Organizational Behavior and Human Decision Processes 142 (2017) 58–70

Contents lists available at ScienceDirect

Organizational Behavior and Human Decision Processes

journal homepage: www.elsevier.com/locate/obhdp

Team conflict dynamics: Implications of a dyadic view of conflict for team performance

Stephen E. Humphrey[a,*], Federico Aime[b], Lily Cushenbery[c], Aaron D. Hill[b], Joshua Fairchild[d]

[a] Pennsylvania State University, United States
[b] Oklahoma State University, United States
[c] State University of New York at Stony Brook, United States
[d] Creighton University, United States

ARTICLE INFO

Keywords:
Team
Group
Conflict
Dyad

ABSTRACT

This paper endeavored to resolve some of the inconsistencies in the intrateam conflict literature by proposing both that conflict can be conceptualized as an expression of dyadic interactions and that the study of conflict requires a dynamic perspective. We propose that the presence of relationship conflict in even a single dyad within a team can hinder information exchange, whereas the level of information exchange in teams can unlock task conflict. We argue that task and relationship conflict, due to this unfolding process, shift from an initially significant positive relationship to a null relationship over time. We further propose that task conflict and dyadic task conflict asymmetry combine to produce high performance in the teams. Our study of 219 individuals organized in 458 dyads within 51 teams – studied over 8 weeks during the development of an entrepreneurial venture – provided support for our theoretical model. Our theory and findings demonstrate that the connection between task and relationship conflict is more complex that previously proposed, with task and relationship conflict differentiating over time.

1. Introduction

The growing recognition by researchers and organizational leaders that teamwork is a critical component of organizational success (Kozlowski & Ilgen, 2006; Marks, 2006) has resulted in the nearly ubiquitous presence of teams studies in the organizational sciences (Humphrey & Aime, 2014; Ilgen, Hollenbeck, Johnson, & Jundt, 2006; Mathieu, Maynard, Rapp, & Gilson, 2008) and the pervasive utilization of teams within organizations themselves (Devine, Clayton, Philips, Dunford, & Melner, 1999; Ken Blanchard Companies., 2006). Because the leveraging of the disparate capabilities of the team members to produce innovative and/or successful outcomes is fundamental for teams to succeed (Bell, Villado, Lukasik, Belau, & Briggs, 2011; Joshi & Roh, 2009; Mathieu, Tannenbaum, Donsbach, & Alliger, 2014), recent research has focused on team member interactions and, within team interaction constructs, team conflict as a core predictor of team success (de Wit, Greer, & Jehn, 2012; Jehn & Bendersky, 2003). Team conflict – disagreements between team members – has most frequently been conceptualized in terms of task and relationship conflict (Weingart, Behfar, Bendersky, Todorova, & Jehn, 2015), where task conflict reflects disagreements about the content and outcomes of the tasks being performed and relationship conflict is thought of as disagreements about interpersonal values. Given Jehn's (1994, 1995) initial findings that one form of conflict (relationship conflict) is detrimental to teams, whereas another form of conflict (task conflict) is beneficial to teams, both scholars and the popular press regarded the model as a potential source of solutions to leverage disparate member capabilities in teams.

Although this research stream has consistently theorized conflict as a multi-dimensional construct and organizational narratives seem to support this view, a pattern of seemingly contradictory results has emerged about the relationship between the dimensions of conflict and team outcomes (De Dreu & Weingart, 2003; de Wit et al., 2012). For example, De Dreu and Weingart's (2003) review found that task and relationship conflict were both negatively related to team performance, whereas de Wit et al. (2012) found the same negative relationship for relationship conflict, but no significant relationship for task conflict (suggesting that task conflict may be good, bad, or unrelated depending upon situational contingencies). Despite the scholarly struggle to produce consistent cumulative insight, two possible shortcomings of this research may be the almost exclusive treatment in the literature of task and relationship conflict as team level properties, such that they

* Corresponding author at: 439 Business Building, Pennsylvania State University, University Park, PA 16802, United States.
E-mail address: stephen.humphrey@psu.edu (S.E. Humphrey).

http://dx.doi.org/10.1016/j.obhdp.2017.08.002
Received 8 February 2016; Received in revised form 9 August 2017; Accepted 10 August 2017

represent the climate of the team (e.g., idea challenging, collective hostility, etc.), and also the view that both conflict dimensions appear immediately rather than potentially emerge through interactions within the team.

A solution to the confusion in the intragroup conflict literature may be to consider teamwork as a collection of organizing activities. Humphrey and Aime (2014) recently argued that teams are "assemblies of interdependent relations and activities organizing shifting sets or subsets of participants embedded in and relevant to wider resource and institutional environments" (p. 450), suggesting that teams are best thought of in terms of the organizing activities of its members, such that how team members structure the interactions amongst themselves define the success (or failure) of the team.

Applying an organizing lens to the intragroup conflict literature requires us to consider how conflict develops within a team. Consistent with an organizing approach to team conflict, we argue that two theoretically relevant findings could help resolve inconsistencies in intragroup conflict research: the dyadic nature of basic organizing interactions within teams and the importance of time for organizing processes in teams. We therefore first look at teams as a collection of relationships; more than a specific collection of members, it is the collection of dyadic relationships or interactions between members that brings teams into existence. As noted by Kenny, Kashy, and Cook (2006), "the dyad is arguably the fundamental unit of interpersonal interaction and interpersonal relations" (p. 1) and therefore the locus of "organizing" in teams. In doing this, we provide a logic for the emergence of team level constructs rather that relaying on team level constructions at the onset of teams. Second, we present a model of team conflict that directly addresses the temporal nature of conflict within teams. As organizing in teams involves a series of ongoings or events rather than a single interaction, and because team level constructs emerge through these repeated ongoings and events (Morgeson & Hofmann, 1999), it is imperative to apply a cross-temporal perspective to understand both the emergence of collective phenomena as well as their effect on team functioning.

We start by theoretically separating task and relationship conflict based on their logic of emergence. Whereas relationship conflict represents an expressed dyadic disagreement on relational issues, task conflict emerges from task interactions. That is, a relational disagreement occurs as a function of value differences, and can be cued in any interpersonal interaction. Task conflict, however, is dependent upon the emergence of differences during the performance of specific tasks, and thus is reliant upon the timing of team activities. As such, we argue that the team conflict literature may benefit from theoretically conceptualizing relationship conflict as an expression of specific instantaneous dyadic interactions within the team, whereas team conflict could be better conceptualized as an emergent group perception constructed through a multilevel longitudinal lens.

Although many of the early models of intragroup conflict were process-oriented (and thus built time into their models as substantive constructs; see Habib, 1987; Pondy, 1967; Thomas, 1992), the majority of recent research has focused more on structural models of conflict (Korsgaard, Jeong, Mahony, & Pitariu, 2008). Yet, this is theoretically inconsistent (Choi & Cho, 2011). One would expect that a team dealing with relationship conflict early will organize the team in response to that conflict, framing the future interactions between team members and perhaps even fracturing the team (Carton & Cummings, 2012). In contrast, a team that does not encounter relationship conflict until late in its lifespan will have already established norms and expectations that do not include the expectation for and handling of relationship conflict.

With this in mind, we present a model of team conflict that directly addresses the temporal nature of conflict within teams. We begin by theorizing that the exhibition of *any* relational-oriented conflict early in the lifespan of a team is sufficient to inhibit information exchange (a process critical for team success; Hinsz, Tindale, & Vollrath, 1997). We further theorize that task conflict emerges from the task- and socially-relevant knowledge embedded within information exchange. In short, we suggest that relationship conflict is an instantaneously perceived construct that affects the organizing of a team, whereas task conflict is the result of the organizing activities.

Applying this organizing lens to the team conflict literature requires that we consider the relational dimensions of teamwork. Historically, scholars have operationalized team conflict as a collective construct, asking about the collective conflict experienced by the team (e.g., how frequently is there conflict in your team). Yet, the in vivo experience of team conflict describes the relationships between team members – a team does not fight with itself, but rather the team members argue with each other. We follow this argument by studying the dyadic interactions between team members within a team, marrying the dyadic interactions to the collective representation of conflict through an explicit consideration of the emergence of team conflict.[1]

We accomplish this in two ways. First, we draw from Korsgaard and colleagues (Korsgaard, Ployhart, & Ulrich, 2014; Korsgaard et al., 2008) and Kozlowski and Klein (2000) to present a model of team conflict that captures both compositional and compilational components. Composition (drawn from the principles of isomorphism) characterizes phenomena as having the same form as they emerge at higher levels. Compilation (drawn from the principles of discontinuity) characterizes phenomena as being related across levels, but taking on different forms as they emerge at higher levels. For relationship conflict, we take a compilational approach, where we argue that the mere presence of relationship conflict in any dyad within a team affects information exchange – that is, *any* relationship conflict within a team is given meaning. In contrast, we argue that task conflict has both compositional and compilational aspects. We propose that task conflict is compositional in nature, such that the *level* of task conflict across the dyads of teams has meaning due to its relationship with information exchange. Yet, we also expect that task conflict has a compilational component, where the asymmetry of expressed task conflict between team members (which we label dyadic task conflict asymmetry) signifies differences in capability to address tasks (Aime, Humphrey, De Rue, & Paul, 2014).

Second, we also draw from the organizing perspective to argue that intragroup conflict differentially develops within teams over time. Doing this helps us partially solve a problem rampant within the intragroup conflict literature, wherein task and relationship conflict are highly related in the minds of team members (de Wit et al., 2012). We propose a more process-oriented model of conflict where task conflict becomes differentiated in the minds of team members through repeated interactions and information exchange. In our study, we show that task and relationship conflict are initially positively correlated, but as the team develops over time, the relationship between these constructs changes – they exhibit no relationship later in the life of the team.

We tested our theory with a longitudinal study of team development, testing a path model of the emergence and effect of team conflict. In this study of 51 teams over eight time periods, we specifically demonstrate that relationship conflict constrains information exchange, whereas information exchange unlocks task conflict. Finally, we find that the combination of task conflict and dyadic task conflict asymmetry affect team performance.

This study has several notable contributions. First, by utilizing the organizing approach to teamwork, we present a theoretical model for the emergence and separation of relationship and task conflict over time. Despite the popularity and intuitively appealing nature of functional and dysfunctional conflict (which is reflected in the task and relationship conflict constructs), the lack of a clear theoretical process for their emergence and differentiation resulted in De Dreu (2008)

[1] It is important to note that the purpose of this study is not to examine the predictive validity of dyadic versus team operationalizations of intrateam conflict, but instead to align conflict theory with the measurement and operationalization of conflict. As such, we do not measure, compare, or test team-referent operationalizations of conflict within our study.

concluding: "the positive functions of conflict are found only under an exceedingly narrow set of circumstances" (p. 6). We believe our model provides guidelines for identifying the broader set of circumstances under which conflict can be found to be beneficial.

Second, although there have been some attempts to consider intragroup conflict as possessing dyadic components – notably Korsgaard and colleagues' work (Korsgaard et al., 2008, 2014) – we place the dyad at the center of the conceptualization of intragroup conflict. We draw from the current discourse on multilevel theorizing by arguing for compositional and compilational theoretical modeling of dyadic conflict so as to provide a clean theoretical link to the collective performance of teams.

Third, we help to disentangle the conflictive findings about the relationship between conflict and performance. We first show that task conflict contributes to team performance differently over time, such that it demonstrates a null relationship with performance early in the lifespan of a team, but a positive relationship later. We then add to this contribution by further arguing for a nuanced view of the relationship between task conflict and performance (De Dreu, 2008). After showing how task conflict emerges over time, we argue for and find that the level of task conflict in a team alone is not sufficient for understanding performance. Instead, the level of dyadic task conflict, combined with dyadic task conflict asymmetry, impacts performance. This builds upon Jehn, Rispen, and Thatcher's (2010) finding regarding level and asymmetry (where they found a negative relationship between asymmetry and performance) by showing that the interaction between these two constructs changes the meaning of the main effects, such that dyadic task conflict asymmetry is not universally bad for performance.

1.1. Conflict emergence

To date, the vast majority of research on conflict in teams has focused on collective team perceptions (de Wit et al., 2012; Korsgaard et al., 2008). However, at their core, teams are a collection of relationships; more than a specific collection of members, it is the collection of dyadic relationships or interactions between members that brings teams into existence (Humphrey & Aime, 2014). As noted by Kenny et al. (2006), everyday interactions primarily occur in pairs, or as they suggest, social phenomena are interpersonal by definition and thus have elements of dyadic construction. Therefore, examining the relational aspects of teamwork within the intrateam conflict literature may allow us to theoretically and empirically understand the emergence, meaning, and implications of intrateam conflict. This approach is responsive to both the recent call to focus on "organizing" in Organizational Behavior generally (Heath & Sitkin, 2001), teams more specifically (Humphrey & Aime, 2014), and the conflict literature explicitly (Korsgaard et al., 2014). Moreover, it responds to suggestions of multilevel scholars of the need to consider the very nature of "team" constructs (Kozlowski & Klein, 2000; Morgeson & Hofmann, 1999), particularly in reference to the meaning of these constructs at different levels of abstraction (Chen, Mathieu, & Bliese, 2004).

If theories of conflict begin by focusing on the incompatibility of specific individuals (i.e., incompatibility or relational conflict within dyads), it would be problematic if we failed to consider how the expression of dyadic interactions manifests within the team before considering the impact of conflict (Korsgaard et al., 2008). In the following section, we discuss how task and relationship conflict emerge, considering both the form of emergence and the importance of time.

1.1.1. Dyads as the conflict context

One of the potential hazards of collaboration is the possibility of conflict – the expressed differences amongst team members (de Wit et al., 2012). Although there are individual antecedents and collective climates related to conflict (Korsgaard et al., 2008), one can consider intrateam conflict as primarily dyadic in expression – that is, conflict is expressed from one member to another (Alper, Tjosvold, & Law, 2000; Blau, 1964; Pondy, 1967; Thomas, 1992). Put another way, conflict can take on additional forms and meaning as a result of dyadic interactions (e.g., conflict spirals, hostile work environment, etc.; Glomb & Liao, 2003; Robinson & O'Leary-Kelly, 1998); yet it is the expression of conflict by one member towards others (as well as the perception and interpretation of that conflict by members) that is the foundation of what we think of as intragroup conflict – as Korsgaard et al. (2008) notes, conflict is "a process that occurs within individuals but culminates in individuals' experience of *dyadic* conflict" (p. 1239, italics in original).

We begin by considering relationship conflict. Relationship conflict has traditionally been defined as "people conflict" (Wall & Nolan, 1986), representing the interpersonal incompatibility between team members (Jehn, 1995) stemming from differences in beliefs, values, and experiences (Pelled, Eisenhardt, & Xin, 1999). The theoretical arguments for antecedents to relationship conflict focus on the differences between two people (e.g., we are of a different gender), rather than the "collective" differences within the team (Tsui & O'Reilly, 1989), drawing from the similarity-attraction paradigm (Byrne, 1971; Harrison, 1976).

Extant empirical research has shown that relationship conflict reflects dyadic incompatibility (Korsgaard et al., 2008). For example, in Jehn's (1997) qualitative study of intrateam conflict, the language used to describe relationship conflict differed from that used to describe task conflict. The description of relationship conflict involved pronouns such as "her" or "I", along with descriptions of two members fighting. Jehn quotes one member as saying, "Her attitude just stinks… I just can't stand her attitude and her voice. We just clash" (p. 542), and her field notes include descriptions of dyadic interactions ("She makes fun of the way Craig dresses behind his back": p. 542).

Similar to relationship conflict, task conflict has interpersonal roots. Task conflict is generally thought of as disagreements about goals and interests (De Dreu & Gelfand, 2007) or the content of task performance (de Wit et al., 2012), with theoretical arguments for task conflict reflecting goal incompatibility (Deutsch, 1949), power differences (Emerson, 1962), or structure of the interaction (Janis & Mann, 1977; Pondy, 1967).

There is also empirical evidence for the dyadic nature of task conflict. Pelled and Adler (1994) noted the parallel relational nature of relationship and task conflict: "We got along fine on a personal level; hallway conversations were cheerful and friendly. When it came to talking about the project, though, there were problems" (p. 23). In another team, a member "described a task-related conflict in which he wanted a certain 'preferred' component in the product, but the designer insisted that it could not be used in the design because of space limitations", which resulted in a back-and-forth discussion between the two team members on how to improve the product (p. 23).

1.1.2. Multilevel emergence

As noted by Humphrey and Aime (2014), dyadic relational processes are the building blocks of teamwork, with the activities through which the team members organize their relationships creating what we think of as a "team". They further suggest that the team-relevant outcomes dictate the level(s) at which theories exist. In the case of intragroup conflict (particularly in management research), the relevant level of theoretical specificity (and thus level of analysis) is the team level (de Wit et al., 2012), given the interest in maximizing performance.

In order to connect dyadic-level conflict to team-level outcomes, researchers must consider the form of dyadic conflict at the team level (Chan, 1998). Multilevel scholars explicitly treat the meaning of constructs across levels as one of the critical steps in developing relevant and sound theoretical arguments (Morgeson & Hofmann, 1999), implying that the specific assignment of constructs across levels is not just a matter of methodological operationalization of constructs but rather a core theoretical statement for developing theories across levels. As such, we discuss multilevel translation of constructs within the theory

section. Furthermore, Kozlowski and Klein (2000) argue for the multilevel translation of constructs in two different forms: composition and compilation. Following their recommendations, we must consider whether task and relationship conflict are compositional or compilational in nature when we translate the construct to the team level.

Relationship conflict is ultimately a damaging form of conflict (Jehn & Bendersky, 2003) – it is a form of conflict focused on non-task issues, instead dealing with personality and values (those things which people hold sacrosanct). Drawing upon Social Learning Theory (SLT; Bandura, 1977), which suggests that individuals learn social behaviors by observing and imitating others, we believe that relationship conflict emerges at the team level taking a compilational form. When team members are trying to make sense of how to behave in the team, they are going to look around to see how others are behaving. Relationship conflict tends to be loud and messy – team members yell at each other (Jehn, 1997), there are heated disagreements (Jehn, 1995), and people are insulted (Jehn & Bendersky, 2003) – which team members will be unlikely (or unable) to avoid noticing. We believe that it is the *mere presence* of relationship conflict in *any* dyad in a team that is sufficient to affect team member cognitions and behaviors. The specific expression of disagreements between two team members serves as the team-level representation, such that any dyadic relationship conflict will be harmful to the team. Thus, we believe that the correct way to conceptualize relationship conflict at the team level is the maximum level of relationship conflict across any dyad within the team.

We argue that task conflict has both a compositional and compilational form when moving from the dyad to the team. As opposed to relationship conflict, task conflict is thought to be functional in nature, focused on substantive issues about the task at hand (Guetzkow & Gyr, 1954). Research has shown that having some level of task conflict can lead a team to avoid premature consensus (Schulz-Hardt, Jochims, & Frey, 2002), promoting creativity and innovation (De Dreu & West, 2001; Nemeth, 1986). In the theoretical arguments advanced by these scholars, teams require task conflict across their membership in order to challenge suboptimal preferences of team members (De Dreu, 2008). Thus, different than relationship conflict, the presence of task conflict in a single dyad is likely insufficient to induce the solution questioning, task goal reevaluating behavior (across the entire team) necessary for promoting positive collective processes and outcomes. That is, the benefits of task conflict are predicated on the idea that there are numerous challenges to ideas, addressing the ideas of multiple team members (and perhaps originating from different members). Indeed, it is the level of task conflict within the team (spread across dyads) that should induce positive outcomes, as team goal and interest change requires the buy in of multiple members (assuming that a team is not simply a representation of a single member's power). Thus, we believe that the compositional form of team task conflict is the average level of task conflict across all team dyads.

Yet, there is also reason to believe that task conflict also has a compilational form. Recent work by Aime et al. (2014) has argued that the power structure of high performing teams is such that there is a continual shift of power expressions between members, depending upon situational contingencies. They argue that as situational needs change in any given task, different members with their own set of capabilities will emerge as the experts in the situation.

If teams are composed of non-redundant individuals, the ability to challenge ideas or activities should vary depending upon the situation (Aime et al., 2014). For example, consider an academic research team composed of three members: Anna is an expert on teamwork and a middling statistician; Bruce knows nothing about teamwork and an expert on statistics; and Colette is knowledgeable about teamwork and a good statistician. Following Aime et al.'s (2014) theoretical arguments, when the team is trying to develop a theoretical model, Anna should take the lead on the project and it would be logical for Colette to question the design of the study (given her knowledge of the research domain). However, for this part of the project, it would be questionable for Bruce to express task conflict towards either other member, given his lack of knowledge about the content domain. In contrast, when it comes to analyzing the data, Bruce should be leading the project and it would be legitimate for Colette to question his decisions about the analytical techniques and implementations. Despite the simplicity of this example, it is clear that not only should there be variation in task conflict across dyads, it is very possibly an adaptive capability. Thus, we believe that task conflict can also be conceptualized at the team level in a compilational form, using the variance in task conflict across dyads.

1.1.3. Emergence of conflict

There has been some recent interest in integrating temporality and conflict (Jehn & Bendersky, 2003; Maltarich, Kukenberger, Reilly, & Mathieu, in press; Mannix & Jehn, 2004). For example, Jehn and Mannix (2001) examined conflict profiles, finding that teams performed better with low levels of relationship conflict across time, and high levels of task conflict near the midpoint of the project. Greer, Mannix, and Jehn (2008), in investigating the impact of early conflict on later conflict, found that task and relationship conflict did not have long-term effects on future levels of conflict. Choi and Cho (2011) tested seven different models of the potential association between task and relationship conflict, finding that relationship conflict could spiral into task conflict when inducing negative affect, whereas task conflict was apt to affect relationship conflict when the team had low levels of trust.

Building off of process theories of intragroup conflict, we propose that the connection between task and relationship conflict differs depending upon when they occur in the lifespan of the team, and whether triggers exist to make sense of the activities of the team (Neuman & Baron, 1998). Following existing theory on intrateam conflict, we place information exchange as a central construct in its relation to conflict (Jehn & Bendersky, 2003; Pelled, 1996), and a critical trigger in the development of task conflict. Information exchange – thought of as the sharing of task-related information amongst members of a group (Jehn & Shah, 1997) – has been argued to be a critical function of a team (Ren & Argote, 2011), and is perhaps the most important function for unlocking individual member capabilities, such as those derived from diverse member characteristics (Aime et al., 2014).

Dyadic relationship conflict is expected to limit information exchange in those dyads. Research shows that people are more likely to cooperate with, socially and behaviorally integrate with, and communicate more with people that they are friendly with (Edmondson, Dillon, & Roloff, 2007; Ren & Argote, 2011; Rink, Kane, Ellemers, & Van Der Vegt, 2013). That is, information exchange is predicated on a high-quality relationship (Deutsch, 1969), suggesting that the presence of relationship conflict within a dyad should harm information exchange (Barron, 1997; Homan et al., 2008; Jehn & Shah, 1997; Li & Hambrick, 2005; Pelled, 1996; Pondy, 1967). Having relationship conflict between two members will impede information exchange between those members (Pelled, 1996) – expressing a disagreement on values hinders the possibility of and willingness to share information critical to the team (Massey & Dawes, 2007; Wall & Callister, 1995). In fact, not only will information be withheld, it is likely that members will make a show of withholding the critical information (Gabriel, 1998).

Beyond the focal dyad engaged in relationship conflict, however, we expect that the presence of relationship conflict between any two team members will reduce information exchange within the entire team. Following the arguments of SLT, the mere presence in a team of dyadic relationship conflict resulting in the (passive or active) withholding of information will serve as a model that others will emulate. Team members not directly involved in the conflict may not choose to yell at other members in the team (Jehn, 1997), given that there is a high personal cost to participating in social conflict (Kaplan, Adams, Clarkson, Manuck, & Shively, 1991). However, they can easily emulate the low-cost option of withholding information exchange, as it is hard

to demonstrate that someone has failed to share critical information (Stasser, Stewart, & Wittenbaum, 1995). We thus predict that a high level of relationship conflict in any dyad within the team will lead to lower information exchange within the team.

Hypothesis 1. The presence of a high level of relationship conflict in a dyad in a team will lead to lower information exchange within the team.

As expressed earlier, we expect that relationship conflict will precede both information exchange and task conflict. In this section, we will discuss why information exchange will produce task conflict.

As discussed by Morgeson and Hofmann (1999):

> "The structure of any given collective (e.g., a work team) can be viewed as a series of ongoings, events, and event cycles between the component parts (e.g., individuals). This structure, in turn, forms the basis for the eventual emergence of collective constructs. In other words, the collective action (which is composed of ongoings and events) enables collective phenomena to emerge" (p. 252).

In order to develop the collective construct of task conflict, there needs to be a series of interactions to produce that shared understanding. In an ongoing team, one path is through the structured interactions produced by information exchange.

One of the clear benefits of information exchange is that it provides the team with more information that can increase decision accuracy (Hollenbeck et al., 1995). Yet, this is not the only expected benefit of information exchange – information exchange is also expected to serve to establish a point of contact between members (Haythornthwaite & Wellman, 1998), developing members' cooperative relationship (c.f., Johnson et al., 2005). In the process of communicating task-relevant information (Wittenbaum, Hollingshead, & Botero, 2004), personal information is also communicated and gathered (Berger, 1975, 1979; Berger & Calabrese, 1975). This exchange of information serves a dual purpose: to increase one's liking of the other (Knight & Vallacher, 1981) and increase shared understanding (Mohammed & Dumville, 2001; Postrel, 2002).

Developing a shared understanding of task-related team knowledge takes both time and shared experience (Kozlowski, Watola, Nowakowski, Kim, & Botero, 2009; Waller, Gupta, & Giambatista, 2004). Until a shared understanding is developed, team members are apt to misinterpret shared information, as the semantics of shared information is unclear (Hinds & Bailey, 2003; Hinds & Weisband, 2003). When there is a shared understanding, however, the meaning and intent of the words used is clearly communicated, allowing team members to challenge ideas without the challenge being interpreted as personal attacks. No longer working under the threat that one's comments will be considered personal affronts, team members will feel it is a safer environment to express new ideas (Bradley, Postlethwaite, Klotz, Hamdani, & Brown, 2012; Edmondson, 1999). Under these conditions, teams have been shown to be more comfortable expressing their unique viewpoints, and challenging the status quo (see De Dreu, 2008; De Dreu & West, 2001; Nemeth, 1986; Simons & Peterson, 2000). We therefore expect that information exchange will encourage the development of task conflict:

Hypothesis 2 a. Information exchange will increase task conflict within the team.

Several extensions of this hypothesis are important to note and test for in our study. First, combining the logic of Hypothesis 2 a with Hypothesis 1, an indirect path emerges from relational conflict early in the team lifespan to task conflict late in the lifespan of a team. High levels of relational conflict in a dyad within a team will inhibit information exchange between team members in order to avoid participating in social conflict (Kaplan et al., 1991). As a result, low levels of information exchange will inhibit the development of task conflict.

Hypothesis 2 b. Relationship conflict early in the lifespan of a team will have a negative indirect effect through information exchange on task conflict later in the lifespan of a team.

If this logic holds, the confusion between relational conflict and task conflict in previous cross-sectional research should be resolved as collective action allows collective phenomena to emerge over time (Marks, Mathieu, & Zacarro, 2001; Morgeson & Hoffman, 1999). It is well documented that team members struggle with separating task-based conflict from relational conflicts (Jehn & Mannix, 2001; Mooney, Holahan, & Amason, 2007; Simons & Peterson, 2000). According to self-verification theory (Swann, Polzer, Seyle, & Ko, 2004), a challenge to one's ideas is interpreted as a challenge to one's competency, making a seemingly task-oriented criticism (e.g., I do not like *your idea*) get interpreted as a relationship-oriented criticism (e.g., I do not like *you*). Put another way, early in the lifespan of a team, "conflict is conflict" in the minds of team members. It is not a surprise, therefore, that scholars have consistently found a high correlation between task and relationship conflict in cross-sectional or one-shot experimental studies (De Dreu & Weingart, 2003), as team members have not yet differentiated between the two constructs. We expect, however, both for task conflict to emerge as an independent construct later in the lifespan of a team through collective interaction and also for relational conflict earlier in the lifespan of a team to have a negative indirect effect on task conflict later in the lifespan of the team. Therefore, we expect the initial high positive correlation between task and relationship conflict to turn into a negative correlation between the constructs later in the lifespan of the team.

Hypothesis 2c. Task and relationship conflict will be positively related early in the lifespan of a team and negatively related late in the lifespan of a team.

1.2. Intrateam conflict and performance

We formulate two hypotheses regarding the relationship of task conflict and performance. First, we follow our arguments about the longitudinal development of task conflict to hypothesize about the short-term versus long-term effect of task conflict on performance. Second, we present a nuanced argument for when task conflict will most benefit team performance by integrating the work on conflict asymmetry (Jehn et al., 2010) with both the Devil's Advocacy literature (Janis, 1982) and the recent work on heterarchical power arrangements within teams (Aime et al., 2014).

1.2.1. The emergent effect of task conflict on performance

Despite inconsistent empirical results (De Dreu & Weingart, 2003; de Wit et al., 2012), there is a strong belief – and compelling theoretical rationale – that task conflict is ultimately beneficial for a team. We are not ready to abandon the notion that task conflict will reduce negative group outcomes such as groupthink and decision errors and enhance positive outcomes such as creativity and accurate performance (De Dreu, 2008). We expect that the narrow conditions defined by de Wit et al. (2012) under which task conflict is beneficial can partially be explained by a consideration of timing.

Teams lack mutual understanding early in their lifespan (Hinds & Weisband, 2003), which results in an inability to separate relationship conflict episodes from task conflict episodes (Simons & Peterson, 2000). This conflating of the two types of conflict necessarily causes confusion on the relationship between task conflict and team performance. That is, early in the team lifespan, the conflict experienced may be relationship- or task-oriented, and yet it essentially will be evaluated as the presence of conflict within that team. As such, the potential positive effects of task conflict (e.g., critical thinking and idea generation) may be lost within the team, presenting a scenario where the effects of task and relationship conflict are additively

negative for a team in the short run.

Yet, even beyond the conflation of the two types of conflict, task conflict itself has limited meaning early in the lifespan of a team. If task conflict represents the disagreement between members on the tasks at hand, but the tasks themselves have not yet begun, what does it mean to state that members have or do not have task conflict? As noted by Janssen, Van De Vliert, and Veenstra (1999), task conflict will not be related to team performance if teams "lack a sufficient amount of task-related conflict issues" (p. 121). In contrast, given that task and relationship conflict should differentiate later in the lifespan of a team, we expect the theorized processes that emerge from task conflict (e.g., opinion divergence, alternative assessment; Jehn & Bendersky, 2003) to foster team performance.

Hypothesis 3. Task conflict later in the lifespan of a team will have a positive effect on team performance.

1.2.2. Task conflict and performance

One recent innovation in the study of the conflict-performance link has been the introduction of conflict asymmetry. Jehn et al. (2010) define conflict asymmetry as differences in team members' perceptions of conflict in the team. According to Jehn et al., conflict asymmetry is problematic for team performance, as it suggests a lack of collective cognitive structures within the team (such as shared mental models) where team members do not possess a shared understanding of the goals, coordination processes, or behavioral integration within the team. In an empirical study, Jehn et al. demonstrated that, controlling for the mean level of conflict, conflict asymmetry explained a unique portion of the variance in creativity.

Although Jehn et al. (2010) argued that conflict asymmetry alone was responsible for team performance (i.e., they did not find a main effect of conflict on the outcomes), we argue for a more complex relationship. There are three reasons why we differ from Jehn et al. in our hypothesis. First, in their theory development, they do not differentiate between task and relationship conflict when considering asymmetry – they consider asymmetry of any kind to be problematic for the team (note that they found a high correlation between task and relationship conflict in their study). Yet, as we have argued that task and relationship conflict will separate over time, we do not believe that task and relationship conflict asymmetry are the same thing. Given that we are interested in performance at the end of a longer project, we are focused on the impact of task conflict asymmetry on performance. Second, a major component of their logic rests upon the notion that conflict asymmetry impedes information exchange. In our manuscript, in contrast, we argue that information exchange promotes task conflict rather than the reverse causal direction. Thus, their theoretical mechanism is in direct conflict with ours. Third, they conceptualize conflict asymmetry as differences in *perception* of conflict (i.e., lack of agreement on conflict ratings by team members). In contrast, we focus on conflict asymmetry in terms of the dyadic experiences of task conflict that occur within the team (i.e., asymmetry across dyads). Given this shift in perspective, we propose that dyadic task conflict asymmetry – under specific conditions – can benefit the team. Task conflict asymmetry represents the compilational form of dyadic task conflict at the team level, whereas task conflict level represents the compositional form of dyadic task conflict. Specifically, we propose that task conflict asymmetry interacts with task conflict level to influence team performance.

Teams experiencing low mean levels of task conflict coupled with low task conflict asymmetry are expected to be missing out on any of the benefits of the functional components of task conflict. For example, team members may automatically rely on their past experiences rather than searching for better, more efficient ways of doing things. Implicit agreement from team members supports the status quo rather than challenging it. If task conflict is expected to stave off early consensus (thus promoting creative ideas), the lack of any task conflict in the team should limit the potential for higher performance (Pelled et al., 1999).

Alternately, consider a situation in which there is a low mean level of task conflict coupled with high task conflict asymmetry. This condition can be thought of as a situation in which almost none of the team members are expressing task conflict in the team, whereas a single member may be expressing a high amount of task conflict in a small number of dyadic relationships. In general, the team has a shared understanding that task conflict should not exist in the team (i.e., there is a task conflict climate that task conflict should not exist); yet, one member may be violating this shared understanding by challenging someone else's beliefs about the benefits and weaknesses about a specific decision. Often referred to as playing the "Devil's Advocate" (Janis, 1982), this is a technique that is suggested for fostering creativity in teams. Yet, research shows that a single member of a team voicing dissent can harm performance (Nemeth, Brown, & Rogers, 2001; Turner & Pratkanis, 1997), as it promotes negative affective reactions in the team that isolates that member from the remainder of the team (Levine, 1980). Given that minority dissent requires high participation in decision making in order to be beneficial (De Dreu & West, 2001) – or, in other words, the team has to want everyone to participate in the process, including the dissenter – the very act of expressing task-based dissent where the norms of the team are to not do so likely harms performance.

Shifting to teams with high task conflict levels, we would expect that these teams would genuinely benefit from having task conflict in the team (Jehn, 1995). Yet, we believe that the amount that they benefit is a function of the level of task conflict asymmetry. In other words, how that conflict is expressed in the team is expected to critically impact whether the task conflict is highly beneficial, or only moderately so.

We believe that task conflict asymmetry is beneficial for teams with high levels of task conflict, drawing upon the logic expressed by Aime et al. (2014). Given that task conflict asymmetry represents a differentiation between members on how much task conflict is being expressed within any given dyad, we believe that teams that demonstrate task conflict asymmetry will perform better than teams that do not. Unequal conflict expressions imply a functioning coordination system – team members should differentiate at whom and when they direct challenges of task ideas. If a team member is less knowledgeable than another member on a specific function – he/she does not possess the relevant resources to resolve the situational demands – this member should not challenge the other member on this aspect of the task. This would functionally be represented by a team where there is a shared agreement that task conflict is acceptable within the team, but also an understanding that different people possess unique capabilities that are highly relevant in specific situations.

In contrast, a team where everyone is challenging everyone else would suggest something akin to chaos. A team member without requisite knowledge or capability for an issue who challenges others more knowledgeable may be considered to be performing an inappropriate behavior, harming the cooperation of other team members (De Cremer & van Knippenberg, 2002; Rusbult, 1983), leading to lower team performance (Aime et al., 2014).

Hypothesis 4. Task conflict level will interact with task conflict asymmetry, such that team performance will be highest when there is high task conflict level and high task conflict asymmetry, moderate when there is high task conflict level and low task conflict asymmetry or low task conflict level and low task conflict asymmetry, and low when there is low task conflict level and high task conflict asymmetry.

2. Methods

As we have discussed in the manuscript, a large weakness of a one-shot study of ad-hoc teams is that there is not enough time for relationships to develop (and thus we would not expect task and relationship conflict to differentiate in that context). To test our

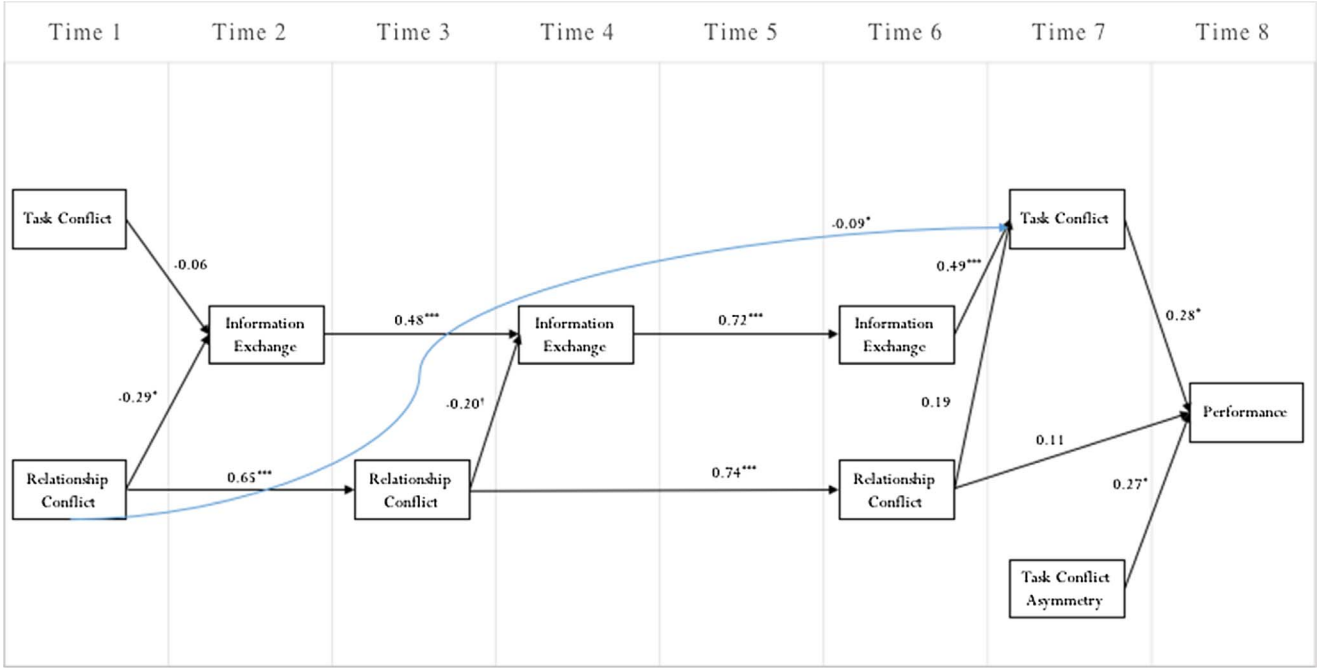

Fig. 1. Path analysis results.

hypotheses, we therefore conducted a longitudinal study of teamwork over an eight-week period.

We examined the behaviors of 51 teams (6 three-person teams, 10 four-person teams, 33 five-person teams, and 2 six-person teams), with 226 students organized in 458 directional dyads completing our surveys. The teams were drawn from a joint business / engineering entrepreneurship class at a large United States university. Approximately 75% of the participants were male and their average age was 21.29.

2.1. Description

Participants were recruited from three sections of a senior-level undergraduate entrepreneurship class. In the class, students were required to form teams to develop a new venture based upon their own new ideas. They each were required to individually pitch an idea to the entire class, and then the teams were self-selected based upon the quality of the ideas and interest in the venture. Over the course of the nine weeks, the teams had to work together to identify an opportunity, qualify its potential, understand the key competitive factors, research the audience, and produce a presentation aimed at raising venture financing. These tasks were considered to be relevant to and motivating for the students, as all students in the class were either majoring or minoring in entrepreneurship, suggesting that developing a new venture was a likely path upon graduation. We recruited students to participate in the study immediately after they formed their teams. Students were offered extra credit to complete the surveys.

Given that repetitive surveying of the same variables can change the meaning of those variables to the respondents (Morwitz, Johnson, & Schmittlein, 1993; Salancik, 1979), we did not collect all of our variables at every point in time. We staggered the data collection so as to allow construct development over time, with minimal interference from the researchers. It is important to note that (a) no data was collected on Week 5, (b) at two points in time, we measured both task and relationship conflict (rather than just one or the other), and (c) all analyses were conducted at the team level, as performance (the ultimate dependent variable) was purely a team-level construct.

2.2. Variables

2.2.1. Conflict

Given the many concerns expressed about the continued (almost exclusive) use of Jehn's (1995) measure of intragroup conflict (see Korsgaard et al., 2008), we chose to utilize alternative scales for measuring task and relationship conflict (all items presented in Appendix A). Task conflict was measured with a three-item scale adapted from Behfar, Mannix, Peterson, and Trochim (2011). Coefficient alphas for the three measurements ranged from 0.90 to 0.95. Relationship conflict was measured with a three-item scale adapted from Cammann, Fichman, Jenkins, and Klesh (1983). Coefficient alphas for the three measurements ranged from 0.92 to 0.94.

For times 1, 6, and 7, task conflict was measured solely at the dyadic level and aggregated to the team level by calculating the mean across dyads. In time 7, we created task conflict asymmetry by calculating the standard deviation of ratings across dyads (consistent with Jehn et al.'s 2010 calculation of conflict asymmetry). Relationship conflict was measured solely at the dyadic level in times 1, 3, and 6, and aggregated to the team level by utilizing the max level of relationship conflict in any dyad within the team (following the tenets of a disjunctive model; Kozlowski & Klein, 2000).

2.2.2. Information exchange

In times 2, 4, and 6, we measured information exchange via a three-item scale adapted from De Dreu (2007). Coefficient alphas for the three measurements ranged from 0.90 to 0.95. Data was aggregated to the team level by calculating the mean across dyads.

2.2.3. Performance

Performance was assessed by the professors of the class (naïve to our hypotheses) during week 8 on two components: the quality of the written feasibility study of their new product venture and the quality of the presentation on their feasibility study. These two components were combined, and we then standardized the resulting scores.

2.3. Analyses

To test our longitudinal hypotheses, we formalized a cross-temporal

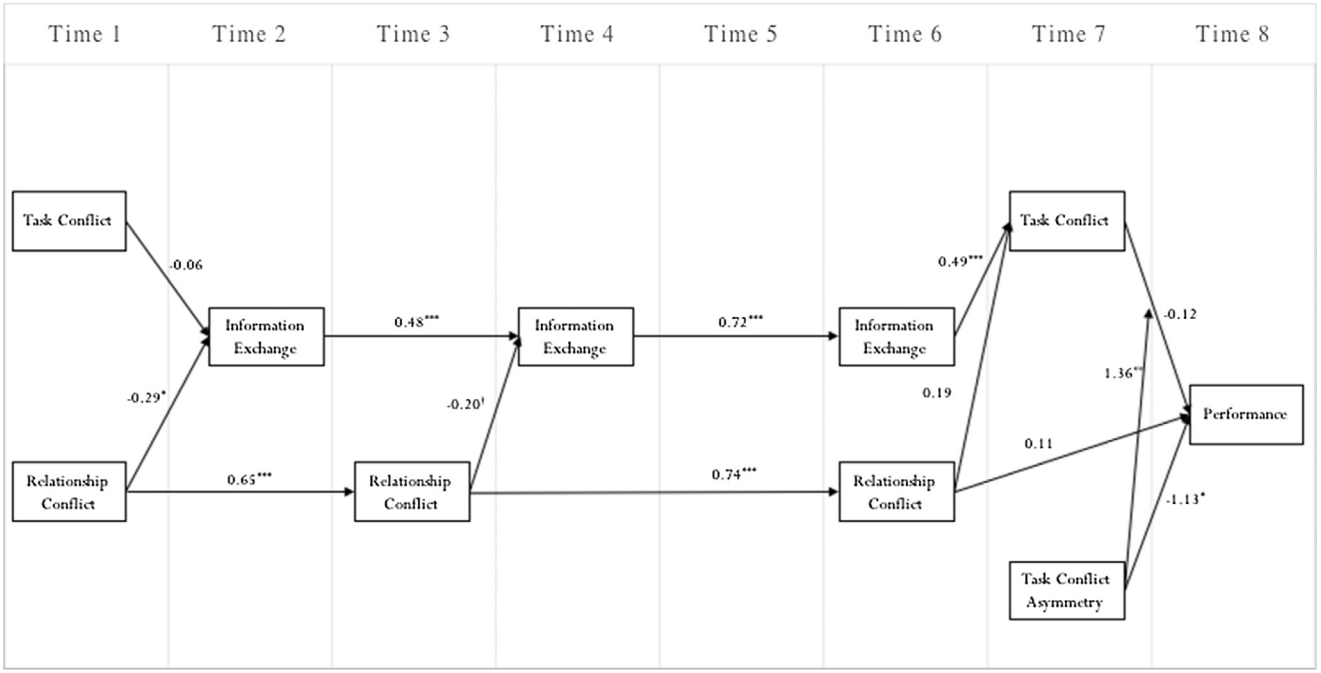

Fig. 2. Path analysis results (interaction).

path analysis with maximum likelihood estimation that controls for lagged values of the predicted path steps. Graphical depictions of the model and its coefficients are presented in Fig. 1 (no interaction) and Fig. 2 (interaction between task conflict and dyadic task conflict asymmetry).

3. Results

Table 1 presents the means, standard deviations, and intercorrelations for all variables. We first examined the dyadic and team experiences with conflict across time. We found that a large number of dyads (between 155–170) did not experience relationship conflict in a given time period, and 79 dyads did not experience relationship conflict in *any* of the three time periods we measured it. In contrast, very few dyads (between 13–21) experienced no task conflict in a given time period, with only five dyads experiencing no task conflict in *any* of the three time periods. When considering task and relationship conflict at the team level, all teams experienced task conflict at some point in time, whereas only one team did not experience any relationship conflict within the team across the team's lifespan. We turned next to testing Hypothesis 1, which predicted that the presence of a high level of relationship conflict in any dyad in a team would lead to lower information exchange. As shown in Fig. 1, relationship conflict (measured as the max conflict in any dyad of the team) in time 1 significantly related to information exchange in time 2 ($\beta = -0.29$, $t = -2.05$, $p = 0.04$), even when controlling for task conflict in time 1 ($\beta = -0.06$, $t = -0.43$, $p = 0.67$). Moreover, relationship conflict in time 3 exhibited a partially significant relationship with information exchange in time 4 ($\beta = -0.20$, $t = -1.68$, $p = 0.09$), even when controlling for information exchange in a previous moment ($\beta = 0.48$, $t = 4.45$, $p = 0.00$). Additionally, all paths from relationship conflict to information exchange at any stage in the life of the team support the finding that relationship conflict reduces information exchange in the team. These results provide strong support for Hypothesis 1.

Hypothesis 2 a predicted that information exchange will increase task conflict. As shown in Fig. 1, information exchange in time 6 significantly related to task conflict in time 7 ($\beta = 0.49$ $t = 4.11$, $p = 0.00$). Thus, we find strong support for Hypothesis 2 a. Hypothesis 2 b predicted that relationship conflict early in the lifespan of a team would have a negative indirect effect through information exchange on task conflict later in the lifespan of a team. Fig. 1 again provides strong support for this hypothesis. The indirect effect of relationship conflict at

Table 1
Means, standard deviations, and correlations.

		M	SD	1	2	3	4	5	6	7	8	9	10	11
1	Task Conflict (Time 1)	3.73	1.07	–										
2	Relationship Conflict (Time 1)	2.47	1.31	0.41**	–									
3	Information Exchange (Time 2)	5.36	0.79	−0.18	−0.31*	–								
4	Relationship Conflict (Time 3)	2.74	1.33	0.31*	0.65**	−0.28*	–							
5	Information Exchange (Time 4)	5.31	0.70	−0.13	−0.51**	0.53**	−0.34*	–						
6	Task Conflict (Time 6)	3.99	0.81	0.49**	0.10	0.10	0.15	0.14	–					
7	Relationship Conflict (Time 6)	2.77	1.45	0.37**	0.71**	−0.29*	0.74**	−0.48**	0.02	–				
8	Information Exchange (Time 6)	5.29	0.75	0.05	−0.46**	0.36**	−0.34*	0.73**	0.30*	−0.56**	–			
9	Task Conflict (Time 7)	4.01	0.93	0.47**	−0.05	0.08	0.05	0.09	0.79**	−0.08	0.39**	–		
10	Task Conflict Asymmetry (Time 7)	0.99	0.60	−0.16	0.04	−0.05	0.11	−0.11	−0.44**	0.10	−0.02	−0.28*	–	
11	Performance (Time 8)	0.00	1.00	−0.03	0.02	0.06	0.25	−0.05	0.06	0.12	−0.05	0.19	0.21	–
12	Team Size	4.60	0.75	0.10	0.33*	−0.15	0.26	0.03	−0.13	0.33*	0.20	−0.27	0.13	0.01

Notes: $N = 51$ teams
* $p < 0.05$
** $p < 0.01$

time 1 on task conflict at time 7 through the information effect path is negative and significant (β = −0.09, t = −2.10, p = 0.04).[2] We also find some support for Hypothesis 2 c, which stated that task and relationship conflict would be positively related early in the lifespan of a team and negatively related late in the lifespan of a team. As shown in Table 1, consistent with our expectations and past research, there was a strong positive relationship between task conflict and relationship conflict at time 1 (r = 0.41, p < 0.01). However, if we examine the relationship between task and relationship conflict later in the lifespan of the team (time 6), the relationship became essentially zero (r = 0.02, *ns*). Additionally, the relationship between relationship conflict at time 6 and task conflict at time 7 is also not significant. Thus, although we predicted that task and relationship conflict would be negatively related over time, the data instead shows that they have no relationship later in the lifespan of the team. Thus, there is support for part of Hypothesis 2 c.

We next examined Hypotheses 3. Hypothesis 3 predicted that task conflict later in the lifespan of a team would have a positive effect on team performance. Fig. 1 shows that there was a significant relationship between task conflict at time 7 and team performance (β = 0.28, t = 2.09, p = 0.04). Thus, there is support for Hypothesis 3.

Finally, we tested Hypothesis 4, which predicted that the interaction between task conflict level and task conflict asymmetry would impact team performance.[3] As shown in Fig. 2, the interaction between task conflict level and task conflict asymmetry was significant (β = 1.35, t = 2.66, p = 0.01). We then plotted the resulting interaction. Fig. 3 shows that teams performed essentially equivalent under all combinations of task conflict and task conflict asymmetry except when they combined high levels of task conflict with high task conflict asymmetry. These results provide some support for Hypothesis 4 (such that the pattern of interaction is consistent with the predictions for high and low performance); however, we do not find support for configurations that produce moderate levels of performance.

4. Discussion

In this paper, we provided a route for resolving the inconsistencies within the intragroup conflict literature through the application of the organizing lens. Our results demonstrate that relationship conflict impacts the exchange of information within the team, which in turn affects the level of task conflict within the team. We additionally found that although task and relationship conflict are initially positively correlated, they differentiate over time. Finally, we found that examining conflict longitudinally reveals that task conflict interacts with dyadic task conflict asymmetry in predicting team performance.

With these results in mind, our paper provides a number of critical contributions to the study of teamwork. First, whereas scholars have suggested that finding the "functional" aspect of task conflict is a nearly fruitless pursuit (De Dreu, 2008), we find that task conflict can be beneficial under specific configurations. Scholars have endeavored to examine alternative conceptualizations of conflict at the team level, ranging from asymmetry to skewness (Sinha, Janardhanan, Greer, Conlon, & Edwards, 2016), with clear value. We follow this lead by further refining the conflict asymmetry construct (Jehn et al., 2010), conceptualizing it as a differentiation of behavioral actions across dyads, rather than differences in evaluations of team-referent conflict. This refinement – when coupled with Aime et al.'s (2014) recent theoretical model of heterarchical power structures within teams – led us to hypothesize and find that team performance is highest when teams have both a high level of task conflict and high dyadic task conflict asymmetry. This finding serves as a unique path to team performance beyond prior conceptualizations (and thus expands upon the limited circumstances in which task conflict is perceived of as beneficial; De Dreu, 2008; de Wit et al., 2012).

Second, our reconceptualization of relationship conflict introduces a number of unique elements into the literature. This conceptualization, although consistent with past observation of relationship conflict (Jehn, 1997), changes the meaning of relationship conflict. We present relationship conflict as a construct that reflects the dyadic interactions of even a single dyadic pair. As tempers flare between two members due to unique situational contingencies, the team as a whole is impacted (particularly in terms of their information exchange).

Third, the common finding amongst conflict scholars (De Dreu, 2008; De Dreu & Weingart, 2003; de Wit et al., 2012; Jehn & Bendersky, 2003) is that task and relationship conflict are generally highly correlated. They all recommend for team members to somehow separate the two constructs in their minds, as this separation has been shown to produce positive relationships between task conflict and performance (de Wit et al., 2012). In our paper, we found that task and relationship conflict shifted from a positive correlation to a null one after several weeks. Interestingly, de Wit et al. (2012) found that task and relationship conflict were less correlated for top management teams than other teams; yet, it may not be "level of organization", as suggested by de Wit et al., that explains this different pattern of result, but rather the fact that the teams have existed for a longer period of time. Top management teams, and by their extension top managers, may have developed a better understanding of what team member behaviors mean, and what the tasks of a top management team entail, through greater interaction and mutual understanding.

Scholars have called for an increased focus on the dynamics of teams (Cronin, Weingart, & Todorova, 2011; Humphrey & Aime, 2014) and specifically the dynamics of intragroup conflict (Korsgaard et al., 2008), noting the dearth of dynamic theories within the teams literature. Our theory predicts, and finds, a path-dependent model of intrateam conflict, where task conflict arises from information exchange, which is itself a function of relationship conflict. Yet, nearly all research on intrateam conflict is cross-sectional in nature. It may be that part of the reason for the large positive relationship between task and relationship conflict in the literature is that teams are often being surveyed early in their lifespan, following limited interaction, which inhibits team members' ability to establish relationships through information exchange that allows for task conflict to emerge. If team members perceive all forms of conflict to be "conflict" (rather than separating the meaning of task and relationship conflict), conflict theory (Jehn & Bendersky, 2003) is bound to fail. We thus strongly encourage scholars to bring back the process models of conflict to study intrateam conflict in a more longitudinal and/or dynamic manner.

4.1. Limitations and future research opportunities

As with any paper, our study has limitations. One obvious limitation is that our study utilized a student population rather than a field sample. As with most studies of this type, this was done to have better control over the study, increase the internal validity of the measures, and better test causation in our model. The downside of any student sample is one of external generalizability of the specific findings. In our view, this is not a significant concern for our study. There is no reason to suspect that the theoretical model we presented would be applicable solely to a student population; thus, this is a legitimate venue for testing our theoretical model (Berkowitz & Donnerstein, 1982). Further, recent research has suggested that the fields of Organizational Behavior and

[2] Following the suggestion of a Reviewer, we added a direct path between relationship conflict in time 3 and relationship conflict in time 6. This path was significant (see Fig. 1). We also tested the path between relationship conflict in time 6 and performance in time 8 – this path was insignificant. The inclusion or exclusion of these paths do not change the conclusions derived from any other analyses. As such, we include the significant effect but exclude the non-significant path for parsimony.

[3] Following a Reviewer's suggestion, we examined relationship conflict asymmetry. Our results failed to find either a direct relationship between relationship conflict asymmetry at time 6 and team performance (β = 0.172, p = 0.182) or a moderating effect of relationship conflict asymmetry at time 6 on the relationship between task conflict at time 7 and performance (β = 0.08, p = 0.254).

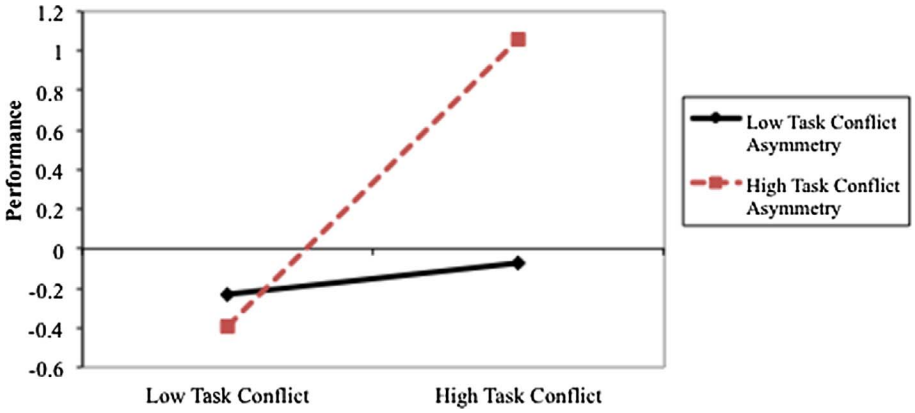

Fig. 3. Interaction between task conflict level and task conflict asymmetry.

Industrial-Organizational Psychology have amongst the highest similarity of effect sizes between laboratory and field studies (Mitchell, 2012). Moreover, the study examined ongoing student teams, pursuing a project (developing a company) that was directly applicable to their long-term career goals (note that approximately 10% of these teams per semester continue to pursue the venture – creating an actual company that they began in this class after the semester's end). Nonetheless, we strongly encourage scholars to further refine our model through constructive replications in field samples.

Related to this point, we frequently discussed our ideas in relation to time: long-term, later in life, early in the lifespan, etc. Obviously, how long "earlier" or "later" in the lifespan of a team can vary widely depending upon the team: a construction team may work for three years building a refinery, an IT team may bring a new software solution online over the course of two weeks, and an emergency response team may resolve a situation in 30 min. Our study does not purport to resolve how long "later" is in an absolute sense, but rather we focused on later being longer than a single setting. Future research is needed to understand when enough time has elapsed (or, more relevantly, how much interaction has occurred) for information exchange to result in the positive outcomes we observed, as well as eliminate the possibility that other effects emerge that offset the positive findings over time.

A second limitation is that we treated all dyads as equal within our study. Yet, there is reason to suspect that the visibility of relationship conflict will vary across dyads. Because we propose that the mechanism by which the maximum dyadic relationship conflict within the team affects team information exchange is social learning, we expect that the visibility of the dyadic relationship conflict will exacerbate or attenuate the impact of relationship conflict on information exchange. For example, if relationship conflict occurs within a dyad composed of members not central to the workflow of the team, it would be expected that the other team members would not be as likely to observe the conflict (c.f., Humphrey, Morgeson, & Mannor, 2009; Summers, Humphrey, & Ferris, 2012). Similarly, if the relationship conflict occurs between two team members who are not collocated with the remainder of the team (i.e., this is a virtual team), the relationship conflict may be harder to see (see Korsgaard et al.'s 2008 related discussion of this point).

Third, we argued that a dyadic conceptualization of conflict was an important step in the development and refinement of intrateam conflict. It is true, however, that other conceptualizations of conflict stemming from different team configurations may be more relevant in other situations. For example, it is possible that a team may fracture into distinct sub-groups (Carton & Cummings, 2012) – in this case, understanding within or between sub-group conflict may be more relevant for predicting team outcomes than a dyadic conceptualization. A logical next step in the study of intrateam conflict is look specifically at the social network within teams to see if conflict is disruptive to the whole team, to a subset of the team, or if it perhaps has a singular impact (c.f., the localized effect of abusive supervision). Future research should endeavor to unpack the full microdynamics of intrateam conflict (Humphrey & Aime, 2014), presenting a more complete view of intrateam behavior.

Fourth, given that our focus was on better aligning conflict theory with the measurement and operationalization of conflict, we did not compare the validity of a team-referent operationalization of conflict to a dyadic operationalization. However, it may be beneficial for researchers to empirically compare and contrast these different operationalizations. An in-depth comparison of different operationalizations may provide insight into the boundary conditions under which different operationalizations are more predictive, as well as clarify which outcomes are better aligned to different operationalizations.

Fifth, we provided a rationale for the covariation of task and relationship conflict within teams, suggesting that team members do not perceive them as different early in the lifespan of the team. Although we find support for our argument that they differentiate later in the team because teams have the opportunity to develop a shared understanding through information exchange (and thus they are no longer conflated in the minds of members), it is possible that the levels of task and relationship conflict are objectively the same early in the lifespan of teams. Future research should work to obtain objective measures of task and relationship conflict in an effort to clarify this mechanism further.

Sixth, it is interesting to note that although the correlation between task and relationship conflict changed across time, the mean levels of the variables barely did. The finding that the population did not see an increase or decrease in either of these types of conflict suggests that they are offset to some extent over time. That is, teams that engage in task conflict later in time seem to embrace it (and the same with relationship conflict). Future research is needed to examine team behavior at a more granular level, investigating the escalation of either type of conflict over time.

Seventh, we argued (and found evidence supporting) that relationship and task conflict become less correlated over time. However, the inverse is potentially possible in specific conditions. Our model is predicated on the idea that a shared understanding is developed in a team as a result of information exchange. If that shared understanding is disrupted (e.g., changing membership or role responsibilities, broken trust; Aime, Johnson, Ridge, & Hill, 2010; Beersma et al., 2009; De Jong & Dirks, 2012), the presence of relationship conflict may spiral into task conflict perceptions. Future research is encouraged to examine under which conditions task and relationship conflict become more or less correlated over time.

Eighth, our research did not directly address the issue of emotional displays as they pertain to conflict. Yet, there is emerging research connecting these two literatures (e.g., Jehn, Greer, Levine, & Szulanski, 2008; Rispens & Demerouti, 2016; Todorova, Bear, & Weingart, 2014). Given the centrality of affect to our understanding of behavior, it would behoove scholars to examine the emotional displays stemming from

conflict across time, as well as moderators of the emotion–team outcome relationship (e.g., psychological safety).

Ninth, despite some recent research demonstrating that psychological safety is a meaningful moderator of the task conflict—team performance relationship (Bradley et al., 2012), we did not address this climate construct in our study. On the one hand, it is possible to argue that team psychological safety climate emerges as a function of information exchange (i.e., shared understanding produces a climate where team members feel safe to take risks). On the other hand, one could argue that relationship conflict inhibits the formation of a psychological safety climate, inhibiting information exchange. Future research is necessary to untangle the causal ordering of these constructs within a team.

Tenth, in measuring task and relationship conflict, we chose alternative measures beyond Jehn's (1995) classic scale. We did this due to the concerns expressed about Jehn's measure (e.g., Bendersky et al., 2014; Korsgaard et al., 2008). Yet, it is not clear if our measures perfectly captured the constructs – as a Reviewer noted, there may have been insufficient social interaction for behaviors such as "bickering" to occur early. Furthermore, future studies could add greater complexity to our study by including process conflict in addition to task and relationship conflict, as more recent work has suggested a distinction between team conflict in *which* goals to pursue and team conflict in *how* to pursue these goals. Future research is clearly needed to develop validated measures that are appropriate for utilization at any stage of a team's lifespan.

Finally, we want to acknowledge that the generalizability of our theory may be bound by contextual factors. For example, our model and tests were conducted within a framework where the teams had a high level of task interdependence. That is, we focused on teams where there is a built-in requirement for team members to interact, that diverse knowledge, skills, and abilities are a defining characteristic of the team, the outcomes of the team at least in part require the combination of inputs and processes from team members (see Hollenbeck & Spitzmuller, 2012), and team members were rewarded for shared performance (Hill, Aime, & Ridge, 2017). However, a significant portion of the small groups research has focused on other task types, such as disjunctive or additive tasks (Steiner, 1972), as well as teams with homogeneity in functional background, knowledge, skills, and/or abilities. We agree that our theorizing may be less relevant for teams that solely perform either disjunctive or conjunctive tasks, as the most important person in either team structure (i.e., the "best" performer in disjunctive tasks or the "worst" performer in conjunctive tasks) may not be aware or at a minimum unaffected by a high level of relationship conflict in another, less important dyadic relationship. Moreover, knowledge, skill, or ability diversity may exacerbate the value of task conflict asymmetry, or may even be necessary for task conflict asymmetry to have value. Further, teams with more competitive reward structures may find that they cannot exchange information in a way that builds a positive form of task conflict (Aime, Meyer, & Humphrey, 2010; Beersma et al., 2003). Future research should examine how our theoretical model generalizes to different task, team, and reward structures (Hollenbeck, Beersma, & Schouten, 2012), as well as team compositions (Mathieu et al., 2014). In particular, top management teams may be particularly fruitful ground for the study of task and relationship conflict. Given groups of executives vary in the degree to which they are independent and interdependent (Hambrick, Humphrey, & Gupta, 2015), as well as the unique natures of interaction and roles in executive groups (c.f., Hambrick, 1994, 1995), and possible conflict in relationships as team members compete to ascend the corporate hierarchy, the task and relationship conflict in dyads at this level may be particularly interesting.

5. Conclusion

This paper endeavored to resolve some of the inconsistencies in the intrateam conflict literature by proposing that conflict can be conceptualized as an expression of dyadic interactions, and that the study of conflict requires a dynamic perspective. Our theory and findings demonstrate that the connection between task and relationship conflict is more complex than previously proposed. Moreover, the effect of task conflict on team performance requires a consideration of both conflict level and dyadic conflict asymmetry. We hope that our findings encourage scholars to reengage with the intrateam conflict literature, rather than "throwing the baby out with the bathwater" due to the challenges to date in finding situations in which task conflict is functional for teams.

Appendix A

Relationship Conflict (Cammann et al., 1983)
Consider your relationship with each team member …

- We constantly bickered
- We did not respect each other
- We have feelings which tend to pull us apart

Task Conflict (Behfar et al., 2011)
Consider your relationship with each team member …

- We frequently argued about the pros and cons of different opinions
- We frequently discussed evidence for alternative viewpoints
- We frequently engaged in debates about different opinions or ideas

Information Exchange (De Dreu, 2007)
Consider your relationship with each team member …

- We inform each other about work-related issues
- The quality of information exchange in our dyad is good
- I get new facts, insights, and ideas from him/her

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