RESEARCH ARTICLE



Shared leadership and relationship conflict in teams: The moderating role of team power base diversity

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Summary

Shared leadership in teams is believed to be beneficial for team effectiveness. Yet recent empirical evidence shows that it may not always bring positive effects. On the one hand, the team leadership literature suggests that shared leadership allows for frequent interactions among members, improving intrateam harmony and reducing conflicts. On the other hand, the team power literature suggests that frequent influence interactions among multiple leaders can form an arena in which members fight over their power turfs, thereby triggering conflict. Drawing on dominance complementarity theory, we suggest that team power base diversity-the variety in power bases among team members from which they derive their informal influence-is an important contingency that moderates the impact of shared leadership on relationship conflict to influence team performance. In a sample of 70 project-based teams, we find support for the proposition that at high levels of team power base diversity, shared leadership has a positive downstream effect on team performance through reduced team relationship conflict. We discuss the contributions to knowledge about shared leadership and highlight practical implications for temporary teams with no formally designated leaders.

KEYWORDS

teams, shared leadership, relationship conflict, power base diversity, team performance

1 | INTRODUCTION

Organizations face complex multidimensional problems that require them to mobilize effort and expertise beyond any single member's capacities (Maloney, Bresman, Zellmer-Bruhn, & Beaver, 2016). To cope with such problems, organizations tend to rely on teams of talented employees to share leadership for effective decision-making (B.S. Bell & Kozlowski, 2012). Shared leadership is an emergent team phenomenon that develops when teams have multiple leaders and team members recognize each other's leadership influence as they collectively engage in goal setting, planning, resource delegation, and feedback (D'Innocenzo, Mathieu, & Kukenberger, 2016). As such, shared leadership is characterized by a high density of leadership networks within teams, whereby members simultaneously lead and follow their peers (Chiu, Owens, & Tesluk, 2016). The benefits of shared leadership are well-acknowledged by contemporary organizational research (Denis, Langley, & Sergi, 2012; Nicolaides et al., 2014; Wang, Waldman, & Zhang, 2014). In theory, shared leadership can bring about positive team outcomes through enhancing members' sense of autonomy (Hoch & Dulebohn, 2013) and commitment (J.B. Carson, Tesluk, & Marrone, 2007) in the decision-making process, the richness of intragroup information exchange (Gu, Chen, Huang, Liu, & Huang, 2018), and the collective pride in accomplishments (Jackson, 2011).

One foundational assumption underlying the proposed benefits of shared leadership is that interpersonal harmony is maintained and relationship conflict—a team state representing interpersonal disharmony and antagonism among members arising from incompatibilities (K.A. Jehn, 1995; Simons & Peterson, 2000)—is reduced as the leadership influence shifts among multiple informal leaders 650

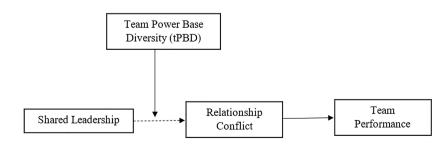
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(Hoch & Dulebohn, 2013; J.E. Mathieu, Kukenberger, D'Innocenzo, & Reilly, 2015; J.L. Pierce & Newstrom, 2003). However, there are opposing views in the literature about whether shared leadership increases or decreases relationship conflict (see a recent review by Zhu, Liao, Yam, & Johnson, 2018). Some studies propose that shared leadership improves intragroup harmony by providing more opportunities for member interaction and socialization, thereby facilitating cohesion and social integration (e.g., J.E. Mathieu et al., 2015; Pearce, Yoo, & Alavi, 2004). In contrast, others suggest that shared leadership could present itself as a "too many cooks spoil the broth" problem (Mitchell & Boyle, 2020), potentially hurting group harmony and generating interpersonal conflicts. In particular, the team power literature posits that when power and social influence shift between members (a phenomenon likely to occur in the presence of shared leadership), there is increased ambiguity around influence boundaries, which increases competition, interpersonal friction, and relationship conflict (L.L. Greer, de Jong, Schouten, & Dannals, 2018; L.L. Greer, Van Bunderen, & Yu. 2017). Our work aims to address the seemingly contradictory views on the shared leadership and team relationship conflict link. We propose that shared leadership may not always be beneficial for team performance and argue for a need to understand further the potential contingencies and interpersonal conflict mechanisms that link shared leadership with team performance.

In this article, we introduce team power base diversity (tPBD) as a key contingency factor that alters the association between shared leadership, team relationship conflict, and team performance. tPBD is a compositional diversity construct representing the *variety* (D.A. Harrison & Klein, 2007) in power bases from which members derive their informal influence in the team. Drawing on prior research on shared leadership and relational dynamics in teams (see review by Denis et al., 2012), we develop a conceptual model that explains how and why the indirect effect of shared leadership on team performance through relationship conflict is likely to be contingent on the level of team diversity in the member's power bases. We undertake an empirical investigation to advance our knowledge about the conditions under which the positive effects of shared leadership manifest in teams (Zhu et al., 2018).

Shared leadership scholars have suggested that the benefits of having multiple informal leaders in teams may not manifest until members can effectively negotiate influence in the leadership claiming and granting interactions without conflicts (D.S. DeRue, 2011). We hypothesize the conditions under which shared leadership promotes interpersonal harmony and team performance by drawing insights from the dominance complementarity theory (R.C. Carson, 2019; Kiesler, 1983). The core premise of dominance complementarity theory is that interpersonal harmony from reduced relationship conflict is most likely when dominance behaviors are met with contrasting submissive behaviors (R.C. Carson, 2019; Kiesler, 1983; Kristof-Brown, Barrick, & Kay Stevens, 2005; Sadler, Ethier, Gunn, Duong, & Woody, 2009). We argue that in teams with a high density of shared leadership ties and increasing levels of tPBD, there is likely to be certainty and differentiation around influence boundaries, which enables dominance complementarity during leadership granting and claiming interactions (B.S. Bell & Kozlowski, 2012; G. Yukl, 1999). The consequent clarity and demarcation decrease threats, one-upmanship, and misunderstandings during leadership sharing, thereby reducing relationship conflict in teams (Epitropaki, Kark, Mainemelis, & Lord, 2017; L.Z. Tiedens & Fragale, 2003). We summarize our theoretical model in Figure 1.

Our work makes two significant contributions to the leadership literature. First, we propose and empirically show that mitigating relationship conflict (akin to preserving interpersonal harmony) is a crucial mechanism through which shared leadership can bring about desirable team performance outcomes. Through our empirical study, we demonstrate the utility of going beyond the functional leadership perspective, which largely assumes the unconditional benefits of shared leadership (F.P. Morgeson, DeRue, & Karam, 2010), and respond to recent calls for more contingency research on the effects of shared leadership (Carnabuci, Emery, & Brinberg, 2018). Besides articulating the tensions inherent in shared leadership, we develop and test a contingency model that explores tPBD as the critical factor that potentially triggers the "bright" versus the "dark" relational side of shared leadership in teams. Second, by introducing a novel team compositional construct of tPBD and examining its moderating effect on the relationship between shared leadership and team relationship conflict, we take a step toward integrating the largely disconnected streams of literature on leadership, power, and conflict (Bolden, 2011; Langfred, 2007). Further, the proposed multivariate conceptualization to capture the differentiation among members on interpersonal power sources adds to the scant literature on team power compositional



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states as critical boundary factors that affect how shared leadership could influence team performance.

2 | THEORETICAL BACKGROUND AND HYPOTHESES

2.1 | Shared leadership and relational conflict in teams: The tension in the literature

As a relational phenomenon, shared leadership in teams involves recurring patterns of leading-following double interactions among members (J.B. Carson et al., 2007). Teams with shared leadership are characterized by a high density of leadership ties whereby multiple individuals claim leadership and engage in various "leader-like" behaviors (e.g., taking charge or setting goals) as others grant them the influence (D.S. DeRue, 2011). These dyadic leading-following interactions in shared leadership teams are primarily seen as occurring smoothly without much conflict (D.S. DeRue, 2011). Further, in much of the research linking shared leadership to team performance, it is suggested that multiple leaders can manage the tensions and uncertainty that may be associated with the leadership claiming and granting process (M.A. Hogg, 2001, 2007). As Bergman, Rentsch, Small, Davenport, & Bergman (2012, p. 21) note in their seminal research:

When a member participates in the team's leadership, they are, in effect, demonstrating their commitment to the team and its task. In turn, misattributions regarding that member's intentions or dedication to the team should be minimized. Fewer misattributions should result in less intragroup conflict.

Several other studies also posit a similar view that shared leadership is likely to benefit social integration and can build member confidence (Nicolaides et al., 2014), cohesion (J.E. Mathieu et al., 2015; Pearce et al., 2004), trust (Drescher, Korsgaard, Welpe, Picot, & Wigand, 2014), and team collectivism (Hiller, Day, & Vance, 2006). Shared leadership is also likely to facilitate more frequent task discussions (Aime, Humphrey, DeRue, & Paul, 2014) and provide opportunities to demonstrate trustworthiness (Drescher et al., 2014) and a chance for members to collectively structure tasks and feel joint pride in accomplishments (Jackson, 2011). In essence, this stream of theoretical and empirical work rests on the premise that in teams with shared leadership characterized by a high density of leadership interactions, interpersonal harmony is not likely to be disrupted, and that there is little or no relational tension or competition for influence during the leading-following interactions (M.A. Hogg, 2001, 2007).

Although the team leadership literature discusses the benefits of shared leadership in maintaining and promoting interpersonal harmony, the team power literature presents a somewhat contrary view by theorizing about and showing adverse relational outcomes of having multiple members trying to exert power and influence over each other (L.L. Greer & van Kleef, 2010). The power perspective argues that influence and power cannot be equally distributed among multiple members trying to claim leadership (L.L. Greer et al., 2017). As influence shifts among team members, it creates ambiguity around influence boundaries, thereby triggering interpersonal friction, power struggles, and relationship conflict (L.L. Greer et al., 2018). The conflict theory of power suggests that competitive behaviors often follow such influence shifts as members attempt to maintain their leadership and valued influence position relative to others in the team (L.L. Greer, 2014; Tarakci, Greer, & Groenen, 2016). Accordingly, from a team power perspective, shared leadership is likely to engender uncertainties about the power structures within teams and induce conflict among members (L.L. Greer et al., 2017).

When juxtaposed, the two perspectives presented above indicate contradictory theoretical predictions regarding the level of relationship conflict that is likely to exist in teams with a high number of peers, all attempting to share leadership, power, and influence over each other. G. Chen, Sharma, Edinger, Shapiro, and Farh (2011) show that teams can simultaneously face the positive effects of sharing leadership and the adverse effects of relationship conflict. Thus, it is essential to identify the contingent factors that explain when relationship conflict can be triggered or mitigated in teams with varying levels of shared leadership. Surprisingly, as recent conceptual reviews have suggested (Epitropaki et al., 2017; Zhu et al., 2018), little empirical attention has been given to exploring the circumstances under which shared leadership can trigger or suppress relationship conflict.

2.2 | Addressing the tension: The dominance complementarity perspective

To address the seemingly contradictory views on the shared leadership and relationship conflict association, we draw on the dominance complementarity theory, according to which interpersonal relationship quality is determined by the complementarity of dominance and deference in interactions (R.C. Carson, 2019). The theory suggests that interpersonal harmony is promoted, and interpersonal frictions are weakened when dominance-influence behaviors by a member are followed by contrasting submissive behaviors from other team members (L.M. Horowitz et al., 2006; Kristof-Brown et al., 2005; Sadler et al., 2009). When assertive acts are complemented by passive behaviors, individual needs for structure, predictability, and certainty are realized (L.L. Greer et al., 2017; Halevy, Chou, & Galinsky, 2011; Zitek & Tiedens, 2012), and feelings of comfort and interpersonal understanding are strengthened among team members (Dryer & Horowitz, 1997; L.M. Horowitz et al., 2006; L.M. Horowitz, Dryer, & Krasnoperova, 1997).

Accordingly, because the benefits of shared leadership reside in the assumption that individuals are willing to persistently engage in leading-following interactions with minimal friction and relational conflicts, we suggest that a high level of differentiation in power bases among members is critical for maintaining high-quality relationships in the presence of shared leadership. Increasing tPBD levels may help

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team members differentiate their dominance domains when negotiating leadership domains with their peers. Such differentiation in power bases is likely to enable relational harmony and weaken negative social interactions during the leading-following interaction process. Under increasing levels of tPBD, shared leadership will be inversely associated with team relationship conflict due to the complementarity arising from differentiated member power. On the contrary, under low levels of tPBD, shared leadership might exacerbate team relational conflict because multiple members could perceive threat as they simultaneously show their dominance on similar power bases. In essence, we propose that diversity among team members on power bases acts as a contingency factor in explaining the relationship between shared leadership and team performance through the mechanism of team relationship conflict.

2.3 Team power base diversity

Team power base diversity (tPBD) refers to a team state with heterogeneity in interpersonal power bases from which members derive influence. It represents the differences among team members in the resources they use to influence others. Interpersonal power, the capacity to have intended effects on other's attitudes, beliefs, and behaviors, is a function of resource interdependencies among members in a workgroup (D. Keltner, Gruenfeld, & Anderson, 2003; Magee & Galinsky, 2008; Overbeck & Park, 2001, p. 550; Schwarzwald, Koslowsky, & Agassi, 2001). Identifying distinct types of resources based on which one person can exert power over others has long occupied a central place in social psychology and organizational behavior studies. Among the most popular formulations of interpersonal power sources is the fivefold typology proposed by social psychologists J.R. French and Raven (1959). Over the years, their representation of the resources in distinct "bases of power" has been extended and modified to include additional sources from which members may build their capacity to influence (P.M. Podsakoff & Schriescheim, 1985; Turner & Schabram, 2012). Drawing on these theoretical and empirical works (Hinkin & Schriesheim, 1989; Mossholder, Bennett, Kemery, & Wesolowski, 1998; B.H. Raven, Schwarzwald, & Koslowsky, 1998), we conceptualize tPBD as differences among members in how they rely on the following nine sources of power to influence others: expertise, informational, referent, positional, coercive, reward, approval, reciprocity, and equity.

Expertise power represents asymmetrical levels of functional knowledge about task domains among team members. Informational power represents the unbalanced distribution of unique and critical information beyond functional expertise (e.g., information about critical stakeholders' preferences). Referent power arises when some team members are more liked, respected, and admired than others. More often than not, some members in self-managed teams are designated as informal leaders during specific project phases, giving rise to positional power. Likewise, members may have reward and coercive power when they are perceived as having control over the provision of social and material rewards or penalties. Approval power results when some members are seen as role models, and their acceptance and endorsement are more often sought than others (Hinkin & Schriesheim, 1989). More recent work on power bases suggests that interpersonal power can also emerge from norms of reciprocity and social responsibility (Krause, Kearney, & Street, 2006). Reciprocity power results when individuals respond favorably to a target member's influence attempts because they perceive an obligation to do so due to a sense of reciprocity for positive acts by the target person in the past (Gouldner, 1960). Similarly, equity power also referred to as the "power of the powerless," results when others perceive the target member as having endured inequities in the past and feel an obligation to compensate for the unfairness by complying with the target's influence attempts (Walster, Walster, & Berscheid, 1978; Wicker & Burley, 1991).

Ample empirical evidence suggests that over time and across task interactions, the above noted nine bases of power present critical personal resources that contribute to a team member's interpersonal influence (Jayasingam, Ansari, & Jantan, 2010; Mossholder et al., 1998; B.H. Raven et al., 1998). Teams often vary in the extent to which members develop different power bases (Halevy et al., 2011; Magee & Galinsky, 2008). Even in teams with no internal hierarchical differentiation, this typology is useful to represent the asymmetric distribution of valued resources among its members and the difference in the context-relevant sources of power they are most likely to draw on to influence each other. Accordingly, we conceptualize tPBD as a team state that is based on deep-level diversity in power bases. Below, we clarify the form, nature, and boundaries of this teamdiversity construct.

As a variety formulation (D.A. Harrison & Klein, 2007), tPBD is a function of differentiation among team members on the nine kinds of power sources and categories of resources that they use. tPBD increases when there is little overlap among members on the power sources they tend to draw on when attempting to influence others. A four-membered team, for example, will have a high tPBD when one member's primary source of power comes from their knowledge (expertise power), a second member's primary source of power comes from their interpersonal history of past favors extended to others (reciprocity power), a third member draws power from control over vital information (informational power), and the fourth member draws power from being interpersonally respected and admired by others (referent power). In contrast, a team would have a low tPBD when the majority of members draw their influence from the same single power base.

Within teams, members can differ from each other on several qualitative factors, including demographics, personality traits, attitudes, and behavioral influence tactics (D.A. Harrison & Klein, 2007; Kipnis, Schmidt, & Wilkinson, 1980; G. Yukl, 2013; G. Yukl, Seifert, & Chavez, 2008). However, tPBD is distinct from these prevalent diversity conceptualizations based on innate characteristics and behavioral tendencies. Such personal attributes may likely play a role in how members come to acquire their sources of power within teams; however, tPBD may also emerge due to a host of other factors, including historical interactions or acquired resources over time (D.A. Harrison, Price, & Bell, 1998; D.A. Harrison, Price, Gavin, & Florey, 2002; D. van Knippenberg & Mell, 2016). As such, tPBD captures perceived asymmetric control over valued resources that generate interdependencies among members.

As such, tPBD is also distinct from other typically studied emergent team cognitive or affective states (e.g., shared cognition), which capture the heterogeneity in members' perceptions on a single attribute or dimension of the collective (Crawford & LePine, 2013; S.E. Humphrey & Aime, 2014; J. Mathieu, Maynard, Rapp, & Gilson, 2008; F.P. Morgeson & Hofmann, 1999; D. van Knippenberg & Mell, 2016). In contrast to such "separation" based diversity constructs (D.A. Harrison & Klein, 2007), our conceptualization of tPBD is a relatively novel form of "variety" construct that is based on aggregated dyadic differences across members on nine gualitatively distinct power base categories. Our conceptualization is in line with recent team diversity research that has stressed the importance of exploring the dyadic overlap on a multidimensional set of categorically different attributes before aggregating it to a team level index of diversity (D.A. Harrison & Klein, 2007).

Shared leadership and relationship conflict: 2.4 The moderating role of tPBD in teams

As a relational phenomenon, shared leadership represents the patterns of reciprocal influence interactions among team members (J.B. Carson et al., 2007). A high level of shared leadership reflects a high density in a team's internal leadership interaction network. In teams where members share leadership, multiple members simultaneously claim and grant roles to lead one another (D.S. DeRue, 2011). When a member attempts to exert influence and claim leadership, peer team members are likely to encode and evaluate the influence attempts as power cues (Gioia & Sims, 1983) and evaluate whether and how to grant leadership to their peers. Members are likely to compare and challenge the legitimacy of the leader's power while simultaneously asserting their own power base to exert influence (Fielding & Hogg, 1997; Fiske & Dépret, 1996). Such leadership claiming and granting interactions can create uncertainty around members' power boundaries, limit mutual influence, and potentially elicit interpersonal conflicts (Mitchell & Boyle, 2020).

Dominance complementarity theory (R.C. Carson, 2019) provides a basis to understand when individuals are open to influence from fellow team members. As prior research has shown, when leadership behaviors from one party are matched by submissive, passive behavior from another, there is less potential for unhealthy competition and conflict (A.M. Grant, Gino, & Hofmann, 2011; Hu & Judge, 2017). Drawing on the core tenets of dominance complementarity, we argue that high tPBD creates conditions for harmonious conflict-free interactions in teams where leadership influence is shared across multiple members. Heterogeneity in power bases potentially creates conditions in which there is more clarity around power boundaries and greater chances of leadership-claiming attempts to be perceived as valid and conducive to pursuing common -WILEY-

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interests. High tPBD serves as a critical cue for individuals to know their relative power compared with their peers, guiding their responses to their peers. (e.g., to dominantly claim leadership or submissively grant leadership to others). We expect that when team members differ in their primary bases of power (i.e., high tPBD), they will be more motivated to accept each other's influence. In contrast, when power bases overlap, we expect that team members will be less receptive to each other's influence attempts. Under such a low tPBD condition, the mutual resistance may elicit frustration and friction among members.

Higher levels of tPBD aid negotiations around influence boundaries. Under these conditions, leadership claiming and granting interactions among team members is likely to be in conjunction with higher dominance-submissive complementarity and, consequently, lower relationship conflicts. In teams where multiple leaders are attempting to co-lead (high density of shared leadership), higher levels of tPBD help people to anticipate which member they can defer to and for what (Klein, Ziegert, Knight, & Xiao, 2006) and reduces the chances of non-confirmation of influence (Klein et al., 2006; B.H. Raven & Kruglanski, 1970). Also, complementarity emerging from differentiated power bases is likely to reduce the political maneuvering and stepping on others' toes that are likely when members have overlapping or share the same power bases (L.L. Greer, Caruso, & Jehn. 2011). As posited by dominance-complementarity theory, such complementarity can help peer-level leaders to feel less threatened (Howell & Dorfman, 1981) and instead feel safe and verified (Groysberg, Polzer, & Elfenbein, 2011) in their differentiated power bases (Dubin, 1963; Hickson, Hinings, Lee, Schneck, & Pennings, 1971; D. van Knippenberg, de Dreu, & Homan, 2004). Accordingly, we expect the relationship between shared leadership and relationship conflict to be negative at higher levels of tPBD.

On the contrary, in teams with low diversity in power bases among members (low tPBD), members are likely to experience less differentiation (or high overlap) in power boundaries and may experience a greater sense of insecurity about their turf and higher sensitivity to one-upmanship of ideas and disapproval of their influence (L.L. Greer et al., 2011). As a result, in teams with multiple leaders (high density of shared leadership) and a lack of differentiation of power bases (low tPBD), there is likely to be an imbalance in dominance complementarity, reducing members' ability to identify where and when it is appropriate to grant and claim influence (Crevani, Lindgren, & Packendorff, 2007). Such an interaction context is likely to increase negativity, friction, and misunderstanding, resulting in more relationship conflict (A.M. Grant et al., 2011; Kristof-Brown et al., 2005; L.Z. Tiedens & Fragale, 2003). A lack of dominance complementarity also means that multiple leaders are likely to mimic their peers' dominant behaviors emerging from similar power bases (e.g., L.Z. Tiedens & Fragale, 2003; L.Z. Tiedens, Unzueta, & Young, 2007). Peer leaders whose influence is derived from the same primary power base are likely to feel more insecure and threatened. Feeling threatened can, in turn, make these multiple leaders more inflexible in how they consider their teammates' opposing views and how they integrate others' influence attempts and ideas during decision-making 654 WILEY Journal of Organizationa

(Nemeth & Kwan, 1985), thereby increasing the chances of relationship conflict (L.L. Greer & van Kleef, 2010).

In sum, we predict that tPBD will moderate the relationship between team shared leadership and relationship conflict, such that a high density of shared leadership is associated with fewer relationship conflicts as tPBD increases.

Hypothesis 1. The effect of shared leadership on team relationship conflict is moderated by team power base diversity (tPBD). When tPBD is high (low), shared leadership relates negatively (positively) to relationship conflict.

We further propose that the level of relationship conflict will influence team performance such that high levels of conflict will lead to lower performance. Team relationship conflict is a pervasive characteristic of working and interacting in teams (K.A. Jehn, 1995; K.A. Jehn & Bendersky, 2003; K.A. Jehn & Mannix, 2001) and has typically been explored as an explanatory variable in the relationship between team input states and performance (K.A. Jehn, Greer, Levine, & Szulanski, 2008). Meta-analytic studies show that relationship conflict is dysfunctional for team performance (de Wit, Greer, & Jehn, 2012). It stimulates hostility (C. Bell & Song, 2005), reduces cognitive flexibility and idea receptiveness (Hulsheger, Anderson, & Salgado, 2009), harms information sharing (Menguc & Auh, 2008), prevents consensus decisions (Ensley, Pearson, & Amason, 2002), distracts from the task (Janssen, van de Vliert, & Veenstra, 1999), and lowers cooperation, commitment, and engagement (Mills & Schulz, 2009), thereby hurting team performance (Margues Santos & Passos, 2013). Thus, higher levels of relationship conflict in teams can lower performance. In the context of our study, we propose an indirect contingent effect of shared leadership on team performance via relationship conflict:

Hypothesis 2. The indirect effect of shared leadership on team performance through relationship conflict is contingent on tPBD, such that the indirect effect becomes increasingly positive as tPBD increases and increasingly negative as tPBD decreases.

METHOD 3

3.1 Sample description

The sample consisted of 332 full-time MBA students nested within 70 teams. The participants were randomly assigned to four- or fivemember project teams (mean team size = 4.74; SD = 0.44). The sample was 67% male with a mean age of 27.72 years (SD = 1.47 years). Team members had a significant number of years of managerial job experience in diverse industries (mean work experience = 4.86 years; SD = 1.06 years), creating teams with a moderate skill differentiation among members. The teams were required to work together on a finance and operations team project for twelve weeks. The team projects had the following characteristics (S.W.J. Kozlowski & Bell, 2003): (a) they were similar to consulting project teams with timeconstrained tasks, (b) they had clear task goals and performance criterion defined early, (c) they had no a priori member roles assigned and no formally designated external team leader (low authority differentiation) (Hollenbeck, Beersma, & Schouten, 2012), and (d) they had performance demands that required both coordinated individual performance (high workflow interdependence) and utilization of specialized knowledge, skills, and information for consensus-based decision-making. Accordingly, the task design required everyone in the team to contribute toward joint decision-making.

The projects were primarily identical across teams in that the teams were required to identify a solution for a complex operations management and financial accounting problem. A similar task structure allowed us to make meaningful comparisons across teams. Further, the more precise control on team performance criteria and the consistency in teamwork life cycles allowed us to make such comparisons that would otherwise have been difficult in a sample obtained from firms. The team project grade was 45% of the overall individual student grade, presenting sufficient incentive for high performance. Most participants believed that their course grades played a significant role in their future employment/promotion prospects. The team members had frequent face-to-face contact, as the students were enrolled full-time and lived on a residential campus for the duration of their studies. The teams met twice every week during class times and worked on their projects regularly outside of class. The majority of communication was face-to-face, but some project deliverables and coordination occurred via email.

3.2 Design

To reduce common method bias, we collected data in two stages (Time 1 [survey] and Time 2 [performance]) and from different sources (self-rated, peer-rated, and instructor-rated; P.M. Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Given the nature of the team project work and the likelihood that most teams would begin frequent team meetings and discussions only a few weeks after the start of the project, we chose to collect data on the model variables five weeks from the start of the project. After participants had five weeks of working together as a team, they completed the Time 1 online survey where we collected: (a) network measure of shared leadership, (b) team referent-shift measure of team relationship conflict, and (c) peer-ratings based measure of tPBD. The survey data for this study was part of a broader organizational survey conducted at the business school, and so we faced practical constraints around the frequency of data collection. We acknowledge that the model variables were captured simultaneously; however, common method bias was not likely to be a serious concern for several reasons. First, the independent variable (shared leadership) was a social network density index created by aggregating ratings from all members about every other member. In contrast, the mediator (relationship conflict) was measured with team referent-shift items and then aggregated to the team level based on shared perceptions across members. The fact that the model

variables were operationalized using different measurement methods (other rated round-robin method vs. team referent-shift items) helps mitigate possible common method biases (P.M. Podsakoff et al., 2003). Second, Siemsen, Roth, and Oliveira (2010) have reported that the common method biases indeed deflate the moderating effects in regression models, suggesting that our interaction analysis results are likely more conservative if the bias indeed exists. At the end of the 12-week project (Time 2), we collected objective team performance data (i.e., grades on team projects) directly from the course instructor. The team performance index was a global team property, as each member of the team received the same overall team grade.

3.3 | Measures

3.3.1 | Shared leadership

We captured shared leadership by asking each team member to rate every other member on the extent to which they perceived the person as engaging in leadership behaviors (J.B. Carson et al., 2007). Following the norm in social network research, we used a descriptive item adapted from Hiller et al.'s (2006) scale of functional team leadership to measure leadership within teams. The item content was as follows: "Please indicate the extent to which this person set goals for the project, delegated tasks and allocated resources, provided corrective feedback, gave task-related instructions, provided structure, steered the team, and monitored performance." The question was on a 3-point scale (1 = rarely, 2 = sometimes, and 3 = most of the time), which was later collapsed into a dichotomous scale where rarely was coded as 0 and sometimes and most of the time were coded as 1. Shared leadership as a team level construct was operationalized using the network density, which is the total number of observed leadership ties in a team divided by the total possible leadership ties in a team. High density represented shared leadership as it denotes that there are several leadership ties between members and that there are multiple members in a team perceived by others as engaging in leadership (D.S. DeRue, 2011).

3.3.2 | Team power base diversity (tPBD)

In line with our conceptualization of the power base diversity construct, each member rated the primary source of power for each of the other members of their team. The nine bases of power (see Appendix A for a brief description) were adapted from the taxonomy of power bases initially described by J.R. French and Raven (1959) and subsequently extended by B.H. Raven et al. (1998). The following item stem appeared on the survey: "For each of your group members, identify their primary source of power in your group." A drop-down menu option allowed them to select the primary source of power for each member. Because we were interested in the differences in the kind or category of the power base, we operationalized tPBD as what D.A. Harrison and Klein (2007) termed a *variety* measure. As



mentioned in the seminal work by D.A. Harrison and Klein (2007), the two conventional approaches to measuring differences on a categorical attribute are Blau's index (also termed Herfindahl or Hirschman index) and Teachman's (entropy) index. These indices are, however, less suited for the purpose of this study. Blau's and Teachman's indices are both computed by aggregating-albeit in different ways-the proportion of group members in each possible category. They are appropriate for measuring differences when an individual belongs to one category on a multicategorical attribute (e.g., gender). tPBD does not lend itself to these two within-team diversity operationalizations because, in our conceptualization, multiple power bases can potentially be attributed to a particular individual. In fact, in our empirical setting, we find instances where team members differ in what they see as a focal individual's primary power base. Thus, a member's primary power base can be usefully conceptualized as a finite set and tPBD as an aggregation of Jaccard distance between the primary power base sets of each dyad in the team.

Jaccard distance (Jaccard, 1908), an index used to measure dissimilarity between sample sets, is commonly used in many disciplines, including biology (Real, Vargas, & Olmstead, 1996), ecology (Rahel, 2000), psychology (e.g., Ellingwood, Mugford, Bennell, Melnyk, & Fritzon, 2013), and information studies (Niwattanakul, Singthongchai, Naenudorn, & Wanapu, 2013). For any pair of sets, the Jaccard distance index is defined as (b + c)/(a + b + c), where *a* is the number of elements common to both the sets and *b* and *c* is the number of elements unique to each of the two sets.

The values of the Jaccard distance index between two sets can range from 0 to 1. Because tPBD is computed as the sum of Jaccard distances between every member pair, its possible values should range from a minimum of 0 to a maximum of n(n - 1)/2, where *n* is the group size. For a four-member team, the minimum of 0 occurs when all team members have the same primary power base, and the maximum value of 6 occurs when there is no common power base among team members. Similarly, the tPBD for a five-member team ranges from 0 to 10.

3.3.3 | Relationship conflict

We used a team referent-shift measure (Chan, 1998) to capture the extent to which members perceived interpersonal friction and relationship conflict within the team. We used K.A. Jehn's (1995) threeitem scale of relationship conflict. Items included: "There was tension among members in my team," "There was friction among members in my team," and "There were personality clashes present among members in my team," and "There were personality clashes present among members in my team," and "There were to 5 = always). The Cronbach's alpha for the scale was .84, and the confirmatory factor analysis confirmed a single factor structure. Supporting aggregation of individual ratings of relationship conflict to a team-level variable, we found adequate levels of interrater agreement indicated by median $r_{wg_uniform} = .94$, $r_{wg_slight_skew} = .90$, ICC(1) = 0.15, and ICC(2) = 0.38¹; F = 1.62, p = .010 (Bliese, 2000; G. Chen & Bliese, 2002; S.W.J. Kozlowski & Hattrup, 1992; LeBreton & Senter, 2008). 656 WILEY Journal of Organizationa

3.3.4 Team performance

We used the course coordinator's official project performance reports to measure team performance and procured them directly from the business school's academic services department. The team grade was on a scale of 0 to 100, and all teams were rated on the same performance criteria. The similarity in the assigned team tasks allowed us to capture team performance on a complex task without confounding our data with differences in the task and difficulty levels of projects across teams. The course instructor had provided each team with detailed criteria for project expectations and performance rating, and all teams had equal access to institutional resources to complete the task. The project's nature was such that each team met several times during the five weeks and was expected to maintain high levels of face-to-face communication to push the team project forward.

3.3.5 Control variable

We control for team size because previous work suggests that team size can influence leadership and conflict within teams and team performance (Amason & Sapienza, 1997; Brewer & Kramer, 1986). Controlling for team size is also required because the maximum possible tPBD measured using aggregate Jaccard distance increases with team size. In larger teams, there is potential for more distinct power bases to be identified as the primary source of influence. Scholars have noted a similar possibility when using other variety-based diversity measures. For example, D.A. Harrison and Klein (2007) observe:

> (I)f two groups differ in size, but each group shows maximum variety (i.e., in each group, no two members have the same functional background), there is a potential for more distinct categories to be present in the larger group. Therefore, if one takes Blau's index (or Teachman's) as a literal or "true" value for variety, maximum possible variety increases with unit size; there is a "richer" set of possible information categories to draw from. (p. 1211-1212; italics in original)

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Prior research on diversity has similarly controlled for group size when using standard measures of variety (e.g., Blau's index; Dahlin, Weingart, & Hinds, 2005). Also, drawing from previous work on the role of demographic diversity on conflict (Pelled, Eisenhardt, & Xin, 1999) and team performance (e.g., S.T. Bell, Villado, Lukasik, Belau, & Briggs, 2011), we controlled for team-level gender diversity in our analysis.²

RESULTS 4

We report the means, standard deviations, correlations, and scale reliabilities for all variables in Table 1. As expected, shared leadership was not significantly associated with relationship conflict (r = -.09, p = .486) or team performance (r = -.02, p = .885), suggesting that the relationships might be contingent on other factors.

We test our hypotheses using PROCESS for SPSS 2.15 (MODEL 8: Haves, 2017) because it provides a direct estimation for the moderated mediation effect (Pundt & Venz, 2017). The moderatedmediation result is summarized in Table 2. In Hypothesis 1, we suggested that the shared leadership-team relationship conflict association is moderated by tPBD. As shown, the interaction effect of shared leadership and tPBD is significantly associated with relationship conflict (B = -0.39, SE = 0.19, p = .047). Following the recent recommendation for estimating and interpreting moderation effects (e.g., Gardner, Harris, Li, Kirkman, & Mathieu, 2017), we employed the Johnson-Neyman (J-N) technique to plot the interaction. Instead of comparing the simple slopes at different moderator levels (e.g., +1 or -1 SD), the J-N method offers more detailed information about the nature of the moderating effect by specifying the regions of moderator values that make the relationship between the independent and dependent variable significantly different from 0 (Gardner et al., 2017). Based on the J-N method result (see Figure 2), at any (mean-centered) tPBD value greater than -0.004, shared leadership was negatively and significantly associated with team relationship conflict, and this negative association became strengthened as tPBD increased. For instance, when the (mean-centered) tPBD was 1.68 (+1 SD), the negative association remained significant and became reinforced (B = -1.21, SE = 0.46, p = .011, 95% CI = [-2.132, -0.284]. However, in teams with less diversity in power bases among

TABLE 1

Descriptive statistics

Variable	М	SD	1	2	3	4	5	6
1. Team size	4.74	0.44	_					
2. Gender diversity	0.44	0.33	17	-				
3. Shared leadership	0.41	0.18	35**	.01	-			
4. tPBD	6.20	1.68	.62**	.09	33**	-		
5. Relationship conflict	1.41	0.40	25*	.06	08	17	(.84)	
6. Team performance	82.23	5.73	.26*	19	02	.30*	37**	-

Note: N = 70 teams; alpha reliabilities reported on the diagonal. ^{*}p < .05.

[™]p < .01.

PROCESS results (Model 8) TABLE 2

					Bootstrapp	Bootstrapping 95% CI						
	В	SE	t	p	ш	UL						
Mediator: relationship conflict												
Model summary: R ² = .16, F = 2.36, p = .049												
Team size	-0.16	0.14	-1.11	.271	-0.456	0.130						
Gender diversity	0.06	0.14	0.41	.687	-0.229	0.345						
Shared leadership	-0.54*	0.27	-2.00	.049*	-1.089	-0.001						
tPBD	-0.04	0.04	-0.94	.352	-0.110	0.040						
Shared leadership \times tPBD	-0.39*	0.19	-2.03	.047*	-0.782	-0.001						
Dependent variable: team performance												
Model summary: R^2 = .23, F = 3.22, p = .008												
Team size	0.01	2.05	0.001	.998	-4.089	4.100						
Gender diversity	-3.46+	1.99	-1.74	.087	-7.443	0.517						
Shared leadership	1.40	3.88	0.36	.721	-6.367	9.157						
tPBD	0.94+	.52	1.81	.075	-0.100	1.979						
Shared leadership \times tPBD	-0.40	2.77	-0.14	.885	-5.947	5.143						
Relationship conflict	-4.52**	1.73	-2.61	.011*	-7.977	-1.065						

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Note: N = 70; CI = 95%; process for SPSS 2.15 was used with bias-corrected CI method and 10,000 bootstrap samples.

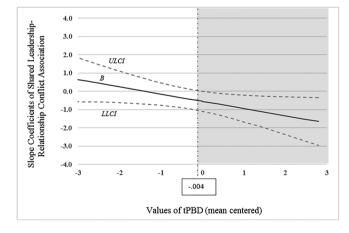
Abbreviations: B, unstandardized coefficients; LL, lower limit of the confidence interval; SE, standard errors; UL, upper limit of the confidence interval.

⁺p < .10.

^{*}p < .05.

^{**}p < .01.

FIGURE 2 Interaction between shared leadership and team power base diversity (tPBD) on team relationship conflict



Note. The shadowed area represents the region of significance for the simple slope of the association between shared leadership and team relationship conflict. At any (mean-centred) tPBD value greater than -.004, shared leadership was significantly and negatively related to team relationship conflict, and this negative association became strengthened as tPBD increased.

members, shared leadership was unrelated to relationship conflict. As shown in Figure 2, there was no level of tPBD wherein shared leadership was significantly and positively related to team relationship conflict. These results partially support Hypothesis 1.

In Hypothesis 2, we suggested that the indirect path of shared leadership \rightarrow relationship conflict \rightarrow team performance would be contingent on the level of tPBD. As shown in Table 2, the interaction term was significantly associated with relationship conflict (B = -0.39, SE = 0.19, p = .047), and relationship conflict was significantly related to team performance (B = -4.52, SE = 1.73, p = .01), representing preliminary support of our proposition. Results generated from the PRO-CESS macro (Hayes, 2017) showed that the index of moderated

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mediation was positive and significantly greater than zero (index = 1.78, SE = 1.23, 95% CI = [0.061, 5.272]), suggesting that the indirect effect of shared leadership on team performance through relationship conflict increases when tPBD value increases (Hayes, 2017)³. For instance, with a low level of tPBD (-1 SD), the indirect effect was insignificant (B = -0.53, SE = 2.17, 95% CI = [-5.726, 3.291]). At the mean level of tPBD, the indirect effect was significantly positive (B = 2.47, SE = 1.29, 95% CI = [0.548, 6.003]). With a high tPBD (+1 SD), the indirect effect became stronger and remained significantly positive (B = 5.46, SE = 2.70, 95% CI = [1.534, 12.990]). These results suggested that the indirect relationship between shared leadership and team performance through relationship conflict increased when the level of tPBD increased, supporting Hypothesis 2.

4.1 Post hoc exploratory analysis

Team conflicts can be conceptualized into task conflict and relationship conflict (K.A. Jehn, 1995). Although we were motivated to understand relational tensions, we also chose to explore post hoc whether the shared leadership-tPBD interaction is also associated with taskconflict levels in teams. We also performed an exploratory analysis to explore task conflict's potential role as a mediator between shared leadership and performance. We had archival data on K.A. Jehn's (1995) 3-item scale of task conflict for the sample teams. We performed a path analysis model with AMOS 26.0, where both task conflict and relationship conflict were considered parallel mediators, to estimate the conditional indirect effect (bootstrapping n = 10.000). Consistent with our previous analyses, team size and gender diversity were entered as control variables and allowed to regress on the mediators and dependent variable. The result suggested that the shared leadership-tPBD interaction term was significantly associated with both task conflict (B = -0.60, SE = 0.24, p = .013) and relationship conflict (B = -0.39, SE = 0.19, p = .035). However, when both types of conflict were entered as mediators, relationship conflict was significantly associated with team performance (B = -3.83, SE = 1.80, p = .038), but task conflict was not (B = -1.31, SE = 1.39, p = .348). Similarly, the indirect path through relationship conflict was significant (i.e., the specific mediation path of interaction term \rightarrow relational conflict \rightarrow team performance; B = 1.51, 95% CI = [0.010, 4.973]), whereas the indirect effect through task conflict was not (B = 0.79, 95% CI = [-0.849, 3.349]). Our results confirm that the interaction between shared leadership and tPBD is positively associated with team performance through lowering relationship conflict but not through the pathway of task conflict.

5 DISCUSSION

In the present study, we theorize that that tPBD would moderate the relationship between team shared leadership and relationship conflict, such that shared leadership might trigger or dissipate relationship conflict-depending on the extent to which there is power base diversity in teams. The results primarily support our hypotheses. We find that with high levels of tPBD, the shared leadership-relationship conflict association becomes increasingly negative. We also find that shared leadership's indirect effect on team performance through relationship conflict becomes increasingly positive as tPBD increases. These findings bring important theoretical and practical implications for building self-managed teams.

Theoretical implications for informal team 5.1 leadership studies

One of the central goals of this work was to resolve the tension in the field in terms of whether and under what circumstance shared leadership is more likely to result in relational harmony versus interpersonal friction as members engage in influence negotiations (J.L. Pierce & Newstrom, 2003). First, our study integrates relatively isolated areas of theoretical and empirical work on team power (L.L. Greer et al., 2018) and shared leadership (e.g., J.B. Carson et al., 2007) to show how power base diversity could be a theoretically relevant and critical boundary condition that influences the associations between team leadership, relationship conflict, and performance outcomes in teams. We believe that by highlighting tPBD as a boundary condition, our work is the first step in reconciling the opposing views on shared leadership's effect on relational harmony.

We advance the thinking in the literature by demonstrating that indeed there are performance benefits of shared leadership; however, the unconditional positive effects of shared leadership cannot be taken for granted. Leadership scholars have recently discussed the importance of questioning the assumption that shared leadership will always lead to beneficial outcomes. For example, a recent metaanalysis on shared leadership effects shows only a moderate to a low level of positive association between shared leadership and team performance (r = .32; D'Innocenzo et al., 2016), and the heterogeneity in the estimates point to the possibility of "opposing" effects that may, in turn, hide the direct influence of shared leadership on team performance (Zhu et al., 2018). In this work, we proposed and showed that the presence of a single good condition (that of increasing levels of shared leadership in a team) may not always lead to "good relational outcome and performance" (A.M. Grant & Schwartz, 2011; J.R. Pierce & Aguinis, 2013) unless there are facilitating conditions (e.g., tPBD). Our study suggests the possibility of disharmony in teams with multiple leaders and demonstrates that relationship conflict is significantly lower when multiple informal leaders have some basis for differentiating their power from one another (power base diversity) as they negotiate and share leadership with peers (Carnabuci et al., 2018). Thus, it might be a promising choice to shift the research focus to investigate other potential negative mediating mechanisms and compositional factors that could trigger or subdue counterproductive relationship dynamics in teams with increasing levels of shared leadership (see review by Denis et al., 2012).

It is essential to acknowledge and discuss that in our study, teams with high levels of shared leadership and low levels of tPBD did not show significantly high relationship conflict and low performance, although teams with high levels of shared leadership and high levels of tPBD showed significantly lower levels of relationship conflict. One possible explanation for the difference in findings could be the relatively small number of teams in our sample who reported very high levels of relationship conflict. We acknowledge the limitation of using a sample of student project teams from a single geographical location and hope that future research will replicate our model in a larger field sample of mature project teams with more extended working history and higher stakes in terms of incentives. In actual workplaces across different cultures, we believe that members are likely to have higher impression management needs, motivating greater interpersonal friction, thereby providing the range in data that allows the interaction effect to surface fully. In addition, recent work in the area of team processes indicates the possibility of the asymmetrical impact of few team members on team dynamics (Sherf, Sinha, Tangirala, & Awasty, 2018; Sinha, Janardhanan, Greer, Conlon, & Edwards, 2016). We suggest that future research replicate our model in mature project team contexts. In such teams, there is a likelihood of shared leadership reducing over time as a hierarchy of power bases evolves, and some individual informal leaders begin accumulating disproportionate levels of power. It would also be wise to simultaneously explore both the adverse conflict pathway and the positive information exchange pathway by which shared leadership affects performance over time.

Relatedly, in our exploratory analyses, the interaction between shared leadership and tPBD did not influence performance outcomes through the task conflict pathway. Perhaps the relative lack of importance of task conflict reflects the student team sample used in this study. It is likely, for instance, that task conflict would be more pronounced in a project team or committee that has members representing competing functional departments or interests. Prior work has been suggestive of such differences in the two conflict types' relative influence on team outcomes (Bai, Han, & Harms, 2016; De Dreu & Weingart, 2003). Future research could utilize research settings with different types of teams, group tasks, and team contexts to test the relative impact of task versus relationship conflict in teams.

We believe our work acknowledges that leadership, power, and influence are implicitly interrelated (Northouse, 2007). Influence, in the context of leadership, is a social and behavioral process wherein a leader acts to intentionally change the attitude and behavior of another individual (Katz & Kahn, 1978), whereas power is the potential capacity from which a member may derive the motive or drive to influence (J.R.P. French & Snyder, 1959; Janda, 1960). In other words, leadership influence within teams is member power in action. However, every member perceived to have a power base may or may not choose to engage in leadership activities. A team can indeed vary in the emergent level of shared leadership (i.e., the density of leaders) independent of the compositional diversity in power bases from which team members derive their influence. At the team level, having diversity in power bases does not conceptually equate to members' choice of exerting leadership behaviors to control, monitor, and lead



the team toward its goals. We acknowledge that the construct of tPBD and shared leadership could show relationships worthy of further investigation. For example, when team members have some inherent differences in power sources that precede team interactions (i.e., they are precursors to teamwork), the differences could signal and motivate individuals to emerge as leaders, thereby promoting conditions for shared leadership. At the same time, we can expect the opposite, such that diversity in power sources that precede team interactions can limit who emerges as a leader, thereby creating teams with more centralized leadership structures. Given that both of the effects are theoretically possible and that we are introducing a novel construct of tPBD, we encourage future research to theoretically explicate these relationships. We believe our work pushes the theoretical and empirical thinking on informal shared leadership and raises interesting questions on the antecedents and outcomes of team power base composition.

5.2 | Theoretical implications for team composition studies

We believe that our work on developing a multivariate operationalization of diversity on nine power bases within teams can provide empirical and theoretical insights into how team composition factors can be a critical contingency that affects the association between team states, processes, and performance outcomes. Typically, leadership studies focus on sociodemographic and trait-based compositional factors (such as personality, gender, and expertise) as "inputs" in determining how team leadership manifests and how attributions are made about leadership effectiveness (T.A. Judge. Bono, Ilies, & Gerhardt, 2002; T.A. Judge, Erez, Bono, & Thoresen, 2002). In such studies, compositional factors are seen as antecedents of leadership rather than facilitating boundary conditions for team leadership to influence performance. We push this line of work by proposing power base diversity as an emergent internal team state that could act as a boundary condition (Mannix & Sauer, 2006) to facilitate complementary dominant-submissive behavioral fit among multiple task leaders and improve interpersonal compatibility. We believe that power base diversity is different from other demographic and traitbased team compositional states, as it is likely to emerge through members' historical knowledge and team interactions relevant to the task at hand, as opposed to unchangeable stable individual differences (like gender and personality) that remain constant across situations.

In addition, most of the past work relating team leadership to power composition has tended to focus on leader influence in the context of either formal positional power or expertise-based functional power (Koopman, Matta, Scott, & Conlon, 2015; F.P. Morgeson et al., 2010). We advance the thinking on interpersonal power within teams by showing the importance of exploring a team compositional state that captures not just one source of power but also the variety in members' sources of power (Jayasingam et al., 2010) and how interpersonal influence processes play out in teams. Given the apparent but understudied conceptual relationship between the source of 660 WILEY Journal of Organizationa

power and leadership in team interactions (D. Keltner et al., 2003; D. Keltner, Van Kleef, Chen, & Kraus, 2008), we hope that our work sets in motion novel theoretical thinking about how an emergent team state of tPBD can interact with other forms of team leadership to determine team dynamics and performance. Because our work provides the first empirical look at how the level of shared leadership can interact with tPBD to impact conflict dynamics and team performance, it is critical to acknowledge our work's limitations while laying down several exciting avenues for future research.

5.3 Limitations and future research directions

In this work, we introduce a multidimensional Euclidean distancebased measure of tPBD. A key limitation of this measurement is the reliance on reports about the single most used basis of power for each member. The decision to have members rate only the primary power base of every other team member was a parsimonious approach that was adopted to meet the practical constraints of survey length and limit respondent fatigue while measuring diversity on a wide variety of bases. However, our approach may likely be an oversimplification, which assumes that members always have a clearly dominant power base and rely on that for influence. While individuals, "because of their personalities, experiences, and values, or force of habit, may tend to prefer some bases of power over others." their choice of power strategies may vary depending on the situation and desired outcomes (B.H. Raven, 2008, p. 6). Future research would benefit from asking the respondents to indicate the extent to which team members used each of the different bases of power and whether some members had more than one dominant power base. The nine power bases could be collapsed (based on the team context) to measure broadly: informal expertise/information power, formal position/reward/coercion power, and referent/approval power. A reduced number of power bases combined with peer rating on multiple power bases for each member will allow future researchers to evaluate, for instance, how task demands relate to which power bases becoming more dominant than others and how much the power bases overlap within individuals over time (e.g., Berger, Cohen, & Zelditch, 1972).

Relatedly, our concept of tPBD provides initial theoretical arguments to explore how members may adopt complementary leadership influence behaviors based on their perceived sources of power within a team. Although our operationalization of tPBD shows the importance of nine power bases, we acknowledge that some of the power bases may be more relevant and likely to change over time depthe ending on the project team and task. For example, some power bases may be more prevalent or salient in academic institutions or faculty committees versus boards of directors versus senior leadership teams of professional associations. Similarly, as a particular power base gains asymmetrical influence, other members might attempt to garner resources to develop the same power base, leading to less diversity over time. We encourage future researchers to pay attention to and consider the relevance, prevalence, and emergence of power bases over time. We also hope that scholars will capture the perceived rank order of power bases at the very start of the team's lifecycle to examine both the process of emergence of power base diversity as well as to explore when and how members choose to dominate versus submit to influence attempts during shared leadership interactions.

Our study was limited because it could not capture the momentary behavioral micro leading-following interactions between leaders ascertain behavioral dominance complementarity (Crevani to et al., 2007; O'Toole, Galbraith, & Lawler, 2002). As such, the underlying causal theoretical mechanism of dominance complementarity in leader behaviors remains to be explored in future research. Future research can use experimental designs in which the distribution of power bases is manipulated, or confederates are used to engage in dominance complementarity, whereas the phenomenon of the perceived threat and felt dominance complementarity are explicitly measured. We encourage studies to utilize video recordings of team discussions to analyze how tPBD differentially creates complementary styles of negotiating leadership roles among peer leaders and explore how it may influence intrateam conflict. In teams with a higher density of leaders with similar power bases, conflict emergence may likely be contingent on the member's communication and emotional intelligence skills. Future research would benefit by exploring how the interaction between interpersonal skills, need for power/status, and power bases influence conflict in teams with a high density of shared leadership. Future research could explore how types of power bases affect the influence tactics that a peer leader chooses to adopt and how, over time, the power base of an individual leader becomes stronger or weaker as a result of these influence behaviors (G. Yukl. 2013). There is also the potential to explore how members' expectations and effectiveness evaluations differ for those informal leaders who are perceived as being high on expertise or information versus referent base of power, and how these expectations at the team level influence the level of conflict and performance.

We acknowledge that our study explores the phenomenon of shared leadership and power base diversity in self-managed student project teams where there was no formal team leader and no a priori organizational role assignments. According to Zhang, Nahrgang, Ashford, and DeRue (2020), there are multiple advantages of using leaderless student project teams to explore informal leadership, as it allows for frequent intragroup interactions for informal leadership to emerge. Although previous shared leadership studies have commonly adopted this research context (e.g., D.S. DeRue, Nahrgang, & Ashford, 2015; Zhang et al., 2020), in reality, self-managed teams (often committees and project teams) could include members who represent different stakeholders within the organizations and may, at times, have formal roles or agendas assigned to them. These elected or appointed representatives may, in turn, garner different levels of influence based on their legitimate positional power and the status power of the external collective they represent. As a result, the team members might experience a higher level of task conflict, which could seriously influence team effectiveness. Future research could explore how power base diversity emerges in teams of peers based on which stakeholder, agenda, or expertise they represent and the potential hierarchical relationship between these stakeholder groups. Such a

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study would benefit from the integration of the literature on team roles (S.E. Humphrey, Morgeson, & Mannor, 2009; Steiner, 1972; Stewart, Fulmer, & Barrick, 2005) with that on power bases and team leadership to explore the effects of formal team leadership in facilitating adaptive conflict resolution during influence negotiations between informal peer leaders.

Another limitation of our work emerges from the practical constraints that governed our data collection, wherein we could only obtain a one-time measurement of shared leadership in teams around the midpoint of the team's progress. Future research could advance our work by modeling the temporal dynamics of how increasing levels of shared leadership (higher levels of leader density) may give rise to relationship conflict at different stages of the team life and how external demands can trigger jockeying for control and influence (L.L. Greer & van Kleef, 2010). Understanding the dynamic nature and fluctuations of sharing leadership influence may provide fascinating insights into how relationship conflict can be best managed. For example, future research could explore the momentary interactional patterns that lead to conflict resolution when tPBD is high or triggers relationship conflict among task leaders when tPBD is low. Future research could also explore whether leaders with a particular primary power source are more susceptible to relationship conflict, whereas others with more substantial relational power sources are immune to interpersonal incompatibility during task interactions.

Carnabuci et al. (2018) propose that higher levels of informal leadership among members can result in the possibility of relationship conflict because members change their attributions about others' leadership in dynamically changing "double-interacts" (D.S. DeRue & Ashford, 2010). Our work shows that under increasing tPBD, the emergent team state of shared leadership is less likely to induce relationship conflict and resultantly promote team performance. However, emergent team states, such as shared leadership, can be in a state of flux because they vary based on dynamic sense-making (Lord, Gatti, & Chui, 2016) as well as a social construction process between leaders and followers (Lichtenstein & McKelvey, 2011; Weick, 1995). We hope future research will explore how shared leadership states within teams evolve (Tarakci et al., 2016) and how tPBD affects the within-team variability in leader density over time. We hope future research will also explore how leaders dynamically adjust their leadership attributions toward members based on the changing pattern of relative power relations and distinct leader identities in the team (D.S. DeRue & Ashford, 2010). In summary, we hope that our work will encourage others to integrate the theoretical contributions and avenues for improvement previously outlined and use future research to advance the understanding of how shared leadership and tPBD co-emerge and change over time.

5.4 | Practical implications

Our findings offer insights for practitioners who design, monitor, or consult with teams where shared leadership is encouraged. We demonstrate that merely increasing leadership in teams may not be enough and that it is essential for practitioners to focus on how informal leadership and power are shared with peers to prevent negative dynamics. We recommend that practitioners consider team selection to maximize diversity in the composition of power bases within teams to reap the full benefits of shared leadership. Also, designated team leaders responsible for self-managed teams could be trained to detect harmful relationship conflict dynamics and intervene when early signs of such patterns are visible, rather than assuming that teams with multiple leaders will continue to remain functional. An indirect implication of our work is to push practitioners to critically evaluate and be open to the idea that, in some situations, formalized leadership structures may be more productive, especially when informal peer-level leaders show signs of interpersonal incompatibility.

6 | CONCLUSION

Although many scholars believe that shared leadership always promotes team performance, there is merit for future research to explore the conditions that enhance this positive effect and factors that could trigger shared leadership's dark side. Our research identifies team power base diversity as an important contingency that influences the relationship between shared leadership, conflicts, and teams' performance. In doing so, our research takes a step toward addressing the opposing views on shared leadership's effects suggested in the team leadership and power literature streams.

ACKNOWLEDGMENTS

We are indebted to Dr. Lindred Greer and colleagues at the Centre for Workplace Excellence, UniSA Business School, for providing feedback on earlier drafts of this paper.

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ENDNOTES

- ¹ Because ICC(2) is influenced by the number of raters, the relatively low value here could be explained by the small team size in our sample (Gong, Law, Chang, & Xin, 2009). Previous studies suggest that ICC (2) values greater than 0.25 can still be acceptable when satisfactory r_{wg} and ICC(1) values, as well as significant *F*-test results, are observed (Dietz, van Knippenberg, Hirst, & Restubog, 2015; Dong, Liao, Chuang, Zhou, & Campbell, 2015).
- ² In a post hoc analysis, we also considered age (coefficient of variation index) and functional background diversity (Teachman index) as control variables. Neither of the additional controls was significantly associated with model variables; thus, we removed it from the analysis due to concerns around sustaining statistical power. The result is available upon request. We appreciate the suggestion from an anonymous reviewer.
- ³ Although Preacher, Rucker, and Hayes (2007) suggested that the J-N technique could also be applied to estimate conditional indirect effects, in a recent review Hayes (2017) cautioned that this estimation assumes the sample follows a normal distribution, which could be untrue in most cases. Thus, adopting the bootstrapping procedure to estimate the index of moderated mediation is preferred and recommended (Hayes, 2017).

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How to cite this article: Sinha R, Chiu C-Y, Srinivas SB. Shared leadership and relationship conflict in teams: The moderating role of team power base diversity. J Organ Behav. 2021;42: 649-667. https://doi.org/10.1002/job.2515



APPENDIX A.

TEAM POWER BASE DIVERSITY MEASUREMENT

For each of your group members, identify their primary source of power in your group:

- 1. *Expertise*: This person has power in the group because he/she is an expert, knows a lot about the task/project.
- 2. *Referent*: This person has power in the group because he/she is respected, admired, and liked by other group members.
- 3. *Informational*: This person has power in the group because he/she has a lot of information or access to information that others do not.
- 4. *Approval*: This person has power in the group because group members seek his/her approval—they want to be liked and admired by this person.

- Reciprocity: This person has power in the group because group members feel obliged toward this person for what he/she has done for the group in the past.
- 6. *Equity*: This person has power in the group because group members feel a need to make up for things that had NOT been done well previously to this person.
- *Reward*: This person has power in the group because he/she controls certain valued resources and can provide benefits for other group members.
- 8. *Coercion*: This person has power in the group because he/she controls certain valued resources and can make it difficult or unpleasant for others.
- 9. *Positional*: This person has power in the group because he/she has been assigned a sort of informal leadership position in the group.