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# Contextualizing psychological contracts research: a multi-sample study of shared individual psychological contract fulfilment

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## ABSTRACT

Research on psychological contracts has made significant contributions to theoretically advancing our understanding of the employee-employer exchange relationship and its implications for organizational practice. However, the predominant emphasis of this empirical research has been on the individual level of analysis and in the process does not give sufficient attention to contextual influences. Teams have become a common feature in organizations today and provide a proximal context through which to understand how teams affect individuals' evaluation of their psychological contract. Based on the macrosociological perspective of social exchange theory as well as theories on the role of social influence in psychological contract evaluations, we examine how *shared* individual psychological contract fulfilment (PCF) shapes the relationship between *individual* PCF and outcomes (employee's own contributions and contextual performance) at the individual level as well as the predictors (group POS) and consequences (average employee contributions and average contextual performance) of shared individual PCF at the team level. Our findings from three studies, representing a total sample of 995 employees and 170 teams, provide support for the study hypotheses. This paper contributes to the psychological contract literature by conceptually and empirically addressing the role of a team context (shared individual PCF) and its impact on individual- and team-level relationships.

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## Introduction

Capturing an employee's perception of the reciprocal obligations in the exchange relationship with his/her employer (Rousseau, 1989), the psychological contract and its effects on employee attitudes and behaviour have been the subject of four meta-analyses (Bal, De Lange, Jansen, & Van Der Velde, 2008; Li, Rousseau, & Silla-Guerola, 2006; Topa Cantisano, Morales Dominguez, & Depolo, 2008; Zhao, Wayne, Glibkowski, & Bravo, 2007) and several literature reviews (e.g., Conway & Briner, 2005; Coyle-Shapiro, Pereira Costa, Doden, & Chang, 2019; Rousseau, 2011; Taylor & Tekleab, 2004; Cullinane & Dundon, 2006). Drawing on social exchange theory (Blau, 1964) as a primary theoretical foundation, these studies have uncovered the importance of psychological contracts in understanding employment relationships, employee attitudes, and behaviours (Conway & Briner, 2005).

Although this body of empirical research has made significant contributions to the literature and organizational practice, it focuses heavily on the individual level, and neglects to consider the context, "situational or environmental constraints and opportunities that have the functional capacity to affect the occurrence and meaning of organizational behavior" (Johns, 2017, p. 577), under which responses to psychological contract fulfilment (PCF) are altered. An important contextual factor that potentially shapes individual's reactions to PCF is their work team. Over the past few decades, organizations have increasingly designed their work processes around

teams (Mathieu, Maynard, Rapp, & Gilson, 2008), and recent studies show that team-level constructs influence work attitudes and behaviours of individual team members (e.g., Richter, Hirst, Van Knippenberg, & Baer, 2012; Troth, Jordan, Lawrence, & Tse, 2012). Omitting the context at the team level limits the potential contribution of psychological contract research as it discounts the influence of team members' PCF on how employees respond to their own PCF. A small number of theoretical (Ho, 2005; Laulié & Tekleab, 2016) and empirical (De Vos & Tekleab, 2014; Gibbard et al., 2017; Ho & Levesque, 2005) studies in the psychological contract literature have paved the way for considering perceptions of PCF at the team level as a contextual factor, shaping an individual's response to their own PCF. Specifically, Ho (2005), Ho and Levesque (2005) and Laulié and Tekleab (2016) note that employees' perceptions of PCF, defined as "the extent to which one party to the contract deems the other has met its obligations" (Lee, Liu, Rousseau, Hui, & Chen, 2011, p. 204),<sup>1</sup> are generally influenced by the social context in which they operate. In this study, we focus on the role of the social context at the team level as a proximal context that operates as a "shaper" of individual team members' responses to their own PCF.<sup>2</sup>

We argue that social exchanges within the team shape individual members' psychological contract perceptions and their reactions to these perceptions. Individuals not only engage in social exchanges with organizations in simple

dyadic relationships, but also manage multiple, mutually dependent networks of relationships (Alcover, Rico, Turnley & Bolino, 2017; Bordia, Restuborg, Bordia, & Tang, 2010; Cook & Emerson, 1978) as part of their regular interactions in the workplace. In his seminal work on social exchange theory (SET), Blau (1964) argued that in order to navigate complex social structures, individuals engage in “indirect exchanges” with the organization through exchanges in their smaller collectives (i.e. teams) to which they belong. This, labelled the “macrosociological” perspective of SET (Blau, 1964, p. vii-xvii), is differentiated from the “microsociological” perspective used widely in empirical studies on psychological contracts. As such, an exclusive focus on the dyadic relationship between the employee and organization may camouflage the range of exchanges that actually occur as part of the employee–organization relationship. As Alcover et al (2017) note, “this dyadic employee–organization relationship does not capture the full extent of the social context arising in the course of interactions between different agents nor does it address all of the social comparison processes...” (p. 5). Relying on the macrosociological perspective of social exchange theory (SET, Blau, 1964), we theorize and empirically investigate: (a) how shared individual PCF, as a team-level contextual variable, shape the individual-level relationship between PCF and work outcomes, and (b) the team-level determinants and outcomes of shared individual PCF. Here, shared individual PCF is defined as “the convergence of team members’ perception of the degree to which employers fulfil their own, *individual* psychological contracts” (Laulié & Tekleab, 2016, p. 664).

Using three field studies, this paper aims to contribute to psychological contract literature in the following ways. First, relying on the macrosociological perspective of SET as the theoretical foundation, the current paper advances

understanding of the contextual effect of shared individual PCF in shaping how employees reciprocate their own PCF, addressing prior calls for such multilevel perspective in the literature (Ho, 2005; Laulié & Tekleab, 2016). In this paper, we argue that phenomena at the team level form a proximal context that provides an important backdrop to understanding how individual team members respond to organizational treatment. In focusing on the team context, the current study extends prior theorizing on the impact of friends and coworkers on shaping an employee’s PCF in a dyadic relationship, and accounts for the impact of team members’ shared individual PCF in shaping their individual responses to their own PCF. Second, we contribute to the psychological contract literature by testing the association between shared PCF and team outcomes (employees’ contextual performance and contributions at the team level). Laulié and Tekleab (2016) proposed that shared individual PCF may serve as a motivational source for teams to perform effectively. In this study, we empirically test this proposition. As Laulié and Tekleab (2016, p. 683) noted, “researchers can and should empirically test the validity of the construct as well as its role in affecting employees’ and teams’ attitudes and behaviours.” Indeed, we highlight that only the test of theoretical propositions can provide a strong footing to the veracity of the theory and its practical implications. Third, we advance understanding of the development of shared individual PCF by theorizing and empirically testing the impact of a potential team level factor (group level POS), thereby extending earlier theoretical work on determinants of shared individual PCF (Laulié & Tekleab, 2016). Overall, this research contributes to theory and practice by looking at the top-down influence of team level PCF on individual level relationships and outcomes (employee’s own contributions, Study 1; contextual performance, Study 2) and at its team level predictor (group

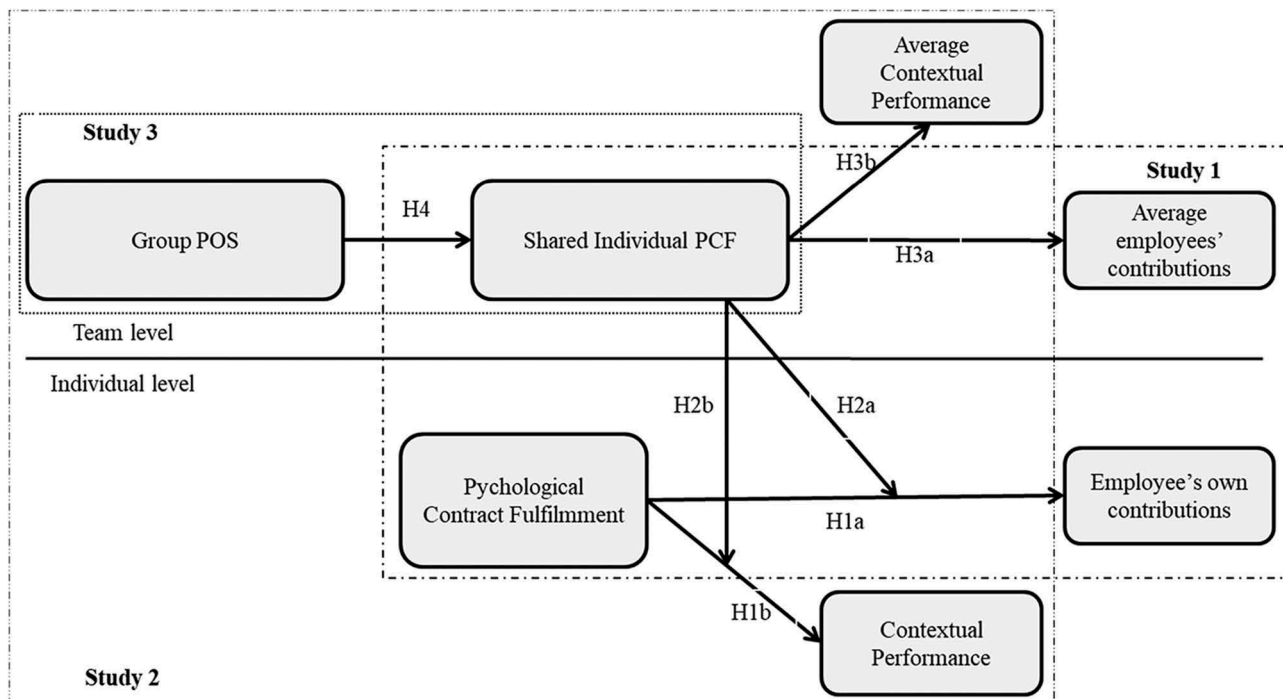


Figure 1. Theoretical model.

POS, Studies 2 and 3). Figure 1 summarizes the proposed theoretical model.

## Theory and hypotheses

### Micro- and macro-sociological perspectives of social exchange theory

Social exchange theory (SET; Blau, 1964) is one of the most widely used theoretical frameworks in organizational science (Colquitt, Baer, Long, & Halvorsen-Ganepola, 2014; Cropanzano, Anthony, Daniels, & Hall, 2017). Building on SET, researchers (e.g., Cropanzano & Mitchell, 2005) have explained the continuous interchange of social resources between two parties, characterized by processes of reciprocity and trust development. In order to gain benefits, good treatment, and sustain a better position in the future, individuals engage in positive relationships with other social actors for their mutual advantage. The description of these social exchanges and why they take place is referred to as the “microsociological” component of SET (Blau, 1964, p. vii-xvii). This component of SET has frequently been used in organizational science to describe employee-employer or employee-supervisor relationships and to explain why employees display different behaviours in the workplace (Colquitt et al., 2014; Coyle-Shapiro & Conway, 2004). Although less frequently studied in the organizational behaviour literature, in his seminal work Blau (1964) also addresses the macrosociological component of SET, which suggests different social exchange relationships are interdependent and co-occurring. The complexity of multiple and simultaneous

social exchange relationships reflected by Blau (1964) manifests itself in a tripartite exchange: the organization, the team, and the individual. Each relationship between two parties (e.g., between the organization and an individual) is directly or indirectly influenced by exchange relationships between the other parties (e.g., the team and the individual). Figure 2 demonstrates these tripartite exchange relationships. A focal individual engages in an exchange relationship with his/her organization (Exchange # 1), where he/she receives benefits from the organization (path A) and reciprocates in some form to the organization (path B). However, the reciprocation (path B) is also dependent on his/her exchange with the team (Exchange #2) as the nature of his/her reciprocation may be influenced by the need to conform to social norms of the team (path C) and gain social approval by the team (path D). Furthermore, the team’s exchange relationship with the organization (Exchange #3), characterized by the collective treatment by the organization (path E) and their collective reciprocation (path F), is also a function of the focal individual’s treatment by the organization because how he/she is treated individually also shapes his/her contribution as a member of the team. This illustrates the embeddedness of exchange relationships in an organizational context and reveals the complexities of understanding individual employee responses to organizational actions.

### Individual-level associations between PCF and outcomes

Consistent with the microsociological perspective of SET, our first hypothesis considers the individual-level associations between PCF and outcomes. Significant theoretical and empirical support

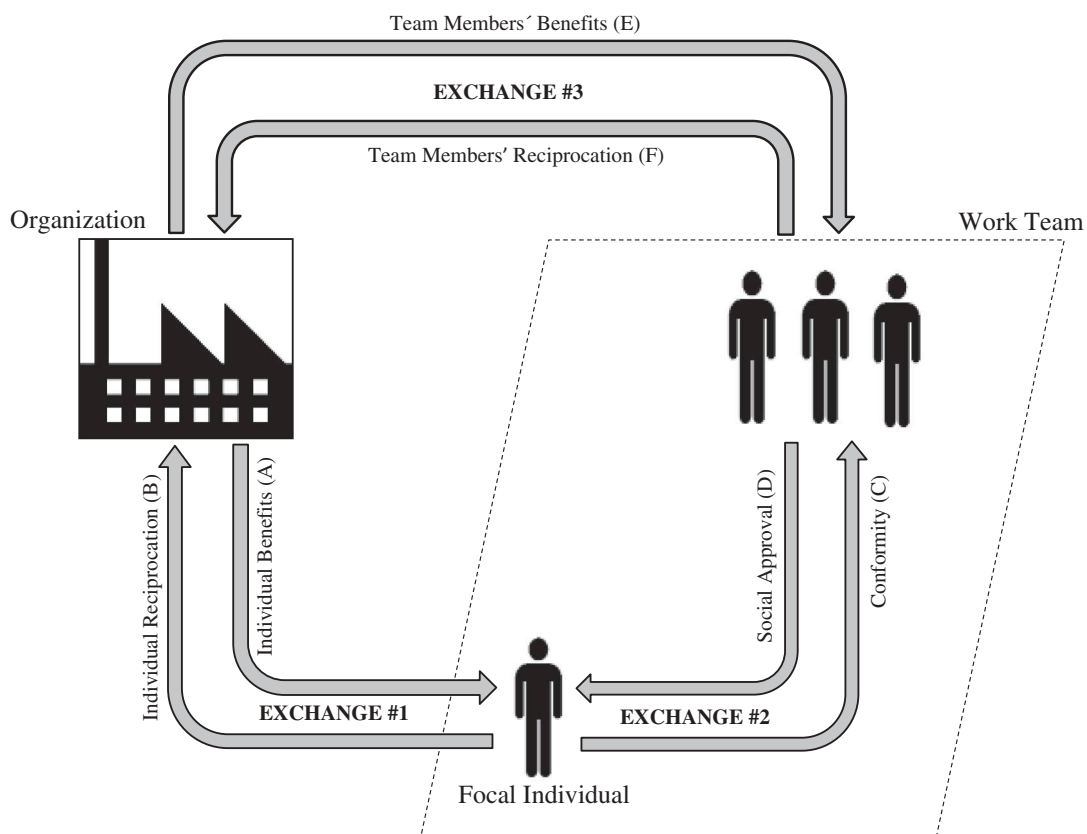


Figure 2. Macrosociological perspective of SET representation.

exists confirming that individuals reciprocate organizational treatment (i.e., PCF) in various ways (e.g., Coyle-Shapiro, 2002; De Vos, Buyens, & Schalk, 2003; Tekleab, Takeuchi, & Taylor, 2005). For example, new hires tend to adjust their perceptions of what they owe their employer as a function of the extent to which they believe their employer has kept its promises to them (De Vos et al., 2003). Similarly, when employees perceive that the organization is delivering its obligations to them, as the microsociological perspective of SET would predict, employees reciprocate with positive work attitudes and behaviours (Coyle-Shapiro, 2002; Tekleab et al., 2005). Conversely, when the organization fails to fulfil its obligations and reneges on its side of the deal, employees reciprocate by negatively adjusting their attitudes and behaviours (see Zhao et al., 2007). We replicate prior research and expect a similar positive effect of PCF on employees' beliefs of what they should contribute to the organization (employee's own contributions) as well as interpersonal behaviours that support the social context in which work is accomplished (contextual performance; Borman & Motowidlo, 1993).

*Hypothesis 1: Individual level PCF will be positively related to (a) employee's own contributions and (b) contextual performance.*

### **The emergence of shared individual PCF**

A less developed focus within SET is how various social exchange-based relationships influence each other (Coyle-Shapiro & Conway, 2004), going beyond the study of dyadic relationships (Bordia et al., 2010; Cook & Emerson, 1978; Gong, Chang, & Cheung, 2010). As individuals' exchanges with organizations are deeply dependent on interactions with others (Ho, 2005; Ho & Levesque, 2005), and particularly on the team in which an individual is embedded, we expect that an individual's behaviours and intentions that support the organizational goals should be either strengthened or neutralized by team-level phenomena. In this study, we utilize the macrosociological perspective of SET as well as theoretical perspectives on the role of social influence in psychological contract evaluations (Ho, 2005; Laulié & Tekleab, 2016) to investigate how shared individual PCF, a team level context, shapes individual team members' responses to the fulfilment of their own psychological contract as well as their collective responses to the organization's treatment of the team.

Recall, we followed Laulié and Tekleab (2016) definition of shared individual PCF as team members' consensus on the extent to which the organization fulfils its obligations to *individual members* of the team.<sup>3</sup> They theorize that members of a team may develop shared perceptions of fulfilment of the organization's obligations to them through bottom-up and top-down processes (Rupp, Bashshur, & Liao, 2007). We treat shared individual PCF as a "shared unit property" (Kozlowski & Klein, 2000, p. 64) that emerges from social interactions in a work group. From a macrosociological perspective of social exchange (Blau, 1964), this exchange of information explains how shared individual PCF emerges at the team level. We noted earlier that the key element of social exchange theory (Blau, 1964; Emerson, 1962; Homans, 1961) is that individuals enter into voluntary relationships such that they perform some action for another party that prompts the recipient to reciprocate in some form. As

Foa and Foa (2012, p. 19) note, "every interpersonal behaviour consists of giving and/or taking away one or more resources," of those resources that can be exchanged, information is likely to be a prevalent one in a team context. Driven by collective team goals and task interdependence (Kozlowski & Bell, 2003), team members are likely to share personal, work related, and/or professional information with other members, who are likely to reciprocate by sharing similar information following the principle of reciprocity in kind (see Figure 2). Over time, these informational exchanges flow more freely to the point that when a member shares his/her evaluation of the extent to which the organization fulfils its obligations to him/her, others will reciprocate by sharing their views and experiences of fulfilment by the organization (Ho, 2005). As a bottom-up process, such deliberate interaction and exchange of information cultivate the emergence of shared individual PCF that in turn acts as a social norm, affecting how individuals respond to their own experience of PCF.

Similarly, as a top-down process, shared individual PCF develops because team members receive the same information about the fulfilment of promises from organizational agents. For example, agents may commit to offering technical consultation, providing technical and physical resources (such as equipment and facilities), ensuring timely access to information, and offering help and encouragement, participation in decision-making, autonomy, and recognition (e.g. Morgeson, DeRue, & Karam, 2010). As team members are likely to be exposed to such common messages from organizational agents (Kozlowski & Klein, 2000; Liao & Rupp, 2005), it is likely that they will develop similar evaluations about the commitments made to them individually (Tangirala & Ramanujam, 2008). Indeed, empirical evidence from HR studies supports the influence of the social environment. For example, drawing on Bowen and Ostroff (2004), Kehoe and Wright (2013, p. 370) argue, "some level of consensus in perceptions of HR practices in a collective (e.g., a job group) is likely to reflect a common set of beliefs concerning the nature of the exchange relationship..." They explain that while an individual forms their own individual perceptions of HR practices, these perceptions "are filtered through the contextual influences and collective sense-making efforts of the group of employees with whom an individual most often works and interacts" (370). Overall, both bottom-up and top-down processes support the emergence of shared individual PCF.

### **Shared individual PCF as a moderator**

We noted above that shared individual PCF emerges due to a combination of continued interactions among team members (bottom-up) and collective sensemaking of information from organizations about commitments to individual members (top-down). At a point when team members converge on their perception of PCF, following the macrosociological perspective of SET, such perception becomes a contextual factor that shapes individuals' reactions to their own perception of PCF (see Figure 2). That is, the extent to which an individual engages in positive/negative reciprocation by increasing/lowering the level of their contributions to the organization and their contextual performance should

not depend exclusively on individual perceptions of the exchange relationship with their employer, but also on the social environment that sustains those individual behaviours (Ehrhart & Naumann, 2004).

In particular, when a team member perceives a low level of PCF in the context of a low level of shared individual PCF in the team, the consistent negative perception makes the individual react negatively by lowering his/her own contributions to the organization and his/her contextual performance. In other words, the social normative context would dictate that the employee should behave similarly to other team members (i.e., reciprocating negatively by contributing to the organization at a low level) given that the organization has failed to fulfil its obligations to him/her as well. On the other hand, if one's PCF is low while the overall shared individual PCF of all team members is high, two negative perceptions that exacerbate one's reaction may emerge. First, this mismatch may cause an individual member to feel differentially treated by the organization, triggering more negative reactions. Second, from research on social comparisons (e.g., equity theory; Adams, 1965) it can be expected that individuals may perceive negative inequity; hence, they tend to reciprocate by further lowering their contributions. Given the higher impact of negative (vs. positive) information (Rozin & Royzman, 2001), individuals who perceive low PCF in a high shared individual PCF environment will react even more negatively by contributing less to the organization.

Conversely, when a team member perceives high PCF in a team with high shared individual PCF, such desirable consistency strengthens the positive impact of an individual's own PCF on his/her future contributions to the organization and contextual performance. In other words, the social normative context would dictate that the employee should behave similarly to other team members (i.e., reciprocating positively by contributing to the organization at a higher level) given that the organization has fulfilled its obligations to him/her as well. On the other hand, when the individual perceives high PCF in the context of an overall low team level of shared individual PCF, the inconsistent information sends contradictory signals to the individual, creating a cognitive dissonance. While the individual may want to respond positively to his/her own high PCF, he/she may not because the team's (i.e., social) response is negative. An individual may thus be reluctant to deviate from expectations to conform to the team's social norm to lower contributions. Thus, the effects of individual PCF on expected contributions and contextual performance will be neutralized in case of low shared PCF. Based on the above reasoning, we hypothesize the following.

*Hypothesis 2: There will be cross-level interaction effects of shared individual PCF on the relationships between own PCF and (a) employee's own contributions and (b) contextual performance such that the relationships will be stronger under high (vs. low) levels of shared individual PCF.*

### **Shared individual PCF and group-level outcomes**

We also rely on the macrosociological perspective of social exchange theory (SET) (Blau, 1964) and the norm of reciprocity

(Gouldner, 1960) to address the effects of shared individual PCF on exchange related team outcomes. Specifically, we expect that team members' shared evaluations of PCF will affect team members' beliefs about their own contributions to the organization and contextual performance. In hypotheses 1a and 1b, at the individual level, we predicted PCF and outcomes to be positively related. As per the macrosociological perspective of SET, we expect this relationship at the individual level to hold at the team level as well (see Figure 1) because the attitudes and behaviours exhibited by individuals are mostly meaningful when several members also display these behaviours in a recurrent way (Organ, 1988; Podsakoff, Podsakoff, MacKenzie, Maynes, & Spoelma, 2014). Specifically, a high level of shared individual PCF creates an environment where several team members display more positive attitudes and behaviours. These behaviours are reinforced as team members observe the attitudes and contextual performance of others and act in a way that is socially accepted by the rest of the team. Thus, we expect shared individual PCF at the team level to be positively associated with team-level employees' own contributions and contextual performance.

*Hypothesis 3: Shared individual PCF level will be positively associated with (a) average employees' own contributions and (b) average contextual performance.*

### **Group POS as an antecedent of shared individual PCF**

The extent to which a team is supported by the organization is likely to provide a filter through which team members evaluate their PCF. Following POS theory, employees develop a global belief concerning the extent to which the organization cares about them and values their contributions, based on the favourableness of employees' history of treatment by the organization (Eisenberger, Huntington, Hutchison, & Sowa, 1986). POS and PCF are conceived as being interdependent yet distinct constructs (Aselage & Eisenberger, 2003; Coyle-Shapiro & Conway, 2005; Tekleab et al., 2005). At the group level, similar to shared individual PCF and extending Eisenberger et al.'s (1986) conceptualization, we define group POS as convergence of team members' perceptions of the extent to which the organization cares about them and values their contributions. Group POS is likely to lead to higher perceptions of shared individual PCF for the following reasons. First, prior work demonstrates that individuals in supportive relationships develop benevolent views of their employer (Tekleab et al., 2005). We argue that this will also hold true at the team level because team members in supportive relationships are more likely to collectively hold benevolent views of their employer's actions and are consequently more likely to give their employer the benefit of the doubt when it comes to how well their employer is fulfilling its side of the exchange. These collective views may translate into team members minimizing events that could be interpreted as a breach of employment promises. Second, Lulié and Tekleab (2016, p. 675) stated that "the collective perception of high POS climate [i.e. group POS] weakens the need and intent to monitor minor discrepancies on the fulfilment of obligations to the individual." The positive work environment created by a high level of group POS in the team signals that the organization is trustworthy. Given this, team members are more likely to attribute

potential breaches to external (not internal) factors, which buffer and allow them to maintain their higher level of shared individual PCF. Overall, we expect a positive relationship between group POS and shared individual PCF. Thus, we hypothesize the following:

*Hypothesis 4: Group level POS will be positively associated with shared individual PCF level.*

## Method

### General study procedures and analyses

We conducted three studies to test our hypotheses. Our study approach aimed to examine specific aspects of our theoretical model (Figure 1), but it also provided the opportunity to assess the replicability of the results across several populations. In all three studies, teams were composed of at least three individuals, possessed common goals, and exhibited interdependence, meeting the criteria to be considered as a team (Kozlowski & Bell, 2003). In addition, all participants in the three studies were guaranteed of the confidentiality of their responses. If respondents could not be matched to a unique team, they were excluded from the studies. We excluded teams with fewer than three individuals responding from the analyses in order to adequately test the multilevel hypotheses. Although we gathered various demographic characteristics (detailed in each study), we did not control for them in all analyses because there was not a specific theoretical argument for their inclusions.<sup>4</sup>

In all studies, team level data were collected using individual survey responses from team members. Accordingly, shared individual PCF, the key construct in all studies, was calculated as the within-team mean of individual PCFs following the direct consensus approach (Chan, 1998) as recommended by Lulié and Tekleab (2016). In order to operationalize it as a meaningful team-level construct, Chan (1998) outlined specific statistics as needed to justify aggregation. Thus, we calculated ICC(1) and mean and median  $r_{wgs}$  for this construct in each study.

### Analyses

To test hypotheses 1, 2, and 3, we conducted a series of multilevel analyses (Random Coefficient Modelling, RCM) using the R-software, version 3.4.1, with the “nlme” package. RCM provides unbiased parameter estimates given that individuals are nested in teams; thus data in our studies are non-independent (Aguinis, Gottfredson, & Culpepper, 2013; Hofmann, 1997, 2002; Raudenbush & Bryk, 2002). First, we investigated whether there were sufficient within- and between-team variabilities on employees’ own contributions and contextual performance. Next, we added individual PCF (individual level) and shared individual PCF (team level) as predictors (Model 1). Then, we examined if there was slope variability to test for cross-level interaction effects (Model 2). Finally, we examined the interaction between individual PCF and shared individual PCF (Model 3). To avoid multicollinearity, we rescaled continuous individual level controls and independent variables as well as team level constructs using grand-mean centring (Bliese, Maltarich, & Hendricks, 2017; Enders & Tofighi, 2007; Hofmann & Gavin, 1998). In grand-

mean centring, “parameter estimates represent differences in slopes between individual-level and group-level relationships” (Bliese et al., 2017, p. 3). Thus, we report the total effect of the group-level relationship by adding the coefficients of both level-1 and level-2, which represents the relationship at the team level.

Note also that a team level construct can only explain variability between-teams, not within-teams (Bliese et al., 2017; Enders & Tofighi, 2007; Hofmann & Gavin, 1998). Thus, a significant relationship between shared individual PCF and outcome variables (average employees’ own contributions and average contextual performance) provides support for Hypothesis 3. A significant interaction effect (between shared individual PCF and individual level PCF) provides support for Hypothesis 2. We also tested the interaction effects using the group-centring option in order to check that the effect was, indeed, produced by the interaction of team-level variables, rather than by a cross-level effect (not reported). Last, we calculated variance explained by the group-level variables (i.e.,  $R^2_{\text{between-group}}$ ) and by the individual-level variables (i.e.,  $R^2_{\text{within-group}}$ ) (Snijders & Bosker, 1999). For Hypothesis 4, we ran OLS regression analyses as all the variables involved reside at the same (i.e., team) level.

Generally, cross-level interactions are difficult to find due to low power (Arend & Schaifer, 2019; Cascio & Zedeck, 1983; Mathieu, Aguinis, Culpepper, & Chen, 2012). In the current study, we adopt  $\alpha < .10$  to test for significance for two reasons: First, as Matthieu et al. (2012, p. 962) state, “it may be reasonable to adopt more liberal alpha levels for early investigations in a nascent topic area.” Given shared individual PCF is a relatively new construct and its role in the psychological contract research has not been empirically explored thus far, it is justifiable to adjust the alpha level to .10. Second, as noted above, cross-level interactions also require large sample size both at Level 1 and Level 2 to detect possible effects, and it might be appropriate to adjust the alpha level to .10. In recent studies using simulations, both Mathieu, Aguinis, et al. (2012) and Arend and Schaifer (2019) showed that the power to detect cross-level interaction is well below .80. Therefore, both these studies recommend the use of a higher alpha level ( $p < .10$ ). Furthermore, Arend and Schaifer (2019) suggest to include the minimum detectable effect size (MDES) at power  $> .80$  for a given average sample size at level 1, sample size at level 2, large effect sizes (.50), and ICC for the null model (see Arend & Shairfer, 2019 for more detail and syntax to calculate the MDES). Thus, in the current study, we followed these suggestions and we report the MDES in Studies 1 and 2.

While we describe the specific aspects of each study in its respective section below, we note here that we tested Hypotheses 1a, 2a and 3a in Study 1, Hypotheses 1b, 2b, 3b, and 4 in Study 2, and Hypothesis 4 in Study 3 (see also Figure 1). Each study has its own strengths and limitations, which we will describe in detail in the discussion section, but we believe our approach expands the psychological contract literature by providing more evidence to explore the external validity of PCF theory at the team level. Table 1 provides a summary of the most important features of each study.



**Table 1.** Summary of main features of studies 1, 2, & 3.

Features	Study 1	Study 2	Study 3
<b>Common features</b>			
Number of team members	Three or more members		
Team criteria	Fulfill Kozlowski & Bell (2003) criteria for a team		
Data collection	Using individual survey responses		
Shared individual PCF	Calculated as the within-team mean of individual PCF, using a direct consensus approach		
Analysis	Random coefficient modeling (RCM) using R-software, version 3.4.1 with the “nlme” package is used for analyses		
Statistics reported	ICC(1); mean and median $r_{wg(j)s}$ ; pseudo R-square		
Centering	Grand-mean centering for both level-1 and level-2 variables is used and reported		
Alpha level for cross-level interaction	Alpha level .10		
Confidentiality	All participants and organizations are guaranteed confidentiality of their responses		
<b>Study specific features</b>			
Country (Language)	Belgium (Dutch & French)	Chile (Spanish)	Netherlands (Dutch)
Sample Description	Teams within 3 federal government institutions (several functions)	Teams in single company in textile industry (several functions)	Teams in 15 organisations (front and back office, customer service)
Sample sizes (teams / individuals)	81 / 609	58 / 209	31 / 195
Number of surveys per team member	1	3	2
Hypotheses tested	1a, 2a, 3a	1b, 2b, 3b, 4	4
<b>Measures</b>			
Shared individual PCF	De Vos et al. (2003)	Robinson & Morrison (2000)	Robinson & Morrison (2000)
Group POS	-	González-Roma et al (2009)	Eisenberger et al. (1990)
Employee's own contributions	De Vos et al. (2003)	-	-
Contextual performance	-	Mohammed et al. (2002)	-
ICC1 / median $R_{wg}$ (shared individual PCF)	.12 / .92	.29 / .82	.23 / .92

## Study 1

### Procedure and sample

The participants in Study 1 worked in teams within three federal government institutions in Belgium (the National Employment Office; FPS Health, Food Chain Safety and Environment; and the National and State Archives). Team members were informed about the study by the human resource manager from their organization. Employees belonging to the selected teams received an email with further information on the project and a link to an online survey. Participants completed this survey in Dutch or French on site and during working hours. We used existing validated measures in Dutch and French where available and for the remaining measures that were originally developed in English, we used the procedures depicted by Brislin (1980) to translate these items into Dutch/French. A total of 133 teams (including a total of 1689 team members) were invited to participate in the study. Of those, 877 employees (response rate = 56%) participated in the study. The final sample comprised of 609 employees from 81 teams, with an average of 8 members per team ( $SD= 3.67$ , range = 3–17 members).

Thirty-eight percent of team members were younger than 40 years, 30% between 40 and 50, and 30% were older than 50, and the rest did not report their age. Sixty-six percent were female and 65% worked full time. Forty-seven percent had a high school degree, 33% had a bachelor's or higher degree; 54% had an organizational tenure of more than 10 years, and the majority (82%) were members of the current team for more than a year.

### Measures

PCF was measured at the individual level with 12 items taken from De Vos et al. (2003), where respondents were asked to indicate the extent to which the 12 items were currently being fulfilled by the organization, using a scale ranging from 1 (not at all) to 5 (completely fulfilled). A sample item reads, "...Opportunities to change jobs within the organization." The

reliability coefficient (Cronbach's alpha) for the scale was .82. *Shared individual PCF level* was calculated as the within-team mean of individual PCFs following the direct consensus approach (Chan, 1998) as recommended by Laulié and Tekleab (2016). The  $ICC_1$  for this construct was .12 ( $p < .001$ ), suggesting a significant between-team variability on this construct. This value corresponds to a medium effect of team membership (LeBreton & Senter, 2008). Moreover, the mean and median  $r_{wg(j)s}$  for this construct were .87 and .92. These values correspond to strong agreement among team members (LeBreton & Senter, 2008). Overall, these results provide strong evidence that shared individual PCF serves as a team-level construct relevant as a contextual variable in the current research model. *Employee's own contribution* was measured using nine items taken from De Vos et al. (2003). Respondents were asked to indicate the extent to which their employer could expect them to contribute each of the items listed ranging from 1 (not at all) to 5 (completely). A sample item reads, "...do overtime in order to get my work done." The reliability coefficient for this scale was .82.

### Results

Table 2 presents descriptive statistics and correlations of the scales used in Studies 1, 2, and 3. The test for within- and between-group variability of employees' own contributions shows that 6% of the variance in this variable was due to team membership. This result supports using multi-level analysis to test the effects of group and individual factors on the dependent variable (employee's own contributions). As our study involves cross-level interactions, this requires a test of slope variability. Thus, we compared a model with no slope variability (Table 3, Model 1) with another model with slope variability (Table 3, Model 2), and the results show that a model with slope variability was significantly better than the alternative model ( $p < .001$ ). Thus, we used results from Model 2 to report the main effects and also continued to test the cross-level interaction effect (see Bliese et al., 2017).

**Table 2.** Descriptive statistics and correlations of the study variables (Studies 1, 2, & 3).

Variables	Mean	s.d.	1	2	3	4	5
<b>Study 1</b>							
<i>Level 2 – Variables</i>							
1. Team Size	7.52	3.43	–				
2. Gender <sup>a</sup>	0.65	0.25	.19				
3. Employment Status <sup>a</sup>	0.33	0.22	.10	.56***	–		
4. Shared Individual PCF strength	0.55	0.23	–.18	–.10	–.17		
5. Shared Individual PCF level	3.35	0.34	–.15	–.03	.04	.46***	–
<i>Level 1 – Variables</i>							
1. Gender	0.67	0.47	–				
2. Employment Status	0.34	0.47	.35***	–			
3. PCF	3.32	0.64	.06	.03	–		
4. Employee's Own Contributions	4.05	0.55	.08	–.08	.28***	–	
<b>Study 2</b>							
<i>Level 2 – Variables</i>							
1. Team Size	4.69	2.79	–				
2. Gender <sup>a</sup>	0.82	0.28	.14	–			
3. Team Tenure	3.23	2.46	.47**	.25	–		
4. Group-Level POS	5.08	0.92	–.14	–.35**	–.18	–	
5. Shared Individual PCF strength	1.00	0.46	.06	.14	.19	–.25	–
6. Shared Individual PCF level	5.27	0.91	–.13	–.28*	–.30**	.49**	–.37**
<i>Level 1 – Variables</i>							
1. Gender	0.83	0.31					
2. Tenure	4.15	4.14	–.11				
3. PCF	5.20	1.26	.06	.15*			
4. Contextual Performance	6.23	0.56	–.03	–.07	.20**		
<b>Study 3</b>							
<i>Level 2 – Variables</i>							
1. Team Size	7.23	548	–				
2. Age	40.26	7.49	.37*	–			
3. Team Tenure	4.81	3.75	.55***	.54**	–		
4. Group-Level POS	3.46	0.45	–.08	–.15	–.04	–	
5. Shared Individual PCF level	3.63	0.46	–.24	–.04	–.03	.50**	

<sup>a</sup> This refers to the proportion of male in the team and proportion of part-time employees. Gender: 0 = male. Employment status: 0 = full time. Study 1:  $N_{\text{individual-level}} = 609$ ;  $N_{\text{team-level}} = 81$ . Study 2:  $N_{\text{individual-level}} = 209$ ;  $N_{\text{team-level}} = 58$ . Study 3:  $N_{\text{team-level}} = 31$ . \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

Hypothesis 1a predicted a positive relationship between PCF and employee's own contributions at the individual level. Consistent with prior PCF research, individual level PCF was positively related to employee's own contributions ( $b = .25$ ,  $s.e. = .05$ ,  $p < .001$ , Table 3, Model 2). This effect still remained significant when the interaction term was included ( $b = .27$ ,  $s.e. = .05$ ,  $p < .001$ , Model 3). These results provide support for Hypothesis 1a. Hypothesis 2a predicted a cross-level moderating role of shared individual PCF level such that the individual level relationship between PCF and employee's own contributions would be stronger under high (vs. low) shared individual PCF level. The results in Table 3 (Model 3) show a significant interaction effect ( $b = .34$ ,  $s.e. = .12$ ,  $p < .01$ ). As shown in Table 3, the effect size for this study is .40 (i.e., square-root of .16, which is the pseudo  $R^2$ ), which is greater than the MDSES for the cross-level interaction for this study (.20). In addition, as illustrated in Figure 3(a), the relationship between an individual's PCF and employee's

**Table 3.** The effects of PCF and shared individual PCF on employee's own contributions and contextual performance (Studies 1 and 2).

Variables	Model 1		Model 2		Model 3	
	B	s.e.	b	s.e.	b	s.e.
<b>Study 1</b>						
PCF	.22***	.04	.25***	.05	.27***	.05
Shared individual PCF level	.08	.08	.11	.08	.00	.09
Shared individual PCF * PCF					.34**	.12
Pseudo $R^2$ (within-group)	.06		.14		.14	
Pseudo $R^2$ (between-groups)	.41		.46		.46	
Pseudo $R^2$ (slope variability)					.16	
<b>Study 2</b>						
PCF	.06	.04	.06	.04	.07 <sup>†</sup>	.04
Shared individual PCF level	.04	.06	.05	.06	.03	.07
Shared individual PCF * PCF					.07 <sup>†</sup>	.04
Pseudo $R^2$ (within-group)	–.01		.02		.01	
Pseudo $R^2$ (between-groups)	.41		.42		–.08	
Pseudo $R^2$ (slope variability)	–	–	–	–	.30	

Study 1:

$N_{\text{individual-level}} = 609$ ;  
 $N_{\text{team-level}} = 81$ ; Study 2:  
 $N_{\text{individual-level}} = 209$ ;  
 $N_{\text{team-level}} = 58$ . We also tested the interaction effects using group-mean centring and the results remain the same.

<sup>†</sup>  $p < .10$

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$

own contributions is stronger when shared individual PCF is high ( $b = .39$ ,  $s.e. = .07$ ,  $p < .001$ ) than when it is low ( $b = .15$ ,  $s.e. = .06$ ,  $p < .01$ ).<sup>5</sup> Overall, these results provide support for Hypothesis 2a. Hypothesis 3a predicted that shared individual PCF level would be positively related to average employees' contributions. The total effect of shared individual PCF level on average employees' contributions was significant ( $.35 = .247 + .107$ ; Table 3, Model 2)<sup>6</sup> and positive, supporting Hypothesis 3a.

## Study 2

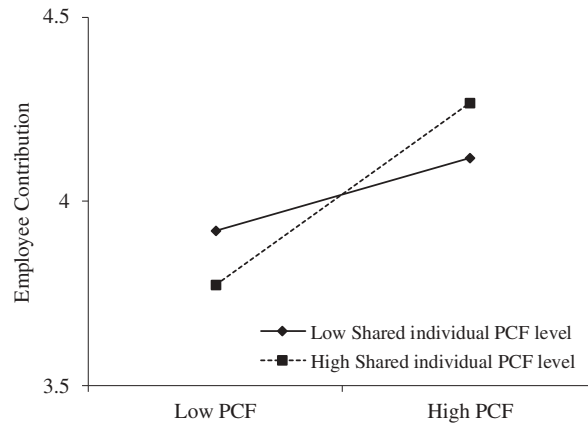
### Procedure and sample

In Study 2, we collected data from a single organization in Chile. The company operates within the textile industry, and it manufactures and sells several lines of clothing directly to customers through its stores. Teams within this company perform diverse types of functions including sales, marketing and commerce, manufacturing, inventory and distribution, and administrative and professional services.

Participants responded to three online surveys in Spanish. Using two independent translators, we used a translation and back-translation method in which, first, one of the authors (bilingual) translated the original items to Spanish, and later, an independent professional translator converted the items back to English. In approximately 29% of items, there were significant differences that were later solved by agreement between the two translators. Finally, using a small independent sample of 19 Chilean individuals, the translated items were pretested to ensure that the questions were understandable and made sense.

Through email communication, 448 full-time employees in 71 teams were invited to respond to three online surveys. In order to

a) Study 1



b) Study 2

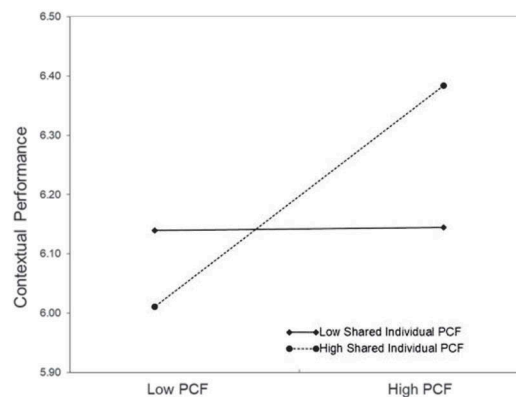


Figure 3. Cross-level interaction effect of shared individual PCF.

reduce common method variance (Podsakoff, MacKenzie, & Podsakoff, 2012), we separated the measurement of antecedents and outcomes. At time 1, we collected information on POS; at time 2 (three months later), we collected data on individual PCF; and at time 3 (three months after the time 2 measure), we collected measures of contextual performance. We received complete surveys from 378, 371, and 390 team members at time 1, time 2, and time 3, respectively. After excluding individuals with missing data, individuals who failed an attention check item, and teams with less than three respondents, we obtained meaningful information from 209 matched respondents from 58 teams for testing hypotheses 1b, 2b, and 3b.<sup>7</sup> The average team sizes were 5.6 at time 1, 4.7 at time 2, and 5.0 at time 3. For the testing of Hypothesis 4, we obtained matched data from 54 teams with three or more individuals. All teams in the final sample had at least 50% of its members with valid responses. The average age of respondents at time 1 was 33.97, 83.3% were women, and had worked in their current jobs for about 4.15 years.

### Measures

Unless otherwise specified, all scales were measured using Likert scales ranging from 1 = strongly disagree to 7 = strongly agree. PCF was measured with a global scale to assess the extent to which employees perceive that their organization has fulfilled its

promises to them using Robinson and Morrison's (2000) 5-item instrument. A sample item is "Almost all of the promises made to me by my employer have been kept so far". The obtained Cronbach's alpha at the individual level was .85. Similar to study 1, *shared individual PCF level* was calculated as the within-team mean of individual PCFs following the direct consensus approach (Chan, 1998) as recommended by Laulié and Tekleab (2016). The ICC<sub>1</sub> for this construct was .29 ( $p < .001$ ) suggesting a significant between-team variability on this construct. This value corresponds to a large effect of team membership (LeBreton & Senter, 2008). The mean and median  $r_{wg(j)s}$  for this construct were .69 and .82 (Study 2), which correspond to moderate agreement among the team members (LeBreton & Senter, 2008). These results provide strong evidence that shared individual PCF serves as the hypothesized team-level direct consensus construct. *Contextual performance* was assessed using nine items originally developed by Motowidlo and Van Scotter (1994) and used in Mohammed, Mathieu, and Bartlett (2002). Team members rated their own contextual performance. A sample item is "I volunteer to help out when others are busy". The coefficient alpha for individual contextual performance was .89. *Group-Level POS* was captured using a 4-item measure of POS Climate developed by González-Romá, Fortes-Ferreira, and Peiro (2009). An example item is "You can tell that the company is interested

in the members of the team.” The obtained Cronbach’s alpha at the individual level was .90. The ICC1 for this construct was .22 ( $p < .001$ ) and the mean and median  $r_{wg(j)}$  values were .65 and .80, respectively. The aggregation indices support that the within-team mean is a good measure of group POS. Finally, we collected data on for team size, gender proportion, and average experience in the team.

## Results

The test for within- and between-group variability of contextual performance shows that 11% of the variance in this variable was due to team membership. This result supports the use of multi-level analysis to test the effects of group and individual factors on the dependent variable. Similar to Study 1, we also tested for slope variability (Model 1 vs. Model 2, Table 3). The results show the model with slope variability was not significantly better than the model with fixed slopes ( $p = .50$ ); however, we continued to test the cross-level interaction effect as it is strongly recommended to continue with an interaction test when theory supports the effect (see Bliese et al., 2017; Snijders & Bosker, 1999). We also used results from Model 2 to report the main effects because it is also used as a basis for Model 3.

Hypothesis 1b predicted a positive relationship between PCF and contextual performance at the individual level. However, the relationship was not significant, albeit in the expected direction ( $b = .06$ ,  $s.e. = .04$ ,  $p = .14$ , Table 3, Model 2). This result fails to provide support for Hypothesis 1b. We also tested a model using individual PCF as the only predictor of contextual performance, and the relationship was significant ( $b = .08$ ,  $s.e. = .03$ ,  $p < .05$ ), suggesting that this individual level effect is more difficult to find when shared individual PCF is included in the model. Hypothesis 2b predicted a cross-level moderating effect of shared individual PCF on the relationship between PCF and contextual performance at the individual level. As shown in Model 4 (Table 3), there was a significant interaction on contextual performance ( $b = 0.07$ ,  $SE = 0.04$ ,  $p < .10$ ). As shown in Table 3, the effect size for this study is .55 (i.e., square-root of .30, which is the pseudo  $R^2$ ), which is greater than the MDES for the cross-level interaction for this study (.27). In addition, as Figure 3(b) shows that the relationship between PCF and contextual performance is stronger when shared individual PCF is high ( $b = .13$ ,  $s.e. = .06$ ,  $p < .05$ ) than when it is low ( $b = .009$ ,  $s.e. = .06$ ,  $p > .10$ ), providing support for Hypothesis 2b.

Hypothesis 3b predicted that shared individual PCF would be positively related to average contextual performance. The total effect of shared individual PCF level on average contextual performance was significant ( $.11 = .06 + .05$ ; Table 3, Model 2)<sup>8</sup> and positive, supporting Hypothesis 3b. Hypothesis 4 predicted a direct effect of group POS on shared individual PCF level. The results show that group POS is positively and significantly related to shared individual PCF level ( $b = .48$ ,  $s.e. = .12$ ,  $p < .001$ ,  $R^2 = .24$ ,  $F = 16.70$ ,  $p < .001$ ), providing support for Hypothesis 4.

## Study 3

### Procedure and sample

In Study 3, we tried to further explore the relationship between group POS and shared individual PCF, and we collected data from

15 organizations located in the Netherlands. The teams were mainly employed in industry, health care, and the service sector. The sample included front and back office service desk teams responsible for helping customers or patients. We received a list of team members and their email addresses from the employing organizations. Respondents received an invitation to participate in the study together with a link to an online survey. Data were collected at two times: at time 1 (T1), they received a survey capturing demographics and the independent variable, and four weeks later at time 2 (T2), they received a survey measuring the dependent variable. Where necessary, translation back translation was used to translate scales from English to Dutch.

We contacted 46 teams and 510 individual team members about participating in the study. Of these, 264 members of 41 teams responded at Time 1. At time 2, 195 members of 41 teams responded to the survey. In two teams, only one member responded at time 2; and in eight teams, only two members responded at time 2. The final sample consists of 246 respondents at T1 and 177 respondents at T2, representing 31 teams. The average team size, excluding the team supervisor, of 7 (ranging from 3 to 34 members,  $SD = 5.48$ ). On average, within-team response rates were 91% at T1 and 73% at T2. None of the teams reported response rates below 50%. The mean respondent age was 42 (ranging from 18 to 65 years,  $SD = 11.52$ ); 23.2% of the team members were younger than 30 years old, 23% were between 30 and 40 years old, 30.5% between 40 and 50 years old, and 24.3% were older than 50. The majority of the sample was female (53%). The majority (91.2%) had a professional education or higher degree. The average organizational tenure of the respondents was 19.87 years ( $SD = 12.22$ ), and the average tenure in their current team was 6.19 years ( $SD = 7.27$ ).

### Measures

Group POS was measured using 4 items from the scale developed by Eisenberger, Fasolo, and Davis-LaMastro (1990) at the individual level and then aggregated to the team level. A sample item was “My employer really cares about my well-being”. The reliability of the scale was .87. The ICC<sub>1</sub> for this construct was .16 ( $p < .001$ ) and the mean and median  $r_{wg(j)}$  values for this construct were .84 and .90, respectively. These values correspond to strong effect and agreement among team members (LeBreton & Senter, 2008) and provide evidence that the POS scale serves as a team-level construct. PCF was also measured using the 5-item scale developed by Robinson and Morrison (2000), which was slightly adapted to fit the 4-week interval between surveys, e.g., “My employer delivered on almost all of his promises to me during the last 4 weeks.” The reliability coefficient for the scale at Time 2 was .74. Similar to the previous studies, Shared individual PCF level was calculated as the within-team mean of individual PCFs following the direct consensus approach (Chan, 1998). The ICC<sub>1</sub> for this construct was .23 ( $p < .001$ ), and the mean and median  $r_{wg(j)}$ s were .89 and .92. Also similar to Studies 1 and 2, these results provide strong evidence that shared individual PCF serves as a team-level construct. We also collected data on age, gender, educational level, work experience, team experience, and team size. But, consistent with Studies 1 and 2, we did not control for any of these variables.

## Results

To test Hypothesis 4, we followed the same procedure as Study 2, where we run OLS regression analyses as all the variables involved reside at the same (i.e., team) level. Hypothesis 4 predicted a direct effect of group POS on shared individual PCF level. The results show that group POS is positively and significantly related to shared individual PCF level in this study ( $b = .51$ ,  $s.e. = .16$ ,  $p < .001$ ,  $R^2 = .25$ ;  $F = 9.77$ ,  $p < .01$ ),<sup>9</sup> providing support for Hypothesis 4.

## Discussion

A great deal of research on psychological contracts assumes that individuals evaluate their psychological contract and react to it independently from their environment. This study acts as a counterbalance by addressing *whether* and *how* PCF at the team level provides the context to shape individual reactions to their own PCF and by examining its team-level predictors and consequences. First, drawing on the macrosociological perspective of SET (Blau, 1964) as well as theories on the role of social influence in psychological contract evaluations (Ho, 2005; Laulié & Tekleab, 2016), this study recognizes that employees working within a team context engage in social exchanges not only with the organization, but also with their team members, which partially shapes their individual as well as collective responses to their perceptions of PCF. Based on three separate studies using both composite and global PCF measures (Zhao et al., 2007), our results support the idea that shared individual PCF can and does exist at the team level. Specifically, we found that the between-group variabilities on this construct in the current studies were 12% (Study 1), 29% (Study 2), and 27% (Study 3) suggesting that the degree of “sharedness” varies between teams, hence providing strong evidence that PCF at the team level might act as contextual variable shaping individuals’ reactions to their own PCF. This suggests that not only does the context influence individuals’ evaluations of their PCF (Ho, 2005) but the context also give rise to shared individual PCF evaluations within a group (Laulié & Tekleab, 2016). This is particularly important because the context (i.e., the team) shapes team members’ interpretation of their own PCF, which in turn influences organizationally relevant work outcomes.

Second, our study investigated whether shared individual PCF has any meaningful impact on individual and team outcomes. Our findings showed that shared individual PCF, as a context, had cross-level moderating effects on the relationship between PCF and work outcomes at the individual level. Overall, we found that employees’ reactions to their own perception of contract fulfilment were stronger when the collective, shared individual PCF was high (vs. low). Specifically, high shared individual PCF elicits a strong reaction from employees when they experience either low or high fulfilment of their own psychological contract. For those employees with low PCF, social comparison and negative information drive their more negative behaviour; whereas for those employees with high PCF, the consistency of their perceptions with other team members and the social normative context encouraging high level of reciprocation drives their more positive behaviours. On the other hand, low shared individual PCF weakens the relationship between PCF and outcomes at the individual level because this context sends

mixed signals to employees with high PCF, dampening their potential contributions to the organization. Overall, these results suggest that it is essential to consider the overall PCF context in the team, i.e., shared individual PCF, because it provides the basis for understanding individual and collective responses in the team (Naumann & Bennett, 2000).

Third, our study found support for team-level predictor and outcomes of shared individual PCF. Specifically, this study showed that group POS, as a team level variable, predicted shared individual PCF, which in turn, predicted average employee contributions and average contextual performance of the team. These results are in line with climate research in that group POS sends consistent signals to all members that shape their perceptions of the level of PCF, which transcends to the collective as shared individual PCF. These results are also consistent with social exchange theory (Blau, 1964; Emerson, 1962; Homans, 1961) as providing employees with support signals of benevolent intentions from the organization and its trustworthiness; reduces employees’ tendency to monitor the organization and hence, raises the shared individual PCF level in the team, which is reciprocated by a higher level of collective employees’ contributions as well as contextual performance.

## Theoretical and practical contributions

Our findings make several theoretical contributions to psychological contract research. First, the current article addresses the long-standing call for the inclusion of context in perceptions of fulfilment (Ho, 2005; Laulié & Tekleab, 2016). This is especially relevant because of the increasing importance of teams as a central unit in organizations (Homan et al., 2008). Moreover, the issue of context (in this study, the context of the team) in management research is on the ascendancy in light of the changing nature of work and organizations (Johns, 2017). Using three different samples, this study provides support for the emergence of shared individual PCF within the team context, that affects both individual and collective outcomes. To our knowledge, this is the first study to examine PCF at the team level and argues that a more comprehensive understanding of the psychological contract as an exchange construct needs to take into account both the individual and the team.

Second, the current study extends PCF literature by acknowledging the team as a “shaper of meaning” (Johns, 2017, p. 577) and by theorizing on *how* it shapes employees’ individual and collective responses to the organization’s fulfilment (or lack thereof) of its obligations to them. Relying on the macrosociological perspective of SET, theoretical arguments and empirical findings from Studies 1 and 2 provided strong evidence that individual responses to their own perceptions of contract fulfilment are *not* solely determined by their own individual perceptions; rather, it also depends on the collective (shared) level of PCF. These findings challenge and extend prior studies that relied only on individual level relationships. They challenge prior research because employees’ own perception of fulfilment is a necessary but not a sufficient condition to exert positive impact on work outcomes. While prior studies (Ho, 2005; Ho & Levesque, 2005)

focus on dyadic relationships, where an employee's PCF is shaped by his/her interactions with a friend or a coworker, the current study extends these studies by examining the role of team members in a team setting in shaping one's responses to his/her own PCF.

Third, the current paper also extends psychological contract research by theorizing a team level predictor (group POS) of shared individual PCF, as well as team level outcomes that are critical for the organization. Consistent with SET (Blau, 1964), our findings show that a team level contextual variable (group level POS) provides consistent messages and signals of the extent to which the organization fulfils its obligations by caring for the well-being of the team members, which directly influence the level of shared individual PCF. These perceptions (i.e., high shared individual PCF), in turn, positively influence their own contributions to the organization as well as their contextual performance. Overall, the current research provides a new perspective on how PCF at the team level is affected by other team level constructs and how it can shape employees' collective behaviours. Taken together, by introducing and investigating shared individual PCF, this study contributes to and extends the boundaries of the psychological contract literature by answering calls to further investigate the interconnection of psychological contracts with their social context (Bordia et al., 2010; Coyle-Shapiro & Conway, 2004). The fact that the conclusions are drawn from multiple samples provides further support for the validity of our findings.

Our paper also has important contributions for practice. First, our findings suggest that organizations should be aware of the importance of the immediate social context in which employees develop their perceptions of PCF as well as its impact on work-related attitudes and behaviours. Specifically, the team structure created for the purposes of organizational effectiveness also creates an environment that will influence the interaction among the team members and, subsequently, their collective perceptions of organizational events (e.g., fulfilment of obligations or lack thereof). This study, therefore, provides evidence for managers of the importance of considering the team as a whole in their effort to fulfil company's obligations to employees. Relying on and trying to fulfil the organization's obligations to selected individuals in a team may cause more damage when the overall team level perception of shared individual PCF is low (see Figure 3(a,b)). Moreover, the findings from the current study suggest that organizations can impact employees' shared perceptions by the degree of support they provide to team members, which influences shared individual PCF. After all, organizations survive not because of the efforts and contributions of specific individuals; rather, it is the collective effort of teams in the organization. Overall, our study adds further evidence that it is important for organizations to be cognizant of the way they interact with their employees, not just as individuals but also as members of a team.

### **Limitations and suggestions for future research**

The current study is not without limitations. First, the use of cross-sectional data in Study 1 does not allow us to truly establish the

direction of causality between shared individual PCF and outcomes. However, evidence from meta-analyses (Zhao et al., 2007) on the direction of the relationship as well as the fact that we replicated, albeit with a different work outcome, the results using a lagged research design in Study 2, reduce our concern. Second, our study looked at only one possible team level variable (group POS) as the predictor of shared individual PCF. It is possible that other team constructs (e.g., justice climate, cohesion, communication) may also trigger a positive work environment, with similar cognitive effects to that of group POS on shared individual PCF. Thus, we encourage future researchers to examine additional team constructs as potential predictors of the emergence and level of shared individual PCF. Third, our study utilized two of the dominant operationalization of the PCF construct. In the psychological contract literature, the composite measure (e.g., De Vos, Buyens, & Schalk, 2005; Robinson, Kraatz, & Rousseau, 1994; Coyle-Shapiro, 2002) and the global measure (e.g., Bordia, Restubog, & Tang, 2008; Robinson & Morrison, 2000) has been consistently used to assess employees' perception of PCF (or psychological contract breach (PCB)). To our knowledge, there is no clear evidence as to the "best" way of measuring the construct. The only study that compared the effects of the two approaches (Zhao et al., 2007) did not find a significant difference between both measures. In our study, the use of the two measures did not seem to make a difference to the conclusion drawn. Although it would have been more desirable to replicate the findings using only one operationalization in all three studies, such different operationalizations of the construct also provided an opportunity to examine if the operationalization had any impact in terms of the emergence of shared individual PCF at the team level. Irrespective of how PCF was operationalized at the team level, our findings were consistent. Fourth, future research should expand different dispersion models of PCF at the team level. We encourage more research to explore its main causes and effects as well as other conceptualizations of differences within teams (such as large differences in social comparison). Fifth, the current study tested only two perceptual work outcomes (employee's own contributions and contextual performance). These constructs were selected as they are proximal work outcomes in the exchange relationship. Overall, we encourage future research to further the current study by looking at not only other work outcomes (e.g., job satisfaction, commitment, turnover intentions) but also its associations with other team level constructs (e.g., team performance and creativity). Finally, we gathered data at different time intervals for the three studies. These differences were primarily for pragmatic reasons for collecting data from different organizations. Although we do not believe that the time interval made any difference in our results, we encourage future research to review the implications, if any, of different time intervals in the psychological contract literature.

### **Conclusion**

This research draws from the psychological contract literature and from micro- and macrosociological perspectives of SET to propose and test the role of the team context (shared individual PCF) in shaping employees' contributions to the organization. Using multiple studies and approaches, this research provides evidence for the existence of shared

individual PCF, its predictor and outcomes, and more importantly, shared individual PCF as a shaper of individual employees' responses to their own PCF. Overall, this research highlights the importance of the interconnected nature of individuals' psychological contract evaluations with other team members' perceptions as a result of the social context of their team environment.

## Notes

1. In this study, consistent with prior studies, we consider breach and fulfilment as two ends of the same continuum. Thus, psychological contract breach is defined as "extent to which one party to the contract deems the other has *failed* to meet its obligations."
2. We acknowledge that social context may operate at different levels, ranging from the team to the organization. Generally, phenomena at the team are closer to the individual than those at higher level (e.g., unit, organization). Thus, in this study, we take a specific perception (shared individual PCF) at the team level as a proximal contextual factor.
3. Laulié and Tekleab (2016) also identified shared *team* PCF, the collective agreement on the extent to which the organization fulfils its obligation to the *team* as a whole; however, for simplicity and clarity of constructs, we focus here on shared *individual* PCF only.
4. We thank the two anonymous reviewers for their suggestions on handling control variables.
5. We used <http://www.quantpsy.org/interact/hlm2.htm>, Case 3, to calculate slope significance levels.
6. We calculated this by adding the main effects of PCF on employee's own contributions ( $b = .25$ ,  $s.e. = .05$ ) and Shared individual PCF level average employees' contributions ( $b = .11$ ,  $s.e. = .08$ ; see Bliese et al., 2017). We also checked the significance of this coefficient ( $b = .35$ ,  $s.e. = .07$ ,  $p < .001$ ) using a group-mean centred approach (see also Bliese et al., 2018).
7. After merging data from surveys at the 3 points in time, there were 11 teams with less than 3 "matched" individuals in the final sample; however, we decided to keep the individual cases from these 11 teams because the aim of the study was to test a contextual moderation effect of shared individual PCF on an *individual level relationship* (i.e. PCF – Contextual Performance).
8. We calculated this by adding the main effects of PCF on contextual performance ( $b = .06$ ,  $s.e. = .04$ ) and Shared individual PCF level on average contextual performance ( $b = .05$ ,  $s.e. = .06$ ; see Bliese et al., 2018). We also checked the significance of this coefficient ( $b = .11$ ,  $s.e. = .05$ ,  $p < .05$ ) using a group-mean centred approach (see Bliese et al., 2018).
9. We also tested the relationships by including teams that had two respondents at time 2 (total of 8 teams), and the results were similar to those reported above.

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## Disclosure statement

No potential conflict of interest was reported by the authors.

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