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A Multilevel Perspective on Faultlines: Differentiating the Effects Between Group- and Organizational-Level Faultlines

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Integrating the literature on faultlines, conflict, and pay, we drew on the basic principles of multilevel theory and differentiated between group- and organizational-level faultlines to introduce a novel multilevel perspective on faultlines. Using multisource, multilevel data on 30 Major League Baseball (MLB) teams, we found that group-level faultlines were negatively associated with group performance, and that internally focused conflict exacerbated but externally focused conflict mitigated this effect. Organizational-level faultlines were negatively related to organizational performance, and were most harmful in organizations with high levels of compensation. Implications for groups and teams in the sports/entertainment and other industries are discussed.

Keywords: faultlines, multilevel theory, sports teams, conflict, pay

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> I called it years ago. What I called is that you're going to see more Black faces, but there ain't no English going to be coming out. . . . [It's about] being able to tell [Latino players] what to do—being able to control them.
>
> —*Gary Sheffield*

Most of us intuitively realize, and have witnessed, the problems that can occur when people from very different backgrounds and outlooks work together. Taking a group as a whole, we similarly know that when people see factions or "splits" among the people in the group, the chance for conflict or other dysfunction increases, hurting group performance (Lau & Murnighan, 1998; Thatcher & Patel, 2012). These splits, or faultlines, occur when multiple attributes (e.g., race, age) of group members come into alignment and divide a group into relatively homogeneous subgroups (Lau & Murnighan, 1998). While we know that faultlines are generally bad for performance, some investigators have found mixed results (Gibson & Vermeulen, 2003; Lau & Murnighan, 2005) with a modest correlation between faultlines and group performance of −.14 reported in a recent meta-analysis (Thatcher & Patel, 2011). These inconsistencies suggest that there is still much to learn about the relationship between faultlines and group performance.

Even less is known about how demographic faultlines or group divisions emerge and manifest at the organizational level. A nascent research stream has begun to consider organizational-level faultlines (Lawrence & Zyphur, 2011) and, like much of the group-level faultline research, yielded some interesting findings. Yet, we still know little about the implications of faultlines for overall performance of an organization, or how these higher-level, organizational faultlines are relevant to a larger subsystem which is made up of work groups that may also have lower level splits (faultlines at the group level). Seeking answers to this question, we use the concept of faultlines to model the effect of demographic factions across multiple levels (organizational and group) across a set of organizations. To test these ideas empirically, we use the setting of Major League Baseball (MLB) teams because it provides a platform of distinct organizations (Resick, Whitman, Weingarden, & Hiller, 2009) and nested, well-defined functional groups within each team.

Following the premise that much of human behavior is situational (Cronbach, 1957; Lewin, 1936), we also take into account the context in which faultlines operate and seek to provide new insights into when and under what conditions faultlines are likely to be most effective. We see context as the key to understanding when faultlines are salient and thus, important to group members (Carton & Cummings, 2012), so that they can influence their behaviors. We first focus on conflict shaping the group-level faultlines–performance link because the role of conflict in faultlines research has been well-established and recognized in its connection to group-level outcomes (cf. Thatcher & Patel, 2012). To understand under what conditions organizations could mitigate the decrements in organizational performance, we also look at the

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organizational-level relationships and turn to pay because pay, either alone or as a component of high-performance work practices, has been one of most researched topics for organizational performance (Chng, Rodgers, Shih, & Song, 2012; Guthrie, Spell, & Nyamori, 2002; Huselid, 1995).

This study is therefore intended to extend research in three key ways. First, drawing on the basic principles of multilevel theory (Kozlowski, 2012; Kozlowski & Klein, 2000), we introduce a multilevel perspective on faultlines and offer a methodological approach to measuring faultlines at different levels. As part of this perspective, we differentiate between group- and organizational-level faultlines and propose a novel, integrative explanation of why faultline-derived effects will vary across groups and organizations. Second, we extend existing research on conflict by being among the first studies: (a) that, consistent with Glavin and Schieman (2010), views conflict as a social contextual factor rather than a group process variable, (b) that focuses on an important aspect of conflict—its directionality (whether it is directed inside or outside the organization)—that has been largely overlooked yet critically important since this can potentially generate very different effects for employees. Third, we integrate compensation research with the faultlines literature by showing how the organizational-level effects of faultlines can be shaped by pay-related factors. Together these contributions enrich our understanding of the multilevel effects of faultlines on group- and organizational-level performance as well as the critical ways in which the context of faultlines can disarm their dysfunctional influence.

Faultlines: A Brief Review

As plentiful research on group composition has demonstrated, the mix of people in a group matters. This "mix" or specific characteristics of group members have been linked to a variety of outcomes including group decisions, conflict management, communication, and performance (e.g., Bell, 2007; Humphrey, Hollenbeck, Meyer, & Ilgen, 2002; Kim, 1997; LePine, Hollenbeck, Ilgen, & Hedlund, 1997). Much of composition research has taken a group diversity perspective, employing a wide array of theoretical interests, conceptualizations, and measurements both across and within various disciplines (e.g., Bezrukova, Jehn, Zanutto, & Thatcher, 2009; Bezrukova, Thatcher, & Jehn, 2007; Blau, 1977; Harrison & Klein, 2007; Joshi & Roh, 2009; Kanter, 1977; Pfeffer, 1983; Reskin, McBrier, & Kmec, 1999; Williams & O'Reilly, 1998). We do not attempt to resolve controversies around the numerous conceptualizations and operationalizations of diversity (including but not limited to demographic diversity), but rather build on this work to offer one of the ways (among many others) to understand diversity's role in shaping group and organizational performance. Because differences among people can occur based on many different attributes, we use the faultline perspective that takes into account multiple attributes simultaneously (cf. Bezrukova et al., 2007; Lau & Murnighan, 1998; Thatcher & Patel, 2012).

Faultlines are hypothetical dividing lines that split a group into relatively homogeneous subgroups based on group members' demographic alignment along one or more attributes (Lau & Murnighan, 1998). For example, a sports team would have a faultline when all the White players are under 25 years old and all the Black players are about 40 years old (attributes are correlated with each other, e.g., White and under 25). Based on the principle of comparative fit (defined as the extent to which a categorization results in clear between-subgroup differences and within-subgroup similarities, Reynolds & Turner, 2001; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), the alignment on multiple categories increases the salience of subgroup identification and reinforces the salience of attributes (Ashforth & Johnson, 2001). However, if the White players and some of the Black players are under 25-years-old, the category of age cross-cuts that of race. This cross-cutting will dilute the outgroup bias based on race and thus the resulting faultline will be weaker compared to that in the former group. Just as the strength of a geological fault increases with the number of layers it cuts through, the strength of a group faultline increases the more attributes there are in alignment that define a subgroup.

Faultline Attributes

Most prior work on faultlines has relied on social identity and categorization theories (Tajfel & Turner, 1986; Turner, 1975) to elucidate how faultlines could correlate with various performance outcomes (Lau & Murnighan, 1998). These theories posit that individuals organize the social world around them by classifying themselves into social categories (e.g., experienced Black players). Faultlines trigger categorization of self and others as members of an in-group or an out-group (Ashforth & Mael, 1989) that allows group members to simplify the social world and generalize their existing knowledge about certain groups and new people (Bruner, 1957). This inherent duality (in-groups vs. out-groups) is also associated with intersubgroup behavior in groups such as stereotyping, in-group bias, prejudice, and out-group discrimination (Jetten, Hogg, & Mullin, 2000). These in-group biases and related behaviors are the most typical responses to the differences among people across identity-based attributes (Carton & Cummings, 2012) such as race, nationality, or age (Jehn, Chadwick, & Thatcher, 1997; Jehn, Northcraft, & Neale, 1999), thus justifying them as our choices for attributes to study.

These identity-based attributes seem particularly salient in the professional sports teams we study. First, both age and racial diversity have been studied in their connection to team performance in professional sports teams, including baseball teams (Timmerman, 2000). In particular, a number of studies have identified race as a particularly salient feature in sports teams (Cunningham, Choi, & Sagas, 2008; Groothuis & Hill, 2008; Kahn & Sherer, 1988; Stone, Lynch, Sjomeling, & Darley, 1999). Other sports studies have highlighted the importance of country of origin and identified it as a growing phenomenon—the unmistakable influx of international professional sports players in both the MLB and in the National Basketball Association (NBA; Eschker, Perez, & Siegler, 2004; Sakuda, 2012). Not surprisingly, these attributes have received a lot of attention in popular sports/entertainment media, substantiating their theoretical and empirical significance as worthy attributes of faultlines and salient features in professional sports settings. Supporting this is Hayhurst's (2014) recent article reporting that players are aware of their differences on the basis of demographic attributes including ethnicity (and national origin) and that splits in groups ultimately affect team based performance. A recent ESPN article further discusses the importance of demographics such as age, race, and country of origin in

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shaping team chemistry (Phillips, 2014), hence providing additional justification for the choice of attributes we study.

Multilevel Theory and the Effects of Faultlines

Our choice of faultline attributes and the relationships that we model with performance is further guided by multilevel theory (MLT). This theory explains how the attributes of individuals, groups, and organizations on one level of analysis can have effects on other levels (Kozlowski, 2012; Kozlowski & Klein, 2000). We directly connect our theoretical model to the specific principles of MLT (emergence, homology, and contextual effects) to (a) explain how MLT leads to the way we conceptualized organizational-level faultlines, and (b) provide better justification for the choice of faultlines attributes emphasizing the "structural view" that represents how individuals are organized in groups and groups are in turn nested in the organization. We explain below how MLT principles guide our conceptual model as a progression of faultline effects based on a bottom-up process (i.e., from individual-level to group-level, and then to organizational-level).

One tenet of MLT, the emergence principle, is that interactions between individuals can emerge as higher-level phenomena (bottom-up effects). For example, group cohesion, defined as an affect-laden attraction of individual members to the group and its task (Kozlowski & Chao, 2012, p. 347) emerges from individual feelings to a group-level phenomenon. In guiding our choice of faultline attributes and linking our own model with the emergence principle, we build on prior research that finds individual demographic attributes such as age, race, and nationality have aspects of an emergent, bottom-up phenomenon (Marks, Mathieu, & Zaccaro, 2001). They originate in the alignment of members' attributes and manifest as a higher level, group or collective phenomenon (Kozlowski & Klein, 2000). We further argue that the principle of emergence could describe not only the situations when group constructs emerge from individual attributes, but also cases when organizational-level phenomenon emerge from group-level characteristics. According to MLT, system-level phenomena could be produced by a lower-level entity, where an organizational-level faultline could emerge from the dynamic interaction of lower-level entities or group faultlines (Ashforth & Reingen, 2014).

The next principle of MLT is that some phenomena can be multilevel (operate in homologous, parallel fashion across levels). In our model, this guides our consideration of both group and organizational-level performance as important with linkages to faultlines at these respective levels; this relationship is reflective of MLT and its roots in the functional equivalence principle of general systems theory (Kozlowski, 2012). In exploring performance across levels, our model is similar to a multiple goal model of regulation (DeShon, Kozlowski, Schmidt, Milner, & Wiechmann, 2004) in that the group members in our sample have group performance goals and metrics they must accomplish, but also must pay attention to organizational goals of winning games through backing up teammates and other actions not directly related to their group goals. The goal of understanding links across levels is a challenge because while the effects of faultlines are reasonably well researched and understood at the group-level, organizational-level faultline effects have generated much less attention.

Turning to contextual factors, the third MLT principle suggests that the effects of higher-level factors can be found on a lower level (top-down effects). One of the most common ways this is seen is through the moderating effects of higher-level contextual factors on lower level outcomes, as exemplified by Hunter and Hunter's (1984) study of unit structure's effects on cognitive ability and job performance, and Rousseau's (1978) study of technology on attitudes in groups. Take, for example, the contextual variable of conflict. There is considerable evidence that conflict within a group plays a critical role in understanding the effects of faultlines (cf. Thatcher & Patel, 2012). What is much less clear is whether conflict at an organization level, rather than within the group, will make group level faultlines more or less salient to individuals. Reinforcing this evidence is a widely held recognition that conflict, both between and within teams, has long been seen as a salient and prevalent factor in sports settings like ours (Sullivan & Feltz, 2001).

To offer a richer and more sophisticated analysis of organizational performance, we further look at the unit-level (organizational-level) models (Kozlowski & Klein, 2000) focusing on pay with the goal to identify conditions where organizations could mitigate the harmful effects of organizational faultlines on organizational performance. The fact that pay (specifically, team payroll) is a very salient issue in professional sports in addition to being one of the most researched topics in the domain of organizational performance guided us in its inclusion in our organizational-level models (Chng et al., 2012; Guthrie et al., 2002; Huselid, 1995).

The ultimate point to be taken from our grounding in MLT is that the joined effect of group faultlines emerging to the organizational-level could have important implications for overall organizational performance. Yet, to date even recent methodological approaches to measuring faultlines, while recognizing the complex nature of splits in groups, fall short in disentangling faultline effects at different levels (e.g., Meyer & Glenz, 2013). For these reasons, and because we are modeling (a) variables at a lower (individual, group) level that emerge at a higher level (group, organizational, respectively); (b) variables that are homologous, or parallel across levels (affecting performance); and (c) both higher level moderating effects on lower levels outcomes as well as unit (organizational) level moderating effects, we take a MLT perspective and describe how this perspective guides our choices for the set of attributes that make up group-level faultlines, and higher-level organizational faultlines. These phenomena, on multiple levels, may have meaningful relationships with performance.

Group-Level Faultlines

We define a group-level faultline as a bifurcation of the group into subgroups (e.g., older White players vs. younger Latino players on a baseball team). From a MLT perspective, we combine individual attributes such as age, race, and country of origin (in measuring the extent of alignment, or faultline) and relate the resulting faultline to group performance, with group faultlines in our model being a bottom up, emergence phenomenon to the group level (Kozlowski, 2012). Despite the substantial amount of research that has been done to understand the effects of faultlines on group performance, inconsistencies remain in theoretical arguments and empirical results. For example, some scholars found that the performance of groups with faultlines suffered from fragmentation due to categorizations into in-groups and out-groups which form barriers to communication and collaboration (Sawyer, Houlette, & Yeagley, 2006) and limited access to informational resources (Bezrukova, Thatcher, Jehn, & Spell, 2012) or hindered information elaboration (Homan et al., 2008). Yet others suggested that members of different subgroups may see the value in their differences and be able to effectively utilize cognitive resources available to the group, thus increasing group performance (Bezrukova et al., 2009). Given these inconsistencies, we develop our first baseline hypothesis.

The basic premise of the faultline framework is that group-level faultlines are distractive as they shift attention to task-irrelevant cues (Bezrukova et al., 2012), including (a) competition between subgroups formed by faultlines which may considerably reduce individuals' motivations to contribute to a group (Lau & Murnighan, 2005); (b) distrust and conflict that may be likely to increase and take time to resolve (e.g., Polzer, Crisp, Jarvenpaa, & Kim, 2006); and (c) restricted communication and isolation between groups, resulting in less sharing of relevant information and advice (e.g., Thatcher, Jehn, & Zanutto, 2003). The presence of group-level faultlines, then, harms groups by consuming the time and resources that could be otherwise directed toward achieving the group's goals. Thus our first, baseline hypothesis serves to replicate past results to determine the relationship between group-level faultlines and group performance.

Hypothesis 1 (H1): Group-level faultlines will be negatively associated with group performance.

Organizational-Level Faultlines

Despite Lau and Murnighan's (1998) contention that faultlines are a truly multilevel phenomenon, there has been relatively little direct research on organizational faultlines. Some research on top management teams (e.g., Barkema & Shvyrkov, 2007; Cooper, Patel, & Thatcher, 2013; Li & Hambrick, 2005; Ormiston & Wong, 2012; Tuggle, Schnatterly, & Johnson, 2010; van Knippenberg, Dawson, West, & Homan, 2011) has been relevant to our understanding of organizational-level faultlines. Yet, this line of research is based on group-level models with the exception that the actions and decisions of top managers influence their entire organization. A more conceptually nuanced view on organizational-level faultlines has been offered by Lawrence and Zyphur (2011) who differentiated between group and organizational faultlines based on how the boundaries around membership in a group versus in an organization are defined. Departing from this work and also recognizing that there are multiple ways in which organizational faultlines could be conceptualized, we draw on MLT principles to tease out the differences in faultline phenomena across levels.

Based on MLT, we view faultline effects as a progression based on a bottom-up process from individual to group to organization. We argue that organizational faultline effects do not emerge directly from individual-level attributes but rather arise from group-level faultlines. Due to structural differentiation where organizations empower groups to promote the overall welfare of the organization (Mintzberg, 1983), groups become critical building blocks where bottom-up processes for organizational-level phenomena originate. As an objective layer in the organization, groups define the bottom-up process because people often identify with the group to which they belong (Cooper & Thatcher, 2010). That is, group members base their self-concepts on their *group* identity that shapes their behavior (Tajfel & Turner, 1986) and can manifest at the organizational-level. For example, Ashforth and Reingen (2014) concluded that an organizational faultline emerged in the food cooperative they studied not directly from individuals, but from competition within groups that made up the organization.

Organizational faultlines thus originate from group-level faultlines that could also vary across an organization and when combined, could emerge at the organizational-level in a variety of different ways in different organizations. For example, an organization could have four project groups—each with a different group faultline. So, compared with group faultlines, organizational faultlines might be structurally different (there is variation between the groups on the strength of their faultlines). This is called a compilation form of emergence (Kozlowski, 2012) and has been identified in past research such as Wegner's (1995) study of transactive memory in groups.

In our theorizing about organizational-level effects, we further use a homologous multilevel model (Kozlowski & Klein, 2000) that assumes that the relationship between group-level faultlines and performance will also hold at the organizational level (the functional equivalence principle). Because organizational-level performance represents a coordinated effort from dynamic interactions of all the parts (groups) involved, the nature of these lower-level interactions that manifests in organizational-level faultlines becomes critical. That is, if groups suffer from divisive processes, such as an "us versus them" mentality of a faultline subgroup, this might incite antagonism within the entire group (Labianca, Brass, & Gray, 1998), ultimately leading to a negative overall impact of the group on organizational-level performance. As another sports-based example, in baseball, pitchers pitch, fielders field, and batters hit—some will excel and others will make errors, yet their combined effort will, taken together, be what that will define team performance (winning a game). Hence the more groups in a team that are affected adversely by faultlines, the more likely the team will experience decrements in overall organizational performance.

Hypothesis 2 (H2): Organizational-level faultlines will be negatively associated with organizational performance.

Organizational Conflict

In explaining the outcomes of group faultlines, a number of top-down contextual effects and moderators have been considered (cf. Thatcher & Patel, 2012) such as cultural alignment (Bezrukova et al., 2012), shared team member objectives (van Knippenberg et al., 2011), goal structure strategies (Rico, Sanchez-Manzanares, Antino, & Lau, 2012), and the social contexts of teams (Cooper et al., 2013; Leslie, 2014); these highlight the context-dependent nature of the relationships we study. We build on this work and turn to the well-established role of conflict in faultline research. Yet unlike prior studies that model conflict as a process variable (cf. De Wit, Greer, & Jehn, 2012), we, in line with the MLT principle of top-down contextual influence, focus on the cross-level effects of organizational conflict on the link between group-level faultlines and group performance. We do this because the

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extent to which conflict is seen as an appropriate form of behavior could reflect a higher-level property of an entity (Gelfand, Leslie, Keller, & De Dreu, 2012; Miller, Roberts, & Ommundsen, 2005). There are many examples, especially in sports teams (e.g., ice hockey, Bernstein, 2006) where conflict operates as a social condition to shape how people act and attend to information (Bandura, 1986). So, consistent with Glavin and Schieman (2010), we argue that conflict can be viewed as a higher-level contextual factor rather than a group process variable.

We also extend conflict research by considering two types of conflict behaviors—conflict directed externally, outside an organization, and conflict directed internally or within an organization. While conflict researchers have made tremendous progress in understanding what makes conflict beneficial or detrimental, mostly focusing on the content of conflict (cf. De Wit et al., 2012), another equally important aspect of conflict—its directionality, has been largely overlooked. Only a few studies have considered both of these conflict contexts together, yet most suggested that internal conflict typically spills over into external conflict (e.g., Glavin & Schieman, 2010; Gleditsch, Salehyan, & Schultz, 2008). For instance, Gleditsch, Salehyan, and Schultz (2008) demonstrated unintended spillover effects from internal conflict to external, exemplified by conflict on the international level. Departing from the conflict spillover hypothesis, we theorize about the cross-level moderation-specific mechanisms by which conflict, directed either inside or outside the organization, generates opposite effects among members of groups with faultlines.

Internal Conflicts

We adopt the general definition of conflict from Jehn (1994) and define internal conflict as environments in which people act upon the discrepant views among group members directed inside the organization. Research on intragroup conflict (cf. De Dreu & Weingart, 2003; De Wit et al., 2012) and team negotiations (Halevy, 2008) converge on one point: Conflict in any form creates an uncomfortable environment (Jehn, Bezrukova, & Thatcher, 2008). Faultlines, in turn, increase the likelihood of demographic subgroupings (two or more members separate from other group members based on demographics; Jehn & Bezrukova, 2010). These demographic alignments can become salient to group members in certain contexts (Harrison & Klein, 2007; Li & Hambrick, 2005). For instance, because internal conflicts involve awareness that discrepancies, or incompatible wishes or desires, exist among the members of an organization (Boulding, 1963), they can work as a contextual trigger of opposition across demographically aligned subgroups fueled by power struggles and animosity within groups.

As such, an organizational environment featuring internal conflict hinders group members' ability to develop a sense of shared identity and makes divisions based on demographic differences within the group salient (Halevy, 2008). Drawing upon the context of our study, the case of the 2011 Boston Red Sox baseball team may be illustrative of the price of a context laden with internal conflict. Dissention within the team, directed at the coach as well as players who were involved in infractions (e.g., eating chicken and drinking beer during games) led to finger pointing and factions forming within functional groups, particularly within the group of starting pitchers. It is widely believed this contributed to their poor group-level performance and led to trades of several players (Red Sox Report, 2012). In this way, internal conflict was a prod that stoked the fire of discord embedded in divisions or splits within the group. This type of environment could trigger social categorization processes and may activate negative stereotypes detrimental for performance (Ayub & Jehn, 2014; Riek, Mania, & Gaertner, 2006). Thus, the joined cross-level effect of group faultlines with organizational-level internal conflict will likely to be counterproductive for group-level performance.

In contrast, organizational environments with low levels of internal conflict may not generate salient subgroup divisions and activation of negative stereotypes. Instead, those contexts may increase overall social relatedness within the group, making bonding across group members possible and eliminating factional elements (Ommundsen, Roberts, Lemyre, & Miller, 2005). The result is a weakened relationship between group-level faultlines and group performance. Consistent with our focus on the professional sports setting, such a phenomenon may be illustrated by players of MLB teams such as the Philadelphia Phillies and Tampa Bay Rays of 2008 (who were champions of their respective leagues that year), both teams being cited in media reports and interviews with group members about good "team chemistry" (Suess, 2010) and for being especially lacking in internal discord between players. Yet, both teams featured substantial diversity with respect to two attributes: ethnic makeup and age; the teams featured players from North American (two of the oldest players), the Dominican Republic, Korea, Germany, and South America (the youngest player), illustrating strong group-level faultlines. These examples suggest that when internal conflict is low, attention of group members may be diverted away from demographic divisions within the group, and damaging phenomena like negative stereotyping is less likely to occur and interfere with group performance.

> *Hypothesis 3 (H3):* The frequency of organizational-level internal conflict will moderate the relationship between group-level faultlines and group performance, such that organizational-level internal conflict will strengthen the negative relationship between group-level faultlines with group performance.

External Conflicts

We view external conflict in line with what Coser (1956, 1968) notes as shared norms of expressions of "nonrealistic conflict" or diffuse aggression directed outside the team. For instance, in baseball, major fights with other teams on the field (called a "bench-clearing brawl") entails all players joining the fight for their team, even if they were not currently playing (e.g., those on the bench). While most research suggests that these expressions of anger and violence are harmful to group performance (Conroy & Elliot, 2004), we argue that when they are directed outside the organization, some benefits for groups could occur. Conflict directed outside an organization can create a greater sense of shared purpose (van Knippenberg et al., 2011) and act as a regulatory strategy adopted by groups to diffuse fear and anticipation of failure in highly competitive situations (Sagar, Lavallee, & Spray, 2007).

Other research suggested that certain contextual conditions could fuel self-regulated forms of motivation by generating elevated levels of perceived autonomy, relatedness (Ommundsen,

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Lemyre, & Abrahamsen, 2010), and especially group solidarity (Collins, 2012). While our predictions should not be taken as an advocacy for aggression and violence, and may be seen as paradoxical, we believe that external conflicts can make demographic subgroupings formed by group-level faultlines less salient by uniting the focal group to "fight" against common "enemies" outside the organization (Brewer, 1999; Tajfel, 1982). The presence of a common enemy can redirect the focus toward a universal threat, which has been shown to be an effective tool commonly used by politicians (Merskin, 2005). We thus propose that the negative relationship between group-level faultlines and group performance will be weaker in organizational environments with high levels of external conflict.

In contrast, there are other organizations in which external conflict is a rarity because it is devalued or has no functional value (Bandura, 1973). Here, we conclude that when people do not focus on fighting outside the organization, they often turn their attention back to their respective subgroups formed by group-level faultlines. Yet many goals they seek to reach are achievable only through socially interdependent effort, hence they have to work in coordination with others to secure what they cannot accomplish on their own. Because group performance involves interactive, coordinated, and synergistic dynamics of group members' transactions, this exclusive attention to subgroups formed by group-level faultlines keeps harming group performance, and the negative relationship between group faultlines and performance will remain.

> *Hypothesis 4 (H4):* The frequency of external conflicts will moderate the relationship between group-level faultlines and group performance, such that organizational-level external conflict will weaken the negative relationship between group-level faultlines with group performance.

Organizational Payroll

Our final hypothesis tests a unit-level model (Kozlowski & Klein, 2000) focusing on pay as a potential moderator of the relationship between organizational faultlines and organizational performance. Our choice of pay as a moderator variable for modeling organizational-level relationships is driven by past work on organizational performance, which pointed to compensation as one of the most fruitfully researched topics in business organizations (Bloom, 1999) and professional sports (Barnes, Reb, & Ang, 2012; Werner & Mero, 1999). In fact, a cornerstone compensation concept is the connection between pay levels (and more broadly, resources devoted to employees) and organizational performance (Becker & Huselid, 2006; Huselid, 1995; Lepak, Taylor, Tekleab, Marrone, & Cohen, 2007; Subramony, Krause, Norton, & Burns, 2008; Tsui, Pierce, Porter, & Tripoli, 1997; Tsui & Wu, 2005). Research has repeatedly demonstrated that monetary rewards can play a significant role in motivating people and guiding behavior (Guion & Landy, 1972; Herzberg, 1965). For instance, Humphrey, Morgeson, and Mannor (2009) found that baseball teams that heavily invested their financial resources to fill core roles on the team were likely to outperform teams that did not make such investments. Thus, we consider the implications of resources in the form of employee compensation collectively (payroll) for the relationships at the organizational-level.

Payroll is defined as the sum of salaries paid to employees of each organization in a given year (Regan, 2012). In the professional sports context, payroll has been studied as (and found to be) a predictor of fan attendance at games (Regan, 2012) and whether a team will make the playoffs (Somberg & Sommers, 2012). Less attention has been given to understanding of how payroll could shape the link between workforce composition and organizational performance. Yet, evidence exists suggesting that resources devoted to compensation might affect relationships between demographics and other workforce attributes. Joshi, Liao, and Jackson (2006) have demonstrated the implications of workplace demographics for pay level. Pay levels have also been shown to moderate the effects of demographic diversity in top management teams upon organizational-level strategic change (Yong, Zelong, & Qiaozhuan, 2011).

Drawing on and extending from these findings, we believe overall pay level (the size of the organization's payroll) will strengthen the negative relationship between organizational-level faultlines and organizational performance, largely for two reasons—pressure to perform and what we call "stickiness." Because high payroll works essentially as a criterion for evaluating performance (the team "gets what it pays for"), the context where payroll is high is characterized by significant pressure, due to exceptionally high expectations that highly compensated teams will "come through" and win consistently, if not capture championships (Day, Gordon, & Fink, 2012). Using a geological metaphor, if there is a lot of divisiveness in an organization, an outsized payroll may exert pressure that creates mini cracks capable of affecting the entire organization and thus interfering with overall organizational performance. It has been found that if pay levels within some teams are very high, social comparison processes can exacerbate fracturing within groups and ultimately have performance consequences for the organization (Fredrickson, Davis-Blake, & Sanders, 2010). Pressure to perform, in turn, has been related to making splits within groups sharper, isolating team members who are different from the rest of the group (Gardner, 2012), ultimately affecting organizational performance.

Second, high payroll can create "sticky" or difficult to address situations on some teams, that in concert with faultlines would hurt organizational performance. Certain teams are well known to give experienced players long-term contracts (10 years or more and sometimes over $100 million in extreme cases (there have been 48 such contracts since in MLB since 1999, Reuter, 2013). Yet, empirical studies have shown that nearly two thirds of the players receiving such expensive contracts have underperformed to expectations or have seen performance diminish over the life of the contract (Reuter, 2013). In such cases, due to the nature of the contracts these high payroll teams are "stuck," or contractually obligated, with players who are underperforming (it is difficult to trade them to another team as another team would have to take on the contract). Any harmful effects of organizational-level faultlines are thus difficult to change or address through roster changes on such teams because they are obligated to the underperforming players, often with diminishing performance. So the harmful effects of organizational-level faultlines are especially and strongly related to lower performance under these high payroll conditions.

In contrast, low payroll organizations, because expectations might be so low, may have a "nothing to lose" culture, which has also been found to be related to performance expectations (Coleman & Kariv, 2014; Williams & Hatch, 2012). Low payroll contexts (often meaning those that do not extend very expensive

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contracts) would not be constricted, and have flexibility, both financially and through changing team membership, to at least attempt to improve the team and increase overall performance. However, while there are notable exceptions, in professional baseball most of the lower payroll organizations are not that competitive (Flannery, 2013), as demonstrated by the positive relationship between payrolls of MLB teams and winning percentages over the 2000–2014 period (Morris, 2014). In this sense, because of their relative lack of talent and potential, low payroll organizations are thought unlikely to perform well regardless of the strength of organizational-level faultlines. So while we predict that under the condition of higher payroll, the negative association between organizational-level faultlines and organizational performance will intensify, this will not be the case for organizations at the lower payroll end of the compensation spectrum.

> *Hypothesis 5 (H5):* Payroll will moderate the relationship between organizational-level faultlines and organizational performance, such that the negative relationship between organizational-level faultlines and organizational performance will become stronger when payroll is higher.

Method

Research Setting and Sample

We tested the hypotheses using data collected as part of a broader data collection effort from all 30 MLB teams from the 2004 through 2008 MLB seasons. This context is well-suited for examining faultlines with respect to race, nationality or country of origin, and age. MLB teams draw players from a wide variety of cultural and ethnic backgrounds; approximately 40% of MLB players are people of color and nearly 30% were born outside the United States. There is also meaningful variation in age across players, ranging from around 20 to midforties in most years. There are also extensive and unambiguous performance measures that are generally consistent across teams and time. The advantages of having readily available, extensive, objective measure of performance has been noted (Humphrey, Morgeson, & Mannor, 2009; Wolfe et al., 2005). Studying performance-pay relationships is also aided by the detailed compensation data for all players that are readily available on websites such as MLB.com. Finally, MLB is a setting where conflict is common, occurring both on and off the playing field. Extensive qualitative data published by sports media (local newspapers, ESPN.com, *Sports Illustrated*, etc.) provide context-rich measures of organizational-level conflict.

Major league baseball also provides a very good setting for testing the effects of both group and organization faultlines. Each MLB team essentially functions as a self-contained organization with many of the core elements of organizations: being brought together to pursue collective goals common to all members through teamwork (winning games), being structured in a hierarchy and nested social structure, and being guided toward those goals by strategic decision-making (Kilduff, Elfenbein, & Staw, 2010; Resick et al., 2009; Wolfe et al., 2005). In addition, an MLB team contains a common set of groups based on players' roles that are consistent with Hackman's (1987) definition of a group. Players from the same role identify each other as group members and are seen by others as workgroups (Hackman, 1987) and in many ways act as somewhat independent entities both on and off the field, such that group members have common, specialized coaches, and specific, unique tasks that differentiate them from the rest of the team.

Based on these factors (having specific coaches and functions) the four groups in each team (organization) included: starting pitchers and relief pitchers; starting position players and backup position players. Each team normally has five starting pitchers, each of whom will typically pitch once every five games. Pitchers have their own coach and will often work together and even sit together on days they are not pitching. Relief pitchers replace starting pitchers in nearly all games, either for strategic reasons such as using a substitute player to bat for the pitcher or because the starting pitcher is fatigued or losing effectiveness. During games, relief pitchers generally sit together in a separate area of the field. We differentiated starting pitchers from relief pitchers based on their roster designation in each time period. Starting position players are the players who are on the field for defense and batting. This group will play most games together. Because position players may not play all games, we included only players who had over 502 at bats in the season (this is the minimum number of plate appearances for a player to be eligible for MLB batting titles and awards). Backup position players are all nonpitchers who had over 75 but fewer than 502 at bats over the season.

These four groupings are also in line with the Hollenbeck, Beersma, and Schouten (2012) typology of groups where skill differentiation represents one dimension with group members performing the same specialized task. Because these classifications represent distinct functional groups within the MLB team where members will sit together during games, have separate coaches, have different practice regimens, and are likely to socialize outside of games, we calculated separate group-level faultline scores for groups of starting pitchers, relief pitchers, starting position players, and backup position players on each team every year. The logic is that because these are "meaningful" groups, the impact of faultlines is likely to be greatest in these groups as opposed to that in other combinations. Thus, our total sample included 584 groups (four groups on each team, 30 teams, 5 years).[1] Consistent with our classification, sports-related media (e.g., ESPN.com) typically track collective performance metrics that match the groups we have identified in our data (performance metrics for starting pitchers, relievers, hitters). Finally, the nesting of our functional groups within broader teams is consistent with a key goal of MLT, or "decomposing it [system] selectively in meaningful ways to capture meaningful links at multiple levels" (Kozlowski, 2012, p. 265). Thus, functional role is automatically embedded in the concept of faultlines at the organizational-level, because we aggregate the group level faultlines to make up the higher level faultlines, which keeps with the parallel across levels principle (homology) of multilevel theory as well.

Demographic data on the players revealed a diverse sample. Player's ages in the sample ranged from 18 to 45 years ($\bar{x}$ = 27.102, SD = 4.842). Approximately 78% of the players were born in the United States. Foreign-born players came from 25 other countries with over two thirds of those coming from the Domin-

[1] Sixteen groups were excluded from analysis because they contained less than four members (our minimum group size).

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ican Republic, Venezuela, or Puerto Rico. Approximately 59% of the players were White, 33% were Hispanic, and 8% were African American. Tenure in MLB ranged from less than 1 year to 24 years ($x = 8.074$ years, $SD = 4.501$). Approximately 21% of the players were starting pitchers, 30% were relief pitchers, 15% were starting position players, and 34% were backup position players.

Measures

Group-level performance. Because pitchers and position players have fundamentally different roles on the team, individual performance measures differed. For starting pitchers and relief pitchers we used a formula developed by Thorn and Palmer (1985): Pitching Performance = Innings Pitched × [League ERA/9] − ER, where innings pitched is the total number of innings pitched by the pitcher over the season, league ERA (earned run average)/9 is the average runs allowed per inning by all teams in the league in that season, and ER (earned runs) is the number of runs allowed by the pitcher over the season. Because the measure is an adjusted count and the variance might differ with the number of innings pitched for the different teams, we performed Levene's test for homogeneity of variance on the pitcher performance measure, and for each year of data the test failed to reject the hypothesis that the variances are equal ($p < 05$), thus indicating the homogeneity of variance assumption was not violated.

For starting position players and backup position players we used a composite measure of the offense generated by the player using a formula from James (1988) that has been used in previous research (cf. Harder, 1992). Performance = [(Hits + BB − CS) × (TB + .55 * SB)]/AB + BB, where hits is the total number of hits, BB is the total number of bases on balls (walks), CS is number of times the player makes an out while trying to steal a base, TB is the number of total bases earned on hits (one base for a single, two bases for a double, three bases for a triple, and four bases for a home run), SB is number of successful stolen bases, and AB is the number of times the player bats.

We used these particular formulas since, despite the numerous approaches to measuring baseball player performance that have been developed over recent years, most of the newer measures have not been rigorously validated and there is no agreement over which formula to use (Humphrey et al., 2009, p.54); absent such consensus we adopted a measure that has been applied in previous management scholarship. Our choice is also consistent with Humphrey et al.'s (2009), comment in their study, also based on an MLB sample, that ". . . there is not a consensus on the best metrics (and many of these metrics are highly related) . . ." (Humphrey et al., 2009, p. 54). In respect to the newer metrics, the activities fundamental to baseball performance have not changed in past decades, meaning the tasks associated with playing baseball have not changed, despite the different variations in measuring performance of those tasks. Thus, our measure includes the same key items contained in currently used baseball statistics.

Because the formulas for pitchers and position players are different, we checked the normality of our performance metrics separately. We found that position player and pitcher performance measures were each normally distributed according to the Shapiro-Wilk test for normality (a significance level greater than 0.05 indicates the data distribution is not significantly different from normal). We found these results: for position players, $p = .169$; for pitchers, $p = .684$. We also visually inspected Q-Q normality plots for each year of data and in each case the data appeared normal (appeared as linear on the Q-Q plot). Based on these results, we then standardized the calculations for pitchers and position players using z-scores calculated for the two groups.

We assessed whether analyzing the dependent variable (group performance) was justified by calculating the within-group agreement for performance as represented by the r_{WG} coefficients (James, Demaree, & Wolf, 1984). We obtained the median value of .887, which was above the standard .70 cutoff. In addition, we performed intraclass correlation coefficient (ICC[1]) analysis to estimate the proportion of variance in the variable between groups over the sum of between- and within-group variance (Bliese, 2000). The .212 value of ICC[1] was significant at $p < .001$ and confirmed that analyzing the dependent variable at the group level was justified.

Organizational-level performance. This was simply the total number of games won by the team in the regular season, out of the 162 games each team plays.

Group-level faultlines. We used MLB.com archival records to obtain players' age, race, and country of origin/nationality. We include age because perceptions of age have been linked to social categorizations of others (Joshi, Dencker, Franz, & Martocchio, 2010). We include race because it is among the most psychologically potent and morally charged attributes, raising questions about prejudice and stereotyping (cf. Chatman, 2010). We include country of origin because nationality-based or ethnic differences have been found to be critical for social identity (Scheepers, Saguy, Dovidio, & Gaertner, 2014) and social categorization based explanations of setting group norms (Chatman & Flynn, 2001). These attributes are commonly used in research on demographic diversity and performance (cf. Jehn et al., 1999; Polzer, Milton, & Swann, 2002), and they are also salient topics in the sport currently.

While there are a number of existing faultline measures (cf. Meyer & Glenz, 2013), we chose the Bezrukova, Jehn, Zanutto, and Thatcher (2009) and Thatcher, Jehn, and Zanutto (2003) measurement approach as most appropriate given our theory and sample characteristics; this approach has also been an accepted methodology to study small work groups (e.g., Bezrukova et al., 2012; Cooper et al., 2013; Lau & Murnighan, 2005; Molleman, 2005; Ormiston & Wong, 2012). This approach allows us to adequately measure faultline effects at different levels and is appropriate for two reasons. Theoretically, an essential part of our faultline conceptualization is guided by social identity and categorization theories that emphasize the "us versus them" dual mentality in groups. Empirically, we are interested in faultlines within small groups, which naturally occur within baseball teams that have group boundaries defined by function (starting pitchers, position players, and other functional groups). Splits into two subgroups within those groups are likely because of their relatively small size. Following recommended procedures (Bezrukova et al., 2009; Zanutto, Bezrukova, & Jehn, 2011), we first measured the strength of faultline splits (*Fau*), which indicates how cleanly a group splits into two subgroups by calculating the percent of total variation in overall group characteristics (age, race, and country of origin/nationality) accounted for by the strongest group split.

Calculating *Fau* is a two-step process. The first step is to calculate:

$$Fau_g = \left(\frac{\sum_{j=1}^{p} \sum_{k=1}^{2} n_k^g (\bar{x}_{\bullet jk} - \bar{x}_{\bullet j \bullet})^2}{\sum_{j=1}^{p} \sum_{k=1}^{2} \sum_{i=1}^{n_k^g} n_k^g (x_{ijk} - \bar{x}_{\bullet j \bullet})^2} \right) g = 1, 2, \ldots S,$$

where x_{ijk} is the value of the j^{th} characteristic of the i^{th} *member of subgroup k,* $\bar{x}_{\bullet j \bullet}$, is the overall group mean of characteristic *j*, $\bar{x}_{\bullet jk}$ is the mean of characteristic *j* in subgroup *k*, and $n^g{}_k$ is the number of members of the k^{th} subgroup ($k = 1,2$) under split *g*. The second step is to calculate the maximum value of Fau_g over all possible splits $g = 1,2. . .S$ (or, to avoid splits involving a subgroups consisting of a single member, we can maximize over all splits where each subgroup contains at least two members). The values of faultline strength in our study ranged from .353 to .991 (x = .582, *SD* = .131).

Second, following procedures described by Bezrukova and colleagues (2009), we calculated faultline distance along the strongest faultline split based on players' age, race, and nationality variables (our faultline measure includes one score for strength, one score for distance), which is the euclidean distance between the subgroup centroids (the euclidean distance between the two sets of averages): $D_g = \sqrt{\sum_{j=1}^{p} (\bar{x}_{\bullet j1} - \bar{x}_{\bullet j2})^2}$, where the centroid (vector of means of each characteristic) for subgroup 1 = $(\bar{x}_{\bullet 11}, \bar{x}_{\bullet 21}, \bar{x}_{\bullet 31}, \ldots, \bar{x}_{\bullet p1})$ and the centroid for Group 2 = $(\bar{x}_{\bullet 12}, \bar{x}_{\bullet 22}, \bar{x}_{\bullet 32}, \ldots, \bar{x}_{\bullet p2})$. Faultline distance values in our sample ranged from .334 (a small distance) to 3.751 (a large distance) (x = 1.742, *SD* = .483).

We treated age as a continuous variable, while race and country of origin/nationality as categorical variables. We combined multiple attributes following the rescaling procedure based on the standard statistical method that uses standard deviation as a basis for equating variables (see details in Zanutto et al., 2011). Specifically, a continuous variable (age) was rescaled by its standard deviation, so a difference of one standard deviation apart in a continuous variable, say age, contributes one to the total distance between the two observations, and all categorical variables were transformed into dummy variables and then rescaled by multiplying by $1/\sqrt{2}$ (a proxy standard deviation for categorical variables), so a difference on a categorical variable, say race, contributes one to the total distance between the two observations.

Finally, in line with the recommendations of Zanutto, Bezrukova, and Jehn (2011), we standardized scores of strength and distance by their respective maximum scores (see Schaffer & Green, 1996), multiplied these scores to account for the joint effect of faultline strength and distance, and consistent with prior research (Bezrukova, Spell, & Perry, 2010; Bezrukova et al., 2012; Spell, Bezrukova, Haar, & Spell, 2011) used this overall group faultline score in our analyses (it ranged from .071 to .974 with x = .278 and *SD* = .117 at the group level). This measure has shown good psychometric properties in prior research as it was correlated with a conceptually related measure of active faultlines and was also unrelated to the conceptually different constructs of morale or group size (see Zanutto et al., 2011 for more details).

Organizational-level faultlines. We operationalized organizational-level faultlines as an organizational-level phenomenon which reflects faultline prevalence[2] (are there many groups with strong faultlines?). For example, organizational faultlines can represent some groups with weaker group faultlines, and others with stronger, thus organizational faultlines are functionally similar to group-level faultlines but structurally different in that there can be variation in group faultlines within an organization. We thus measured organizational faultlines as an aggregate of group-level faultlines. We determined whether analyzing this variable at the organizational-level was justified by calculating the r_{WG} coefficients (James et al., 1984) for each team/organization, all of which were above the standard .70 cutoff (a median = .993). We collected additional evidence regarding the validity of our organizational-level faultline construct, following the suggestions of Bliese (2000). We first conducted a one-way analysis of variance and found between-teams variance to be significant at the .001 level. We next calculated the ICC[1] that estimates the proportion of variance in the variable between teams over the sum of between- and within-team variance and obtained the value of .234. These results met or exceeded the levels of reliability and agreement found in previous research that dealt with aggregation issues (e.g., LeBreton & Senter, 2008). On the basis of these results, we confirmed that this variable represents an organizational-level construct and concluded that aggregation was justified.

Pay variable. Our overall measure of payroll was based on the total amount of money paid to all players on the team in a given year (Today Salaries Database, 2004–2008).

Conflict variables. Following Carton and Rosette's (2011) method, we collected information related to conflict occurring on each team using published news media documents. These documents provide a wide array of accounts related to conflict from different sources including popular national sports media such as, *Sports Illustrated, Sporting News,* the sports sections of the *New York Times* and *U.S.A. Today*, and the ESPN website. A team of research assistants reviewed all issues of these publications for the years 2004 to 2008 and identified all stories (other than reports of game results) on each of the 30 MLB teams. To ensure completeness, two research assistants independently collected articles on each team from the above publications. The final data set contained over 700 articles.

We used multiple methods to measure conflict to avoid errors unique to a particular method (Webb, Campbell, Schwartz, & Sechrest, 1966). We have closely followed the widely used Weber protocol (Weber, 1990) for creating, testing, and implementing our coding scheme (e.g., 1 = definition of coding units, 2 = definition of coding categories . . . 5 = revision of the coding rules, etc.). Our coding scheme was somewhat similar to the Global Family Interaction Scales (Riskin, 1982) or the TEMPO system for analysis of team interaction process (Futoran, Kelly, & McGrath, 1989), as our rating method assessed players' interactions based upon aggregation of conflict behavior across time and persons into a global pattern or characteristic (Grotevant & Carlson, 1987).

Following the procedure of Doucet and Jehn (1997), we conducted computer-aided text analysis of these articles using MonoConc Pro 2.0 (Barlow, 2000) and created a frequency list with the terms mentioned from most to least often. Then, two raters who were not familiar with the specific hypotheses and were chosen, in part, based on their lack of familiarity with the baseball domain (Hunter, Cushenbery, Thoroughgood, Johnson, & Ligon, 2011),

[2] We thank an anonymous reviewer for this suggestion.

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were asked to independently consider all terms from the frequency list and select the keywords representing conflict based on our definition (see above). They reviewed their individual lists and created a final list containing the words that they agreed upon. Examples of the keywords for conflict were *brawl, clash,* and *dispute*. Second, the raters conducted "in-context verification" to ensure that the words were used in the way suggested by our conflict definition. They performed keyword searches and reviewed the surrounding text and eliminated excerpts that were inconsistent with our definition of conflict. For instance, the response "The weekend's *clash* between two division leading teams . . ." was dropped because it refers to an organizational-level competition between two teams.

Arising from our analysis were two themes, or types of conflict. One theme was that of internal conflict, or conflicts arising from within the team, in which fights with teammates, coaches or others directly connected to the team are common and even normative. These conflicts were exemplified through disagreements or incompatibilities among team players over work or nonwork related issues (adapted from Jehn, 1995). For instance, references to personality clashes or other behavioral responses to conflict across work- or nonwork related issues and interactions within the team or with people directly connected to the team were coded as instances of internal conflict. An example of such internal conflict would be the following quote:

> Texas Rangers catcher Rod Barajas and pitcher Ryan Drese insisted their working relationship was fine Wednesday, a day after the battery mates scuffled in the dugout during a game.

The other theme was that of conflict directed outside of the team, which we call external conflict. This conflict was exemplified through behavioral responses that occurred in teams in reference to a source outside of the team; that is, fights with players from other teams or conflicts while not playing (e.g., the player was involved in a fight elsewhere after the game). An example of the instance of an external conflict between different teams would be the following quote:

> Red Sox ace Pedro Martinez threw 72-year-old Yankees bench coach Don Zimmer to the ground during a bench-clearing melee that interrupted Game 3 of the AL championship series Saturday. In a bizarre scene that added even more intensity to baseball's most bitter rivalry, the fight began after Martinez threw behind Karim Garcia's head in the top of the fourth inning.

Finally, the number of articles describing each type of conflict was tallied by year for each team. We then divided this number by the total number of articles written about each team to control for differences in the number of articles or stories written about each team (the bigger the market size, the more the number of articles written about the team).

To verify the validity of the conflict constructs and to develop more accurate and complete measures, we used a second measurement technique (Campbell & Fiske, 1959; Runkel & McGrath, 1972) based on content analysis software. Following methodology used by others (Abrahamson & Fairchild, 1999; Spell & Blum, 2005), we counted the total number of words in each of the categories of conflict (internal, external) for each year using the General Inquirer program (Stone, Dunphy, & Ogilvie, 1966). This program uses the Harvard-IV dictionary and links words within the articles to content categories. Examples of words that the program considers as conflict included *confront, disagree, shove*. The correlations between results generated by the two approaches we used (manual coding and software-guided) were significant and positive (r = .571 and .684 for internal and external conflict respectively, $p < .05$), thus providing evidence of convergent validity of our conflict measures. Based on these results, we triangulated and averaged the results from these two procedures to get a count of each type of conflict, by team, for each year.

Controls. Following recommendations of Becker (2005) and more recently of Bernerth and Aguinis (2015), we identified several potentially relevant control variables to rule out alternative explanations and increase confidence in our findings. First, to partial out true variance from the relationships of interest and capture experience effects on performance, we, in line with past work (Ertug & Castellucci, 2013), controlled for the average group tenure in MLB (measured as the number of years in MLB). Members' differences in tenure represent the spread of information content and experience that is typically associated with a broader array of relevant information and a larger pool of task-relevant skills that group members bring to a team (Jehn et al., 1997; Jehn et al., 1999; Tsui, Egan, & O'Reilly, 1992; Webber & Donahue, 2001; Williams & O'Reilly, 1998). Average level of experience has important implications for performance in diverse workgroups and thus could be a biasing factor (e.g., Boeker, 1997; Carpenter & Fredrickson, 2001; Hambrick, Cho, & Chen, 1996).

Second, we controlled for talent because recent research has demonstrated the relationship between talent and team performance with talent explaining considerable variance in performance (Swaab, Schaerer, Anicich, Ronay, & Galinsky, 2014), and thus being a confound whose effects on performance should be separated from our independent variable (faultlines; McBurney & White, 2004). We measured talent as the number of star players on a team or players that are selected for each of the annual MLB All-Star games based on their individual talent as defined by managers and fans. To isolate the unique effects of faultlines we also controlled for the overall diversity within the group. We used Blau's (1977) heterogeneity index to measure group heterogeneity for our demographic categorical variables and the standard deviation to measure group diversity for age as recommended by prior research (Harrison & Klein, 2007). Following the procedure suggested by Jehn, Northcraft, and Neale (1999), we averaged age, race, and nationality heterogeneity variables to arrive at our heterogeneity control variable.

We included dummy variables for year to control for unobserved systematic period effects (Phelps, 2010; Weller, Holtom, Matiaske, & Mellewigt, 2009; Yang, Phelps, & Steensma, 2010) because unmeasured events within a year could conceivably have an effect. Because the two leagues have slightly different rules, perhaps the most evident being the use of the designated hitter (hitting for the pitcher) in the American League, and this means there is an additional player with hitting duties in the American League, we controlled for league in our analyses by dummy coding American League 0 and National League 1. Finally, when testing for the effects on group performance, we controlled for organizational performance, thereby assuring that the effects seen are above and beyond any effects on organizational performance.

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Analytic Strategy

Consistent with Humphrey et al. (2009) and because trends over time (linear, quadratic) were beyond the scope of this study, we used cross-sectional pooled analysis over 5 years where we treated time as a fixed effect (e.g., including dummy codes for time). We first performed a series of hierarchical linear analyses (HLM, Bryk & Raudenbush, 1992; Raudenbush, Bryk, Cheong, & Congdon, 2000) testing hypotheses predicting group- and cross-level relationships (H1, H3–H4). We used the deviance index ($-2 \times$ log-likelihood of a maximum-likelihood estimate) to assess model fit and performed a series of chi-square tests to examine which models provided superior fit (Bryk & Raudenbush, 1992). These statistics allow us to determine the explanatory value of a particular model and the effect size associated with the addition of specific parameters. In addition, we included the level-1 R-squared for each model.

We then conducted a series of regression analyses testing hypotheses predicting organizational-level relationships (H2, H5). We used fixed-effects linear regressions of panel data, with team as the panel variable and season as the time variable (Wooldridge, 2009). Each analysis was conducted in a hierarchical fashion that included adding controls (Step 1), main effects (Step 2), and two-way interactions (Step 3). Following the recommendation of Cohen, Cohen, West, and Aiken (2003) and Nezlek (2001), we standardized and grand-mean centered all variables to avoid multicollinearity and adjust for differences among groups to avoid estimation difficulties.

Results

Tables 1 and 3 show the descriptive statistics and correlations for all group-level and organizational-level variables except the dummy variables for year. Descriptive statistics and correlations are based on the original variable metrics.

Hypothesis Testing

Table 2 presents the results of the HLM analyses testing the main effects of group-level faultlines on group performance (see Model 2). Hypothesis 1 (H1) predicted group faultlines would be negatively associated with group performance. In support of H1, faultlines were negatively and significantly related to performance ($y = -.067$, $SE = .019$, $p = .001$). A chi-square test of the change in the deviance statistic from the control model to the model with faultlines confirmed that including faultlines improved the model fit for performance ($\chi^2 = 10.615$, $df = 1$, $p = .002$). More importantly, this effect is above and beyond any effects of organizational performance.

Table 3 (see Model 2) shows the results of the hierarchical regression analysis testing the main effects of organizational-level faultlines on organizational performance. Hypothesis 2 (H2) predicted that organizational-level faultlines would be negatively associated with organizational-level performance. In support of H2, organizational faultlines were negatively and significantly related to performance ($b = 1.596$, $SE = .773$, $p = .041$). The change in R squared from Step 1 to Step 2 for the main effect model indicated a significant increase above and beyond the control variables.

Table 1
Descriptive Statistics and Correlations[a,b]

Correlations	Mean	*SD*	1	2	3	4	5	6	7	8	9	10
1. Tenure in MLB	8.242	2.262		.109	.294**	.096	.236**	.380**	−.036	−.037	.232**	.353**
2. Heterogeneity	.000	.698	.156**		.054	−.002	.172*	.185*	.085	.118	.022	.018
3. Talent	.830	.981	.262**	−.015		−.025	.205*	.598**	.028	.011	.468**	.599**
4. League	.535	.499	.076	−.009	−.025		.215**	−.150	.058	.038	.171*	−.112
5. Faultlines	.278	.117	.180**	.160**	.145**	.117**		.277**	.072	.059	−.074	−.047
6. Payroll	78,279,754	34,501,317	.284**	.083*	.335**	−.162**	.124**		.057	.077	.206*	.462**
7. Internal conflict	.034	.201	−.039	.054	.015	.059	.041	.056		−.013	.160	−.111
8. External conflict	1,342	1.565	−.006	.047	.014	.036	.011	.068	−.016		−.019	−.070
9. Group performance	.334	.618	.241**	−.094*	.493**	.037	−.054*	.047	.036	−.013		.652**
10. Org. performance	80.930	10.943	.259**	−.006	.332**	−.134**	−.024	.481**	−.119**	−.086*	.141**	

Note. MLB = Major League Baseball; Org. = organizational.
[a] Group-level correlations are reported in the bottom triangle ($N = 584$). Organizational-level means assigned down to group-level. Organizational-level correlations are reported in the top triangle ($N = 150$). [b] An interpretation of the correlations should be conducted with caution because cross-level correlations were calculated by assigning average organizational scores to all members and were not adjusted for lack of independence.
* $p < .05$. ** $p < .01$, two-tailed tests.

Table 2
Hypothesis Testing Using Hierarchical Linear Modeling

	Group performance			
Variable	Model 1 controls	Model 2 (H1)	Model 3	Model 4 (H3, H4)
Intercept	.585*** (.142)	.555*** (.141)	.541*** (.133)	.570*** (.126)
Controls				
Year dummies included	yes	yes	yes	yes
Tenure in MLB	.064*** (.011)	.071*** (.011)	.070*** (.011)	.062*** (.011)
Heterogeneity	−.015 (.030)	−.003 (.029)	−.006 (.029)	−.020 (.030)
Talent	−.038 (.025)	−.027 (.027)	−.039 (.025)	−.017 (.027)
League	.017 (.019)	.029 (.020)	.015 (.018)	.025 (.020)
Organizational performance	.002 (.001)	.001 (.001)	.002 (.001)	.002 (.001)
Main effects				
Faultlines (Fau) (H1)		−.067*** (.019)	−.077** (.024)	−.062** (.019)
Internal conflicts (Iconflict)			−.029*** (.007)	−.035*** (.004)
External conflicts (Econflict)			−.010 (.005)	−.014* (.007)
Cross-level interactions				
Iconflict × Fau (H3)				−.019* (.007)
Econflict × Fau (H4)				.013** (.005)
Level 1 R^2	.016	.024	.032	.036
Model deviance[c]	7,469.401	7,458.785	7,455.853	7,414.392

Note. H = hypothesis; MLB = Major League Baseball.
[a] Entries corresponding to the predictors are estimations of the fixed effects, y_s, with robust standard errors in parentheses. [b] Deviance is a measure of model fit; it equals −2 × the log-likelihood of the maximum-likelihood estimate. A smaller model deviance means a better fit.
* $p < .05$. ** $p < .01$. *** $p < .001$, two-tailed tests.

We next conducted a series of HLM analyses to test the relationship between group-level faultlines, organizational conflict, and group performance. In full support of H3 (see Table 2, Model 4), the cross-level interaction between internal conflict and faultlines was significant for group performance variable ($y = -.019$, $SE = .007$, $p = .011$). We plotted the interaction effects for the two levels of internal conflict at one standard deviation above and below the mean (see Figure 1a) and performed a simple slope analysis for multilevel models (Bauer & Curran, 2005; Preacher, Curran, & Bauer, 2006). Although Dawson (2014) has recently cautioned about using arbitrary values in simple slope tests, the simple slope test showed that at high levels of internal conflict (1 *SD* above the mean), there was a negative relationship between group-level faultlines and group performance ($y = -.109$, $t = -4.332$, $p = .000$). However, at low levels of internal conflict (1 *SD* below the mean), there was no relationship between group-

Table 3
Hypothesis Testing Using Hierarchical Regression Analysis

	Organizational performance			
	Model 1 (controls)	Model 2 (H4)	Model 3	Model 4 (H5)
Controls[a]				
Year dummies included	yes	yes	yes	yes
Tenure in MLB	4.445*** (1.123)	5.135*** (1.159)	5.842*** (1.519)	5.113** (1.558)
Talent	4.950*** (.822)	4.993*** (.813)	5.218*** (.872)	5.457*** (.875)
Heterogeneity	−.499 (.700)	−.291 (.700)	−.205 (.711)	−.236 (.705)
League	−1.523* (.702)	−1.245 (.707)	−1.444 (.760)	−1.369 (.755)
Main effects				
Faultlines (Fau) (H4)		−1.596* (.773)	−1.568* (.776)	−1.470* (.771)
Payroll			−.877 (1.214)	−.671 (1.209)
Interaction				
Fau × Payroll (H5)				−1.330* (.728)
Change in R^2		.017	.019	.013
F change		4.258*	2.383	3.337*
R^2	.436	.453	.455	.468
Adjusted R^2	.404	.418	.416	.425
F	13.645***	12.882***	11.607***	11.032***

Note. H = hypothesis; MLB = Major League Baseball.
[a] Entries corresponding to the predictors represent unstandardized regression coefficients with standard errors in parentheses.
* $p < .05$. ** $p < .01$. *** $p < .001$, two-tailed tests.

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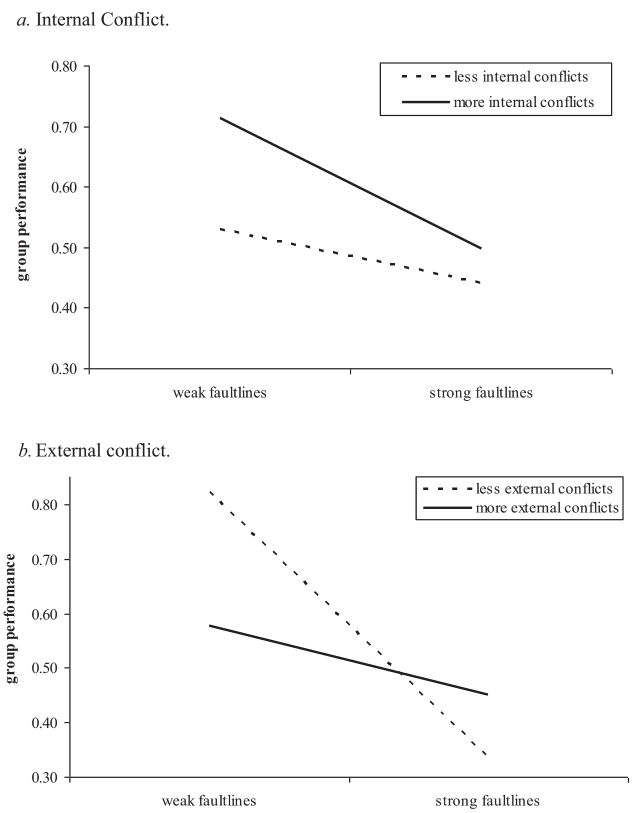

Figure 1. (a) Internal conflict. (b) External conflict.

level faultlines and group performance ($y = -.045$, $t = -1.507$, $p = .132$), thus, further fully supporting H3.

In full support of H4 (see Table 2, Model 4), the cross-level interaction between external conflict and faultlines was significant for the group performance variable ($y = .013$, $SE = .005$, $p = .004$). A plot of the interaction shows that at low levels of external conflict (1 *SD* below the mean) there was a negative relationship between group-level faultlines and group performance ($y = -.122$, $t = -4.210$, $p = .000$); however, at high levels of external conflict (1 *SD* above the mean), there was no relationship between group-level faultlines and performance ($y = -.032$, $t = -1.278$, $p = .202$). As shown in Figures 1a–b, performance was lowest for all groups with strong faultlines. A chi-square test of the change in the deviance statistic from the main effect model to the model with interaction terms confirmed that including interactions between faultlines and two types of conflict improved the model fit for group performance ($\chi^2 = 1.743$, $df = 2$, $p = .042$).

Hypothesis 5 (H5) predicted that payroll would moderate the relationship between organizational-level faultlines and organizational performance, such that the negative relationship between organizational-level faultlines and organizational performance would become stronger when payroll is higher. In full support of H5 (see Table 3, Model 4), payroll moderated the effects of faultlines on organizational performance ($b = -1.330$, $SE = .728$, $p = .031$). The change in R squared from step 2 to step 3 for the moderated model indicated a significant increase above the control and main effect variables. To aid in interpretation, we plotted the interaction effects for the two levels of payroll at one standard deviation above and below the mean (see Figure 2) and performed a simple slope analysis as recommended by Aiken and West (1991). The test showed that when payroll was high (1 *SD* above the mean), there was a negative relationship between organizational-level faultlines and organizational performance ($b = -2.820$, $t = -2.776$, $p = .006$); however, when payroll was low (1 *SD* below the mean), there was no relationship between faultlines and performance ($b = -.180$, $t = -.166$, $p = .869$), thus further supporting H5. Taken all our results together, our models accounted for nearly a quarter of the variance in group performance and over 40% between the teams we studied.

Robustness Check and Sensitivity Analyses

We further assessed the validity of our results with sensitivity analyses. The purpose of these analyses is to determine whether different decisions and assumptions made during the analysis process would have substantially influenced the obtained results. As part of our sensitivity analyses, we assessed the potential causes of nonrobustness in terms of measurement approaches, centering decisions, and statistical analysis. First, we have calculated faultlines scores using Meyer and Glenz's (2013) ASW measure. We found statistically significant correlations between ASW and the faultline measure we used in this article at the group level ($r = .284$, $p < .001$) as well as at the organizational-level ($r = .171$, $p < .05$). We further reran analysis using the ASW scores and found that group faultlines were negatively related to group performance ($y = -.023$, $SE = .015$, $p = .047$). Organizational faultlines were also negatively associated with organizational performance ($b = -1.046$, $SE = .784$, $p = .086$), but at $p < .1$, providing further confidence in the robustness of the effects we obtained independent from a specific measurement approach used.

We reran analysis for cross-level interaction tests of the explanatory group-level variable (faultlines) based on different centering decisions (Enders & Tofighi, 2007; Hofmann & Gavin, 1997). The cross-level interaction between internal conflict and faultlines was significant for the group performance variable when using group-mean centering ($y = -.016$, $SE = .006$, $p = .011$) as well as when using grand-mean centering ($y = -.019$, $SE = .007$, $p = .011$). The cross-level interaction between external conflict and faultlines was also significant for the group performance variable when using group-mean centering ($y = .015$, $SE = .005$, $p = .000$) as

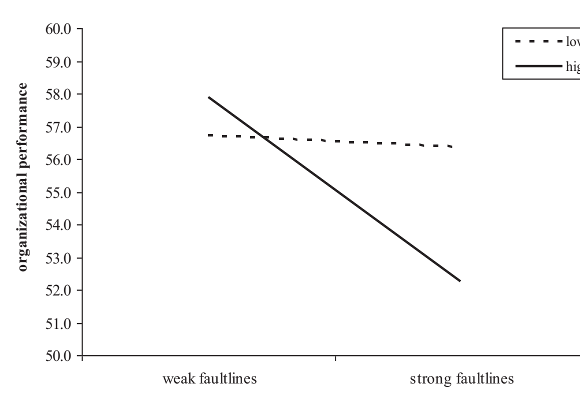

Figure 2. Payroll.

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well as when using grand-mean centering (y = .013, SE = .005, p = .004), thus results using each centering approach did not differ significantly, providing further confidence in our findings (see Table 4).

Finally, to provide evidence that our analytical approach was appropriate, we checked the correlations between residuals by year (see Table 5). Most correlations did not differ much between adjacent years and between more disparate years, except one significant correlation between the residuals for Year 2 and Year 3 (out of 25 possible correlations). We thus used the Durbin-Watson Statistic to check if the residuals were correlated serially from one observation to the next. This means the size of the residual for one case has no impact on the size of the residual for the next case. The value of the Durbin-Watson statistic ranges from 0 to 4. As a general rule of thumb, the residuals are uncorrelated when the Durbin-Watson statistic is approximately 2. For our data, the value of Durbin-Watson was 1.916, approximately equal to 2, indicating no serial correlation and providing evidence for the appropriateness of our analysis.

Discussion

To our knowledge, this is the first study to use multilevel theory to examine the multilevel-effects of faultlines in organizations.

Table 4
A Comparison Table With Different Centering Decisions

DV = Group performance		
Variable	Group mean centering[a] (CWC_2) Model 4 (H3, H4)	Grand mean centering (CGM) Model 4 (H3, H4)
Intercept	.546*** (.132)	.570*** (.126)
Controls		
Year dummies included	yes	yes
Tenure in MLB	.070*** (.011)	.062*** (.011)
Heterogeneity	−.008 (.030)	−.020 (.030)
Talent	−.039 (.025)	−.017 (.027)
League	.015 (.018)	.025 (.020)
Organizational performance	.002 (.001)	.002 (.001)
Main effects		
Faultlines (Fau) (H1)	−.077** (.024)	−.062** (.019)
Faultlines at org. level	−.018 (.010)	
Internal conflict (Iconflict)	.030*** (.007)	.035*** (.004)
External conflict (Econflict)	−.011* (.005)	−.014* (.007)
Cross-level interactions		
Iconflict × Fau (H3)	−.016* (.006)	−.019* (.007)
Econflict × Fau (H4)	.015*** (.003)	.013** (.005)
Level 1 R^2	.036	.036
% Total variance explained[c]	23.861**	23.852**
Model deviance[d]	7,454.111	7,414.392

Note. CGM = centering at the grand mean; CWC2 = centering within cluster or group-mean centering; DV = dependent variable; H = hypothesis; MLB = Major League Baseball; org. = organizational.
[a] The explanatory group-level variable (faultlines) is group-mean centered, and the respective variable mean at the higher, organizational-level is added to the model. [b] Entries corresponding to the predictors are estimations of the fixed effects, y_s, with robust standard errors in parentheses. [c] % total variance explained compares the total variance for the model to the null model. [d] Deviance is a measure of model fit; it equals −2 x the log-likelihood of the maximum-likelihood estimate. A smaller model deviance means a better fit.
* $p < .05$. ** $p < .01$. *** $p < .001$, two-tailed tests.

Table 5
Correlations Between Residuals by Year

	Residual_ year 2	Residual_ year 3	Residual_ year 4	Residual_ year 5
Residual_year1	−.058	.009	.026	.054
Residual_year2		.191***	.005	.004
Residual_year3			.050	.012
Residual_year4				−.016

*** $p < .001$, two-tailed tests.

The need, however, for more research that recognizes the significance of multiple levels in organizations has been noted. For example, the importance of simultaneously investigating phenomena across levels of an organization has been highlighted by Kozlowski's (2012, p. 260) assertion "I want to study groups, that is the level I'm interested in, why should I study other levels? My answer is, because the world is complex." As Shore et al. (2011, p. 13) have also pointed out, ". . . faultline research is typically conducted at the group level," thus leaving room for more nuanced and integrative models. These models reflect advances in multilevel research that enable bringing together macro and micro perspectives on faultlines that more realistically describe the phenomenon.

Major Goals and Contributions

Faultlines

This research extends the faultline literature by presenting a novel multilevel perspective on faultlines and demonstrating that both group- and organizational-level faultlines have meaningful relationships with performance. Our approach to modeling faultline effects supports the basic principles of multilevel theory. Specifically, we found support for the emergence principle (bottom up effects) in finding that faultlines made up of individual attributes emerge and become relevant on the group level as a significant antecedent of group performance (H1). We thus add to the MLT literature as this study is the first to incorporate multilevel theory and consider emergence principles while examining faultlines.

We also add to the faultline literature in that we replicated prior findings on the negative relationship between group faultlines and group performance that have included settings ranging from international joint venture (IJV) management and transnational groups (Earley & Mosakowski, 2000; Li & Hambrick, 2005) to self-governing church congregations (Dyck & Starke, 1999) and others, but this is the first to probe the group-level faultline relationships in professional sports settings. Our systematic replication approach (Aronson, Ellsworth, Carlsmith, & Gonzales, 1990) thus is invaluable for uncovering the source of inconsistent results and can ultimately enhance our understanding of conceptual variables (Aronson et al., 1990, p. 55).

Another, even more important, contribution demonstrates that group faultlines, taken together across all the groups that make up an organization, also emerge on the organizational-level to affect performance on that level (H2). When theorizing about organizational-level faultlines, we introduced a new way of look-

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ing at faultlines on the macro level, mapping multilevel theory to the objective layers in organizations (i.e., individuals within in groups, and groups as building blocks of an organization), and heeding Kozlowski's (2012, p. 260) call for researchers to consider higher-level effects when studying groups. Related to this need to consider high-level effects, we explained why faultline formation cannot skip the group-level, drawing on social identity theory which suggests that people base their self-concepts on their *group* identity that shapes their behavior (Tajfel & Turner, 1986) that can manifest at the organizational-level. Our previously cited example (Red Sox Report, 2012) of the team where a group (pitchers) appeared to split during a season, and the subsequent team performance problems that were attributed partly to this dysfunction, is anecdotal evidence of this phenomenon.

Further, and in holistically looking at our results, we show how group-level faultlines were negatively associated with group performance, and organizational-level faultlines were negatively related to organizational performance; these results reveal a homology that supports the principle of parallel effects of MLT. In fact, aspects of our setting help us to better understand the implications of this homology and assess both types of performance. Baseball exhibits a greater degree of independence of each functional group than do other team sports and other organizational settings, yet the collaborative contribution of each group that makes up the organization is important to win games (Jones, 1974). Given the salience of demographic splits or faultlines within groups in this setting, which we have already pointed out, we think a key lesson to draw here is that demographic makeup and rifts within groups affect performance beyond individual abilities. Building on this assertion, we now turn to second-order findings on conflict and pay that support MLT principles of top-down and unit-level effects. These results have practical implications in understanding how faultlines affect performance in different contexts, guiding training and performance enhancement strategies, staffing, team building and other issues for managers in assessing the makeup of a group.

Conflict

Our findings contribute to the conflict literature in two ways. First, the use of multilevel modeling allowed us to demonstrate that organizational conflict can be viewed as a contextual factor that can affect group activities. Second, these results show the value of considering the directionality of conflict in trying to understand the relations between conflict and other group and organization outcomes. Unlike prior research that did not differentiate between the two types of conflict context (Sagar, Boardley, & Kavussanu, 2011), we found different effects for different types of organizational environments. Organizational environments full of internal conflict among team members exacerbated the harmful effects on performance of group-level faultlines (H3). These results lend support for the idea that conflict among team members themselves intensifies and makes more salient the splits within a group. Interestingly, this conclusion contrasts to anecdotal accounts in popular media of teams with inner struggles that win anyway.

But a more theoretically meaningful contrast might be our finding concerning conflict with outsiders (external as opposed to internally directed conflict, H4) that appears to break the relationship between group splits and group performance. When conflict is directed toward people outside the group, it may serve to unify group members (when they have a common "enemy") and thus fractures in the group are less visible to members, ultimately robbing faultlines of their performance-harming effects. Such effects have been widely noticed on a more macro level, such as acute upswings in nearly unanimous support for a national political leader when a country faces a crisis (e.g., 9/11 and George Bush). Our findings suggest that such effects can also occur on a group level. The results may also reflect cultural aspects of sports and the MLB setting. If conflicts with nongroup members actually lead to better performance, it may explain why in baseball there is little real move to change antisocial behavior and aggression toward opponents (e.g., throwing at a batter, retaliation for the same, running hard into opposing players) because the outcomes—strong norms supporting fighting with outsiders—can actually bring the team together. Thus, even with moves over the past few years to penalize aggression, there is little evidence that such "unwritten rules" have changed, such as retaliation for slights such as running slowly around the bases after a home run (Chass, 1990).

Other examples include the institutionalized aggression documented in the scandal involving the New Orleans Saints professional football team where an alleged "bounty" incentive system rewarded players for inflicting injury on opposing teams' players. In a study based on college baseball, Shields, Bredemeier, Gardner, and Bostrom (1995) found that athletes perceived their team environment as strongly supporting the use of aggression. In connecting this evidence and our results, antisocial outcomes associated with performance goals appear to be characterized by unfavorable affective responses along with a lack of engagement and investment in relational activities (Jackson, Harwood, & Grove, 2010). These negative relational outcomes emphasize self-importance at the expense of cooperation, high levels of interpersonal conflict, intragroup rivalry, and antisocial behavior toward one's teammates (Conroy & Elliot, 2004; Ommundsen et al., 2005). All of these studies show that conflict is inherent in sports at all levels, but our study extends this notion to show how such conflict directed outside the team is actually rewarded.

Pay

In addition to conflict, we found that resources devoted to the team, in the form of compensation, acted as a moderator of the organizational faultlines–performance relationship (H5). Our results are consistent with the view that problems inherent from organizational-level faultlines affect the organizations that have received the greatest resources; this could partly be a manifestation of the fact that there is simply more to lose on such "rich" teams. Also, in the professional sports context resource rich (high paying) teams face higher expectations to win; faultlines within teams and any dysfunction caused by them become all the more critical due to the lofty expectations, because so much is at stake (satisfying expectations of a championships or related team achievements). While Humphrey et al. (2009) found that teams that invested more financial resources in core roles significantly outperformed others (we cannot tell if core—noncore roles were aligned with faultlines on a team), we demonstrated a different pattern of results—organizational-level faultlines interacted with payrolls such that

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teams with high payrolls faced the pressure of having the most to lose.

While we could not directly measure performance expectations to verify these conclusions, we conducted supplemental analyses to seek evidence that performance expectations were related to payroll—that is, teams expected to be successful also tend to enjoy higher compensation. We collected available data on expectations of teams in each year of our study as their predicted finish in the standings (for a related approach see, Pieper, Nüesch, & Franck, 2014). To get a more generalizable idea of the expectations surrounding a team in a given year, we averaged the predicted finishes from *ESPN The Magazine, Baseball Prospectus, Sports Illustrated*, and *Bleacher Report.* We found the across years correlation between predicted finish and size of payroll was statistically significant at $-.49$ ($p < .001$), with the negative coefficient meaning the higher the expected standing (1st place, 2nd place, etc.) the higher the payroll at the start of each season. These data support our theoretical rationale based on evidence that team performance expectations at the outset of each season are related to payroll level.

Limitations

As with all studies, there are limitations with ours. While we have extensive performance data, and considered different ways to calculate performance (especially of groups), our metrics are adapted from James (1988) and are certainly not the only way to assess performance in this context. Given there is no definitive or "best" performance formula (Humphrey et al., 2009), it is perhaps unsurprising that sources of baseball statistics such as *Baseball-Reference, Fangraphs,* and *Baseball Prospectus* all use different variations of the WAR (wins above replacement) statistic that seems the most high profile metric, yet there is no clearly preferred formula. However, the elements used in the formula we adopted (hits, bases on balls, caught stealing, total bases, at bats) are very close to what *Baseball-Reference* uses in their performance metric for hitters. This similarity of elements in the formulas point to the fact that the activities fundamental to baseball performance have not changed in the past decades, meaning the tasks associated with playing baseball have not changed, despite the different variations in measuring performance of those tasks.

Another measurement-related limitation pertains to the conflict measure. We do not have data about organizational conflict other than secondary media sources (we did not interview actual players or others about specific incidents of conflict). We have no reason to think, however, they are unreliable as they are based, generally, on player interviews. Some caution might be noted concerning the analytic approach, as our model does not take account of the ordering of the years (we use dummy variables for seasons) but rather focuses on the levels of analysis. While this is a limitation, the analytic approach used in this study is consistent with traditional approaches to analyzing panel data (Wooldridge, 2009) that reflect our data structure (individuals nested in groups that are nested in teams).

As with all studies, unmeasured variables may significantly affect the findings. We were not able to collect, for example, data on different cultural aspects of each team and top management strategy with respect to player development, such as promoting players from the lower levels of each teams "farm" system or acquiring players by outbidding other teams. It would be also intriguing, in considering the factors that affect the salience of faultlines, to consider the primary language (e.g., English, Spanish) of players. Yet, we have no reason to think such variables would affect our overall findings. Somewhat related to this limitation of the effect on organizational faultlines, we do not consider other organizational members such as coaches, support staff including trainers, front office personnel, and others that may well have relevance for faultline effects. Future research could explicitly consider these potentially significant individuals because they presumably play a role, at least indirectly, in team performance.

Generalizability and Sample Characteristics

One question that could be raised regarding our results is the generalizability to other contexts and situations. To that point, important similarities have been observed between sports teams and organizations in other industries (Keidell, 1987). These include their mutual concern for competing externally, cooperating internally, managing human resources strategically, and developing appropriate systems and structures (Berman, Down, & Hill, 2002). Professional baseball, football, and basketball have been used in organizational research to illustrate some of these aspects along a variety of dimensions, including interdependence, coordination, shared team experience, the role of management (Berman et al., 2002; Daft, 1995; Keidell, 1987), pay disparity (Bloom, 1999), and more recently, status and rivalry (Kilduff et al., 2010; Washington & Zajac, 2005), group composition, heterogeneity, and racial characteristics of leaders (Berman et al., 2002; Carton & Rosette, 2011; Humphrey et al., 2009). Most research has centered on the between-teams competitive dynamics, while a few have looked at processes, attitudes, and so forth within the team. Among the latter, the focus has been on either leaders and their evaluations based on race (Carton & Rosette, 2011) or the strategic core of the team (Humphrey et al., 2009). Less emphasis has been placed on characteristics of the team in its entirety. Extending this stream, we use faultline concept to look both between teams and within their structural units (groups) to understand how the composition of people at different levels can influence group and organizational performance.

Although organizations may differ in terms of the factors or attributes that could create faultlines, MLB may provide a very generalizable test. Professional American baseball teams have experienced changes in ethnic and nationality diversity in recent years, including a sharp rise in the number of Latino and Asian players and a decrease in African American players. In recent years four out of 10 MLB players are people of color (Armour & Levitt, 2012). At the same time, the number of players who were born outside of the United States has risen considerably. While not all organizations face exactly these demographic shifts, most organizations are staffed by a diverse, changing workforce. Another attractive aspect of our setting is that baseball provides an unambiguous indicator of team performance (won–loss record) and is known for its extensive reliance on statistics, which allow for multiple measures of performance on group and other levels.

While there are many ways professional sports are similar to other organizations, especially as examples of the entertainment industry, we recognize some important differences. By design, our organizations each have four groups that are part of the overall team. Although organizations are generally made up of multiple groups, the groups in our study may be less stable than those in other organizations. The composition of groups in baseball teams may change over the season due to trades or injuries. In addition, over the course of a season, pitchers may shift from starters to relief pitchers and position players may go from starters to backup players. The composition of groups in any organization will change over time, however, it may be more pronounced in baseball teams and thereby affect the generalizability of our findings.

Also in MLB, while the groups are very interdependent, interdependence within the group is lower than in other settings. As an illustration, a pitcher's performance depends far less on the other pitchers than it does on the position players. Given this fact, researchers might find investigating task types and the relative impact of within and across group interdependencies on faultline groups a rewarding topic. Also, while we earlier cite the objectivity of performance measures and public nature of the data as advantages, these characteristics are not universally found, especially in private sector organizations, at the same time public performance measures are indeed commonplace in public sector and some private firms. An interesting approach of future research would be to apply the model here in a setting with supervisor-sourced subjective performance ratings and self-rated performance. Such a study might shed light on the relationship of rater judgments of group and organizational performance with faultlines themselves, and the role of faultlines in attributions raters make on performance.

Finally, given the multitude of pay configurations found across workplaces, we also recognize that pay structure in any organization (including MLB teams) probably has limitations of generalizability. Given this, it is likely that the MLB pay structure has its closest cousins in organizations such as investment banking, securities, law firms, and other settings where pay is tightly based on performance metrics, competition is fierce, and overall pay is very high compared with other industries. Related to pay, a case could be made for it as a faultline measure; indeed it is visible (especially in our context of MLB). We recognize that an alternative model could view pay within a team as part of a faultline measure, where teams with sharp divisions in pay (a group of high-paid vs. low paid players) may have different implications than teams with no sharp pay differences. But because the original goal of our study was focusing on individual demographics we did not take this approach, even though it is a potentially fascinating and fruitful topic for future research.

Conclusion

Hall of Fame MLB player Yogi Berra once said, "90% of baseball is mental. The other half is physical." No matter the actual proportion, Berra was on to something—much of success in sport is driven not only by physical ability but by cognitive differences and attitudes among players. Our findings showed that part of that "90%" is likely associated with group and organizational composition. Such results tell us that considering the impact of demographic structure and the relationships they define are worthy to study and assess, not only for sports teams but in all types of organizations. Yet, the crux of our results might recall an old saying that one should "dance with the one that brung you." This typically is meant to highlight the value of commitment to individuals, but in sports is also often used to mean that before a big game, coaches need to stick with the roster of team members they have used to this point. Such a thought perhaps unintentionally highlights the spirit of this research: that the mix of people and social structure of groups and organizations contributes to performance in ways that still warrant exploring.

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