerial controls are equifinal in their effects on problem-free performance. According to this logic, combining formal managerial control

with peer control would offer few additional benefits for providing constraints, deterring opportunism, and offering information.

There is an equally plausible alternative that prior empirical research has largely overlooked, however, namely formal managerial control acting as an antecedent of peer control. In support of this alternative view, Loughry (2010) argues that 'supervisors' attitudes are likely to influence the types and amounts of peer control that emerge in work groups', and prior research has found a strong association between managerial and peer control (Loughry and Tosi, 2008). Other work has shown that team members tend to mimic their team leader's behaviours, at least to a certain extent. In particular, building on social learning theory (Badura, 1977), we expect that team leaders exercising formal managerial control will be regarded as role models by team members and will influence whether and how they engage in peer control.

With regards to direct peer control, when team leaders specify procedures, work assignments, and concrete outcome goals, they also focus team members' attention on these issues (Ocasio and Wohlgezogen, 2010), thereby inducing the team members to follow their example. This focus likely triggers discussions among team members about how work gets done within the team, and how to improve these processes, thereby serving as a catalyst for direct peer control. In support of this argument, Hughes (2004, p. 285) found in his study of new public sector workers that 'while they were not directly involved in the participants' learning, the supervisors' influence on learning was nevertheless extensive. It was through the routine formal managerial functions of delegating tasks, setting expectations, requiring accountability and providing feedback on work performed'. Similarly, in their study of two Fortune 500 companies' salespeople, Kohli and colleagues (1998) found that formal managerial controls, by devoting increased attention to and providing feedback on task-oriented and performance-oriented behaviours, encourage employees to engage in learning and improvement efforts. The increased learning orientation, in turn, provides a fertile ground for peers to interact, observe each other's behaviours and their success or failure, and openly discuss how work gets done – in other words, for direct peer control.

Moreover, formal managerial control tends to entail a high level of transparency; the procedures to be followed and outcomes to be achieved are explicitly defined, communicated to each team member, and subsequently monitored and incentivized. Such transparency helps reduce ambiguity around team leaders' procedural and outcome expectations for the team and promote the same values throughout the team. In a corporate context, for example, Kownatzki et al. (2013) found that more transparent decision processes aligned corporate and strategic business unit-level interests and fast-tracked decision processes. Since team leaders serve as role models, team members may abstain from indirect peer control, which, by definition, is not transparent and open, but happens behind people's backs (Loughry and Tosi, 2008). We, therefore, propose:

> *Hypothesis 1*: Formal managerial control is (a) positively related to direct peer control and (b) negatively related to indirect peer control

Clan control. While the link between clan control and peer control remains ambiguous in prior work, we expect that the more a common vision, norms, and goals guide team

members' behaviours, and the more committed the individual members are to the team as a result of high levels of clan control (Kirsch, 1996), the more they will monitor whether their peers act according to these norms, the more they will praise them for aligned behaviour, and the more they will correct them in case they deviate. Similarly, higher levels of clan control help cultivate a shared understanding and language among team members (Kirsch, 1996), and therefore facilitate more productive discussions about how work gets done – and should be done – within a team (Sihag and Rijsdijk, 2019).

We further expect clan control to have a negative association with indirect peer control. In particular, the establishment of a common vision, norms, and goals among team members should be associated with higher mutual trust (Choudhury and Sabherwal, 2003; Huang et al., 2005), stronger commitment (Kirsch, 1996), reciprocity, and social cohesion within the team (Ouchi, 1979). Rituals and ceremonies further serve to identify and reinforce acceptable behaviours among team members, and individuals are rewarded for acting in accordance with the team's values (Kirsch, 1996). Such socialization and reinforcement of acceptable behaviours are targeted at effectively eliminating goal incongruence between team members (Ouchi, 1979) and, at the very least, will lead to team members becoming more homogenous in terms of goals, norms, and ways of operating. In sum, then, trust, commitment, and cohesion as a result of clan control should reduce the need for team members to resort to indirect peer control, i.e., gossiping about peers' non-performance and about peers with different approaches, as well as avoiding deviant peers. Formally:

> *Hypothesis 2*: Clan control is (a) positively related to direct peer control and (b) negatively related to indirect peer control

Outcomes of Peer Control

Job satisfaction. Theoretical support for a relationship between direct peer control and job satisfaction can be derived from the job characteristics model (JCM) (e.g., Hackman and Lawler, 1971; Hackman and Oldham, 1975). Hackman and colleagues proposed that positive work outcomes – such as job satisfaction – are dependent on intrinsically motivating jobs, characterized by five dimensions: Task identity, task significance, skill variety, autonomy, and feedback. We expect direct peer control to positively affect all five core job dimensions, thereby having a positive influence on job satisfaction. First, while some authors have argued that very high levels of alternative work practices, such as team responsibility for a task, can have a negative impact on job satisfaction (Godard, 2001), the heedful interrelating, enhanced coordination of tasks, and greater agreement about goals as a result of direct peer control (Loughry, 2010) allow team members to understand how their contribution fits into the big picture of the overall job, which enhances task identity. Second, the opportunities for peer recognition and praise that direct peer control provides increase team members' feelings of task significance and make them feel more appreciated (Loughry, 2010). Third, Godard (2001) has argued that at very high levels, multi-skilling can negatively influence job satisfaction as it can increase workload. Despite this potential downside, direct peer control provides team members

with cues about which tasks are considered relevant, and, even more importantly, how well these tasks are performed. These cues, in turn, provide team members with opportunities to appropriately apply and further improve their skills and talents (Bijlsma-Frankema and Costa, 2010), enhancing skill variety. Fourth, some authors have cautioned that excessive peer control may induce conformity to team norms (Merchant, 1985), which may undermine team members' autonomy. Taken to its extreme, peer control could result in a more subtle, but also more difficult-to-resist, concertive control regime with potentially oppressive tendencies (Barker, 1993; Wright and Barker, 2000). Even these authors acknowledge, however, that such dysfunctional aspects of peer control only arise when the control system is too constraining, 'paralleling the disadvantages of external control mechanisms such as supervision' (Wright and Barker, 2000, p. 347). The more recent literature has further maintained that, compared to other forms of control, peer control tends to be perceived as leaving team members with more choice, or autonomy, in their work (Loughry, 2010; Weibel, 2010). Moreover, with direct peer control, any restrictions on individual autonomy are not the result of rules and structures that the organizational hierarchy has promulgated, but of social obligation and normative pressures emerging from team members' agreed-upon core values (Barker, 1993). As a result, 'workers willingly subjugate themselves to a pressure that rationalizes work and ensures controlled collective action but that, unlike bureaucratization, emerges socially rather than from formal organizational structure' (Lange, 2008, p. 721). Accordingly, we expect direct peer control to increase the perceived autonomy associated with a given job. Fifth, direct peer control by definition involves direct and open responses to peers' behaviour and results, such as praising team members for jobs well done, correcting team members when mistakes were made, and discussing everyone's job behaviour and performance (Loughry and Tosi, 2008). Direct peer control further enjoys distinct advantages over other types of control in that team members frequently interact with each other, which provides ample opportunity for feedback in the form of recognition and praise from peers (Loughry, 2010). Thanks to their intimate knowledge about each other as a by-product of their frequent interactions, peers are often the best judges of the appropriateness of their team members' behaviours (Loughry, 2010). Consequently, direct peer control creates 'a tight link between the coworker's behavior and the peer administered consequences' (Loughry and Tosi, 2008, p. 885), allowing for timelier and higher-quality feedback. We, therefore, propose:

Hypothesis 3a: Direct peer control is positively related to job satisfaction

In contrast to direct peer control's positive effect, we expect that indirect peer control is not conducive to these core job dimensions, but rather detracts from at least two of them – autonomy and feedback – and thereby negatively affects job satisfaction. In particular, rather than actively engaging team members as is common in direct peer control, gossiping about and avoiding a particular team member represent acts of disengaging oneself from that peer. This disengagement suggests that indirect peer control is more about protecting one's own interests than working towards other team members' or the team's interests (Loughry and Tosi, 2008). Such politically motivated control efforts are likely seen as unwarranted and illegitimate attempts to undermine team members' autonomy,

and thereby diminish job satisfaction (see Hackman and Lawler, 1971; Hackman and Oldham, 1975). Moreover, gossiping about and avoiding poorly performing team members are in direct contrast to the JCM's conceptualization of feedback as 'obtaining direct and clear information about the effectiveness of his or her performance' (Hackman and Oldham, 1975, p. 161). The target of gossip is, by definition, not present and often not even aware, and team members may actively shun this peer (Loughry and Tosi, 2008). There are thus few (if any) tangible opportunities to learn from, and potentially change, one's behaviour. Indirect peer control, therefore, is a comparatively poor feedback mechanism.

In addition, some authors have also cautioned that indirect peer pressure might subject peers to unnecessary stress, and thereby lead to an unpleasant work environment (Loughry, 2010). In particular, while acknowledging the possible benefits of gossip for enforcing team norms and values (Dunbar, 2004; Gluckman, 1963), the literature on gossip suggests people learning that their team members are exchanging negative, work-related information about them behind their backs likely causes them distress. This distress can trigger interpersonal conflict and hostile relations within the team (Grosser et al., 2010). Moreover, gossip can exacerbate negative relationships between team members and perpetuate the social marginalization of organizational 'outcasts,' who are often the targets of gossip (Grosser et al., 2012). On the flipside, the prevalence of indirect peer control is a signal that even team members conforming with expectations – i.e., those that resort to gossip about other, non-compliant team members – are unhappy with their (non-compliant) team members and will thus likely experience lower levels of job satisfaction. Consequently, especially negative gossip can create a hostile work environment for the targets of gossip and its broader audience, including gossipers themselves, with detrimental effects on job satisfaction. We, therefore, propose:

Hypothesis 3b: Indirect peer control is negatively related to job satisfaction

Team performance. The effect of peer control on team performance remains a subject of considerable debate in the literature, and the empirical evidence is mixed (De Jong et al., 2014; Loughry and Tosi, 2008; Stewart et al., 2012; Welbourne and Ferrante, 2008). On the one side of this debate, some authors have argued that peer control could deduct time from team members' assigned duties, upset team leaders who might see peer control as team members' encroachment on their formal managerial roles, and contribute to performance problems if attempts at peer control are misinformed (Loughry, 2010; Welbourne and Ferrante, 2008). These negative effects seem to diminish, however, with the flatter hierarchies characterizing modern organizations as well as team members' increasing familiarity with – and, as a result, more goal-oriented use of – peer controls (e.g., De Jong et al., 2014; Kirsch et al., 2010; Loughry and Tosi, 2008). Other authors have cautioned that excessive levels of team norm conformity due to peer control may stifle creative approaches to work problems, and therefore reduce a team's ability to adapt to a changing environment (Merchant, 1985), which would suggest a boundary condition on the effectiveness of very high levels of peer controls in settings where creativity and adaptation are paramount.

On the other side of this debate are three sets of arguments building on motivational, agency, and learning theories. First, motivational theory work has extended the JCM from the individual to the team level and found that more empowered jobs are associated with higher team performance (Kirkman and Rosen, 1999). In particular, when team members take on greater responsibility in the form of peer control, they are likely to perceive themselves as having more autonomy, a greater impact on their peers' development and rewards, more meaningful and a wider variety of skills, and a more accurate understanding of their team's potency (Kirkman and Rosen, 1999).

Second, compared to other control regimes, peer control enjoys distinct advantages with respect to agency theory's two key mitigating mechanisms, monitoring and incentive alignment (Loughry and Tosi, 2008). More frequent interaction and a more intimate understanding between peers compared to those with their team leaders allows peers to detect behaviours that other forms of monitoring might miss and provides more opportunities to influence each other (Loughry, 2010; Welbourne and Ferrante, 2008). Peer control further takes advantage of peers' self-interests, which leads them to evaluate their team members' behaviour with respect to its impact on their own performance and, by extension, that of the team as a whole (Kandel and Lazear, 1992), and penalize the pursuit of individual goals at the expense of team goals. Not surprisingly, prior research found it critical for reducing free-riding in teams and increasing team effectiveness (Loughry and Tosi, 2008; Manz and Sims, 1987).

Third, direct peer control provides coordination and learning benefits for teams. By providing constant feedback on how team members behave and perform their jobs, direct peer control offers guidance, clarifies roles, and reduces team members' perceived role ambiguity (Loughry, 2010), which in turn facilitates coordination between team members (Loughry, 2010; Manz and Sims, 1987). Moreover, observing how peers perform specific tasks, discussing their approach, and correcting it if it is perceived as suboptimal can be a catalyst for team learning (Kirkman and Rosen, 1999; LePine and van Dyne, 2001). In line with these arguments, we propose:

Hypothesis 4a: Direct peer control is positively related to team performance

There are similarly divergent views on the effects of indirect peer control on team performance. One point of view builds on the individual-level effects discussed above that indirect peer control causes team members distress. At the team level, this could lead to an unpleasant work environment marked by interpersonal conflict and hostile relations within the team and, ultimately, to its fragmentation (Grosser et al., 2010, 2012). Grosser et al. (2012, p. 52) further acknowledge, however, that gossip 'can be a tricky organizational phenomenon in that it can be both positive and negative at the same time; this often depends on whether one is viewing the gossip from the employee's perspective or the organization's perspective'.

Given this section's focus on team-level performance, we subscribe to the alternative view that indirect peer control in general (Barker, 1993; Sewell, 1998) and particularly the gossip and avoidance it entails (Dunbar, 2004; Gluckman, 1963; Grosser et al., 2012) can be an effective and efficient means of maintaining conformity and control over team members. Indirect peer control enjoys the monitoring and incentive advantages peers

have over team leaders (Loughry and Tosi, 2008). In comparison to direct peer control, gossiping about and avoiding underperforming peers also carries significantly less costs and risks for the person monitoring, as it avoids any open confrontation between team members (Loughry and Tosi, 2008). Nevertheless, prior work has identified gossip and avoidance as powerful means of mitigating egoistic behaviours and securing the subsequent cooperation of ostracized team members (e.g., Feinberg et al., 2014). Moreover, based on the information obtained via gossip, the team may decide to avoid certain individuals when subsequent tasks are assigned, allowing the team to achieve better outcomes (Grosser et al., 2012). Finally, gossip may also signal trust within teams. The literature has long acknowledged the exchange of gossip as a way to form and maintain relationships within an organization. It has also pointed out that gossip can even bring individuals closer together (Dunbar, 2004; Grosser et al., 2012), with beneficial consequences for team effectiveness and performance. In line with this second view, we propose:

Hypothesis 4b: Indirect peer control is positively related to team performance

METHODS

Sample

To test these hypotheses, we gathered data on regional coordinators, team leaders, and volunteer teams working for the German country organization of a worldwide children's rights non-profit organization (NPO). In Germany, this NPO has around 1,800 volunteers, organized in 90 geographic teams. (The approximately 6,000 occasional volunteers who help out at special events were not included in our study). Each team is headed by a volunteer team leader, and grouped together into five geographical regions, each under the responsibility of a salaried regional coordinator. The average team consists of about 19 members plus a team leader, which is in line with prior work on peer control (e.g., De Jong et al., 2014; Stewart et al., 2012).

As part of a multinational NPO, the German country organization we are studying exhibits very high levels of professionalism and has implemented a professional system to manage volunteers. Unlike other volunteer or grassroots associations, our NPO's activities are defined by its German headquarters. Rules and procedures regarding volunteer work are stipulated by the head of the volunteer coordination division, who is also a member of the executive board, and who previously worked for a leading consulting firm. A year before our study took place, the NPO took additional steps to homogenize its teams' identities by establishing and promoting a common mission statement (Jacobs et al., forthcoming). Additional guidelines, activity handbooks, and procedures are outlined in the organization's intranet, which is used by all volunteer teams. Each team leader is further invited to participate in one of four annual regional conferences, which feature team-building activities, volunteer training workshops, and best-practice exchanges.

Team leaders are selected by the regional coordinators, who screen all volunteer members of a team and approach members who, beyond a high commitment, also have prior

leadership experience and show strong leadership skills, to become team leaders. Team leaders receive extensive training by the NPO headquarters. Almost all team leaders possess a higher-education degree and, on average, have around 15 years of professional experience. Team leaders specify concrete goals for the team's activities, staff team members on specific activities, and chair the biweekly team meetings, for which they also set the agenda.

Team members engage in office management, administration, accounting, event management, greeting card sales, fundraising, public relations, and media design tasks on a daily basis. These tasks are highly interdependent, and none of them can be done by a single team member. Despite the common mission statement and other rules and procedures stipulated by headquarters, each team operates largely autonomously in its geographical context, and the teams do not interact directly. We restricted our sample population to those 83 teams that had worked together for more than a year.

Our setting represents a suitable context for testing our theoretical framework. On the one hand, the teams have flat hierarchies and thus a wide span of control – with only one team leader responsible for each team, and with all team members considered peers – but also require extensive interactions among team members to accomplish team tasks, and so we would expect a certain degree of lateral peer control to be present in such teams (see De Jong et al., 2014; Loughry and Tosi, 2008). On the other hand, the existence of experienced team leaders, supported by a strong mission statement, rules, and procedures established by headquarters, also suggest top-down managerial control. The clear delineation of teams responsible for their own regions that are overseen by regional coordinators allows us to gather reliable and comparable performance data on the teams. And lastly, with teams being responsible for – and having discretion over how to manage – their unique geographical contexts, we expect sufficient variance in both our independent and dependent variables.

Our sample organization is testament to large, multinational NPOs becoming increasingly professionalized in their organizational and management approaches (e.g., Hwang and Powell, 2009), further blurring the demarcation line between for-profit and not-for-profit organizations (e.g., Bromley and Meyer, 2017). And even outside the NPO setting, our team-based organizational context exhibits many features typical of 21st-century organizations – such as (voluntary) communities of practice (e.g., Wenger and Snyder, 2000) – making our sample context comparable to the context of routine team tasks in for-profit organizations.

Procedure

We conducted several pre-tests of our survey with different audiences within our sample organization, in which participants had the opportunity to raise questions and were asked to identify any ambiguous or unclear items. Based on their suggestions, we slightly changed the wording of several items as outlined below to better fit our empirical context. The survey was distributed in German. We followed the common guidelines for translating our English questionnaire into a different language with a forward and backward translation.

The NPO's headquarters distributed the final eight-page questionnaire to all team leaders, who then distributed the surveys to their team members. In addition, the NPO headquarters posted a note on the organization's intranet with a link to the survey website. We guaranteed all participants confidentiality and sent out three e-mail reminders. Excluding two teams with only one respondent, we received usable responses from 356 volunteers in 58 teams, or from about 20 per cent of the volunteers and 70 per cent of the teams. To examine any potential for response bias, we compared responding and non-responding teams with regards to the age of the teams and the team leaders' ages and genders, which was the only information that was made available to us for all teams. Results show no systematic differences between responding and non-responding teams on all three variables.

Measures

Prior research has long established that 'employee perceptions of their jobs have substantial convergence with the assessments of objective job characteristics made by the researchers and by company supervisors', and that 'results suggest, therefore, that employees' perceptions of their jobs are of central importance in affecting job attitudes and behaviors' (Hackman and Lawler, 1971, p. 275). In line with both seminal and recent research on peer control (e.g., De Jong et al., 2014; Loughry and Tosi, 2008), we therefore measured all organizational control variables by surveying team members. Our control for team size was obtained from each team's leader. To mitigate possible common method variance, we followed Podsakoff and colleagues' (2003, 2012) recommendations for survey design choices and used their latent variable approach by adding an uncorrelated common method factor to the overall measurement model of a confirmatory factor analysis, which enabled us to estimate the percentage of variance in responses due to trait, method, and random error components. Partitioning the variance in this way revealed that 54.2 per cent of the variance in Model 4 was accounted for by the trait factors, 35.3 per cent by random errors, and only 10.6 per cent by the method factor. With the proportion of the variance accounted for by the method factor being much less than that explained by the trait factors and the 24–25 per cent typically found across studies in the management field (Podsakoff et al., 2003), any potential bias would be minor and unlikely to affect our results.

To avoid common method variance altogether in our team-level hypotheses, we measured team-level performance with two distinct measures: We surveyed the regional coordinators who, on average, evaluated a dozen teams each; and we used objective performance data to measure team-level performance. Consequently, we collected data from four sources (team members, team leaders, regional coordinators, and publicly available financial reports) and at two levels of analysis (individuals and teams).

Independent Variables

Unless mentioned otherwise, all responses were recorded on a 1 = strongly disagree to 5 = strongly agree Likert-type scale. Please refer to the Appendix for a list of all survey items.

Formal managerial control. We adapted Bonner et al.'s (2002) measure, which captures process and outcome control. As our pre-testers perceived that our third item made one item redundant ('upper management determined the team's work process'), and another item did not fit our organizational context ('upper management specified objectives for quality management and standards for this project'), we deleted these two items. The resulting six-item measure of formal managerial control loaded on one factor without any significant cross-loadings (AVE = 0.60; $\alpha = 0.88$; CR = 0.90; $rwg_{(j)} = 0.63$; ICC(1) = 0.04; ICC(k) = 0.18).

Clan control. We obtained the first two items for clan control from of a three-item scale used in Kirsch et al. (2010). We dropped the original third item ('All project team members attempted to be 'regular' members of the project team') after the pre-test as the pre-test respondents did not understand it. We replaced it with a new item: 'All team members know [organization]'s vision and act accordingly' (AVE = 0.61; $\alpha = 0.85$; CR = 0.83; $rwg_{(j)} = 0.82$; ICC(1) = 0.05; ICC(k) = 0.23).

Direct peer control. We followed Loughry and Tosi's (2008) distinction between direct and indirect peer control. After our pre-test, we deleted six items of the original 14-item direct peer control scale that were not applicable to our context as evident from the pre-tests. For instance, items such as 'tell a supervisor if a team member is stealing' of the subdimension *report* openly offended our respondents in the pre-tests. This left us with eight items to measure direct peer control, comprising two items for each of Loughry and Tosi's (2008) four subdimensions, *notice*, *praise*, *correct*, and *discuss*. The answers were indicated on a range from 1 = never to 5 = very often. An exploratory factor analysis showed, however, that these four subdimensions loaded on two factors: notice/praise on the one hand, and correct/discuss on the other hand. We performed a confirmatory factor analysis comparing our two-factor solution for direct peer control ($\chi^2(19) = 211.82$; $p < 0.001$) with a one-factor solution combining the items for notice/praise with correct/discuss ($\chi^2(20) = 475.09$; $p < 0.001$). The two-factor solution is clearly superior ($\chi^2_{diff}(1) = 263.27$; $p < 0.001$). Based on these factor analyses, we decided to use the two-factor solution: direct peer control (notice & praise) (AVE = 0.41; $\alpha = 0.86$; CR = 0.73; $rwg_{(j)} = 0.82$; ICC(1) = 0.04; ICC(k) = 0.19) and direct peer control (correct & discuss) (AVE = 0.55; $\alpha = 0.81$; CR = 0.78; $rwg_{(j)} = 0.61$; ICC(1) = −0.03; ICC(k) = −0.17) and report the results for a one-factor solution in our Supplemental Analyses section.

Indirect peer control. After deleting the original third item ('gossiping about coworkers' performance') in Loughry and Tosi's (2008) scale, because pre-tests indicated that it did not fit our non-profit context, we ended up with four of the original five items to measure indirect peer control. Our final measure comprises two items each for the sub-dimensions *gossip* and *avoid* and loaded on one factor without any significant cross-loadings (AVE = 0.71; $\alpha = 0.89$; CR = 0.91; $rwg_{(j)} = 0.60$; ICC(1) = 0.07; ICC(k) = 0.30).

Dependent Variables

Job satisfaction. To measure job satisfaction, we used the three-item scale by Boezeman and Ellemers (2009), which they had already adapted to a volunteer context (AVE = 0.78; $\alpha = 0.92$; CR = 0.91).

Team performance. We measured team performance in two different ways. First, in close interaction with the head of the volunteer coordination division, we developed three *team performance* items aligned with the NPO's existing internal team assessments on a scale ranging from 1 = very good to 5 = very poor. We then collected assessments from the five regional coordinators at headquarters who are supervising all teams in their respective regions. We averaged these informants' assessments across all three items and reverse-coded the scale to allow for an easier interpretation of the results (AVE = 0.82; $\alpha = 0.92$; CR = 0.93). Second, in addition to the regional coordinators' perceived performance measure, we used the official profit data (i.e., the natural logarithm of the difference between revenues and costs) the NPO collects for each team – and reports to German tax authorities – to measure *team profits*. Revenues are mainly generated by fundraising efforts that include events the teams organize, such as charity runs for children or concerts, but team members also activate their private social networks to solicit donations.

Control Variables

We controlled for several individual team member characteristics known to influence individual satisfaction and/or team performance and the perceived level of peer control: gender (*female*) [1 for female and 0 for male team members]; *age (ln)* [natural logarithm of years old], which may influence job satisfaction and the intention to remain; *organizational tenure* [on a 1 to 6 scale: 0–1 years; 1–5 years; 6–10 years; 11–15 years; 16–20 years; > 20 years] as '[w]orkers in organizations and positions with low turnover might be more likely to see the organization's interest aligned with their own, and thus be willing to engage in peer control that supports better performance' (Loughry, 2010, p. 350); respondents' *time commitment (ln)* [natural logarithm of the average number of hours per month], as this may influence satisfaction and intention to remain; respondents' work experience in professional jobs (*professional experience*) [on the same scale as organizational tenure], as this may influence a respondent's experience with peer and managerial control in teams; whether a respondent is currently volunteering at another NPO *(other NPO engagement*) [1 if that respondent currently volunteers at another NPO and 0 otherwise]; the natural logarithm of the number of active team members in each team (*team size (ln)*); and *team cohesiveness* in line with prior work on the performance implications of peer control (Loughry and Tosi, 2008), using three of the latter authors' six items that pretests showed best captured our context (AVE = 0.48; $\alpha = 0.79$; CR = 0.73; $rwg_{(j)} = 0.84$; ICC(1) = 0.11; ICC(k) = 0.44). At the team level of analysis (with team performance/profits as dependent variables), we used the mean scores of these variables across team members as controls.

Validity and Reliability

We performed exploratory factor analyses for all multi-item variables, and all items loaded on their respective factors with no significant cross-loadings. The one exception was the described two-factor solution for direct peer control. We also examined the average variance extracted (AVE) of each construct and found that all AVEs were higher than the recommended minimum value of 0.50 (Fornell and Larcker, 1981), indicating adequate convergent validity. The exception was, again, the two-factor solution we found

for direct peer control and our control variable team cohesiveness. To ensure discriminant validity, we ascertained that the AVEs for any two constructs were greater than the shared variance (i.e., squared correlation) between the two constructs (Hair et al., 2009). Finally, to confirm scale reliability we calculated consistency reliabilities (Cronbach alphas) and composite reliabilities (CR) for each factor. All measures' alphas satisfied the generally recommended level of 0.70 (Nunnally, 1978), and all CRs were higher than the recommended value of 0.70 (Hair et al., 2009).

Hypotheses Tests

As individual team members' assessments are nested within their respective teams, and teams are nested within their respective regions, we used a multilevel modelling (MLM) approach for all of our analyses (Bryk and Raudenbush, 1992). For our individual-level analyses (H1–3 in Models 1–4), we tested our hypotheses with a three-level MLM model, with individual team members nested within teams, and teams nested within regions. For our team-level analyses (H4 in Models 5–6), we employed a direct-consensus model using average team member responses to operationalize team-level scores (Chan, 1998). We examined whether an aggregation of the individual responses to the team level was warranted by calculating the within-group agreement using $r_{wg(j)}$ statistics (James et al., 1993) as well as ICC(1) and ICC(*k*) indices (Bliese, 2000). All variables had moderate ($r_{wg(j)}$ between 0.51 and 0.70) or strong interrater agreement ($r_{wg(j)}$ between 0.71 and 0.90) (LeBreton and Senter, 2008). Several of our variables had *ICC*(1) values of 0.05 or higher, providing 'prima facie evidence of a group effect' (LeBreton and Senter, 2008, p. 838); and all of the other constructs exhibited ICC(1) > 0.01, which is in line with Bliese's (1998) threshold for detecting group-level relationships not evident in the lower-level data, and which provides further evidence that the aggregation to the team level was justified. For the models using team performance (Models 5 and 6), we tested our hypotheses with a two-level MLM model, with teams nested within regions.

RESULTS

Tables I and II presents means, standard deviations, and bivariate correlations. In addition to an average of 3.32 (on a five-point scale) for formal managerial control, providing evidence for team leaders actively engaging in managerial control, and an average of 4.03 for clan control, we also see clear evidence of direct peer control (average of 3.74 for notice & praise; average of 3.01 for correct & discuss) and indirect peer control (average of 2.33).

Table III presents our MLM regression results. Models 1–3 show the individual-level relationships between managerial and clan control and peer control; Model 4 shows the individual-level relationships between managerial, clan, and peer controls and job satisfaction; and Models 5 and 6 show the team-level relationships between managerial, clan, and peer control and, respectively, team performance and team profits.

Our results suggest that the older team members are, the less likely they are to report direct peer control among team members, and that the longer they are part of the organization, the less they report evidence of noticing and praising among team members as

Table I. Means, standard deviations, and bivariate correlations of individual-level variables

Variable	*Mean*	*S.D.*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1. Female	0.85	0.36														
2. Age (ln)	4.07	0.30	0.12													
3. Organizational Tenure	3.18	1.33	0.17	0.37												
4. Time Commitment (ln)	2.14	0.79	0.04	0.15	0.11											
5. Professional Experience	4.95	1.55	−0.03	0.51	0.10	0.02										
6. Other NPO Engagement	0.39	0.49	−0.16	0.05	0.12	−0.10	−0.01									
7. Team Size (ln)	2.92	0.78	−0.01	−0.04	−0.04	0.07	−0.04	0.01								
8. Team Cohesiveness	3.94	0.71	−0.03	−0.02	0.08	0.06	−0.07	−0.06	0.08	0.79[1]						
9. Formal Manag. Control	3.32	0.98	0.00	0.17	0.08	0.10	0.09	−0.08	0.08	0.29	0.88[1]					
10. Clan Control	4.03	0.78	0.09	0.18	0.14	0.07	0.02	0.03	0.01	0.50	0.38	0.85[1]				
11. Direct Peer Control (Notice & Praise)	3.74	0.77	−0.05	−0.10	−0.09	0.03	−0.07	0.06	0.09	0.52	0.22	0.51	0.86[1]			
12. Direct Peer Control (Correct & Discuss)	3.01	0.90	−0.01	−0.12	−0.07	0.03	−0.11	−0.01	0.06	0.21	0.24	0.29	0.50	0.81[1]		
13. Indirect Peer Control	2.33	1.06	−0.05	−0.01	−0.05	0.03	−0.00	−0.04	0.04	−0.27	−0.10	−0.29	−0.11	0.18	0.89[1]	
14. Job Satisfaction	4.31	0.70	0.02	0.03	0.11	0.18	−0.07	−0.10	0.06	0.41	0.31	0.45	0.39	0.24	−0.27	0.92[1]

$N = 356$; two-tailed tests; correlations with absolute value equal to or greater than 0.10 are significant at the $p < 0.05$ level.
Coding of control variables: *female:* dummy variable, which assumes a value of 1 for female members and 0 for male members; *age:* natural logarithm of the team members' age in years; *organizational tenure* and *professional experience*: scale from 1 to 6 (1 = 0–1 years; 2 = 1–5 years; 3 = 6–10 years; 4 = 11–15 years; 5 = 16–20 years; 6 = > 20 years); *time commitment:* natural logarithm of the average number of hours invested by members per month; *other NPO engagement*: dummy variable, which assumes a value of 1 if that respondent currently volunteers at another NPO; *team size*: natural logarithm of the number of active team members in each team; *team cohesiveness:* Likert-type scale with 1 = strongly disagree to 5 = strongly agree.
[1]Consistency reliability (Cronbach alphas).

Table II. Means, standard deviations, and bivariate correlations of team-level variables

Variable	*Mean*[2]	*S.D.*[2]	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1. Female	0.85	0.17														
2. Age (ln)	4.09	0.16	0.22													
3. Organizational Tenure	3.23	0.76	0.17	0.49												
4. Time Commitment (ln)	2.17	0.42	−0.09	0.08	−0.15											
5. Professional Experience	5.00	0.68	−0.10	0.53	0.20	0.08										
6. Other NPO Engagement	0.42	0.20	0.02	0.22	0.21	0.01	0.15									
7. Team Size (ln)	2.87	0.72	0.04	−0.05	−0.01	−0.02	0.03	0.04								
8. Team Cohesiveness	3.90	0.37	0.16	0.26	0.34	−0.29	0.14	−0.23	0.14							
9. Formal Manag. Control	3.30	0.43	−0.09	0.30	0.14	−0.13	0.08	−0.07	0.09	0.22						
10. Clan Control	4.01	0.38	0.11	0.45	0.32	−0.21	0.19	0.11	−0.03	0.58	0.45					
11. Direct Peer Control (Notice & Praise)	3.77	0.33	−0.02	0.29	0.16	−0.02	0.14	−0.17	0.04	0.42	0.19	0.33				
12. Direct Peer Control (Correct & Discuss)	3.02	0.36	−0.08	−0.08	0.09	0.08	−0.22	0.15	−0.04	−0.03	0.22	0.24	0.08			
13. Indirect Peer Control	2.22	0.49	−0.19	−0.40	−0.15	0.05	−0.23	0.08	0.18	−0.10	0.05	0.02	−0.16	0.39		
14. Team Performance	3.52	1.20	−0.19	0.03	−0.25	0.20	0.07	−0.12	0.29	−0.07	0.22	−0.13	0.07	−0.12	0.19	0.92[1]
15. Team Profits (ln)	11.08	1.00	0.00	−0.11	−0.13	0.02	−0.07	0.01	0.57	0.13	0.12	−0.06	−0.20	−0.14	0.22	0.46

$N = 58$; two-tailed tests; correlations with absolute value equal to or greater than 0.26 are significant at the $p < 0.05$ level.
Coding of control variables: *female:* dummy variable, which assumes a value of 1 for female members and 0 for male members; *age:* natural logarithm of the team members' age in years; *organizational tenure* and *professional experience*: scale from 1 to 6 (1 = 0–1 years; 2 = 1–5 years; 3 = 6–10 years; 4 = 11–15 years; 5 = 16–20 years; 6 = > 20 years); *time commitment:* natural logarithm of the average number of hours invested by members per month; *other NPO engagement*: dummy variable, which assumes a value of 1 if that respondent currently volunteers at another NPO; *team size*: natural logarithm of the number of active team members in each team; *team cohesiveness:* Likert-type scale with 1 = strongly disagree to 5 = strongly agree.
[1]Consistency reliability (Cronbach alpha).
[2]Means and standard deviations for team-level variables.

Table III. Multilevel modeling (MLM) regression results

	Model 1: Direct Peer Control (Notice & Praise)	*Model 2: Direct Peer Control (Correct & Discuss)*	*Model 3: Indirect Peer Control*	*Model 4: Job Satisfaction*	*Model 5: Team Performance* [1]	*Model 6: Team Profits* [1]
Control Variables						
Female	−0.03 (0.17)	−0.00 (0.12)	−0.12 (0.09)	−0.06 (0.09)	−0.90 (0.75)	−0.23 (0.85)
Age (ln)	−0.66*** (0.17)	−0.43*** (0.07)	0.43† (0.25)	−0.23† (0.13)	2.47** (0.91)	0.51 (1.42)
Organizational Tenure	−0.06* (0.03)	−0.04 (0.04)	−0.02 (0.03)	0.06* (0.02)	−0.42** (0.13)	−0.20† (0.12)
Time Commitment (ln)	0.02 (0.05)	0.03 (0.05)	0.06 (0.07)	0.12*** (0.01)	0.35† (0.20)	0.22 (0.24)
Professional Experience	0.04*** (0.01)	−0.03 (0.03)	−0.04 (0.03)	−0.02 (0.02)	−0.08 (0.17)	−0.19 (0.13)
Other NPO Engagement	0.13† (0.08)	0.05 (0.07)	−0.09 (0.09)	−0.17† (0.09)	−0.36 (0.38)	0.47** (0.17)
Team Size (ln)	0.01 (0.04)	0.02 (0.05)	0.08 (0.06)	−0.01 (0.02)	0.37* (0.16)	0.69*** (0.11)
Team Cohesiveness	0.33*** (0.05)	0.05 (0.05)	−0.21** (0.08)	0.08 (0.05)	0.10 (0.34)	0.86* (0.42)
Independent Variables						
Formal Manag. Control	0.02 (0.06)	0.17* (0.07)	0.03 (0.05)	0.08† (0.05)	0.73** (0.25)	0.39** (0.13)
Clan Control	0.35*** (0.10)	0.27** (0.08)	−0.28*** (0.08)	0.15** (0.05)	−0.79* (0.36)	−0.32 (0.35)
Direct Peer Control (Notice & Praise)				0.16* (0.07)	0.32 (0.29)	−0.81*** (0.19)
Direct Peer Control (Correct & Discuss)				0.06** (0.02)	−0.66* (0.30)	−0.51† (0.30)
Indirect Peer Control				−0.13*** (0.03)	0.71* (0.35)	0.30* (0.12)
(Level-1 pseudo) R^2	0.38***	0.15***	0.10**	0.32***	0.37***	0.48***
(Level-1) N	356	356	356	356	58	58

Notes: Unstandardized coefficients shown, with robust standard errors (S.E.) in parentheses, based on random coefficient regression models using multilevel modeling (MLM). Variance explained calculated as pseudo $R^2 = 1 -$ (level-1 restricted error + level-2 restricted error)/(level-1 unrestricted error + level-2 unrestricted error) (Snijders and Bosker, 2012).
[1]Control and independent variables at the team level.
†$p < 0.10$; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

part of direct peer control, which would suggest a relatively higher likelihood of disengagement for older team members. In contrast, the more professional experience team members have, the more they report direct peer control in the form of noticing and praising among team members. Also as expected, team cohesiveness is positively associated with direct peer control and negatively with indirect peer control. And it makes sense – particularly for our volunteer context – that team members reporting higher levels of job satisfaction also report a longer tenure at and a higher time commitment to the NPO. Moreover, team size is positively related to team performance and profits, which can be explained by the higher number of revenue-generating activities that are possible with a higher number of active team members. Our finding that team cohesiveness is positively related to team profits is in line with broad support for this relationship in the literature (e.g., Evans and Dion, 2012). Average team member age and organizational tenure have a positive and negative association, respectively, with team performance, which may suggest that while the increased experience associated with age seems to help improve team performance, increasing average tenure has detrimental effects on a team's performance. And lastly, the average team member's engagement with other NPOs serves as an indicator of the team's experience with other organizations in the non-profit sector that can be leveraged for the task at hand, explaining its positive association with team profits.

Providing partial support for Hypothesis 1a, formal managerial control is positively related to direct peer control (notice & praise) (Model 1: $b = 0.02$, $p = 0.76$), and positively and significantly related to direct peer control (correct & discuss) (Model 2: $b = 0.17$, $p = 0.01$). We find no support for H1b, however, as the relationship between formal managerial control and indirect peer control is non-significant (Model 3: $b = 0.03$, $p = 0.60$). In support of Hypotheses 2a and 2b, clan control is positively and significantly related to direct peer control (Model 1: $b = 0.35$, $p < 0.001$ for notice & praise, and Model 2: $b = 0.27$, $p < 0.01$ for correct & discuss), whereas clan control is negatively and significantly related to indirect peer control (Model 3: $b = -0.28$, $p < 0.001$). In line with Hypotheses 3a and 3b, direct peer control is positively and significantly related to job satisfaction (Model 4: $b = 0.16$, $p < 0.05$ for notice & praise, and $b = 0.06$, $p < 0.01$ for correct & discuss), while indirect peer control is negatively and significantly related to job satisfaction (Model 4: $b = -0.13$, $p < 0.001$).

In Models 5 and 6, we present our team-level findings on the relationship between direct peer control (Hypothesis 4a) and indirect peer control (Hypothesis 4b) on team performance and team profits. The findings for Hypothesis 4a are mixed: Contrary to our expectations, direct peer control is either not significantly associated with team performance (Model 5: $b = 0.32$, $p = 0.27$ for notice & praise) and team profits (Model 6: $b = -0.51$, $p = 0.09$ for correct & discuss); or it is negatively and significantly associated with both team performance (Model 5: $b = -0.66$, $p < 0.05$ for correct & discuss) and team profits (Model 6: $b = -0.81$, $p < 0.001$ for notice & praise). Our results support Hypothesis 4b, as we find positive and significant associations between indirect peer control and team performance (Model 5: $b = 0.71$, $p < 0.05$) as well as team profits (Model 6: $b = 0.30$, $p < 0.05$). Figure 1 provides an overview of our results.

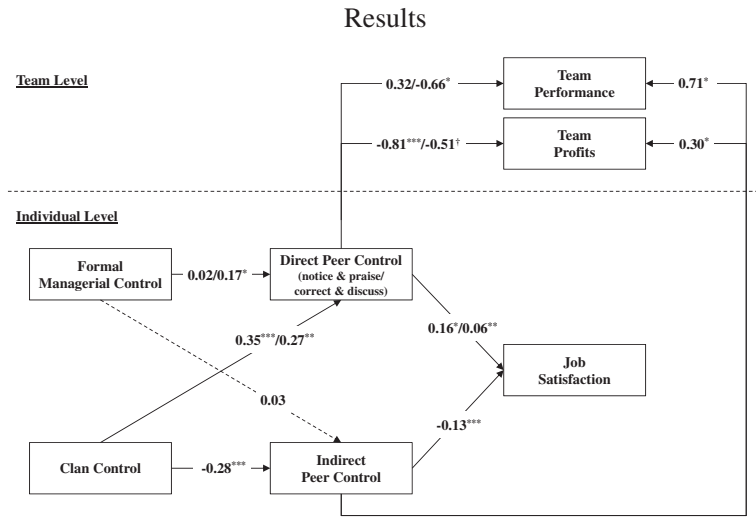

Figure 1. Multilevel modeling (MLM) regression results

Supplemental Analyses

We re-ran our models with a one-factor solution for direct peer control (Loughry and Tosi, 2008), and the results are consistent with our two-factor findings: In Models 1–4, formal managerial control ($b = 0.09$; $p = 0.12$) was not significantly associated with direct peer control while clan control was ($b = 0.23$; $p < 0.001$), and direct peer control remained significantly associated with job satisfaction ($b = 0.17$; $p < 0.001$). Direct peer control also remained negative and nonsignificant ($b = -0.38$; $p = 0.21$) in Model 5 and negative and significant ($b = -1.31$; $p < 0.001$) in Model 6.

We also tested Loughry and Tosi's (2008) hypothesized interaction effect between formal managerial control and peer control. Added to Models 5, none of the interaction effects between formal managerial control and direct peer control (notice & praise) ($b = -0.50$, $p = 0.50$), direct peer control (correct & discuss) ($b = 1.17$, $p = 0.22$), and indirect peer control ($b = -0.34$, $p = 0.68$) attained significance. Added to Model 6, none of the interaction effects between formal managerial control and direct peer control (notice & praise) ($b = 1.46$, $p = 0.10$), direct peer control (correct & discuss) ($b = 0.40$, $p = 0.77$), and indirect peer control ($b = 0.06$, $p = 0.97$) attained significance either. These results provide no evidence for an interaction effect between formal managerial and peer control.

While not explicitly hypothesized, we also examined the indirect effects implied in our framework. At the individual level, we estimated the indirect effects of formal managerial control and clan control on job satisfaction via peer control, following current recommendations for multilevel mediation analyses (Aguinis et al., 2017). Our results provide support for three indirect effects: the indirect effect of clan control via direct peer control (correct & discuss) ($b = 0.02$, $p = 0.098$; 95% CI: 0.000, 0.03); the indirect effect of clan control via direct peer control (notice & praise) ($b = 0.05$, $p = 0.02$; 95% CI: 0.02, 0.08); and the indirect effect of clan control via indirect peer control ($b = 0.03$, $p = 0.01$; 95%

CI: 0.01, 0.05). The indirect effects of formal managerial control do not attain statistical significance ($b = 0.00$, $p = 0.78$; $b = 0.01$, $p = 0.17$; and $b = 0.00$, $p = 0.63$ for the two direct peer control dimensions and indirect peer control, respectively). These indirect effects map closely onto our main-effects results and provide additional support for our theorizing of clan control as an antecedent of peer control.

At the team level, our sample size ($n = 58$ teams) is not large enough to provide enough statistical power to detect mediation effects (Fritz and MacKinnon, 2007). The results nevertheless provide at least some indication of a mediating effect at the team level. While none of the indirect effects for team performance attained significance, for team profits, we obtained at least marginally significant indirect effects for the effect of clan control via direct peer control (correct & discuss) ($b = -0.18$, $p = 0.05$; 95% CI: −0.34, −0.03) and via indirect peer control ($b = 0.11$, $p = 0.09$; 95% CI: 0.004, 0.22).

To further examine whether our findings can be generalized to other professional contexts beyond our volunteer sample, we collected data on six teams at our sample NPO's headquarters that are composed entirely of salaried employees. For all six headquarters teams (with a minimum of three and a maximum of nine members), the six team leaders and 29 out of 38 team members answered an almost identical survey to the one we sent out to our main sample; we only slightly adapted the wording of our items to correspond to the professional context. While the small sample size did not allow us to replicate our analyses with this sample alone, we can nevertheless use it to examine the generalizability of our findings. First, we used *t*-tests to compare the means of all hypothesized variables at the individual level and found that the only statistically significant difference was for clan control, which was higher among volunteers (M = 4.03, SD = 0.78) than among salaried employees (M = 3.09, SD = 0.77; $p < 0.001$). This difference likely reflects the previously mentioned efforts by the NPO's corporate headquarters to homogenize the volunteer teams' identities by establishing and promoting a common mission statement a year before our study took place. We also used Levene's test for equality of variances, and found that the only statistically significant difference between samples was for formal managerial control, which had a higher variance among volunteers ($\sigma^2 = 0.78$) than among salaried employees ($\sigma^2 = 0.27$; $p < 0.001$), providing evidence of the higher discretion volunteer team leaders enjoy.

Excluding two control variables that are not available for the headquarters teams – i.e., time commitment and other NPO engagement – we re-ran our regression analyses for the individual-level models (Models 1–4) with a pooled sample including both volunteer and salaried teams members ($n = 385$). All hypothesized results remained the same with the exception of formal managerial control, which went from marginally significant ($b = 0.08$, $p = 0.09$) to fully significant ($b = 0.09$, $p = 0.04$). As the salaried headquarters teams had different goals and objectives than our volunteer teams, there was no comparable dependent variable available, and so we had to restrict our supplemental analyses to Models 1–4. Despite this limitation, these results provide at least tentative evidence that our findings apply equally to salaried employees outside the volunteer context.

DISCUSSION

Our study focused on lateral peer control, its association with top-down managerial controls, and its consequences at both the individual and team level. We find formal managerial control and clan control to be antecedents of peer control, albeit with differential effects on direct and indirect peer control. We also find a significant effect of peer control on individual job satisfaction and team performance, but again, with crucial differences between the two types of peer controls and the two outcomes.

Theoretical Implications

Our study has two main theoretical implications. First, our nuanced findings provide new avenues for the burgeoning literature on configurations of different types of control in general (Cardinal et al., 2004, 2010; Kreutzer et al., 2015, 2016; ; Sihag and Rijsdijk, 2019), and for prior studies suggesting an interactive (or substitution) effect of formal managerial and peer controls in particular (Loughry and Tosi, 2008; Stewart et al., 2012; Welbourne and Ferrante, 2008). While Loughry and Tosi (2008) have not tested a potential antecedent effect with their data, the positive and highly significant correlation ($r = 0.52$) between formal managerial control and direct peer control they report would suggest a positive association between those two control modes. On the flipside, we do not find any evidence of their hypothesized substitute effect between formal managerial and peer control in our supplemental analyses. These differences, however, could be an artefact of differences in the studies' dependent variables: while Loughry and Tosi (2008, p. 882) focused on problem-free performance, defined as 'the degree to which the work unit is free of employee behavior problems', our study's focus is on more general team performance and team profits. Perhaps the difference in focus between avoiding the negative (captured in problem-free performance) and enabling the positive (captured by our team performance/profits) is responsible for some of the divergent findings between the two studies.

Complementing and extending prior studies' substitution logic between different types of control, our theorizing and findings corroborate managerial controls as important antecedents of peer controls. Our study thus moves beyond prior work distinguishing between managerial controls as intentionally designed, and lateral controls as resulting solely from the initiative and interactions among peers (e.g., Johnson and Gill, 1993) and instead provides empirical evidence for management's ability to influence the emergence of peer controls with the deliberate design of formal managerial control and clan control. Moreover, our findings emphasize the importance of moving beyond task characteristics as key determinants of organizational control regimes and of explicitly considering the social context in organizations, such as the one set by top-down managerial controls.

As expected, clan control has a positive association with direct peer control and a negative association with indirect peer control, suggesting that a common vision and goals guiding a team induce team members to more closely monitor and control each other's behaviours while, at the same time, reducing the need for gossiping and/or avoiding non-compliant team members. The results pattern for formal managerial control, however, is more complex. We found no support, for instance, for our argument that the transparency characterizing formal managerial control might reduce indirect peer

control. Instead, with higher levels of formal managerial control, team leaders might actually exert more pressure on team members to conform to behavioural expectations and to achieve certain performance outcomes. Such pressure may, in turn, translate into a greater likelihood of team members avoiding less committed and reliable peers and gossiping about any apparent or perceived shortcoming in their behaviour or performance.

Our results also illustrate the need for a more differentiated understanding of direct peer control, i.e., highlighting the distinction between notice & praise versus correct & discuss. This is evident from our finding that only correct & discuss is positively associated with formal managerial control. By specifying procedures, work assignments, and concrete goals, team leaders seem to be able to influence the learning and improvement efforts within teams but to have less of an influence on team members noticing and praising each other's efforts.

Second, our findings establish peer control's association with both individual job satisfaction and team performance and thereby shed new light on inconsistencies found in prior work (Kohli and Jaworski, 1994; Loughry and Tosi, 2008; Stewart et al., 2012; Welbourne and Ferrante, 2008). In particular, our results illustrate the need to distinguish between direct and indirect peer control, which has contrary effects on both outcomes, and to look at direct peer control in a more nuanced way. On the one hand, direct peer control is positively related to job satisfaction, but has a negative effect on team performance (at least for the two significant effects). These unexpected findings suggest that noticing peers' work activities, praising and correcting them, and openly communicating and discussing work behaviour may make team members feel satisfied, but it detracts from team performance. A possible explanation is that direct peer control does not always have to be consistent with accomplishing organizational objectives (Jaworski, 1988; Loughry, 2010). On the contrary, our findings seem to suggest that direct peer control 'could take time away from workers' assigned duties, upset supervisors, who might feel that control is a supervisory role, or contribute to performance problems if the peer performing the control misunderstands what behavior is appropriate' (Loughry, 2010, p. 341).

On the other hand, indirect peer control is negatively related to job satisfaction, but has a positive effect on team performance. This differs from prior work that has deemed indirect peer control as a problematic behaviour that is not in organizations' interests (Loughry and Tosi, 2008). Our results provides empirical corroboration for Grosser et al.'s (2012) observation that the impact of gossip in organizations depends on whether one is taking the employee's or the organization's perspective. Our results suggest that gossiping about peers within a team may provide relatively inexpensive, as well as relevant and timely, information on which the rest of the team can act. While having a negative relationship with individuals' job satisfaction, indirect peer control seems to unfold its disciplinary benefits for the team as a whole (Barker, 1993; Feinberg et al., 2014; Sewell, 1998).

Our combined findings suggest both managerial discretion and an important trade-off when it comes to peer control. While team leaders have the power to influence peer control within their teams with their choice of managerial controls, a focus on enhancing job satisfaction among team members comes at the expense of team performance, and vice versa. This trade-off poses an interesting dilemma for team leaders, whose

organizational control choices can benefit outcomes at the individual or team level, but not both at the same time.

Limitations and Future Research Opportunities

Our findings are subject to several limitations. First and foremost is the empirical context of our study – volunteers in an NPO. Our context is in line with recent work, however, that has used volunteer samples to examine organizational and management theories (e.g., Florian et al., 2019). Moreover, the typical daily tasks our respondent teams were engaged in as well as the increasing professionalization of NPOs (Hwang and Powell, 2009) suggest that our sample context likely mirrors that of routine team tasks in for-profit organizations. Even more importantly, the supplemental analysis of salaried headquarters teams we report above provides no indication of any systematic differences between our volunteer and salaried employee samples. This leaves us with few reasons to question the generalizability of our findings. Nevertheless, future research comparing for-profit enterprises' and NPOs' organizational control regimes should provide a more definite answer regarding the generalizability of these results.

A second and related limitation is our study's German setting, which likely differs from other peer control work that has focused on U.S. samples (Loughry and Tosi, 2008; Stewart et al., 2012). Key differences of the German compared to the U.S. culture – e.g., its lower individualism, higher uncertainty avoidance and long-term orientation, and lower indulgence (Hofstede, 2001) – could potentially influence the extent to which teams use direct and indirect peer control and how this translates into individual satisfaction and team performance. For instance, Germany's lower level of individualism might imply that team members feel more obliged to take care of each other than it would be expected in a more individualistic culture, which could result in a higher likelihood and acceptance of direct peer control. In addition, German culture is classified as relatively restrained, which implies that not much emphasis is put on leisure time, and that people exert more control over the gratification of their desires (Hofstede, 2001). These social norms might make team members more likely to get upset with unreliable peers who are shirking or slacking off, and to avoid and gossip about them. Future studies could replicate our findings in similar settings in other countries or conduct multi-country studies to examine the influence of national culture on the antecedents and outcomes of peer control.

A third limitation is related to the cross-sectional nature of our data, which does not allow us to make causal inferences. In line with recent recommendations in the literature (Aguinis et al., 2017), future research should assess mediation for both the individual- and team-level model using longitudinal (and preferably panel) data, which allow for an empirical comparison of alternative causal flows. Moreover, while we did not find any evidence for this in our data – with team members' average tenure being over three years – future research may examine potential differences in peer controls' short- versus long-term effects. For instance, direct peer control may unfold its performance benefits only over time, i.e., when teams are working together long enough to translate the results of their discussion, correction, and praising activities into behaviours that increase team performance (see Barker, 1993). Indirect peer control, on the other hand, could lead to

turnover – which would entail a loss of knowledge – and health problems (e.g., stress, burnout, etc.), and may thus have a negative effect on team performance in the long run.

We also did not control for task interdependence in our volunteer teams. As our sample teams all engage in similar tasks that are outlined above and which are highly interdependent, we did not expect significant differences in the teams' task interdependencies. Loughry and Tosi (2008), however, found that the link between direct peer control and work-unit performance was positively moderated by task interdependence, while the link between indirect peer control and work-unit performance was not. Future research may thus want to clarify any task interdependence-related contingency effects.

In conclusion, despite the proliferation and increasing importance of peer control in today's increasingly team-based, knowledge-intensive work environment, we still have a relatively shallow understanding of its antecedents and organizational consequences. Our multilevel analysis of both antecedents and outcomes of peer control represents a step towards the development of a better theoretical foundation for this important phenomenon and reveals important trade-offs with regards to peer control's influence on individual- and team-level outcomes. Our study's differential results highlight that a simultaneous examination of the antecedents and outcomes of peer control (and possibly other forms of organizational control) has the potential to generate new theoretical and empirical insights.

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APPENDIX

MEASUREMENT ITEMS

Construct	*Items*	*Adapted from*
Team Cohesiveness	Please indicate your level of agreement with the following statements: 1. Team members liked the work that the team does. 2. Members of the team got along well. 3. Members of the team enjoyed spending time together.	Loughry and Tosi (2008)
Formal Managerial Control	Please indicate your level of agreement with the following statements: 1. The team leader specified the processes or procedures which the team had to follow during their activities. 2. The team leader specified the procedures (e.g., how to raise donations) used by the team. 3. The team leader determined work assignments for individual team members. 4. There were clear, planned goals and objectives set for this team by the team leader. 5. The team leader specified concrete goals for specific activities (e.g., the number of Christmas markets covered). 6. The team leader specified the product quality objectives for specific activities within this team (e.g., the quality of the content of talks in the information work).	Bonner et al. (2002)

Construct	*Items*	*Adapted from*
Clan Control	Please indicate your level of agreement with the following statements: 1. The common vision of helping children influenced how team members behaved. 2. All team members know [organization]'s vision and act accordingly. 3. Shared norms and values based on [organization]'s vision influenced team behaviors.	Kirsch et al. (2010)
Direct Peer Control	How often did members of your team… 1. see what other members did at their job? [notice] 2. notice what other members were doing at their job? [notice] 3. let others know that a team member had done good work? [praise] 4. tell team members that they did a good job? [praise] 5. take action if a team member had done the job incorrectly? [correct] 6. let team members know if they were doing something wrong? [correct] 7. talk about how team members did their job? [discuss] 8. discuss how everyone had performed at their jobs? [discuss]	Loughry and Tosi (2008)
Indirect Peer Control	How often did members of your team… 1. get angry with unreliable members and gossip about them with their friends on the team? [gossip] 2. gossip about it with their friends on the team if a team member has repeatedly let others down? [gossip] 3. refuse to socialize with team members who are unreliable? [avoid] 4. avoid team members who let others down repeatedly? [avoid]	Loughry and Tosi (2008)
Job Satisfaction	Please indicate your agreement with the following statements: 1. All in all, I am satisfied with my volunteer job at [organization]. 2. In general, I like my volunteer job at [organization]. 3. In general, I like working as a volunteer at [organization].	Boezeman and Ellemers (2009)
Team Performance	1. How advanced is this team's (organizational and procedural) way of working? 2. How do you assess this team's quality of information and media work? 3. How do you assess this team's overall performance?	