Collective fit perceptions: A multilevel investigation of person–group fit with individual-level and team-level outcomes

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Summary

This study describes a multilevel examination of person–group (PG) fit perceptions in a sample of 1023 individuals working in 92 teams at a private sector R&D firm. Using confirmatory factor analysis and multilevel random coefficient modeling, we provide evidence that perceptions of team-level collective fit are unique from aggregated individual-level PG fit perceptions at the individual and team levels. We demonstrate that collective values-based and abilities-based fit perceptions showed unique and positive relationships with team cohesion, team efficacy, and team performance, after accounting for aggregated individual perceptions of PG fit. Results also demonstrate that cohesion partially mediates the relationship between collective fit and team performance. Cross-level effects were also supported, indicating that collective fit explains additional variance in individual-level outcomes, beyond individual-level PG fit perceptions. The usefulness of employing a multilevel approach to studying PG fit is discussed. Copyright © 2014 John Wiley & Sons, Ltd.

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Person–environment (PE) fit, or the compatibility that occurs when individual and work environment characteristics are well matched, has become one of the most ubiquitous concepts in organizational psychology (Schneider, 2001). In the 1990s, coinciding with organizations’ increasing use of teams, a distinct area of research on person–group (PG) fit emerged. PG or person–team fit describes the interpersonal compatibility between individuals and members of their immediate work groups (Kristof-Brown & Stevens, 2001; Werbel & Gilliland, 1999). PG fit is similar to demography (Riordan, 2000) in its emphasis on the interaction of individual members’ characteristics with those of others on the team to predict individual-level consequences. It differs, however, by its emphasis on psychological rather than demographic characteristics. PG fit has been associated with individual outcomes including job satisfaction, satisfaction with coworkers, organizational commitment, and contextual and task performance (Kristof-Brown, Zimmerman, & Johnson, 2005b; Werbel & Gilliland, 1999). This emphasis on individual-level outcomes, however, has been criticized as an overly restrictive view of fit, guilty of ignoring the multilevel reality of work contexts (Ostroff & Schulte, 2007).

The failure of PG fit research to account for individuals being nested in teams is conceptually and statistically problematic. Conceptually, it ignores the possibility that a meaningful correlate of individual-level fit may exist at higher levels of analysis. Aumann and Ostroff (2006) suggested that the interactions of individuals in a unit may produce a collective fit experience that influences unit-level outcomes. A handful of studies (Seong & Choi,
2014; Seong, Kristof-Brown, Park, Hong, & Shin, 2012; Shin, 2008; Shin & Choi, 2010) have begun to establish that such a construct exists, but research has not yet demonstrated that collective fit is differentiable from aggregated individual-level fit perceptions. These studies have also exclusively examined collective fit and team-level outcomes, disregarding possible cross-level effects that these emergent perceptions may have on individual-level outcomes (Bliese, 2000). By ignoring cross-level effects, current estimates of individual-level fit relationships may be biased because they fail to account for variance attributable to fit at higher levels. This study adds to the nascent literature on collective fit by using multilevel analysis to empirically demonstrate its difference from individual-level fit perceptions, and explore its relationships with work-relevant outcomes at both the team and individual levels.

By doing so, this study contributes to the fit literature in multiple ways. First, building on early conceptual work (Aumann & Ostroff, 2006) and expanding on recent empirical studies (Seong & Choi, 2014; Seong et al., 2012; Shin, 2008; Shin & Choi, 2010), we distinguish between collective fit perceptions that form through referent-shift consensus (Chan, 1998) as derived from but conceptually distinct from individuals’ experiences of fit within the team. We use multilevel confirmatory factor analysis (CFA) to provide evidence of this distinctiveness. Second, we use multilevel random coefficient modeling (MRCM) to test the cross-level effects of collective fit perceptions. The cross-level effects are particularly noteworthy, as they shed new light on possible bias in past estimates of PG fit relationships that did not account for the context of collective fit in the team. Finally, we extend prior work on outcomes of collective fit at the team-level, providing a holistic picture of the influence of collective fit on team-level and individual-level outcomes. Through these analyses, we validate collective fit perceptions as a construct that is unique from individual-level perceptions of PG fit, which has unique and incremental relationships with both team-level and individual-level outcomes.

Literature Review

To best understand collective fit, it is first necessary to grasp the architecture of individual-level PG judgments and how they relate to personal outcomes. Therefore, we briefly review the PG fit literature, before proceeding to higher levels of analysis.

Individual-level person–group fit

Person–group fit is defined as “the compatibility between individuals and their work groups” (Kristof, 1996). Like other types of fit, PG fit has been assessed on a wide variety of characteristics, including goals (Kristof-Brown & Stevens, 2001; Witt, 1998), values (Adkins, Ravlin, & Meglino, 1996; Good & Nelson, 1971), preferences for working climates (Burch & Anderson, 2004), abilities and skills (DeRue & Morgeson, 2007; Hutcheson, 1999), and personality traits (Barsade, Ward, Turner, & Sonnenfeld, 2000; Kristof-Brown, Barrick, & Stevens, 2005a; Liao, Joshi, & Chung, 2004). Regardless of the specific characteristics involved, all forms of PG fit are concerned with how an individual’s personal characteristics interact with those of other team members to predict individual-level outcomes.

Person–group fit relates to individual outcomes through two primary psychological mechanisms, each coinciding with a major type of fit (Kristof-Brown & Guay, 2011; Werbel & Johnson, 2001). Supplementary fit describes compatibility that occurs when individuals are similar to others, such as through value or goal congruence (Muchinsky & Monahan, 1987). The psychological process underlying such fit is the similarity–attraction paradigm (Byrne, 1971), in which a person is attracted and more inclined to like similar others because these relationships are more rewarding.

COLLECTIVE FIT PERCEPTIONS

(Lincoln & Miller, 1979; Wharton & Baron, 1987). The second major type is complementary fit, in which the individual and the environment complete with each other (Muchinsky & Monahan, 1987). Compatibility is based on the psychological process of need fulfillment (Harrison, 1978; Porter, 1961), in which one party’s needs are met by the other. This can happen when the individual has capabilities that meet environmental needs [demands–abilities (DA) fit] or the environment provides something the person needs (needs–supplies fit).

Research has consistently demonstrated that when employees view their characteristics as similar to their team members (supplementary fit), greater personal satisfaction and commitment result (Kristof-Brown et al., 2005b). These attitudes are strongest when directed toward the team (Adkins et al., 1996; Good & Nelson, 1971; Schaubroeck & Lam, 2002). With regard to complementary fit, Hutcheson (1999) reported a positive relationship between perceived DA fit in a team setting, with attitudes toward coworkers ($r=.44$, $p<.05$) and individual task performance ($r=.35$, $p<.05$). Thus, at the individual level, there is evidence for a link between supplementary and complementary PG fit with multiple personal outcomes.

**Team-level (collective) fit**

The PE fit literature is replete with mostly unanswered calls to examine fit at higher levels of analysis (e.g., Jansen & Kristof-Brown, 2006; Kristof-Brown & Guay, 2011; Ostroff, 2012; Ostroff & Schulte, 2007). As described earlier, most studies examine individuals’ fit “to” their team to predict individual-level outcomes, but ignore the idea of fit “at” the team level (Ostroff & Schulte, 2007), in which shared, team-level constructions of fit influence team-level and individual-level outcomes.

Collective constructs such as collective efficacy, climate, and group norms have become firmly entrenched as relevant properties with meaningful team-level consequences (Gully, Incalcaterra, Joshi, & Beaubien, 2002; Mathieu & Chen, 2011; Morgeson & Hofmann, 1999). Because people in teams are subjected to similar environments, events, and conditions, they interact and share interpretations of these occurrences that converge through social information processing (Salancik & Pfeffer, 1978; Thomas & Griffin, 1989) to create consensual views about the team (Kozlowski & Klein, 2000). Collective constructs, therefore, go beyond a simple composite of team member characteristics. Rather, they signify a shared psychological state that results from the repeated interactions of individuals (Morgeson & Hofmann, 1999).

As a collective construct, team-level fit should be distinguishable from a simple aggregation of its lower-level counterparts, just as collective efficacy is conceptually and empirically distinguishable from aggregated self-efficacy. DeRue and Hollenbeck (2007) suggested that members, regardless of their own personal degree of fit, assess whether the team has shared characteristics that allow it to fit well together (internal fit) and whether the team has the requisite capabilities for their task (external fit). These assessments address the team’s response to the question of “Do we fit as a team?” rather than the individuals’ responses to the question of “Do I fit with my team members?” Thus, collective fit follows a referent-shift consensus model (Chan, 1998), in which each individual’s view of the team-level attribute (i.e., fit of the team) is related to but is conceptually distinct from the individual-level construct (i.e., fit to the team). The sense of collective fit emerges as team members interact, build a shared history, and discuss interpretations of how their team responds to important events.

Therefore, we formally define team-level collective fit as follows: *team members’ shared assessment of compatibility with each other and with the requirements of the task environment*. This straightforward definition includes two key points. First, because shared experiences result in the emergent experience of fit, collective fit should be operationalized as a shared perception rather than as a combination of actual member characteristics or personal fit perceptions. Second, it includes compatibility between team members and between the team and its task environment, which DeRue and Hollenbeck (2007) described as internal and external fit, respectively.

Research on collective fit, as defined herein, is nascent. The most closely related research addresses perceived similarity in teams (e.g., Harrison, Price, & Bell, 1998; Harrison, Price, Gavin, & Florey, 2002; Hobman, Bordia, & Gallois, 2003). These studies demonstrate that the perception of similarity has a greater influence on team-level
outcomes than does objective similarity. Yet, these studies focus only on perceived similarity within the team, failing to address the external fit of the team to task demands. Shin and colleagues (Shin, 2008; Shin & Choi, 2010) began studying the extent to which teams’ skills fit their task, which reflects external DA fit. They did not, however, examine internal values fit within the team. Instead, they focused on group–organization fit, which is the similarity between team values and those of the organization. Seong et al. (2012) and Seong and Choi (2014) examined both internal values-based and external DA fit. Those studies include only team-level data, however, and therefore cannot speak to the distinctiveness of collective fit from individual-level PG fit perceptions.

In this study, we extend prior research to include both internal fit, operationalized as perceived value congruence (VC) in the team, and external fit, operationalized as DA fit with the team’s task, and demonstrate their uniqueness from individual-level perceptions of PG fit. As an emergent, collective construct, people should be able to differentiate it from their personal fit with the team and task. This should be demonstrable within individuals and also at the aggregate level, such that aggregated individual-level fit perceptions are distinct from aggregated collective perceptions of fit. Shin (2008; Shin & Choi, 2010) provided preliminary evidence for this distinction with regard to DA fit. We extend this logic to values-based fit as well. Thus, we hypothesize as follows:

**Hypothesis 1a:** At the individual level, people differentiate between their perceptions of personal fit (VC and DA fit) with their team and the collective fit of their team.

**Hypothesis 1b:** At the team level, aggregate individual-level PG fit perceptions (VC and DA) are distinguishable from aggregate collective fit perceptions.

Similar to individual-level fit, collective fit should relate to outcomes through two primary mechanisms—similarity—attraction and need fulfillment. Yet, it differs from individual-level fit because it involves additional team-level dynamics. When individuals interact, they create the context of the team, which then shapes future interactions between them. Weick (1979) termed this a “double interact.” The collective construct reflects the team context and therefore transcends the individuals who created it in the first place, allowing it to persist even if team membership changes (Morgeson & Hofmann, 1999). Although the mechanisms of collective fit may be analogous to those of individual-level fit, they should be stronger and more persistent because they reflect the pervasive contextual influence of the team.

Social identity theory (Hogg & Abrams, 1988) suggests that being around similar others is positively reinforcing because it provides validation of one’s perspectives and choices. Possessing similar values helps a team work together because the team interprets external stimuli in similar ways, increasing attraction (Byrne, 1971; Meglino & Ravlin, 1998). These commonalities provide for easier communication and coordination within the team, as well as facilitate a common understanding of the team’s objectives and strategies for goal accomplishment. These positive experiences combine to stimulate feelings of attraction among, and a desire to display commitment toward, team members. Thus, when teams perceive a high degree of shared values among their members, social attraction and liking should result and promote a desire for sustained interactions. Group cohesion reflects this mutual attraction and motivation to maintain the team (Staw, 1975). Thus, collective VC should be positively related to group cohesion because of the social motivation to sustain interaction.

In addition, because shared values facilitate communication and coordination by focusing team members on mutually valued goals, it may elicit greater confidence in the team’s capacity to perform. Confidence in the team’s (rather than an individual’s) capacity to perform is reflected in team efficacy. Team efficacy is defined as “a group’s shared belief in its conjoint capabilities to organize and execute the courses of action required to produce given levels of attainments” (Bandura, 1997, p. 477). Because of the motivation for sustained interaction, better coordination, and agreement on desired outcomes, collective VC fit should be positively related to team cohesion and efficacy above and beyond individual-level fit perceptions.

**Hypothesis 2:** Collective VC fit will be positively related to (a) team cohesion and (b) team efficacy, above and beyond aggregated individual-level VC fit perceptions.
Reflecting a need fulfillment, rather than similarity-based psychological mechanism, external, DA fit perceptions at the team level directly address the team’s assessment of whether they, as a whole, possess an appropriate and complete skill set. Actual and vicarious experiences with team members can provide information regarding whether the team possesses these requisite capabilities (Bandura, 1997). When a team believes that together they possess the appropriate set of skills to meet team objectives, members will develop more positive attitudes toward the task and collectively mobilize to accomplish it. This should result in higher levels of team efficacy for future performance. High levels of DA fit may also encourage cohesiveness in teams. Cohesiveness involves getting along well, wanting to maintain continuance in the team, and helping each other to accomplish task goals (Beal, Cohen, Burke, & McLendon, 2003; Lee & Farh, 2004). When individuals view the team as having the right composition or compilation of skills, it should stimulate their motivation to engage in activities that range from “bonding” to providing mutual assistance, because they believe the team has what it takes to succeed. The more that they spend time together, provide assistance, and strengthen relationships, the more likely they are to accomplish the team’s goals (e.g., Beal et al., 2003; Stogdill, 1972). If they do not believe that the team possesses the requisite skills (low collective DA fit), they may be prompted to search outside of the team for additional resources. With greater attention devoted to external search, cohesion within the team may drop. Thus, we expect that collective DA fit perceptions will be positively related to team efficacy and cohesion.

**Hypothesis 3:** Collective DA fit will be positively related to (a) team cohesion and (b) team efficacy, above and beyond aggregated individual-level DA fit perceptions.

Collective fit may also have a direct influence on team performance. When perceptions of collective fit are high, individuals believe that team members embrace similar values, thus enabling them to trust each other and communicate about important issues (Edwards & Cable, 2009; Meglino & Ravlin, 1998), and/or they agree that the team possesses the requisite abilities to perform the task. If these perceptions are accurate, then the team is objectively positioned to have better performance than teams that disagree on values or that do not possess the requisite skills and abilities. Even if these perceptions are inaccurate, research on self-fulfilling prophecies (Eden, 1984) suggests that by simply believing that they have the capacity to perform, these teams will be more likely to succeed. They will more readily understand and appreciate the actions and communications of other members, enabling the team to collectively enact a world in which the team works together effectively (Weick, 1979). Thus, regardless of whether the team objectively fits well internally on values and externally based on abilities, believing that they do should establish a positive relationship between collective fit perceptions and team performance.

A handful of studies provide preliminary evidence that fit at higher levels may also be related to performance. In a series of studies on secondary schools, Ostroff (1993a; Ostroff & Rothausen, 1997) found that overall school performance was higher in schools where teachers’ preferences and values were congruent versus those with lower levels of school-wide VC. The relationships were stronger at the aggregated (school) level of analysis than at the individual level (Ostroff & Rothausen, 1997, p. 184). Similarly, VC among executive MBA team members (Hoffman, Bynum, Piccolo, & Sutton, 2011) and goal importance congruence among credit union top management team members (Colbert, Kristof-Brown, Bradley, & Barrick, 2008) have been associated with stronger unit performance, suggesting that within-unit congruence on deep-level characteristics matters. Although these studies emphasized actual goal or value similarity, rather than collective fit perceptions, they offer preliminary evidence that fit with coworkers at higher levels relates to performance.

**Hypothesis 4:** Collective VC fit perceptions will have a positive relationship with team performance and have incremental validity over aggregated individual-level VC fit.

**Hypothesis 5:** Collective DA fit perceptions will have a positive relationship with team performance and have incremental validity over aggregated individual-level DA fit.
Cross-level hypotheses

A longstanding concern with studying PG fit is the non-independence of data regarding the G side of the fit equation. This is typically dealt with by collecting individuals’ perceptions about their teams or work environments, rather than the actual team or environment, thereby creating statistical independence between reports (Colbert et al., 2008; Edwards, Cable, Williamson, Lambert, & Shipp, 2006; Kristof-Brown & Stevens, 2001). However, as individuals are working in the same team environment, their reports about that environment should reflect the underlying reality of the team. In cases of nested data, ignoring higher-level factors as possible influences on lower-level relationships may lead to biases in the individual-level model, with even small non-independence effects resulting in significant bias (Bliese, 2000). Although there are over two dozen studies of PG fit predicting individual-level outcomes, in less than a handful of cases are higher-level factors also modeled (for an exception, see Caldwell, Herold, & Fedor, 2004).

Accordingly, we consider possible cross-level relationships between collective fit perceptions and two individual-level outcomes: commitment to the team and individual task performance. Collective identity theory (Baumeister & Leary, 1995) suggests that a fundamental human need to belong leads individuals to identify themselves with larger groups of which they are members. This extends a person’s self-identity to include collective identity based on group membership (Brewer & Gardner, 1996). When individuals perceive their team as having consistent values and a shared capacity to meet task objectives, collective identity should be intensified. This leads individuals to become more aware of their personal role in the team and its accompanying expectations. According to social exchange norms, to maintain their team membership and be perceived as a valuable contributor, individuals are motivated to demonstrate commitment to the team and strive for higher levels of personal performance.

Research also suggests that collective identities produce a shift toward social motives driven by a concern for the interests of others rather than purely self-interest (Brewer & Kramer, 1985; Kramer & Brewer, 1984). These social motives should invoke stronger individual feelings of attachment to the team and greater personalized effort toward group maintenance in the presence of high collective fit. Thus, in a team that believes it fits well together, each member is motivated to help maintain that harmony. In a team perceived as capable of meeting task requirements, each member will be highly motivated to put in effort to protect the team’s joint capabilities. Taken together, this research provides a strong argument for why collective fit should relate to important outcomes, above and beyond individual-level fit perceptions.

Hypothesis 6a: Collective VC and DA fit perceptions will have a positive relationship with individuals’ task performance, beyond their personal VC and DA fit.

Hypothesis 6b: Collective VC and DA fit perceptions will have a positive relationship with individuals’ commitment to the team, beyond their personal VC and DA fit.

Method

Data and sample

We collected data from a defense industry firm in Korea as part of a larger project conducted for both in-house personnel policy and research purposes. This company has its main office in Seoul, with research and development (R&D) centers and plants located in provincial cities. The total number of employees is around 2500. All company teams are engaged in tasks related to the research, development, and production of military equipment. These teams can be grouped into project (R&D), production, and service teams based on their daily activities (Chiocchio &
Essiembre, 2009). The R&D project teams designed military equipment, production teams manufactured the hardware as designed, and service teams supported the others through administration and other miscellaneous company affairs. Of the total teams, 59.8 per cent were engaged in R&D projects, 19.6 per cent in production, and the remaining 20.7 per cent in service missions. All teams had a formal leader, who reported the performance outcomes.

With support from the firm’s CEO, HR department personnel arranged for the research orientation, questionnaire distribution, and collection. Employees completed a questionnaire before or after work and submitted it sealed to guarantee anonymity to their team leader. Team leaders completed their questionnaires separately. HR managers at each branch office collected the questionnaires from team leaders and sent them directly to the research team. The HR department also provided demographic information on each worker using identifying numbers but no personal names. Employee and supervisor surveys were matched by these numbers.

Surveys were distributed to 1500 team members, of which 1143 responded to the survey (76.2%). In total, members and supervisors of 103 work teams participated. To ensure adequate representation, teams were required to have at least two responding members (not including the leader) and 60 per cent total team participation to be included. Teams missing group-level variables were also removed for analysis purposes. This resulted in a final sample of 92 teams consisting of 1023 individuals. The size of the teams ranged from 3 to 47 members ($M = 11.46, SD = 8.42$), with half having 3–9 members and 90 per cent of the teams had 20 or less members. Because team size and type of team varied, we control for both in our analyses. The average age of respondents was 34.05 years ($SD = 3.39$), and 89 per cent were males. Over 90 per cent of the participants had college (60.3%) or graduate degrees (30.3%). The average years of firm experience was 6.24 ($SD = 5.75$).

**Measures**

**Individual-level fit perceptions**
To assess values-based PG fit, we adapted Cable and DeRue’s (2002) VC scale to reflect the team context. Respondents were told, “The team means my/our team where I/our team members belong to and work, not other teams in the organization.” A sample item is “My personal values match my team’s values.” Because “values” can be a vague term, we provided examples such as “diligence” and “creative thinking.” The Cronbach’s alpha for the three-item scale is .94. DA fit was measured using items from Cable and DeRue (2002) and Shin (2008). We replaced the word “my job” with “team task” to assess abilities-based fit in the team setting. For example, “The match is very good between the demands of my team task and my personal skills.” The Cronbach alpha for the three-item scale is .87. All responses for the fit items were recorded on a 7-point Likert-type scale with 1 = (strongly disagree) to 7 = (strongly agree).

**Individual commitment to the team**
We used Van der Vegt and Bunderson (2005)’s four-item measure of commitment to the team. Sample items include the following: “I feel emotionally attached to my team” and “I feel a strong sense of belonging to my team.” The Cronbach alpha is .94, using the same response scale earlier.

**Individual task performance**
Team leaders evaluated individual team members using seven items ($\alpha = .92$) from Williams and Anderson’s (1991) task performance scale, on the 7-points response scale. Sample items include the following: “This team member adequately completes assigned duties,” “This team member performs tasks that are expected of him/her,” and “This subordinate engages in activities that will directly affect his/her performance evaluation.”

**Collective fit perceptions**
To appropriately measure collective constructs, Morgeson and Hofmann (1999) advised, “Inferences at the collective level will be facilitated by focusing on collective phenomena, framing questions in collective terms, treating individuals as informants about collective processes, and focusing on the role of individuals in terms of the wider
collective” (p. 261). Therefore, we modified the individual-level PG fit scales to reflect the referent shift to the team level. Sample items include the following: “The things our team members value in life are very similar to each other” and “Our team members’ knowledge, skill, and abilities are a good fit with the requirement of our teams’ task,” for VC and DA fit, respectively. The Cronbach’s alpha for the three collective VC fit scale is .98, and for collective DA fit, .94. All items used the 7-point response scale used for the individual-level items.

**Group cohesion**

Group cohesion was measured using Lee and Farh’s (2004) five-item scale on a 7-point response scale (α = .96). All items used the team as referent, emphasized both task and social components of cohesion (i.e., “Members of our group help each other on the team project” and “Members of our group get along well with each other.”).

**Group efficacy**

Group efficacy was measured using seven items (α = .91) from Riggs and Knight (1994). Sample items include the following: “Our team has above average ability” and “Our team is poor compared to other teams doing similar work (Reverse-coded).”

**Group performance**

Group performance was reported by supervisors using a five-item scale (α = .87) of team goal achievement and effectiveness adapted from Zellmer-Bruhn and Gibson (2006). Items include the following: “This team achieves its goals” and “This team serves the purpose it is intended to serve,” on a 7-point Likert scale (1 = “very poor” and 7 = “excellent”).

**Control variables**

Data on team size, team type, and organizational and team tenure of each team member were collected from the company’s HR department. Averages of team and organizational tenure were controlled for in the team-level models, and team size and team type (R&D, production, and service) were controlled for in the individual-level and team-level models. In addition, because perceptions of visible differences have been found to influence perceptions of deep-level diversity, we also controlled for aggregated perceptions of gender and rank diversity by using perceived surface-level diversity measures by Harrison et al. (2002).

Because the surveys were administered in Korean, we followed an iterative method of translation, feedback seeking, and back-translation to address measurement equivalence. Based on feedback received from company managers, minor changes to the measures were made to ensure their understandability and relevance to participants. Alpha reliabilities for the scales were comparable with the English versions of existing scales at the individual level.

**Aggregation of individual responses to the group level**

Before aggregating individuals’ reports of the collective variables (collective fit, cohesion, and group efficacy), we used the mean $r_{wg}$ as an index of within-group agreement (James, Demaree, & Wolf, 1984). Because individual respondents were nested within groups, we also tested for possible statistical dependence in the data by computing ICC(1) that is an index of within-group variability compared with between-group variability and ICC(2) that represents the reliability of group means and the reliability of differentiation among groups. For collective VC fit, these values were 0.93 ($r_{wg}$), 0.13 (ICC1), and 0.64 (ICC2); for collective DA fit, 0.92 ($r_{wg}$), 0.15 (ICC1), and 0.58 (ICC2); for cohesion, 0.93 ($r_{wg}$), 0.16 (ICC1), and 0.68 (ICC2); and for team efficacy, 0.93 ($r_{wg}$), 0.14 (ICC1), and 0.65 (ICC2). The $F$-ratios associated with the ICC(1) values for all variables were statistically significant ($p < .05$), justifying aggregation to the team level. We acknowledge that the ICC(2) values in this study are relatively low, which may limit the power to detect significant team relationships (Bliese, 2000). This is a common concern in studies with small team sizes (e.g., Zhang, Hempel, Han, & Tjosvold, 2007); however, the sufficient $r_{wg}$ and
medium to large group effects as indicated by ICC(1) values (Murphy & Myors, 1998) suggest that meaningful team-level relationships were discovered.

**Split-sample approach and analyses**

Because the collective fit, cohesion, and efficacy measures were collected from the same respondents at a single point in time, we used a split-sample approach, similar to Klein, Knight, Ziegert, Lim, and Saltz (2011), for the team-level analyses to reduce the threat of common method bias inflating the results (Podsakoff, MacKenzie, & Podsakoff, 2012). Specifically, we computed team cohesion and team efficacy using the responses of one half of the members of each team (randomly selected) and the measures of collective fit and aggregated individual-level fit using the responses of the other half of the team.

**Results**

**Measurement models (Hypothesis 1)**

Because of the multilevel nature of our data, we followed Dyer, Hanges, and Hall’s (2005) procedure for multilevel CFA to verify the distinctiveness of individual-level and team-level fit perceptions. These analyses also serve as a test of Hypotheses 1a and 1b, which assert that collective fit perceptions are distinguishable from PG fit perceptions. Table 1, Model 1 reports the fit statistics for an 8-factor model that includes all the individual-level data as well as individuals’ reports of collective fit. This model includes three items each for VC individual-level and collective fit, three items each for DA individual-level and collective fit, four for commitment, seven for team efficacy, five for cohesion, and seven for individual task performance. Our hypothesized model was a good fit to the data ($\chi^2 = 806.19; df = 214; \text{RSMEA} = .05; \text{SRMR} = .04; \text{CFI} = .99; \text{NFI} = .98$). It also fits the data better than alternative

<table>
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<th>Model</th>
<th>Description</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$\chi^2$/df</th>
<th>CFI</th>
<th>NFI</th>
<th>SRMR</th>
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<td>.95</td>
<td>.92</td>
<td>.22</td>
<td>.11</td>
<td>311.09</td>
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</tr>
<tr>
<td>7 Agg. DA fit collapsed with coll. DA fit</td>
<td>560.74</td>
<td>326</td>
<td>1.72</td>
<td>.97</td>
<td>.94</td>
<td>.22</td>
<td>.07</td>
<td>130.97</td>
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<td>8 Team cohesion collapsed with coll. VC fit</td>
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<td>.22</td>
<td>.13</td>
<td>361.71</td>
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<td>9 Team efficacy collapsed with coll. DA fit</td>
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<td>1.80</td>
<td>.97</td>
<td>.93</td>
<td>.08</td>
<td>.09</td>
<td>155.84</td>
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<td>Multilevel models</td>
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<tr>
<td>10 Within-group model</td>
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<td>4.31</td>
<td>.97</td>
<td>.97</td>
<td>.05</td>
<td>.06</td>
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<td></td>
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<td></td>
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<tr>
<td>12 Multilevel model</td>
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<td>.98</td>
<td>.98</td>
<td>W = .03; B = .06</td>
<td>.05</td>
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</table>

Note: CFI = comparative fit index; NFI = normed fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean residual; W = within-group portion of the model; B = between-group portion of the model; DA = demands–abilities; VC = value congruence.

*All chi-square values were statistically significant ($p < .05$) due to the large sample size.
models in which collective and individual fit perceptions were collapsed (Models 2–4), showing that people do different between their personal fit and that of the team, and supporting Hypothesis 1a. We next conducted analyses at the group level to verify that collective fit was distinct from the other team-level concepts. Model 5 reports a 7-factor model, that includes three items for aggregated individual-level VC, three for aggregated individual-level DA fit, three for aggregated collective VC fit, three for aggregated collective DA fit, five for cohesion, seven for team efficacy, and five for team performance. This hypothesized model showed an acceptable fit to the data ($\chi^2 = 429.77; df = 320; RMSEA = .07; SRMR = .05; CFI = .96; NFI = .92$) and was better than alternative Models 6 and 7 as described in the table. Thus, Hypothesis 1b, which states that the shared perception of collective fit differs from aggregated individual fit perceptions, is supported. We also tested two additional alternative models to demonstrate the distinctiveness of collective fit from other emergent team properties. Results of both models confirm that at the team-level, the two types of collective fit are distinct from other collective properties.

The final three steps in the multilevel CFA are to take the confirmed individual-level and team-level factor structure and analyze the within-group and between-group covariance matrices, and then to reincorporate the within and between covariance matrices into a multilevel model. Results displayed in Models 10, 11, and 12 of Table 1 provide an analysis of the within-group, between-group, and multilevel CFA, respectively. The hypothesized model has adequate fit for the within-group ($\chi^2 = 921.61; df = 214; RMSEA = .06; SRMR = .05; CFI = .97; NFI = .97$), between-group ($\chi^2 = 418.19; df = 214; RMSEA = .06; SRMR = .07; CFI = .96; NFI = .97$), and multilevel ($\chi^2 = 1000.68; df = 428; RMSEA = .05; SRMR = .03$ (within); .06 (between); CFI = .98; NFI = .98) models. These results suggest that the factor structure developed in our model is robust at both within-group and between-group levels of analysis.

**Team-level analyses (Hypotheses 2–5)**

Means, standard deviations, and correlations for all variables, as described in Models 1 (individual level) and 5 (team level) earlier, are presented in Table 2. Some correlations between the team-level constructs are high (.25–.83). Therefore, we calculated tolerance and variance inflation factors to determine the extent to which multicollinearity is a problem. All values are within the acceptable ranges (Fox, 1991; O’Brien, 2007; Thomas, Hughes, & Zumbo, 1998), indicating that although some variables are related, they are non-redundant. Hypotheses 2a and 2b state that collective VC fit will have a positive relationship with team cohesion and efficacy; Hypotheses 3a and 3b propose similar relationships for collective DA fit. Model 1 (Table 3) shows that both collective VC fit ($\beta = .50; SE = .15; p < .05$; Tol. = .47; VIF$^2 = 2.13$) and collective DA fit ($\beta = .33; SE = .12; p < .05; Tol. = .52; VIF = 1.91$) have statistically significant relationships with cohesion, after controlling for aggregated individual-level fit perceptions, supporting Hypotheses 2a and 3a. Model 2 shows that collective DA fit ($\beta = .70; SE = .13; p < .05; Tol. = .53; VIF = 1.91$) but not VC fit ($\beta = .15; SE = .06; ns; Tol. = .47; VIF = 2.13$) has a statistically significant relationship with efficacy, supporting Hypothesis 3b but not 2b.

Hypotheses 4 and 5 state that the collective fit perceptions will have a positive, direct relationship with performance, with incremental validity over aggregated individual-level fit perceptions. Table 3, Model 3 shows that after controlling for team size, tenure, perceptions of demographic diversity, and aggregated individual-level fit perceptions, collective VC fit ($\beta = .46; SE = .21; p < .05; Tol. = .47; VIF = 2.13$) has a positive relationship with performance, but collective DA fit does not ($\beta = .09; SE = .18; ns; Tol. = .52; VIF = 1.91$). The inclusion of collective fit in the model accounts for an additional 6 per cent of the variance in performance beyond the controls and aggregated individual-level fit perceptions. Hypothesis 4 but not 5 is supported.

**Cross-level analyses (Hypothesis 6)**

We used MRCM to determine whether collective fit also was related to the individual-level outcomes of commitment and task performance. First, we examined if there were meaningful differences in these outcomes based on

2VIF stands for Variance Inflation Factor.

Table 2. Descriptive statistics, reliabilities, and relationships among individual-level and team-level variables.\textsuperscript{a,b,c}

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
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</thead>
<tbody>
<tr>
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<td>8.42</td>
<td>-</td>
<td>.22*</td>
<td>.26*</td>
<td>-.25*</td>
<td>-.21</td>
<td>.03</td>
<td>.04</td>
<td>.06</td>
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<td>.11</td>
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</tr>
<tr>
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<td>2.65</td>
<td>.13**</td>
<td>-.71*</td>
<td>.11</td>
<td>-.07</td>
<td>.02</td>
<td>-.03</td>
<td>-.01</td>
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<td>-.08</td>
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<tr>
<td>3. Org tenure</td>
<td>6.03</td>
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<td>2.38</td>
<td>.07</td>
<td>.66**</td>
<td>-.06</td>
<td>-.08</td>
<td>.15</td>
<td>.12</td>
<td>.19</td>
<td>.11</td>
<td>.00</td>
<td>.00</td>
<td>.19</td>
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<tr>
<td>4. Perceived gender diversity</td>
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<td>.72</td>
<td>-.14*</td>
<td>-.01</td>
<td>.32*</td>
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<td>.01</td>
<td>.00</td>
<td>.12*</td>
<td>-.00</td>
<td>-.04</td>
<td>-.09</td>
<td>-.04</td>
<td>-.04</td>
<td>-.09</td>
<td>.23*</td>
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<tr>
<td>6. VC fit\textsuperscript{a}</td>
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<td>5.24</td>
<td>1.05</td>
<td>.58</td>
<td>-.09*</td>
<td>.08</td>
<td>.15*</td>
<td>.10*</td>
<td>-.05</td>
<td>.94</td>
<td>.98</td>
<td>.70**</td>
<td>.81**</td>
<td>.82**</td>
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<td>.15**</td>
<td>.03</td>
<td>-.12**</td>
<td>.64**</td>
<td>.87</td>
<td>.94</td>
<td>.64**</td>
<td>.70**</td>
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<td>8. Collective VC fit</td>
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<td>.05</td>
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<td>.74**</td>
<td>.55**</td>
<td>.93</td>
<td>.94</td>
<td>.83**</td>
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<td>9. Collective DA fit</td>
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<td>0.86</td>
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<td>.05</td>
<td>-.11*</td>
<td>.62**</td>
<td>.54**</td>
<td>.69**</td>
<td>.92</td>
<td>.95</td>
</tr>
<tr>
<td>10. Commitment/cohesion\textsuperscript{c}</td>
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<td>5.42</td>
<td>0.99</td>
<td>.57</td>
<td>-.06</td>
<td>.10*</td>
<td>.15**</td>
<td>.08</td>
<td>-.02</td>
<td>.66**</td>
<td>.52**</td>
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<td>.00</td>
<td>.04</td>
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<td>-.07</td>
<td>.46**</td>
<td>.35**</td>
<td>.48**</td>
<td>.61**</td>
<td>.50**</td>
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<tr>
<td>12. Ind. performance/team</td>
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<td>.68</td>
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<td>-.05</td>
<td>.22*</td>
<td>.18**</td>
<td>.15**</td>
<td>.13**</td>
<td>.18**</td>
</tr>
</tbody>
</table>

Note: \textsuperscript{a}N=1023 individuals, N=92 teams and 92 team leaders. Relationships among individual (team)-level variables are below (above) the diagonal. M = mean level across individuals and teams; SD = standard deviation across individuals; DA = demands–abilities; VC = value congruence. Alpha coefficient for reliability is listed in the diagonal across individuals and across teams.

\textsuperscript{b}Aggregated individual-level fit perceptions appear above the diagonal.

\textsuperscript{c}Commitment is individual level; cohesion is team level.

*p < .05 (two-tailed test); **p < .01 (two-tailed test).
group membership and assessed the reliability of the group mean effects. The average group mean reliability of individual task performance across all groups was .87 with an ICC(1) of .37, implying that 37 per cent of the variance is attributable to differences across groups. To determine whether the intercept variance between groups (0j) and the variance within groups (rij) was statistically distinguishable from zero, we used an ANOVA model to compare a random intercept model to a fixed intercept model. The chi-square value was statistically distinguishable from zero with a log likelihood value of 310.22, indicating significant variation in intercept values across groups. This result suggests that individual performance fluctuates meaningfully based on group membership and that the effect of group membership is statistically reliable and distinguishable across groups.

This implies that there are two sources of variation to account for in individual performance: within-group variation (attributable to differences in individual-level fit) and between-group variation (attributable to collective fit). Although the collective fit effects were not as strong, similar results were found for commitment to the team [ICC(1) = .09, group mean reliability = .52, chi-square distinguishable from zero with a log likelihood value of 22.62]. The ICC(1) value of .09 shows that 9 per cent of the total variance in commitment is attributable to differences among teams. These analyses provide evidence that reliable between-group differences in individual-level outcomes exist and can be attributed to collective fit.

Single-level ordinary least squares regression does not account for group-level effects, biasing standard errors and creating problems with estimating effect sizes. Using an MRCM model to evaluate the cross-level hypotheses (6a and 6b) allowed us to take into account individuals being nested in groups and provided more accurate and reliable parameter estimates and standard errors. We followed Bryk and Raudenbush (1992) and Bliese (2000). Because we are testing a contextual multilevel model, we followed Raudenbush and Bryk (2002) and used grand-mean centering. For each outcome variable, we controlled for the other outcome (i.e., commitment or performance) to avoid concerns about shared variance in the criteria.

Hypotheses 6a and 6b state that collective fit perceptions will have a positive relationship with individual performance and commitment to the team. Table 4, Models 2 and 4 show that collective VC fit has a statistically significant relationship with individual task performance (Par. = .16; SE = .04, p < .01) and commitment (Par. = .10; SE = .04, p < .05), whereas collective DA fit does not have a significant relationship with commitment (Par. = −.04; SE = .04, ns) or performance (Par = .01; SE = .10, ns). In both cases, collective VC fit demonstrates statistically significant incremental validity over individual perceptions of fit (commitment deviance = 98.15, p < .01; performance

<table>
<thead>
<tr>
<th>Variable</th>
<th>DV: Cohesion Model (1)</th>
<th>DV: Efficacy Model (2)</th>
<th>DV: Performance Model (3)</th>
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<tr>
<td></td>
<td>β</td>
<td>SE</td>
<td>β</td>
</tr>
<tr>
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<td>Team tenure</td>
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<td>.06</td>
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<tr>
<td>R²</td>
<td>.65**</td>
<td>.12</td>
<td>.59**</td>
</tr>
<tr>
<td>ΔR²</td>
<td>.15**</td>
<td>.18</td>
<td>.06*</td>
</tr>
</tbody>
</table>

Note: *N=92 teams and 92 team leaders. β = the parameter estimate; SE = standard error; DA = demands–abilities; VC = value congruence. All analyses conducted via ordinary least squares regression. In the first three columns, ΔR² indicates the change to the model when the collective fit variables are added.

*p < .05; **p < .01.
deviance = 4.30, \( p < .05 \). The decomposition of variance in Model 2 shows that for commitment, the total variance explained is .50, with .06 at the between-group level and .44 at the within-group (individual) level. This implies that most of the variance in commitment is attributable to individual-level fit perceptions as opposed to collective fit. In Model 4, the total variance explained in individual performance is .12, with .05 at the between-group level and .07 at the within-group (individual) level. This implies that approximately half of the variance in individual performance is attributable to collective fit and half to individual-level fit perceptions. As such, Hypotheses 6a and 6b are supported for VC fit but not for DA fit.

### Discussion

This study presents the first comprehensive multilevel examination of collective fit. By examining fit at the individual and team levels, we conceptually and empirically support the existence of collective fit as a team-level construct with meaningful impact on outcomes at both levels of analysis. Although past research has confirmed that personal perceptions of PG fit relate to individual outcomes in team settings, these results suggest that something additional happens when a team shares cognitions of their collective fit within the team and with their task. We demonstrate that collective fit emerges as a shared perception in teams that is unique from aggregated perceptions of individual-level fit. Specifically, multilevel CFA results confirm that although collective fit perceptions are related to individual-level PG fit perceptions, they load on distinguishable factors at the individual and the team levels. The hierarchical regression results demonstrate that collective fit perceptions explain incremental variance in team-level outcomes, beyond aggregated individual-level fit perceptions, and the MRCM results show that collective fit explains additional variance in
individual-level outcomes beyond individual-level fit perceptions. In models that included collective fit and aggregated individual-level fit perceptions, only the collective fit variables had a statistically significant relationship with team cohesion, efficacy, and performance, suggesting that collective fit is best suited for predicting team-level outcomes. Collective VC fit was found to be a good predictor of cohesion and performance, whereas collective DA fit was related to cohesion and efficacy, but not performance when controlling for the other types of fit. Together, these results support the usefulness and predictive power of collective fit, particularly for VC fit, at the team level.

The benefits of using a multilevel approach were apparent when examining the cross-level relationships. Although our results confirmed previous findings of a positive relationship of individual-level PG fit with team-centric attitudes and individual performance (Kristof-Brown et al., 2005a, 2005b), the MRCM analyses suggest that previous results may be biased because they fail to reflect the team’s collective fit. Collective VC fit and individual-level VC and DA fit each had significant relationships with task performance and commitment, suggesting that collective fit functions as a meaningful contextual variable for lower-level fit relationships. It is recommended that collective fit be included in future studies of PG fit and individual-level outcomes.

Limitations and strengths

Considering a study’s limitations and strengths helps to put its results into context. One limitation of this study is that although team leaders separately reported performance measures, reports of individual and collective fit were collected from participants at the same time as their self-reports of commitment, cohesion, and team efficacy. This leads to a possible inflation in the correlations between these variables, and precludes us from drawing firm conclusions as to the causal ordering of these variables. To address this concern at the team level, we used a split-sample approach similar to Klein et al. (2011). Fit perceptions and outcome variables were drawn from random samples of the team members, ensuring no overlap in the individuals reporting each set of variables. Although this reduces common method concerns at the team level, the possibility of inflation still exists at the individual level for commitment. The cross-sectional design also means that we cannot provide conclusive evidence for the causal ordering of fit, efficacy, and cohesion. For that, we rely on the PE fit theory that suggests that fit involves a cognitive assessment of match and tends to precede other reactions such as cohesion (Kristof-Brown & Guay, 2011). Finally, although we had greater than 60 per cent participation in each team, small teams in which only three or four members reported results limit the size of our ICC(2) measures.

The fact that our participants were members of intact work teams from a non-US sample has both positive and negative implications. On the positive side, it increases generalizability of the findings to non-student and non-Western populations. Expanding the purview of fit research to such contexts is important, as people in different cultures may hold different views on the importance of fit (Lee & Ramaswami, 2013). However, the strength of relationships between fit and outcomes may be stronger in cultures like Korea that hold more collectivistic values, which emphasize close, long-term commitments to others (Hofstede, 1980). Therefore, PG fit may be more salient in Korea than in Western cultures, which could potentially increase the strength of the fit–outcome relationships we report.

A strength of the study is the use of MRCM, which allows for us to account for the nested nature of the data. This method allowed us to model the cross-level relationships between collective fit and individual commitment and task performance. A limitation of this approach, however, is that it is more difficult to estimate the value of $R^2$ for models. Although Snijders and Bosker’s (1999) pseudo-$R^2$ method can be used to determine effect size, it does not specify a standard error and its magnitude depends on the choice of a comparison model. Despite these limits, use of this modeling technique allows us to more exactly specify and constrain our model to fit the assumptions inherent in a multilevel model of fit.

Theoretical implications

In discussing the importance of multilevel modeling, Klein and Kozlowski (2000, p. 213) stated, “Findings at one level of analysis do not generalize neatly and exactly to other levels of analysis, except under very restrictive
circumstances.” Our results suggest that some of the same relationships between fit and outcomes at the individual and team levels of analysis do generalize across levels, but the strength of the relationships differs. Similar to results in Ostroff and Rothausen (1997), the relationships were stronger at higher levels of analysis. This could be a statistical artifact (Hannan, 1971; Ostroff, 1993a, 1993b) or true differences in effect sizes due to distinct processes that occur at different levels of analysis. Schneider’s attraction–selection–attrition framework (1987)—often cited as the theoretical groundwork for fit research—was originally conceived of as a set of aggregate-level processes; yet, it has been frequently translated into individual-level implications. Before we assume that similar processes occur at the group level, better theory justifying group-level associations between fit and outcomes is needed. New research techniques exploring homological relationships across levels of analysis (e.g., Chen, Bliese, & Mathieu, 2005) may be useful in uncovering additional processes at the higher levels of analysis that would influence fit–outcome relationships.

One step in this direction may be found in the cross-level relationships. Our results show that significant variance in individuals’ task performance was related to collective fit of the team. This confirms Bliese’s (2000) assertion that when individuals are nested in teams, higher-level factors should be incorporated into the individual-level model to avoid biasing parameter estimates. We found support for collective fit as a between-team phenomenon that raises the overall level of individual performance—a “rising tide” effect. Alternatively, it is also possible that collective fit perceptions might moderate the relationship between individual fit perceptions and individual outcomes within teams. We did not find evidence of an interaction between individual and collective fit in this data; however, more complicated relationships may exist. For example, there could be a skill relevance effect such that the degree to which collective DA fit influences an individual’s performance depends on the degree to which their specific skill sets are needed. At a minimum, our results suggest that collective fit should become recognized as a meaningful contextual variable in the study of PE fit.

Practical implications

At a practical level, once managers become aware that collective fit perceptions may have benefits for team cohesion, efficacy, and performance, and are associated with individuals’ feelings of commitment and task performance, they can seek to stimulate these perceptions. Actions such as team-centric staffing and/or role allocations that consider compatibility, rather than just person–job matching, team building, offsite experiences, and participative goal setting, could be used to increase perceptions of shared values within teams. Given the strong relationships of collective VC fit, these types of activities that can help create the perception of shared values, may be particularly useful to managers and leaders. To facilitate perceptions of collective DA fit, introducing new members’ areas of expertise and experience, as well as encouraging role differentiation within teams, may also be beneficial. The overarching goal would be the promotion of a positive collective fit climate, in which individuals have not only a sense of how they fit into the team but also how the team fits together and with its task.

At the individual level, these results suggest the importance of hiring and socializing individual team members to cultivate their sense of personal fit. Even though the team context matters, each individual’s personal experience of PG fit relates to their commitment and task performance. Tailoring recruitment messages to convey values held by existing team members, or to provide feedback to applicants during the selection process on how well their values match those of incumbents, may stimulate increased perceptions of PG fit and potentially raise levels of actual fit with the team (Dineen, Ash, & Noe, 2002; Hu, Su, & Chen, 2007). Once hired, emphasizing the complementary or supplementary characteristics brought by the new person can promote his or her sense of personal fit. Providing clear, identifiable work assignments and roles can promote a sense of personal DA fit that may influence attitudes and task performance. These actions would have additional benefits, such as increasing role clarity and stimulating the development of transactive memory systems, in which all team members understand who possesses what specialized knowledge and expertise (DeRue & Morgeson, 2007; Wegner, 1987). Through these actions, managers can cultivate individuals’ sense of personal fit on values and abilities, with the ultimate goal of improving attitudes and performance.
Future research

Although we provide conceptual and empirical evidence for the distinctiveness of collective fit, many questions remain unanswered. Morgeson and Hofmann (1999) provided a series of guidelines for conducting research on collective constructs. These include identifying contextual factors that may change how a construct functions at the lower level and the collective level, studying the exchanges that occur between individuals that result in the formation of the collective construct, and exploring the ways that the collective phenomenon may function differently than its individual-level counterpart. Even at the most basic level, research on antecedents of collective fit perceptions is needed. Seong et al. (2012) provided some support for demographic diversity on social category and informational characteristics as predictors of collective fit, and Seong and Choi (2014) reported leader and group positive affect as antecedent to collective fit. Additional antecedents including contextual variables and team characteristics should be explored as well. Edwards et al. (2006) asserted that much of what underlies individual-level fit perceptions may be affect. At the team level, therefore, ideas such as social contagions (Kelly & Barsade, 2001) and psychological safety (Edmondson, 1999) might offer additional explanatory power for collective perceptions of fit.

An additional area for exploration is the multidimensionality of collective fit perceptions. Existing models of “overall” PE fit, such as those suggested by Jansen and Kristof-Brown (2006) or Herdman and Carlson (2009) suggest that individuals form gestalt perceptions of their fit at work, which then inform their views of fit on specific dimensions. Edwards (2001) suggested not only testing this assertion by measuring fit along single dimensions (i.e., values or abilities) but also testing whether these dimensions combined into a perception of overall fit (formative multidimensionality) or whether they were driven by a superordinate perception (reflective multidimensionality). Seong and Kristof-Brown (2012) used this approach in a study of individual-level fit perceptions, by comparing three alternative models of PG fit. Both the distinct dimensions model (i.e., values, personality, and abilities-based fit modeled separately) and reflective model (i.e., a superordinate PG fit assessment underlying the single dimension measures) were supported. The formative model, in which people combine the individual dimensions to form an overall PG fit perception, was not. A useful next step would be to examine similar dimensionality issues at the team level.

Additional research is also needed on other team characteristics that may present boundary conditions for individual-level fit effects by constraining individual experiences or choices (Diez-Roux, 1998). For example, in a team where individual members have been selected for their unique expertise, a complementary “fit climate” where specialization is valued may encourage an individual with dissimilar values to feel more committed to the team or to share knowledge more freely. Similarly, assembling teams with high value similarity may create a fit climate that encourages individuals to share their diverse abilities or be comfortable vocalizing conflict, by producing psychological safety (Edmondson, 1999) within the team. By capturing these types of team-level influences, progress can be made toward understanding the team context as both a predictor and also potential moderator of individual-level fit relationships.

Finally, we cannot rule out the possibility that performance and other criteria have a reciprocal relationship with collective fit perceptions. Although we position collective fit as an input, Ilgen, Hollenbeck, Johnson, and Jundt’s (2005) input–mediator–output–input model of teams reminds us that outputs can prompt cyclical causal feedback. This suggests that performance may become an input to collective fit assessments over time. Moreover, recent work by Yu (2013) suggests that people are highly motivated to achieve and sustain a sense of fit, and will engage in a variety of activities to achieve it. Past performance is one mechanism that prompts these motivational strivings to increase or sustain fit. Longitudinal research mapping fit and performance is needed to better understand these temporal relationships.

Conclusion

Taken together, these results present a compelling portrait of the multilevel nature of PG fit. Team-level collective fit is demonstrated as unique from aggregated individual-level fit perceptions and other emergent states. It predicts...
team-level outcomes, including cohesion, team efficacy, and team performance. In particular, collective VC fit was found to be an important predictor of team performance. By omitting such collective fit perceptions, past estimates of the relationship between fit and individual outcomes may have been underestimated, and important team-level fit relationships remained mostly unexamined. Involving collective fit in multilevel analyses offers a more realistic and comprehensive approach to studying fit in teams.

Author biographies

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References


Appendix

Collective fit perceptions

Value congruence (VC) collective fit

1) The things that our team members value in life are very similar to each other.
2) Our team members’ values match each other.
3) Our team members’ values are compatible with each other.

Demands–abilities (DA) collective fit

1) Our team members’ knowledge, skill, and abilities are a good fit with the requirement of our team’s task.
2) Our team members’ abilities and training provide a good match with the demands that our team’s task places on them.
3) The match is very good between the demands of our team’s task and our skills.