



Contents lists available at ScienceDirect

Human Resource Management Review

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

Team trust over time: Modeling reciprocal and contextual influences in action teams

Rebecca Grossman^{a,*}, Jennifer Feitosa^b^a Hofstra University, United States^b City University of New York, Brooklyn College, United States

A B S T R A C T

Team trust is increasingly being recognized as important for team performance, but little is currently understood about how it develops and evolves over the course of a team's lifespan. Because trust and related team constructs are inherently dynamic, this represents a critical gap in the literature that needs to be addressed before team trust can be fully understood and effectively facilitated in practice. Of particular relevance to these gaps are action teams – those that come together to perform under time-constrained, yet often high-stakes conditions. While scholars have begun to explore how trust develops in these contexts, little is understood about how it evolves over time. As such, we propose a theoretical model of team trust in action teams that incorporates its dynamic nature, models the reciprocal relationship between team trust and team performance, delineates unique mediating pathways based on the team's progression in the multiphasic performance cycle, and considers the role of moderating influences that may strengthen or attenuate the impact of performance feedback on subsequent team trust. Specific research implications are discussed, providing a rich foundation for future empirical studies, and ultimately, the generation of evidence-based interventions for facilitating trust as teams cycle through multiple performance episodes over time.

While trust has long been considered an organizational commodity, only in recent years have scholars begun to focus on studying it beyond the individual-level (Fulmer & Gelfand, 2012). However, with much of today's work being accomplished through team-based structures, and growing evidence suggesting that trust is indeed critical in team contexts (e.g., Hansen, Morrow, & Batista, 2002; Salas, Sims, & Burke, 2005), the time is ripe for a greater emphasis to be placed on understanding team trust. In line with this need, two meta-analyses recently compiled the team trust literature, demonstrating moderate relationships between team trust and a variety of team effectiveness criteria (Breuer, Huffmeier, & Hertel, 2016; De Jong, Dirks, & Gillespie, 2016). Another went beyond the trust-performance link alone, examining the role of team trust as a mediator of the relationship between diversity and team performance (Feitosa, Grossman, Kramer, & Salas, 2016). While these studies certainly advance the literature and indicate that researchers are increasingly studying team trust (over 110 independent effect sizes were analyzed), a static snapshot of inputs and outcomes of team trust is no longer sufficient – trust is dynamic in nature, thus needs to be understood and examined over time. Specifically, the role of team trust and its relationship with performance may change as the team cycles through multiple performance episodes and is exposed to various moderating influences over the course of its existence.

Related to this, the cyclical nature of the trust-performance link in teams has not yet been considered. Like other team constructs that demonstrate reciprocal relationships with performance (e.g., cohesion, Mathieu, Kukenberger, D'Innocenzo, & Reilly, 2015), it is

* Corresponding author at: Department of Psychology, 114 Hauser Hall, 135, Hofstra University, Hempstead, NY 11549, United States.
E-mail address: Rebecca.Grossman@hofstra.edu (R. Grossman).

<http://dx.doi.org/10.1016/j.hrmr.2017.03.006>

Received 2 August 2016; Received in revised form 14 March 2017; Accepted 31 March 2017

1053-4822/ © 2017 Elsevier Inc. All rights reserved.

possible that performance may influence trust, in addition to vice-versa, or that the directionality of this relationship may change in importance for team effectiveness over time. Building on these issues, there is a need to examine what happens when trust evolves, particularly in action teams. Action teams are those in extreme, stressful, and unpredictable situations that are more unstable in regards to team membership than most traditional work teams, yet often facing life and death consequences (Vashdi, Bamberger, & Erez, 2013). While their importance is unquestionable, the role of trust within such contexts remains understudied, particularly from a dynamic perspective. Teams are likely to experience disruptions in trust as the team progresses, and these changes may be more or less detrimental depending on their phase of team performance. Thus, the purpose of this paper is to present a theoretical model that explores the dynamic nature of trust in teams. Specifically, we adopt a multiphasic perspective to model the consequences of team trust in action teams, the mechanisms through which trust influences performance as the team progresses through the phases of team performance (i.e., action and transition phases, Marks, Mathieu, & Zaccaro, 2001), the moderating roles of variables such as a trust violation, and the unique mechanisms through which performance may then influence trust as the team shifts from action to transition phases and vice-versa. This model can provide a deeper understanding of the role of trust in teams, serve as a foundation for future research to move beyond a static examination of team trust, and ultimately, allow for the development of more nuanced interventions for facilitating trust and performance in team settings.

1. Theoretical background

Team trust can be defined as “a shared psychological state among team members comprising willingness to accept vulnerability based on positive expectations of a specific other or others” (Fulmer & Gelfand, 2012, p. 1174). As indicated, trust in teams is a multi-dimensional construct (Costa, 2003), comprising team members' positive expectations about each other's competence and motivations, as well as a shared acceptance of vulnerability based on the assumption that teammates will act in the best interest of the team. Consequently, trust can play a prominent role in how individuals work together, influencing a range of team processes and emergent states that are critical for team effectiveness (e.g., back-up behavior; Barczak, Lask, & Mulki, 2010), making it a central construct for teams researchers to understand. While trust has traditionally been examined in relation to individuals, leaders, and organizations, scholars have recently begun to explore it within team settings as well. Fulmer and Gelfand (2012), for example, presented a review of the trust literature across levels, including the team level. Others have modeled the development of trust within the specific context of swift-starting action teams (Wildman et al., 2012).

At this point, however, little is known regarding the progression of trust over time, particularly as the team cycles through performance episodes and experiences various contextual cues that can change team members' future interactions (e.g., trust violation). Because trust is critical throughout the duration of a team's existence, an understanding is needed not only of how it develops initially, but also of how it evolves, responds to different team experiences, and is maintained over time. Indeed, scholars have criticized the lack of investigation of emergent states in a more dynamic manner (Kozlowski, Chao, Grand, Braun, & Kuljanin, 2013). We thus draw from research that points to a more fluid and cyclical process, building on Marks et al.'s (2001) team process taxonomy and adapting it to the construct of team trust, whereby trust evolves and relates to team performance in unique ways at different points in the team's action-transition cycle. Our model is characterized by three major components: a focus on trust within *action teams*; exploration of a *reciprocal* relationship between team trust and team performance over time; and consideration of possible *contextual influences* (see Fig. 1).

1.1. Trust in action teams

Effective teams do not start initially with their full capabilities; instead, they form, establish regulatory mechanisms, and evolve over time. This is no different with trust, which has also shown to develop over time (Burke, Sims, Lazzara, & Salas, 2007; Webber, 2008). For instance, Lewicki, Tomlinson and Gillespie (2006) report differences in trust levels after individuals get to know each

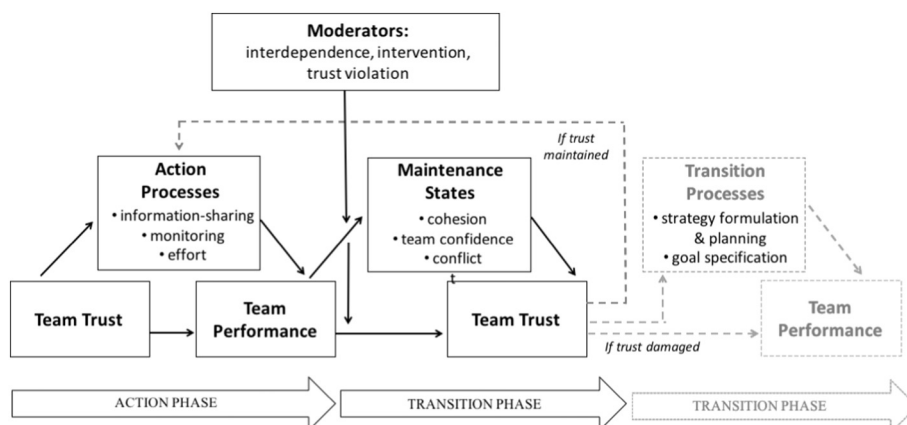


Fig. 1. Theoretical model of team trust over time.

other better. When members develop trust in each other early in a teams' lifespan, a number of benefits can result. Empirical research has shown, for example, that those with high early intragroup trust had less conflict in their future interactions (Peterson & Behfar, 2003). Others have focused on understanding how trust develops, particularly in swift-starting ad hoc situations (Wildman et al., 2012). Thus, in our model we seek to delineate the formation and progression of team trust as it evolves over earlier and later performances phases, noting that the nomological network surrounding this construct may vary at each of these periods.

1.2. Reciprocal relationship

The importance of determining the directionality of the relationship between team variables and team performance has been previously raised (e.g., Peterson & Behfar, 2003), but the current literature has not yet reflected this critical need. Exceptions exist; Mathieu et al. (2015), for instance, explored the reciprocal relationship between team cohesion and performance by examining cross-lagged panels. We expect similar patterns for team trust, proposing different mediators of the trust-performance relationship as compared to the performance-trust relationship, and depending on the phase of team performance. Specifically, the relationship between trust and performance is expected to be more salient during the action phase, with the inverse relationship coming to the forefront when the team undergoes transition. Team events and other input variables (e.g., team's previous performance) can help in reinforcing or destroying the trust-performance cycle.

1.3. Contextual influences

The difficulty of building trust compared to the ease of destroying it calls for a better understanding regarding its development and maintenance (Colquitt, LePine, Piccolo, Zapata, & Rich, 2012). According to Affective Events Theory (Weiss & Cropanzano, 1996), work events may lead to emotions that can serve as antecedents of important job attitudes and behaviors. An example of a work, or team event that would be relevant to the development of trust would be a violation of team member's expectations. Trust violations can be defined as episodes in which information received and what was expected do not match (Lewicki & Burker, 1996). This is similar to a psychological contract that reflects unwritten expectations about reciprocal contributions and benefits, in that it can lead to detrimental outcomes when violated (Dabos & Rousseau, 2004; Schein, 1982). A psychological contract breach can hinder trust, while low levels of trust (e.g., after a violation) can also bring psychological contract breaches to the forefront (Kramer, 2006). Understanding how team members respond to such violations is critical for examining how trust evolves over time, as they can trigger changes in levels of trust and corresponding processes and emergent states. As researchers have shown, individuals distance themselves and decrease their association with a team after a failure (Snyder, Lassegard, & Ford, 1986). Conversely, a successful performance episode can further reinforce these variables, avoiding process loss. Therefore, our model seeks to explore the consequences of a trust violations, as well as other contextual variables, as a means of understanding how trust levels and corresponding team variables might be reshaped over the course of a team's performance cycles.

2. Team trust over time: theoretical propositions

In the following sections, we explore the dynamic nature of the trust-performance relationship, the idea that the direction of, and linking mechanisms underlying this relationship can change depending on the phase of team functioning, and the potential for situational variables to exert moderating influences on the links between performance, trust, and mediating mechanisms. To guide this discussion, we draw from the multiphase, episodic framework of team performance first presented by Marks et al. (2001), and subsequently invoked in numerous studies within the teams literature. Specifically, this temporally-driven model purports that team functioning can best be understood as a series of performance episodes – “distinguishable periods of time over which performance accrues and feedback is available” (p. 359) – wherein input-process-outcome (IPO) cycles occur, and outcomes from earlier episodes become the inputs for subsequent cycles. Inherent to the model is the notion that underlying these recurring cycles are unique phases – action and transition – and that the types of team processes that are most critical for the team to enact depends on the current phase. Whereas action phases primarily involve processes that directly contribute to goal accomplishment, transition phases, which largely occur in between performance episodes, require acts of evaluation and planning.

We build on this framework to inform our theoretical understanding of the reciprocal relationship between team trust and team performance over time. Specifically, we explore the dynamic unfolding of trust through the lens of action and transition phases, and consider mediating mechanisms that align with each of these phases, while also giving consideration to the theoretical underpinnings of trust itself. To explain the trust-performance relationship, for instance, we highlight information-sharing, monitoring, and effort, not only because they reflect action processes that directly contribute to task achievement, but also because they are consistent with the idea that team trust prompts team members to engage in risky, or vulnerable behaviors, as further discussed below. Following a performance episode, we argue that performance influences subsequent trust through a set of maintenance states – cohesion, team confidence, and conflict – that are also closely related to team trust.

While we recognize that Marks et al. (2001) framework does not include emergent states (i.e., shared team properties that emerge through team interactions), team trust itself is considered an emergent state, thus we would be remiss to exclude other key states in our theoretical model. Nonetheless, we aim to draw from their framework in our selection of emergent states. The authors also describe interpersonal processes, those that are used to manage team member relationships, and are thought to occur throughout both action and transition phases. We focus on states that, due to their heavy interpersonal elements, can be considered the resultant of interpersonal processes occurring throughout a team's recurring IPO cycles, and that we argue will be greatly influenced by prior

performance during the transition phase. Further, these states are thought to be foundational for subsequent levels of trust, as they are closely related to the positive expectations and shared vulnerability that contribute to the emergence of trust at the team level. Beyond exploring action and transition phases themselves, we also theorize about the performance conditions that may prompt teams to move to one versus the other, as well as how such conditions can determine the underlying mechanisms that are necessary for either reinforcing or repairing the trust-performance relationship.

Combining these concepts, below, we explore in detail the cyclical connection between team trust and performance, the unique sets of mediators underlying these relationships depending on both the phase of team functioning and the outcomes of performance episodes, as well as the potential for moderating variables to impact these relationships. Because our focus is on action teams, and individual-level predictors of team trust in this context have already been explored (Wildman et al., 2012), we turn our attention first to team trust within the action phase – the lengthiest, and most prominent phase for any action team – building on an assumption that some initial team development and transition has already taken place. Specifically, team development scholars point out that the last developmental phase (i.e., team compilation) is when team members go beyond individual and dyadic influences to develop a better understanding of interdependencies and role distributions across team members to improve their performance (Kozlowski, Gully, Nason, & Smith, 1999). As action teams have to quickly perform the task soon after their formation (McKinney, Barket, Davis, & Smith, 2005), the already formed team that has developed initial trust, undergone brief transition, and is ready to tackle the action phase, is the focus of this paper.

2.1. Team trust and team performance

Much evidence exists to suggest that trust plays a pivotal role in facilitating team performance. Indeed, two recent meta-analyses summarized relevant empirical studies, demonstrating corrected correlations of 0.30 between team trust and team performance (De Jong et al., 2016), and 0.33 between team trust and a broader range of team effectiveness criteria (Breuer et al., 2016). Team trust is thought to contribute to performance by enabling key team processes to occur more efficiently and effectively. When team members don't trust each other, they direct valuable time and effort toward managing uncertainty, scrutinizing others, and actively protecting their own self-interests rather than expending such efforts on accomplishment of collective tasks (Salas et al., 2005). Conversely, the presence of trust enables a degree of vulnerability (De Jong et al., 2016) whereby team members accept a certain level of risk, rely on their teammates, and engage in team processes more openly and cooperatively. Salas et al. (2005) proposed mutual trust as a primary mechanism that supports the core components of teamwork, such as mutual performance monitoring, backup behavior, and adaptability. Empirical studies have supported these and other relationships. Trust has been linked to effort, monitoring, and cooperation in team settings (De Jong & Elfring, 2010; Costa, 2003), to name a few examples. Broadly speaking, research suggests that trust enhances team performance by enabling team members to spend less effort focused on other members' progress and intentions, reducing misunderstandings and conflict among team members, and allowing team members to feel comfortable engaging in the processes that are necessary for task completion (Colquitt, Scott, & LePine, 2007; Peterson & Behfar, 2003; Salas et al., 2005).

While much of the current thinking involves trust influencing later performance through such mechanisms as those described above, the potential for performance to loop back and influence subsequent levels of team trust must also be considered. Teams are dynamic entities - simple input-process-outcome (IPO; McGrath, 1964) models are not sufficient for understanding how team variables emerge and evolve over time. Indeed, the IMOI (input-mediator-output-input; Ilgen, Hollenbeck, Johnson, & Jundt, 2005), framework was put forth to reflect the idea that team variables do not necessarily influence each other in a linear manner that concludes once an IPO cycle has completed, but rather, that outcomes can loop back to influence initial inputs, with the process continuing to cycle over time. While theoretical models, and corresponding empirical research on specific team constructs, such as team trust, have been slow to incorporate these notions, researchers are increasingly taking steps in this direction. Mathieu et al. (2015), for example, used meta-analysis and structural equation modeling to show that team cohesion and performance are reciprocally related with one another over time. Within the trust literature, Dirks (2000) showed that trust in leadership was both an input and an outcome of team performance – trust positively influenced team performance, and went on to mediate the relationship between past and future team performance. In relation to team trust, initial levels enable team processes to be carried out effectively, thereby facilitating performance outcomes, as described above. Once an IPO cycle has completed, formal or informal feedback about team performance provides information about the appropriateness of initial trust judgments and determines whether they should be revised going forward. Strong performance will reinforce or enhance team trust, whereas poor performance will detract from it, with new levels of team trust feeding into subsequent IPO cycles. Though not in relation to team performance, Serva, Fuller, and Mayer (2005; p.625) describe a similar concept they refer to as reciprocal trust, or “the trust that results when a party observes the actions of another and reconsiders one's trust-related attitudes and subsequent behaviors based on those observations.” The authors found a reciprocal relationship between trust and risk-taking behaviors in interacting teams. Similarly, Peterson and Behfar (2003) found that early performance feedback had significant consequences for later team interactions such that negative feedback resulted in increased levels of conflict later on. Thus, trust and performance are likely to evolve in a dynamic manner as teams cycle through multiple IPO sequences and obtain feedback over time.

Considering these ideas, we expect that team trust and team performance will demonstrate a reciprocal relationship with one another over the course of a team's lifespan. Beyond this, we argue that the directional nature of the relationship will vary as the team progresses through recurring IPO cycles, spanning multiple action and transition phases. Specifically, during the action phase, the trust-performance linkage will be particularly salient, as trust will be necessary for the enactment of team processes that contribute to task accomplishment. A lack of trust at this juncture can hinder action processes, preventing the team from reaching its performance potential, and perhaps resulting in cascading damages that are difficult to recover from. Conversely, the performance-trust linkage

will arguably become more salient during the subsequent transition phase. Trust is generally thought to be difficult to build, yet easy to destroy (Colquitt et al., 2012). Once team trust emerges through individual and dyadic influences, successful performance episodes will be a primary means of maintaining emergent states that contribute to such trust, which will then feed into future action and transition processes over time. Weak performance may imply that perceptions need to be altered, detracting from key states and disrupting subsequent trust-performance cycles. Taken together, we propose the following:

Proposition 1. Team performance and team trust will demonstrate a reciprocal relationship whereby (a) initial team trust during the action phase will positively relate to subsequent team performance; and (b) team performance will positively relate to subsequent team trust during the transition phase, while controlling for previous team trust.

2.2. Linking mechanisms

Because we view the trust-performance linkage and the performance-trust linkage as distinct relationships, we also expect that each relationship will be cultivated through a unique set of mediator variables. Trust is likely to facilitate performance by prompting team members to engage in team processes in a more open and cooperative manner. Breuer et al. (2016) describe this openness as “risk-taking behaviors,” suggesting that team trust encourages team members to enact risky processes such as sharing confidential information, openly discussing conflicts and errors, and asking for, and providing feedback and help, all of which serve to promote team effectiveness outcomes. One of these processes we propose will be particularly influential is information-sharing among team members, which can include the amount of information exchanged, the effectiveness of oral and written discussion, the extent to which members make deliberate attempts to keep each other informed, and open communication about teamwork processes and performance feedback (Mesmer-Magnus & DeChurch, 2009). The act of sharing information can involve a degree of vulnerability, particularly if such information is sensitive, requires time and/or effort to communicate, or results in surrendering an individual's advantage for the sake of the team. Thus, whereas trust will be necessary for open information-sharing to occur, a lack of trust, conversely, can result in the withholding of information that is relevant to task performance, as well as the avoidance of communication that can address potential issues with teamwork processes and outcomes. Stoyneva, Tzabbar, and Tazafrir (2013; p. 81) argued that “fast access to valuable information...is one of the basic benefits of trust,” further noting that the flow of information from one person to another is directly related to the trust, or the quality of the relationship between them, and described knowledge sharing as a behavioral manifestation of trusting attitudes. Supporting this empirically, a study of healthcare providers examined transparency among team members, defined as “the sharing of relevant information and explanations within a team to enable its members to carry out their responsibilities within the team” (Palanski, Kahai, & Yammarino, 2011; p. 203). Support was found to suggest that team trust positively influences transparency, while transparency in turn, enhances team performance. In their meta-analysis, Breuer et al. (2016) found strong relationships between team trust and team information processing variables, knowledge sharing and team learning. On the other side of the relationship, there is a wealth of empirical evidence to support the role of information sharing in promoting team performance (Mesmer-Magnus & DeChurch, 2009; Mesmer-Magnus, DeChurch, Jimenez-Rodriguez, Wildman, & Shuffler, 2011).

Another somewhat ‘risky’ process team members are more likely to engage in when team trust has been established is effort. Effort has been described as “the extent to which team members devote their resources (i.e., energy, attention, time) to executing team tasks” (de Jong & Elfring, 2010, p. 537). Trust likely stimulates effort by signaling to team members that expending resources on team objectives will not be done in vain since they can expect that such efforts will be reciprocated in an effective manner by other members. In contrast, team members are likely to reduce their effort when they do not believe they can depend on, or trust their teammates, because they'll expect the low performance of others to detract from their own efforts, making it less worthwhile (Dirks, 1999). Trust enables team members to spend less time protecting themselves (Palanski et al., 2011) freeing up resources that can be directed to effort. In addition to these rational considerations, de Jong and Elfring (2010) argue that trust also influences team effort through more social mechanisms. For example, over time, norms will develop within the team that are influenced by trust and that exert pressure on team members to put forth a given level of effort based on what's considered to be acceptable behavior within the team. Additionally, as members of teams characterized by high levels of trust come to identify with the team, putting effort toward team tasks becomes a way of expressing that identification and ensuring that the team they care about is successful. While trust will help cultivate team effort, such efforts will go on to facilitate team performance by promoting the levels and the quality of teamwork processes – the more hard work and persistence directed toward task accomplishment, the more likely strong performance outcomes will be attained (de Jong & Elfring, 2010). Even if the team includes some weaker members, the additional effort put forth by those members can help address those weaknesses, and that leveraged by stronger performers can help compensate for individual member deficiencies (Williams & Karau, 1991; Liden, Wayne, Jaworski, & Bennett, 2004). Indeed, empirical studies have supported the mediating role of effort in the team trust-performance relationship (de Jong & Elfring, 2010; de Jong, Bijlsma-Frankema, & Cardinal, 2014).

A final process that we expect to be particularly influential for team trust, and in turn, team performance, is monitoring. Though monitoring has been conceptualized in different ways, it generally involves team members observing each other's actions to identify potential errors or performance discrepancies with the goal of providing feedback or backup behavior as needed (Marks et al., 2001). While some have interpreted monitoring as a negative process that can be reduced when levels of team trust are high (Costa, 2003), recent researchers have examined it as a positive behavior that can be increased and implemented more effectively when team members trust each other (Salas et al., 2005). From a negative perspective, for example, teammates who don't trust each other may be more likely to oversee each other's behavior because they don't believe that work will be completed appropriately otherwise, and

these monitoring processes can detract from performance because too many resources are expended on them as opposed to more productive team processes. Partially supporting this notion, [Langfred \(2004\)](#) found that members of self-managing teams who trusted one another engaged in virtually no monitoring, but interestingly, this absence turned out to be detrimental to team performance, suggesting that while too much monitoring may lead to process loss, an ‘ideal’ amount is beneficial because it allows for better coordination among team members. Building on this, [de Jong and Elfring \(2010\)](#) studied monitoring from a more positive angle by capturing behaviors that reflect helping and the maintenance of team standards rather than those focused on micromanaging and controlling of other teammates. In their study of ongoing teams, monitoring indeed emerged as a mediator that was positively influenced by team trust, and transmitted that positive impact onto team performance. In line with this, [Salas et al. \(2005, p.577\)](#) argued that trust is a prerequisite to effective monitoring because without it, “team members may view performance monitoring negatively and may react critically to feedback or assistance provided by a team member.”

Thus, current research suggests that when monitoring is manifested through more positive team processes, it can promote team performance, and that the extent to which monitoring behaviors are interpreted as either positive or negative is determined in part by team trust. When monitoring is perceived in a positive light, it can promote team performance by enabling individual performance lapses to be identified and corrected, signaling when backup behavior is necessary, and generally allowing team members to coordinate more effectively due to their mutual awareness of each other's progress. It is this more positive perspective on monitoring that we focus on here, suggesting that it will be facilitated by team trust, and in turn, will promote team performance outcomes. Indeed, empirical work has supported monitoring as a mediator of the trust-performance relationship ([Crisp & Jarvenpaa, 2013](#); [De Jong & Elfring, 2010](#)). Taken together, we propose:

Proposition 2. (a) Information sharing, (b) effort, and (c) monitoring will mediate the relationship between team trust and team performance.

Upon completion of a performance episode, when team performance begins to loop back to influence subsequent levels of team trust and the transition period begins, we expect that a different set of mediators will underlie this relationship. Strong performance outcomes can help forge bonds among teammates, signal that members are ‘on the same page’ in their approach to team and taskwork processes, and generally promote feelings of confidence in the team's abilities, all states that arguably reinforce members' trust in one another. While the performance-trust relationship is less studied than the reverse, we leverage theory and related evidence to put forth initial propositions geared for future empirical examination. One variable that has garnered some support in this vein is team cohesion, the shared bonding or sense of pride among team members that's derived from task or social attributes of team membership ([Casey-Campbell & Martens, 2009](#)). While much of the literature has focused on cohesion's impact on performance, there is also evidence suggesting that performance uniquely influences subsequent levels of team cohesion ([Mathieu et al., 2015](#)). Successful performance outcomes can promote cohesion by creating a joint sense of accomplishment and corresponding feelings of affection among team members – positive team experiences are likely to be followed by positive emotional reactions. Conversely, negative team outcomes may lead to feelings of detachment, blaming or conflict, and general disillusionment with team membership, disrupting the bonds among team members that contribute to cohesion ([Mathieu et al., 2015](#)). When cohesion is intact, however, we argue that it will enhance subsequent levels of trust due to a sense of commonality that will be present among team members. When cohesion develops through a series of successful performance episodes, members will come to perceive each other as having shared goals and shared attributes that contribute to their success. This, along with social bonding that can result from positive performance outcomes, can result in team members identifying with, or feeling more similar to one another. In turn, team members who perceive themselves as similar are more likely to trust one another ([Chattopadhyay, 1999](#)) because they believe they can better predict each other's behavior, reducing some of the uncertainty that can result in distrust. As initial evidence, qualitative data from a study of learning teams identified team cohesion as a primary contributor to the building of trust between team members, with supplemental quantitative analyses supporting this finding by demonstrating a significant relationship between the two variables ([Tseng & Yeh, 2013](#)).

Another variable that is likely important for the continued sustenance of trust is team confidence. Team confidence is a broad term used to describe both team efficacy – shared beliefs about the team's ability to accomplish a specific goal – and team potency – shared beliefs regarding the team's ability to be successful in general ([Mathieu, Maynard, Rapp, & Gilson, 2008](#)). As described earlier, the conclusion of a performance cycle will be paired with information about how successful the team was, directly influencing the extent to which team confidence will be strengthened or weakened. If the team performs well, for instance, team members will become more confident in their ability to do so again in the future. Conversely, failed performance episodes can detract from team members' confidence in their abilities going forward. While not directional in nature, meta-analyses have shown support for the relationship between team performance and team confidence variables ([Gully, Incalcaterra, Joshi, & Beaubien, 2002](#)). Resulting levels of team confidence are likely to influence subsequent levels of trust as the team progresses. The more confident team members are about their collective abilities, the less uncertainty there will be surrounding each other's future performance behaviors. That is, high levels of confidence enable team members to have positive expectations about their teammates' behaviors, and allows for a degree of vulnerability whereby members can anticipate strong performance from each other without intervention, both defining features of trust ([Fulmer & Gelfand, 2012](#)). In line with this, [Boies, Lvina and Martens \(2011\)](#) found a large correlation between potency and team trust, suggesting that the variables are closely related. Though current research is limited, developing work shows that team efficacy can exert a positive influence on levels of trust in virtual team settings ([Hardin, Fuller, & Davison, 2007](#)).

A final variable that we argue will emerge as a particularly important mediating mechanism as performance loops back to influence trust is conflict – tension between team members that results from real or perceived differences ([De Dreu & Weingart, 2003](#)). Much of the literature has focused on conflict's relationship with performance, namely, whether it is positive or negative, depending

on the conflict type. Whereas interpersonal, or social-focused conflict tends to be detrimental across the board, that surrounding task-relevant activities can actually have benefits under certain conditions because it fosters broader and deeper information processing (e.g., Bradley, Klotz, Postlethwaite, & Brown, 2013). For example, while task conflict has been found to be harmful in the context of production and project tasks, it can have a positive influence when teams engage in decision-making tasks (O'Neill, Allen, & Hastings, 2013) and when the link between task and relationship conflict remains relatively minimal (de Wit, Greer, & Jehn, 2012). Beyond this controversial relationship, it is also possible that the less considered, reverse link between performance and conflict may also play a role as series of performance episodes progress over time. Specifically, if a performance episode concludes with positive team feedback, conflict will be reduced because there won't be a need to change future team processes, decreasing the likelihood that conflicts surrounding the best approach to doing so will arise. If feedback is negative, on the other hand, team members may disagree about how to rectify the situation going forward, and may attribute blame to each other and/or become defensive in response to the failure, thereby increasing levels of both types of conflict. Indeed, Peterson and Behar (2003) studied this exact relationship using a longitudinal design and showed that initial negative performance feedback led to subsequent increases in both task and relationship conflict. The authors invoke theory on the threat-rigidity effect (Staw, Sandelands, & Dutton, 1981), noting that negative feedback can be perceived as a threat by team members, and responses to this threat often include restriction of information flow, blaming behaviors, and disruption of interpersonal bonding. For these reasons, we expect that increased conflict resulting from negative performance will then lead to decrements in team trust, as members respond to the situation with rigidity and defensiveness. On the other hand, if the performance cycle is successful, team members will feel reassured about each other's abilities and intentions, thereby minimizing conflict, and bolstering subsequent trust levels. Hempel, Zhang, and Tjosvold (2009) found some support for these ideas, though they didn't measure conflict directly. Specifically, cooperative conflict management strategies, which essentially serve to reduce or eliminate conflict, were related to increases in team trust.

In sum, while many of the links we suggest are facilitators of the performance-trust relationship have not previously been examined extensively in the proposed directions, we argue that such exploration is necessary when considering the role of time in the development and maintenance of team trust. As a starting point, we propose the following:

Proposition 3. (a) Cohesion, (b) team confidence, and (c) conflict will mediate the relationship between team performance and team trust during transition phases.

Once trust has influenced performance, and performance has looped back to influence trust, we expect that the cycle will continue through one of two unique pathways. First, if the performance-trust cycle during the transition phase has concluded successfully, and trust was maintained or strengthened, the team can continue with their current approaches as the next task cycle begins. That is, with no reason to alter what they're doing, team members can continue focusing on task accomplishment, with trust looping back to the action phase, and the corresponding action processes described earlier (e.g., information sharing). With this, the cycle will begin anew, with trust influencing action processes, and action processes in turn, influencing subsequent performance. If, however, the performance-trust cycle concludes with negative feedback and a reduction of trust, the team will need to remain in the transition phase, and begin enacting transition processes as a means of repairing performance shortcomings. Specifically, we expect that team members will need to re-plan and re-strategize for how taskwork will be approached going forward, since previous methods proved inefficient. These transition processes can then set the stage for performance to be restored, and for subsequent performance-trust and reciprocal cycles to get back on a positive track.

It is important to note that we're conceptualizing these transition processes to occur at a time that they wouldn't otherwise be necessary if negative performance feedback hadn't been attained. That is, we recognize that transition processes are an important part of the IPO cycle (Marks et al., 2001) that should be enacted whenever the team is faced with new or altered tasks. However, our focus is on potential scenarios when feedback (formal or informal) becomes available while task accomplishment is still underway, or perhaps while teams move between tasks of the same type that shouldn't require additional transitional processes if all is functioning appropriately (and unless something goes awry with the mission itself). Marks et al. (2001) describe episodes as the accrual of performance and the availability of feedback. Thus, although the shift between action and transition phases is often associated with movement from one task to a new task, it's possible that teams can move between phases while the accomplishment of the same, or similar tasks is still underway, prompted by the availability of performance feedback. We focus on this possibility, conceptualizing transition processes in this instance as something that needs to occur in response to negative feedback and trust decrements, and disrupts the immediate progression to the next action phase. This is particularly problematic in the context of action teams, which should be spending the majority of their efforts implementing action processes once they've already undergone initial transition (e.g., following formation and training) and have already been deployed – the point at which we focus on in this paper.

As noted, transition phases involve the appraisal of prior performance periods, as well as planning for the next episode, in light of such reflection and evaluation. One transition process we propose will be particularly important following the receipt of negative performance feedback and the ensuing reduction of team trust, is strategy formulation and planning – the “development of alternative courses of action for mission accomplishment (Marks et al., 2001; p. 365), which specifically involves discussing task-relevant information, determining how task goals will be accomplished, setting expectations, roles, and priorities, and communicating such plans to all team members. Although the team may have already gone through this process at an earlier time, strategy will need to be renegotiated once trust has been violated as a means of restoring and strengthening future performance. As part of these activities, it will be critical for the team to reiterate their shared purpose and ensure continued commitment to the team's objectives. In a similar vein, we expect that another transition process – goal specification, or the “identification and specification of goals and subgoals for mission accomplishment” (Marks et al., 2001; p. 365) – will also be important at this juncture. Again, these processes may have already been executed for the task in general, but will now need to focus on the efforts that will be made to rectify the

performance situation. That is, when trust is damaged, the team will no longer be able to continue with existing goals and subgoals, but will need to reassess and formulate a new goal structure for moving forward, which will then allow for performance to be repaired. While action processes will also need to be enacted in order to carry out new strategies and goals, here we focus on the role of transition processes as a response to damaged trust and as an approach to repairing performance decrements. Indeed, transition processes have been found to influence performance directly; a meta-analysis found comparable relationships between all processes in the Marks et al. (2001) team process typology (i.e., action, transition, interpersonal) and team performance (LePine, Piccolo, Jackson, Mathieu, & Saul, 2008).

While we could not locate studies specifically linking trust to transition processes, related work provides some tangential support for the proposed relationships. In an early teams study, for example, Gear, Marsh, and Sargent (1985), examined a small task force and found that when team members received feedback indicating that their performance was only average and demonstrated a desire to improve their performance, more ideas were generated by team members in the following period. Trust was not measured, and the specific nature of the ideas exchanged was not indicated, but this could suggest that team members no longer trusted the path they were on, and offered ideas as a means of making changes that could improve performance. Reflecting on the finding, the authors suggested that “low average feedback indicated the need to ‘check out’ the state of discussion and progress before adding more direction” (p. 718). In more recent work, a time-lagged field study found that team processes, including transition processes, fully mediated the link between empowerment and quantitative performance (Mathieu, Gilson, & Ruddy, 2006). Empowerment – shared beliefs about a team's authority and responsibility for their work – is of course not the same as team trust, but is often thought of as including a dimension that captures team members' beliefs about their competence to perform well (Kirkman & Rosen, 1997), closely aligned with the positive expectations about competence characteristic of trust (Fulmer & Gelfand, 2012). In another study, LePine (2005) demonstrated that when teams encountered disruptions, those that focused on transition processes were better able to adapt to this disruption, and action processes were actually detrimental at this time, perhaps because they detracted from the team's ability to develop a resolution (Kozlowski & Ilgen, 2006). If negative performance feedback and subsequent decreases in team trust are viewed as disruptions to the task cycle, these findings can lend support to the idea that transition processes are particularly important for performance repair following a violation of team trust. Thus, taken together, we propose the following:

Proposition 4. (a) When the prior action-transition cycle concludes successfully and team trust is maintained or strengthened, teams will shift to the action phase, and begin the trust-action processes-team performance cycle anew; (b) when the prior action-transition cycle concludes with negative feedback and in turn, decrements in team trust, the team will need to remain in the transition phase and enact transition processes in order to repair subsequent performance.

Proposition 5. (a) Strategy formulation and planning and (b) goal specification will mediate the relationship between team trust and team performance during transition phases (that follow negative feedback and reduced team trust).

2.3. Moderating influences

With our focus on the evolution of trust over time, the impact of performance on later team trust is brought to the forefront (e.g., Dirks, 2000). As discussed earlier, the limited research that has explicitly explored the effects of performance onto future emergent states has shown, for example, that it will be positively related to cohesion (Mathieu et al., 2015) and negatively related to conflict (Peterson & Behfar, 2003). Furthermore, it is likely that positive performance will increase the extent to which team members rely on each other, whereas underperforming or failing to meet expectations can put in jeopardy members' trust in one another. However, these relationships can be strengthened or weakened depending on contextual influences in place. Researchers have argued that team contingencies, such as levels of task interdependence, can change how team variables influence one another (e.g., Burke, Stagl, Klein, Goodwin, Salas, Halpin, 2006; Rico, Sanchez-Manzanares, Gil, & Gibson, 2008). For instance, the same way that an effective team intervention can diminish the negative effects of poor performance, a trust violation or task interdependence can strengthen these effects even further. Thus, we will now explore the influence of these moderators on the relationships between team performance, team trust and maintenance states (i.e., cohesion, team confidence, and conflict; for an illustration of these effects, see Fig. 2).

2.3.1. Task interdependence

While all teams are interdependent to some degree, particularly action teams, levels of interdependence can vary across teams and tasks, and are often categorized as pooled, sequential, reciprocal, and intensive (Saavedra, Earley, & van Dyne, 1993; Thompson, 1967). Key components to determine how interdependent a team is can include how they allocate their resources, the sequencing of their tasks, and how synchronized they have to be (Zalesny, Salas, & Prince, 1995). Consequently, this is likely to change how members interact with one another, and how their processes are directly linked to the team's outcomes. Accordingly, level of interdependence has been identified as a critical boundary condition, or moderator of a number of relationships in the teams literature. For instance, the relationship between implicit coordination and team performance (Rico et al., 2008) is stronger under conditions of high interdependence. Similarly, albeit little statistical power, trends in a meta-analysis show that leadership behavior and team performance outcomes are more strongly related when interdependence is higher (Burke et al., 2006). Thus, similar thinking can be transferred to the team trust literature. As the definition suggests, high levels of interdependence increase the necessity for members to depend upon each other in order to execute their tasks properly (e.g., Saavedra et al., 1993). These high levels will spill over into higher levels of trust when the action phase concludes with positive performance feedback. That is, optimal performance will be even more important for fostering subsequent team trust when interdependence is high, because the need to have

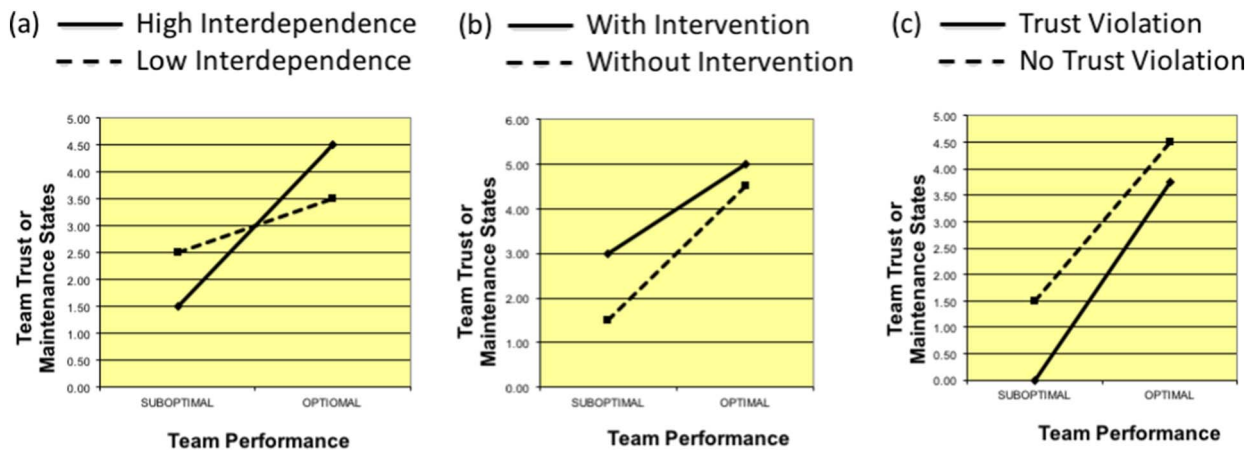


Fig. 2. Illustrative plots of the expected moderating effects of (a) interdependence, (b) intervention, and (c) trust violation.

positive expectations about the team will be more central to team functioning. Conversely, because high levels of interdependence require more reliance from one team member to another, suboptimal performance will greatly hurt trust levels in highly interdependent teams (e.g., reciprocal teams).

For similar reasons, we expect that levels of interdependence are likely to interact with performance to influence not only team trust, but other emergent states as well. In a meta-analysis on cohesion, Gully, Devine, and Whitney (1995) show the correlation between cohesion and performance is magnified when interdependence is high. Similarly, Gully et al. (2002) show equivalent patterns, now for the relationship between team efficacy and team effectiveness, which was strengthened under high, rather than low interdependence conditions. Considering how tightly linked performance and emergent states such as cohesion and self-efficacy are, it is not hard to extrapolate that positive performance will lead to desired maintenance states, as described earlier, but further, that these relationships will be magnified within highly interdependent teams. In the opposite scenario, where the team does not perform as expected, the negative relationship between performance and maintenance states will be exacerbated due to its linkages and positive expectations between team members that may have been broken, but that are critical for the execution of basic team functioning. Thus, we propose:

Proposition 6. The effect of performance onto team trust will be moderated by task interdependence, such that higher levels of task interdependence will strengthen the relationship.

Proposition 7. The effect of performance onto maintenance states (i.e., cohesion, team confidence, conflict) will be moderated by task interdependence, such that higher levels of task interdependence will strengthen these relationships.

2.3.2. Interventions

There are a number of team interventions that can promote teamwork or even repair process loss to avoid suboptimal performance. For example, Tannenbaum and Cerasoli's (2013) meta-analysis showed that providing team members with accurate feedback has the power to enhance performance by 25% when compared to control groups. The effectiveness of feedback increases when it's directed to the task, and not individuals' characteristics (Kluger & DeNisi, 1996). Because previous team performance feedback directly influences future team performance (Passos & Caetano, 2005), it is important to assess whether the performance was optimal or suboptimal. In the scenario that teams performed well, evaluation and reflection on performance can heighten and reinforce the bonds that teammates have developed. In the opposite scenario, if performance is suboptimal, this will likely decrease subsequent team trust levels. However, an intervention can be in place to diminish, or even better, revert this trust deficit. For example, if a team participates in debriefing activities (Smith-Jentsch, Cannon-Bowers, Tannenbaum, & Salas, 2008) following a performance episode that ended negatively, team members can gain an understanding of why they failed, rather than making assumptions and assigning blame, and can get on the same page about how to move forward, enabling them to maintain shared expectations about future behavior despite the performance setback. In this way, suboptimal performance does not necessarily need to be disastrous for subsequent levels of trust in the team. Indeed, related work has found that teams who participate in debriefing show improved team processes and team performance, particularly when debriefs are guided as compared to unguided (Eddy, Tannenbaum, & Mathieu, 2013). Accordingly, interventions can serve to weaken the negative impact of suboptimal performance on trust by reinforcing perceptions of the team's abilities and building positive expectations among team members, regardless of prior performance levels. Thus, we propose that interventions can enhance the influence of performance on trust in optimal performance scenarios by promoting positive attitudes and expectations even further, yet can reduce the role of performance feedback in more negative situations and help to preserve team trust by improving the shared psychological state among members that otherwise could have prevented team members from being willing to accept vulnerability based on the suboptimal performance.

Following a similar rationale, we expect that an effective intervention will not only interact with past performance to influence trust, but it will also shape future maintenance states (i.e., cohesion, team confidence, conflict). For example, individuals have

multiple goals and these goals are sometimes conflicting (DeShon, Kozlowski, Schmidt, Milner, & Wiechmann, 2004), particularly after a team has received negative performance feedback. An intervention has the ability to clarify what went wrong, and importantly, avoid the emergence of conflict resulting from any differences in members' attributions for the failure and ideas about how to address the inadequacy going forward. Individuals can resolve clashes between them, again, preventing suboptimal performance from having a 'be all end all' influence on subsequent levels of conflict (i.e., inevitably increasing conflict). This can apply to other key maintenance states as well – interventions following suboptimal performance episodes can likely help retain the team's confidence in their abilities and preserve cohesive bonds among members. Indeed, debriefs can help teams in identifying their deficits and yield greater teamwork processes (Smith-Jentsch et al., 2008). Accordingly, researchers have found the role of reflexivity – team members' learning from their mistakes – is more crucial when teams are not doing as expected rather than when they are performing well (Schippers, Homan, & van Knippenberg, 2013). Another example of an effective intervention that could help mitigate negative influences of suboptimal performance is focusing on leader behaviors. Although leaders can set a climate that will likely foster team emergent states, this type of context can also moderate the leader member exchange and empowerment relationship by strengthening its positive effects (e.g., Chen, Kirkman, Kanfer, Allen, & Rosen, 2007). From that one can extrapolate, leadership will weaken the negative effect of suboptimal performance and still successfully instill cohesion and team confidence, and reduce conflict in teams. Conversely, we also expect that interventions can strengthen the effect of optimal performance to improve maintenance states even more, as they will further emphasize what the team is doing right. However, the role of interventions in optimal performance scenarios is expected to be less dramatic than in negative scenarios, when interventions have potential to greatly reduce or perhaps even fully negate the impact of suboptimal performance, and salvage key emergent states. Taken together, interventions can help ensure that optimal performance will influence team trust and maintenance states in a beneficial manner, and more importantly, can work to remedy detriments that can result from suboptimal performance. Thus, we propose:

Proposition 8. The effect of performance onto team trust will be moderated by the presence of team interventions such that (a) suboptimal performance will have a less detrimental effect on team trust, and (b) optimal performance will have a more beneficial effect on team trust when an intervention is implemented as compared to when it is not.

Proposition 9. The effect of performance onto maintenance states (i.e., cohesion, team confidence, conflict) will be moderated by the presence of team interventions such that (a) suboptimal performance will have a less detrimental effect on maintenance states, and (b) optimal performance will have a more beneficial effect on maintenance states when an intervention is implemented as compared to when it is not.

2.3.3. Trust violation

In addition to positive boundary conditions (e.g., interventions), events could also occur in a team that shift the impact of performance onto team trust and other emergent states. The modeling of team trust as dynamic and reciprocal calls for consideration of the potential for broken contracts, or what's referred to as a trust violation. Trust violations are a crucial topic for the development of trust, especially understanding what happens after the violation has taken place (e.g., Schoorman, Mayer, & Davis, 2007). A violation to trust expectations – in which individuals deviate from what was expected of them – can hurt one's expectations of reciprocity that were once in place (Greitemeyer & Cox, 2013; Serva et al., 2005). For instance, if an employee was pulled unexpectedly into a team project, but at the end only the original team members received recognition from the supervisor, the next time this employee joins another team project in the company, he/she may withhold substantial effort based on his/her prior experience. Accordingly, a meta-analysis shows that psychological breach impacts affective reactions, such as mistrust, at a very high correlation, $\rho = 0.65$ (Zhao, Wayne, Glibkowski, & Bravo, 2007). In the team context, researchers have found that individuals will form their opinions regarding team trust based on the least trustworthy individual (Naquin & Kurtzberg, 2009). With that being said, a trust violation – even if it was only caused by one individual – can change the morale in the entire team.

While we expect that trust and performance at the team level will demonstrate a reciprocal relationship, this cycle can be disrupted by a trust violation. This violation can detract from the trust and key emergent states that are necessary to promote team functioning, even if the team had attained desired performance levels in previous performance cycles, essentially weakening the impact of optimal performance on team trust. This can change the interactions between members, as some may start questioning levels of integrity and competence among their teammates. As an example, trust has been negatively related to deceptive communication (Fuller, Marett, & Twitchell, 2012). Drawing from social exchange theory, individuals behave in certain ways while expecting reciprocity from one another (Blau, 1964). However, levels of initial trust can moderate the relationship between a breach and outcomes such that high levels of trust can obfuscate the harm of the breach (Robinson, 1996). Extending from these findings, performance and a trust violation might interact, such that the violation will be less detrimental when the prior performance episode resulted in optimal performance feedback. Stated differently, a violation can disrupt the positive influence of optimal performance on future team trust, essentially weakening the performance-trust link, by introducing questioning, uncertainty, and perhaps negative emotional responses that will discourage members from accepting vulnerability in future interactions. In the opposite scenario, the negative influence of suboptimal performance will be further exacerbated in combination with a trust violation, strengthening the relationship between performance and trust, and thus severely hindering future team trust, as team members will now have multiple reasons to doubt each other's intentions and abilities.

Again, we apply a similar logic to the interactive role of performance and a trust violation on levels of key team maintenance states (i.e., cohesion, team confidence, conflict). Following recommendations of prior scholars to take a more dynamic approach when investigating trust in teams, we highlight the importance of giving consideration to the team history in determining the impact of a breach (Brodt & Neville, 2013). Specifically, a trust violation after suboptimal performance can greatly diminish maintenance

states, as these conditions are likely to disrupt team bonds, reduce perceptions of competence, and trigger conflicts due to feelings of threat and blame. Along these lines, de-energizing ties have been associated with reduction of access to information and trust (Parker, Gerbasi, & Porath, 2013). Furthermore, such a situation can create an environment in which team members are actively seeking reoccurrences of violations rather than developing positive expectations about their teammates (Zhao et al., 2007). Thus, the cohesion, team confidence, and conflict states are likely to be jeopardized when a violation of trust occurs in combination with poor performance.

In contrast, a trust violation can still occur and negatively influence maintenance states when performance was attained as expected, though the effect will likely not be as detrimental. Team members might attribute the violation to other contextual factors as a justification for the discrepancy between expectations and behaviors (Morrison & Robinson, 1997), or might be less concerned about a violation if the team is still achieving desirable performance. It is in the search of a balance that teams may attempt to keep the status quo in place (Brodt & Neville, 2013). Consequently, under conditions of optimal performance, cohesion, team confidence, and conflict may still benefit, or at least be maintained despite the presence of a trust violation, but these relationships will be attenuated. Research on trust asymmetry and relationship reciprocity have shown the emergence of conflict when members are not on the same page (Peterson & Behfar, 2003), for example. The emotional consequences of these trust violations should not be ignored (Young & Daniel, 2003; Schoorman et al., 2007). However, high levels of team familiarity can increase trust and cohesion (Tseng & Yeh, 2013), which in turn allows for better ways to manage any negative influences of a trust violation. If teams have already enacted a full performance cycle and achieved successful performance, they may be better equipped to handle a trust violation; however, if prior performance episodes did not conclude successfully, the impact of such suboptimal performance on trust and maintenance states will likely be exacerbated in combination with a trust violation. Therefore, we propose the following:

Proposition 10. The effect of performance onto team trust will be moderated by a trust violation such that (a) suboptimal performance will have a more detrimental effect on team trust, and (b) optimal performance will have a less beneficial effect on team trust when there is a trust violation as compared to when there is not.

Proposition 11. The effect of performance onto maintenance states (i.e., cohesion, team confidence, conflict) will be moderated by a trust violation such that (a) suboptimal performance will have a more detrimental effect on maintenance states, and (b) optimal performance will have a less beneficial effect on maintenance states when there is a trust violation as compared to when there is not.

3. Discussion

While team trust is increasingly being recognized as an important contributor to team performance (e.g., Breuer et al., 2016; De Jong et al., 2016), little is currently understood about how it evolves over the course of a team's lifespan. To help address this gap, we propose a dynamic model of team trust that gives consideration to the reciprocal relationship between team trust and team performance, the unique mediating paths that can emerge at different points in the performance cycle, and the potential for moderating influences to play a role in these distinct trust trajectories. Foundational to our theory is the idea that team functioning occurs through multiphasic performance cycles (Marks et al., 2001), and that an understanding of trust's dynamic nature can be gained by exploring it within each performance phase and considering the impact of varying performance conditions. This theoretical model, paired with specific research propositions, provides numerous implications for theory and practice, which we discuss below.

3.1. Implications for research

3.1.1. Theoretical advancement

By incorporating time into our model of team trust, we advance current theory on both team trust specifically, and team dynamics more generally. Specifically, we go beyond the idea that team trust is important (Breuer et al., 2016; De Jong et al., 2016) to advance current thinking by connecting trust to both proximal and distal outcomes, and mapping these relationships onto action and transition processes that are inherent to the team performance cycle (Marks et al., 2001). In doing so, we also expand on theory about the antecedents of team trust by invoking the idea of a reciprocal relationship whereby trust not only influences performance, but performance also influences later team trust. While researchers are beginning to consider reciprocal relationships between performance and other team constructs (e.g., Mathieu et al., 2015; Peterson & Behfar, 2003), the idea that unique mediators might underlie these relationships depending on the direction has not yet been considered. This is important because it goes beyond the notion that trust influences team functioning to help answer *how* it exerts its influence, and *why* the nature of its influence might change over time. Our consideration of potential moderators further develops this theory by highlighting *when* the impact of performance on later team trust might change or could be intervened upon in practice.

More generally, we answer growing calls in the literature (e.g., Kozlowski et al., 1999) to study teams from a more temporally-driven, dynamic perspective. By building on a widely accepted framework for doing so (Marks et al., 2001) and integrating it with theory on a specific team construct (i.e., trust), we advance more nuanced theory that can serve as a direct foundation for future longitudinal studies. Our inclusion of unique mediators and their connections to specific performance phases and feedback types provides guidance regarding what to measure and when to measure it that can be used to shape longitudinal research methods. Specific to team trust itself, trust has long been thought of as a particularly dynamic construct that can easily be damaged (Colquitt et al., 2012), yet this notion has not yet been incorporated into theoretical models. By modeling trust from a dynamic perspective and delineating specific mechanisms through which it can be maintained, damaged, and perhaps even repaired, we greatly advance theoretical foundations surrounding the team trust construct. Finally, by focusing on action teams – a context in which time and trust

are both particularly relevant – we also help develop theory in a much needed area. Action teams are growing in prominence, yet are not fully understood. Our work provides an initial framework for beginning to understand how and why action teams shift from action to transition, when spending more or less time on action versus transition might be necessary, and how key team variables such as team trust play a role in these dynamics over time.

3.1.2. Future research

Because trust, and in some instances, related constructs, need to be evaluated at multiple points in time, this work also highlights additional research needs. Measuring repeatedly may create a set of issues, such as disrupting the team or causing survey fatigue that can detract from measurement validity. Some organizations simply may not be willing or able to allow team members to participate in measurement efforts recurrently. Researchers, therefore, must develop measurement approaches for assessing team trust over time that are more aligned with practical needs. In line with this, there is a push in the current literature to develop nonobtrusive approaches to measuring various team constructs (e.g., cohesion; Salas, Grossman, Hughes, & Coultas, 2015). Examples of such approaches include the use of external observers, physiological metrics, and sociometric badges, to name a few; research is needed to determine the extent to which team trust can be validity assessed in these manners. It may be possible, for instance, to develop a behavioral-based measure of team trust that can be filled out by external observers. In this paper, we highlight information-sharing, effort, and monitoring as processes that follow from the emergence of trust at the team level – behavioral metrics of such processes may serve as indicators that a sufficient level of trust is present within the team. Related to this, Costa and Anderson (2011) found support for monitoring behaviors, along with other variables, as indicators of team trust. Although traditional survey-based methods were used in this study, future research could examine the extent to which behaviorally-based metrics could validly be utilized. Following from this, it may be possible to utilize surveys earlier in a team's lifespan, and once team trust has been established and stabilized, to switch to less obtrusive approaches for monitoring purposes later on.

On a related note, it is important for future research to examine the extent to which automated performance metrics might influence the trust-performance cycle. Much of our theory rests on the idea of performance cycles concluding with formal or informal feedback that feeds into subsequent emergent states and in turn, team trust. Establishing formal mechanisms for providing the team with performance feedback on a regular basis may help facilitate these processes. Underlying the need to measure team trust at multiple points across the team lifespan is the goal of identifying possible violations in trust that might disrupt the performance cycle. This calls for research exploring strategies for repairing trust at different points in the team's performance cycle. While repair strategies have garnered much research attention (e.g., Lewicki & Polin, 2012), little is known about trust repair within team settings. For instance, should repair efforts be directed toward specific dyads, or toward the team as a whole? Are different interventions more or less effective depending on the phase of team performance? Our model highlights the importance of directing interventions toward bolstering emergent states that help maintain team trust (i.e., cohesion, team confidence, conflict), but additional research is needed to identify more specific approaches for doing so, as well as other points in the performance cycle where it might be useful for interventions to be implemented.

Finally, it is important to note that while our theory implies a linear path where one performance cycle feeds into the next, we recognize that multiple performance cycles can occur within the same team simultaneously. Upon empirical investigation of this more parsimonious model, future research would benefit from building on this work to explore more complex models where multiple cycles may occur at the same time, having important influences on one another. Overall, it is clear that examining team trust through static snapshots is no longer sufficient. This paper addresses a critical gap in the literature by presenting a dynamic model of team trust that incorporates action and transition cycles, the impact of performance feedback, unique pathways driving a reciprocal link between team trust and performance, and the role of moderating influences. In doing so, we greatly advance theory on team trust and team dynamics, and highlight a variety of specific research questions, thereby providing a rich foundation for future empirical investigations.

3.2. Practical implications

Although our work is theoretical in nature, it has important implications for practice; managers should not assume that measuring team trust at one point in time is sufficient for understanding how it will evolve and influence team functioning, but rather, should adopt longitudinal methods when focusing on enhancing team trust. That is, trust, and related variables should be measured at multiple points in time in order to attain the best understanding of what's going on within a team and where potential interventions should be targeted if trust is lacking. While measuring all relevant variables as frequently as possible is ideal, doing so is not always feasible, in either research or practice-based settings. Our model provides initial guidance regarding when it is most important to measure what. Following initial team formation and compilation (Kozlowski et al., 1999), which is the starting point of our model, for example, will be a critical point at which team trust should be measured, as it will set the stage for subsequent trust-performance trajectories that will occur once the team initiates the first action phase of the performance cycle. Though our model does not focus on initial trust formation, the work of prior scholars (e.g., Wildman et al., 2012) provides insight about how team trust can be further developed if it is lacking at this juncture.

Drawing from our model, we present additional examples of how it can be used as a decision-making aid that can assist in the assessment and enhancement of team trust over time (see Fig. 3). If initial trust levels are sufficient, the practitioner can refrain from measuring additional variables until the first action phase of the performance cycle concludes, at which point, performance should be assessed, and the degree to which trust influenced performance should be examined. Although the trust and performance relationship has been widely supported, it should not go unmonitored. It is possible that the team under-delivered in regards to performance even

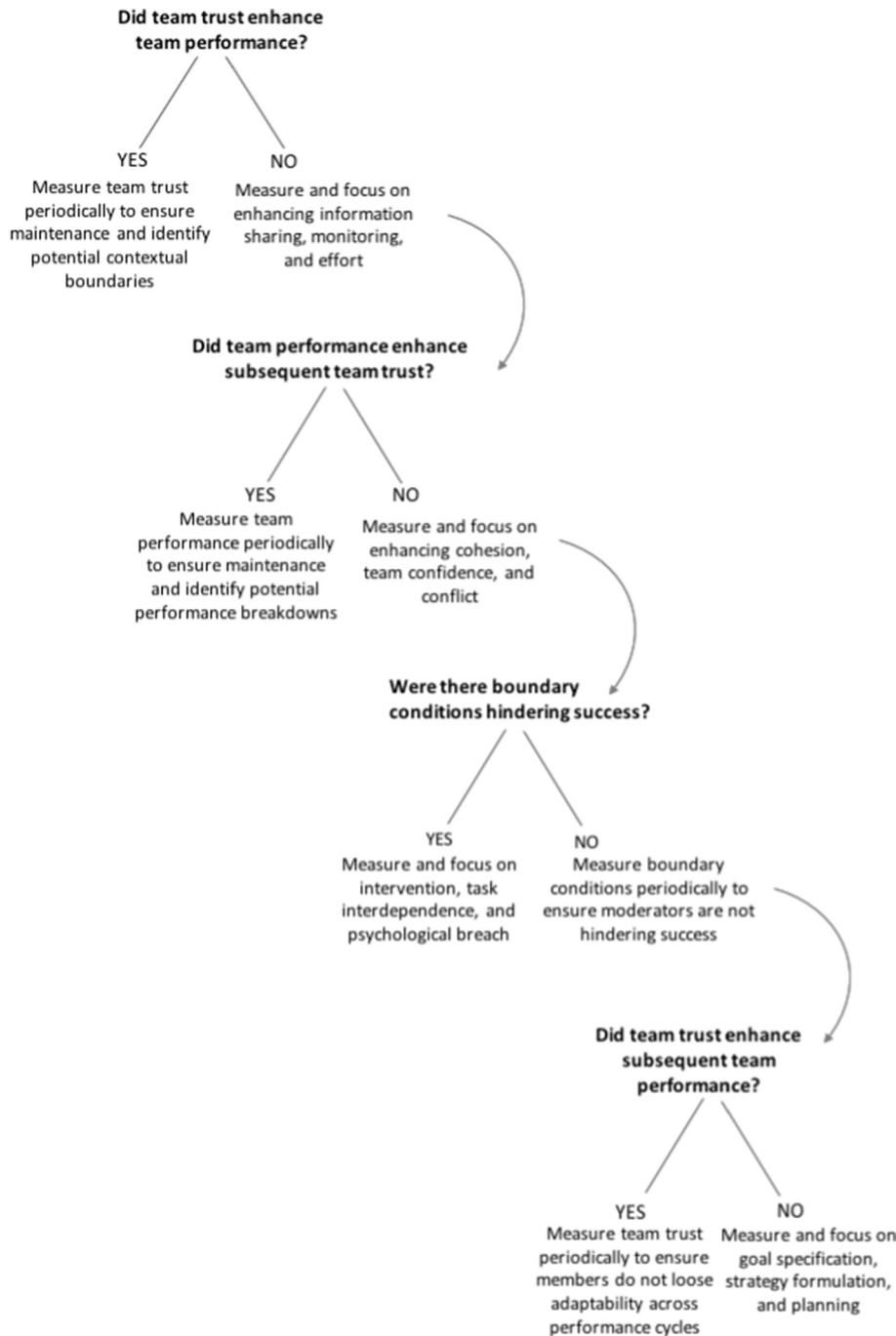


Fig. 3. Research and practical implications: decision guidelines.

though trust was at an optimal level; situational factors or moderators may exist in which high levels of trust do not translate into performance. For instance, when high behavioral uncertainty exists, the relationship between trust and performance can be greatly attenuated (Krishnan, Martin & Noorderhaven, 2006). Consequently, it is possible that the team processes we highlight in this paper as underlying mechanisms of the trust-performance relationship – information sharing, effort, and monitoring – were not triggered in the appropriate way. A weak relationship here may indicate that these processes are deficient, and need to be measured and targeted for intervention to ensure that high levels of trust translate into optimal team performance.

Later on, once the team has progressed through a transition phase, it will be important to measure team trust again and evaluate the extent to which it was influenced by prior performance. Again, while we propose a reciprocal relationship between trust and performance, whereby performance will become an input that influences later levels of trust, this effect is not guaranteed if

performance does not appropriately manifest into the emergent states (i.e., cohesion, team confidence, lower levels of conflict) we argue are critical for maintaining team trust and feeding into the next trust-performance cycle. For example, if a team received optimal performance feedback but knows that they only achieved this outcome because an external team leader stepped in and took on the bulk of the workload, positive feedback may do little to foster team confidence and subsequent team trust. Thus, the relationship between performance and later team trust should not be assumed. Whereas the expected positive relationship here could enable the practitioner to refrain from measuring additional constructs, at least in the immediate future, low levels of team trust, or a weak performance-trust link would indicate that key emergent states (e.g., cohesion) need to be measured and targeted for intervention in this instance. Further expanding the practical implications of our work, we delineated a specific set of moderating variables that could be given attention as needed, as a means of either bolstering the positive impact of optimal performance, or preventing poor performance from having disastrous effects on subsequent trust-performance cycles.

Finally, if teams are required to continue the transition phase in order to address suboptimal performance, it will be important for the practitioner to reevaluate the trust-performance relationship once the transition phase has been completed. Our model provides guidance about the team processes that should be measured and targeted – goal specification, strategy formulation and planning – if the relationship was not repaired appropriately. Overall we inform practice by highlighting what should be measured, when it should be measured, and how the trust-performance relationship can be intervened upon at different points throughout a team's performance cycle. To help manage practical constraints, we suggest that when the reciprocal relationships between team trust and team performance are functioning appropriately, other variables do not necessarily need to be measured, but that trust should continue to be assessed periodically (as aligned with performance cycles), where possible, as a means of ensuring its maintenance and detecting potential trust decrements that can occur as teams garner more and more shared experiences over time. When trust is diminished, we suggest that subsequent measurement and intervention should be aligned with the team's performance phase. For example, if the issue occurs during an action cycle, attention should be paid to the team processes underlying the trust-performance relationship (e.g., information-sharing) to help ensure they can develop through other mechanisms since they won't be facilitated by trust in this instance. While this practical guidance requires organizations to measure and monitor team trust and related variables over time, and current literature does not necessarily indicate what constitutes sufficient or desirable levels of these constructs, this approach can still be applied in an organization-specific manner by setting benchmarks, identifying goals, and evaluating periodically within the context of that particular organization. In sum, our theoretical model, paired with corresponding guidance regarding when to measure what and initial ideas about how to intervene, provide a rich groundwork for the development of evidence-based organizational practices.

3.2.1. Limitations

There are a number of limitations inherent to our theoretical model that are important to acknowledge. First, we recognize that there are other variables that can contribute to the evolution of team trust and play a role in the trust-performance cycle, but in the interest of parsimony, we chose to emphasize those we argue will be most influential given their prominent roles in action and transition phases (Marks et al., 2001) and their close relation to the shared positive expectations and acceptance of vulnerability that are characteristic of team trust (Fulmer & Gelfand, 2012). Related to this, while we focus on specific sets of action processes in the initial action phase, maintenance states in the transition phase, and transition processes in the second, conditional transition phase, we do not propose that the influences of these variables are strictly limited to the phases in which they are modeled. That is, we recognize that information-sharing does not suddenly become unimportant in the transition phase, and that cohesion can certainly play a role in the action phase, for example. Nonetheless, our goal is to provide an accessible, parsimonious model that can serve as a foundation to be expanded upon by future scholars. As noted earlier, this also applies to our decision to focus on a single performance cycle, and we encourage researchers to consider the implication of multiple tasks and performance cycles occurring simultaneously in future efforts.

While we chose to focus on the role of boundary conditions as they apply to the performance-maintenance states and performance-trust relationships, we recognize that moderators can come into play at other points throughout the action-transition cycle. Additionally, we do not claim to have included a complete set of potential moderators – others should also be examined in future research. Regarding team trust itself, we treated it as a non-specific construct, but it is important to note that its often broken down into subdimensions in the literature (e.g., cognitive-based trust versus affect-based trust). While meta-analyses do not find differences between trust dimensions in their relationships with performance (De Jong et al., 2016), hence our reason for exploring trust in a more generic manner, it is possible that breaking down the construct may provide a more nuanced understanding of its relationship with unique mediators at different points in the action-transition cycle. Finally, our model is grounded in an assumption that trust is something that is inherently beneficial for team functioning. While this is largely the case, some research has found that too much trust can actually be detrimental under certain conditions (i.e., high individual autonomy, Langfred, 2004). It would be interesting for future scholars to consider the possibility of too much trust and how that can influence team functioning across action and transition phases over time.

4. Conclusions

Over ten years ago, Kozlowski and Ilgen (2006) reviewed the teams literature and noted that “at the current time...work on team trust [was] underdeveloped” (p. 94). Research on team trust has since exploded, but at present, it is not integrated by an overarching theoretical model, and has not yet accounted for the dynamic nature of the team trust construct. To address this gap, we presented a theoretical model of team trust within action teams that is dynamic, reciprocal, inclusive of unique mediating pathways, and

considers the role of moderating influences at different points throughout a team's performance cycle. This model serves to address recent calls in the literature for more fluid, longitudinal examinations of trust, both by delineating the mechanisms through which trust evolves over time, and by serving as a foundation for future research to empirically examine trust and related team variables across multiple points in time. Further, understanding the unique mechanisms through which trust influences performance and performance influences trust, while overlaying these processes across teams' action and transition phases, will allow for more precise, more effective team interventions to ultimately be developed.

References

- Barczak, G., Lassk, F., & Mulki, J. (2010). Antecedents of team creativity: An examination of team emotional intelligence, team trust and collaborative culture. *Creativity and Innovation Management*, 19(4), 332–345.
- Blau, P. M. (1964). *Exchange and power in social life*. New York: John Wiley & Sons, Inc.
- Boies, K., Lvina, E., & Martens, M. L. (2011). Shared leadership and team performance in a business strategy simulation. *Journal of Personnel Psychology*, 9(4), 195–202.
- Bradley, B. H., Klotz, A. C., Postlethwaite, B. E., & Brown, K. G. (2013). Ready to rumble: How team personality composition and task conflict interact to improve performance. *Journal of Applied Psychology*, 98(2), 385–392.
- Breuer, C., Hüffmeier, J., & Hertel, G. (2016, May 26). Does trust matter more in virtual teams? A meta-analysis of trust and team effectiveness considering virtuality and documentation as moderators. *Journal of Applied Psychology*. Advance online publication <http://dx.doi.org/10.1037/apl0000113>.
- Brodt, S. E., & Neville, L. (2013). Repairing trust to preserve balance: A balance-theoretic approach to trust breach and repair in groups. *Negotiation and Conflict Management Research*, 6(1), 49–65.
- Burke, C. S., Sims, D. E., Lazzara, E. H., & Salas, E. (2007). Trust in leadership: A multi-level review and integration. *The Leadership Quarterly*, 18(6), 606–632.
- Burke, C., Stagl, K., Salas, E., Pierce, L., & Kendall, D. (2006). Understanding team adaptation: A conceptual analysis and model. *Journal of Applied Psychology*, 91(6), 1189–1207.
- Casey-Campbell, M., & Martens, M. L. (2009). Sticking it all together: A critical assessment of the group cohesion-performance literature. *International Journal of Management Reviews*, 11(2), 223–246.
- Chattopadhyay, P. (1999). Beyond direct and symmetrical effects: The influence of demographic dissimilarity on organizational citizenship behavior. *Academy of Management Journal*, 42, 273–287.
- Chen, G., Kirkman, B. L., Kanfer, R., Allen, D., & Rosen, B. (2007). A multilevel study of leadership, empowerment, and performance in teams. *Journal of Applied Psychology*, 92(2), 331.
- Colquitt, J. A., LePine, J. A., Piccolo, R. F., Zapata, C. P., & Rich, B. L. (2012). Explaining the justice–performance relationship: Trust as exchange deepener or trust as uncertainty reducer? *Journal of Applied Psychology*, 97(1), 1–15.
- Colquitt, J. A., Scott, B. A., & LePine, J. A. (2007). Trust, trustworthiness, and trust propensity: A meta-analytic test of their unique relationships with risk taking and job performance. *Journal of Applied Psychology*, 92(4), 909–927.
- Costa, A. C. (2003). Work team trust and effectiveness. *Personnel Review*, 32(5), 605–622.
- Costa, A. C., & Anderson, N. (2011). Measuring trust in teams: Development and validation of a multifaceted measure of formative and reflective indicators of team trust. *European Journal of Work and Organizational Psychology*, 20(1), 119–154.
- Crisp, C. B., & Jarvenpaa, S. L. (2013). Swift trust in global virtual teams. *Journal of Personnel Psychology*, 12(1), 45–56.
- Dabos, G. E., & Rousseau, D. M. (2004). Mutuality and reciprocity in the psychological contracts of employees and employers. *Journal of Applied Psychology*, 89(1), 52–72.
- De Dreu, C. K., & Weingart, L. R. (2003). Task versus relationship conflict, team performance, and team member satisfaction: A meta-analysis. *Journal of Applied Psychology*, 88(4), 741–749.
- De Jong, B. A., & Elfring, T. (2010). How does trust affect the performance of ongoing teams? The mediating role of reflexivity, monitoring, and effort. *Academy of Management Journal*, 53(3), 535–549.
- De Jong, B. A., Bijlsma-Frankema, K. M., & Cardinal, L. B. (2014). Stronger than the sum of its parts? The performance implications of peer control combinations in teams. *Organization Science*, 25(6), 1703–1721.
- De Jong, B. A., Dirks, K. T., & Gillespie, N. (2016, April 28). Trust and team performance: A meta-analysis of main effects, moderators, and covariates. *Journal of Applied Psychology*. Advance online publication <http://dx.doi.org/10.1037/apl0000110>.
- DeShon, R. P., Kozlowski, S. W., Schmidt, A. M., Milner, K. R., & Wiechmann, D. (2004). A multiple-goal, multilevel model of feedback effects on the regulation of individual and team performance. *Journal of Applied Psychology*, 89(6), 1035–1056.
- de Wit, F. R. C., Greer, L. L., & Jehn, K. A. (2012). The paradox of intragroup conflict: A meta-analysis. *Journal of Applied Psychology*, 97, 360–390.
- Dirks, K. T. (1999). The effects of interpersonal trust on work group performance. *Journal of Applied Psychology*, 84(3), 445–455.
- Dirks, K. T. (2000). Trust in leadership and team performance: Evidence from NCAA basketball. *Journal of Applied Psychology*, 85(6), 1004–1012.
- Eddy, E. R., Tannenbaum, S. I., & Mathieu, J. E. (2013). Helping teams to help themselves: Comparing two team-led debriefing methods. *Personnel Psychology*, 66(4), 975–1008.
- Feitosa, J., Grossman, R., Kramer, W. S., & Salas, E. (April, 2016). Can trust explain the diversity-performance relationship? A meta-analysis. *Paper presented at the 31st Annual Conference for the Society for Industrial and Organizational Psychology*, Anaheim, CA.
- Fuller, C. M., Marett, K., & Twitchell, D. P. (2012). An examination of deception in virtual teams: Effects of deception on task performance, mutuality, and trust. *IEEE Transactions on Professional Communication*, 55(1), 20–35.
- Fulmer, C. A., & Gelfand, M. J. (2012). At what level (and in whom) we trust: Trust across multiple organizational levels. *Journal of Management*, 38(4), 1167–1230.
- Gear, T. E., Marsh, N. R., & Sergeant, P. (1985). Semi-automated feedback and team behavior. *Human Relations; Studies Towards the Integration of the Social Sciences*, 38(8), 707–721.
- Greitemeyer, T., & Cox, C. (2013). There's no "I" in team: Effects of cooperative video games on cooperative behavior. *European Journal of Social Psychology*, 43(3), 224–228.
- Gully, S. M., Devine, D. J., & Whitney, D. J. (1995). A meta-analysis of cohesion and performance effects of level of analysis and task interdependence. *Small Group Research*, 26(4), 497–520.
- Gully, S. M., Incalcaterra, K. A., Joshi, A., & Beaubien, J. M. (2002). A meta-analysis of team-efficacy, potency, and performance: Interdependence and level of analysis as moderators of observed relationships. *Journal of Applied Psychology*, 87(5), 819–832.
- Hansen, M. H., Morrow, J. L., & Batista, J. C. (2002). The impact of trust on cooperative membership retention, performance, and satisfaction: An exploratory study. *The International Food and Agribusiness Management Review*, 5(1), 41–59.
- Hardin, A. M., Fuller, M. A., & Davison, R. M. (2007). I know I can, but can we? Culture and efficacy beliefs in global virtual teams. *Small Group Research*, 38(1), 130–155.
- Hempel, P. S., Zhang, Z. X., & Tjosvold, D. (2009). Conflict management between and within teams for trusting relationships and performance in China. *Journal of Organizational Behavior*, 30(1), 41–65.
- Ilgel, D. R., Hollenbeck, J. R., Johnson, M., & Jundt, D. (2005). Teams in organizations: From input-process-output models to IMO models. *Annual Review of Psychology*, 56, 517–543.
- Kirkman, B. L., & Rosen, B. (1997). A model of work team empowerment. *Research in Organizational Change and Development*, 10(1), 131–167.
- Kluger, A. N., & DeNisi, A. (1996). The effects of feedback interventions on performance: A historical review, a meta-analysis, and a preliminary feedback intervention theory. *Psychological Bulletin*, 119, 254–284.
- Kozlowski, S. W., & Ilgen, D. R. (2006). Enhancing the effectiveness of work groups and teams. *Psychological Science in the Public Interest*, 7(3), 77–124.
- Kozlowski, S. W., Chao, G. T., Grand, J. A., Braun, M. T., & Kuljanin, G. (2013). Advancing multilevel research design capturing the dynamics of emergence. *Organizational Research Methods*, 16(4), 581–615.

- Kozlowski, S. W., Gully, S. M., Nason, E. R., & Smith, E. M. (1999). Developing adaptive teams: A theory of compilation and performance across levels and time. In D. R. Ilgen, & E. D. Pulakos (Eds.), *The changing nature of work performance: Implications for staffing, personnel actions, and development* (pp. 240–292). San Francisco, CA: Jossey-Bass.
- Kramer, M. R. (2006). *Organisational trust: A reader*. Oxford: Oxford University Press.
- Krishnan, R., Martin, X., & Noorderhaven, N. G. (2006). When does trust matter to alliance performance? *Academy of Management Journal*, 49(5), 894–917.
- Langfred, C. W. (2004). Too much of a good thing? Negative effects of high trust and individual autonomy in self-managing teams. *Academy of Management Journal*, 47(3), 385–399.
- LePine, J. A. (2005). Adaptation of teams in response to unforeseen change: Effects of goal difficulty and team composition in terms of cognitive ability and goal orientation. *Journal of Applied Psychology*, 90(6), 1153–1167.
- LePine, J. A., Piccolo, R. F., Jackson, C. L., Mathieu, J. E., & Saul, J. R. (2008). A meta-analysis of teamwork processes: Tests of a multidimensional model and relationships with team effectiveness criteria. *Personnel Psychology*, 61(2), 273–307.
- Lewicki, R. J., & Bunker, B. B. (1996). Developing and maintaining trust in work relationships. In R. M. Kramer, & T. R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research* (pp. 114–139). Thousand Oaks, CA: Sage.
- Lewicki, R. J., & Polin, B. (2012). The art of the apology: The structure and effectiveness of apologies in trust repair. In R. M. Kramer, & T. L. Pittinsky (Eds.), *Restoring trust in organizations and leaders enduring challenges and emerging answers*. Oxford: Oxford University Press.
- Lewicki, R. J., Tomlinson, E. C., & Gillespie, N. (2006). Models of interpersonal trust development: Theoretical approaches, empirical evidence, and future directions. *Journal of Management*, 32(6), 991–1022.
- Liden, R. C., Wayne, S. J., Jaworski, R. A., & Bennett, N. (2004). Social loafing: A field investigation. *Journal of Management*, 30(2), 285–304.
- Marks, M. A., Mathieu, J. E., & Zaccaro, S. J. (2001). A temporally based framework and taxonomy of team processes. *Academy of Management Review*, 26(3), 356–376.
- Mathieu, J. E., Gilson, L. L., & Ruddy, T. M. (2006). Empowerment and team effectiveness: An empirical test of an integrated model. *Journal of Applied Psychology*, 91(1), 97–108.
- Mathieu, J. E., Kukenberger, M. R., D'Innocenzo, L., & Reilly, G. (2015). Modeling reciprocal team cohesion–performance relationships, as impacted by shared leadership and members' competence. *Journal of Applied Psychology*, 100(3), 713–734.
- Mathieu, J., Maynard, M. T., Rapp, T., & Gilson, L. (2008). Team effectiveness 1997–2007: A review of recent advancements and a glimpse into the future. *Journal of Management*, 34(3), 410–476.
- McGrath, J. E. (1964). *Social psychology: A brief introduction*. New York: Holt, Rinehart & Winston.
- McKinney, E. H., Barker, J. R., Davis, K. J., & Smith, D. (2005). How swift starting action teams get off the ground what United Flight 232 and airline flight crews can tell us about team communication. *Management Communication Quarterly*, 19(2), 198–237.
- Mesmer-Magnus, J. R., & DeChurch, L. A. (2009). Information sharing and team performance: A meta-analysis. *Journal of Applied Psychology*, 94(2), 535–546.
- Mesmer-Magnus, J. R., DeChurch, L. A., Jimenez-Rodriguez, M., Wildman, J., & Shuffer, M. (2011). A meta-analytic investigation of virtuality and information sharing in teams. *Organizational Behavior and Human Decision Processes*, 115(2), 214–225.
- Morrison, E. W., & Robinson, S. L. (1997). When employees feel betrayed: A model of how psychological contract violation develops. *Academy of Management Review*, 22(1), 226–256.
- Naquin, C. E., & Kurtzberg, T. R. (2009). Team negotiation and perceptions of trustworthiness: The whole versus the sum of the parts. *Group Dynamics: Theory, Research, and Practice*, 13(2), 133–150.
- O'Neill, T. A., Allen, N. J., & Hastings, S. E. (2013). Examining the “pros” and “cons” of team iflict: A team-level meta-analysis of task, relationship, and process conflict. *Human Performance*, 26(3), 236–260.
- Palanski, M. E., Kahai, S. S., & Yammarino, F. J. (2011). Team virtues and performance: An examination of transparency, behavioral integrity, and trust. *Journal of Business Ethics*, 99(2), 201–216.
- Parker, A., Gerbasi, A., & Porath, C. L. (2013). The effects of deenergizing ties in organizations and how to manage them. *Organizational Dynamics*, 42, 110–118.
- Passos, A. M., & Caetano, A. (2005). Exploring the effects of intragroup conflict and past performance feedback on team effectiveness. *Journal of Managerial Psychology*, 20(3/4), 231–244.
- Peterson, R. S., & Behfar, K. J. (2003). The dynamic relationship between performance feedback, trust, and conflict in groups: A longitudinal study. *Organizational Behavior and Human Decision Processes*, 92(1), 102–112.
- Rico, R., Sánchez-Manzanares, M., Gil, F., & Gibson, C. (2008). Team implicit coordination processes: A team knowledge-based approach. *Academy of Management Review*, 33(1), 163–184.
- Robinson, S. L. (1996). Trust and breach of the psychological contract. *Administrative Science Quarterly*, 41, 574–599.
- Saavedra, R., Earley, P. C., & Van Dyne, L. (1993). Complex interdependence in task-performing groups. *Journal of Applied Psychology*, 78(1), 61–72.
- Salas, E., Grossman, R., Hughes, A. M., & Coultas, C. W. (2015). Measuring team cohesion observations from the science. *Human Factors: The Journal of the Human Factors and Ergonomics Society*, 57(3), 365–374.
- Salas, E., Sims, D. E., & Burke, C. S. (2005). Is there a “Big Five” in teamwork? *Small Group Research*, 36(5), 555–599.
- Schein, E. H. (1982). The psychological contract. In H. L. Tosi, & W. C. Hamner (Eds.), *Organizational behavior and management: A contingency approach*. New York, NY: John Wiley & Sons Inc.
- Schippers, M. C., Homan, A. C., & Knippenberg, D. (2013). To reflect or not to reflect: Prior team performance as a boundary condition of the effects of reflexivity on learning and final team performance. *Journal of Organizational Behavior*, 34(1), 6–23.
- Schoorman, F. D., Mayer, R. C., & Davis, J. H. (2007). An integrative model of organizational trust: Past, present, and future. *Academy of Management Review*, 32(2), 344–354.
- Serva, M. A., Fuller, M. A., & Mayer, R. C. (2005). The reciprocal nature of trust: A longitudinal study of interacting teams. *Journal of Organizational Behavior*, 26(6), 625–648.
- Smith-Jentsch, K. A., Cannon-Bowers, J. A., Tannenbaum, S. I., & Salas, E. (2008). Guided team self-correction: Impacts on team mental models, processes, and effectiveness. *Small Group Research*, 39, 303–327.
- Snyder, C. R., Lassegard, M., & Ford, C. E. (1986). Distancing after group success and failure: Basking in reflected glory and cutting off reflected failure. *Journal of Personality and Social Psychology*, 51(2), 382–388.
- Staw, B., Sandelands, L., & Dutton, J. (1981). Threat-rigidity effects in organizational behavior: A multi-level analysis. *Administrative Science Quarterly*, 26, 501–524.
- Stoyneva, I., Tzabbar, D., & Tzafrir, S. (2013). Trust as a micro mechanism for building a firm's dynamic capabilities: A behaviorist approach. In D. Gefen, & D. Gefen (Eds.), *Psychology of trust: New research* (pp. 75–94). Hauppauge, NY, US: Nova Science Publishers.
- Tannenbaum, S. I., & Cerasoli, C. P. (2013). Do team and individual debriefs enhance performance? A meta-analysis. *Human Factors*, 55(1), 231–245.
- Thompson, J. D. (1967). *Organizations in action: Social science bases of administrative theory*. New York, NY: McGraw-Hill.
- Tseng, H. W., & Yeh, H. T. (2013). Team members' perceptions of online teamwork learning experiences and building teamwork trust: A qualitative study. *Computers & Education*, 63, 1–9.
- Vashdi, D. R., Bamberger, P. A., & Erez, M. (2013). Can surgical teams ever learn? The role of coordination, complexity, and transitivity in action team learning. *Academy of Management Journal*, 56(4), 945–971.
- Webber, S. S. (2008). Development of cognitive and affective trust in teams a longitudinal study. *Small Group Research*, 39(6), 746–769.
- Weiss, H. M., & Cropanzano, R. (1996). Affective events theory. *Research in Organizational Behavior*, 18, 1–74.
- Wildman, J. L., Shuffer, M. L., Lazzara, E. H., Fiore, S. M., Burke, C. S., Salas, E., & Garven, S. (2012). Trust development in swift starting action teams: A multilevel framework. *Group & Organization Management*, 37(2), 137–170.
- Williams, K. D., & Karau, S. J. (1991). Social loafing and social compensation: The effects of expectations of co-worker performance. *Journal of Personality and Social Psychology*, 61(4), 570–581.
- Young, L., & Daniel, K. (2003). Affective trust in the workplace. *International Journal of Human Resource Management*, 14(1), 139–155.
- Zalesny, M. D., Salas, E., & Prince, C. (1995). Conceptual and measurement issues in coordination: Implications for team behavior and performance. *Research in Personnel and Human Resources Management*, 13, 81–115.
- Zhao, H. A. O., Wayne, S. J., Glibkowski, B. C., & Bravo, J. (2007). The impact of psychological contract breach on work-related outcomes: A meta-analysis. *Personnel Psychology*, 60(3), 647–680.