Trust in Work Teams:

An Integrative Review, Multilevel Model, and Future Directions

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Abstract

This article presents an integrative review of the rapidly growing body of research on trust in work teams. We start by analyzing prominent definitions of trust and their theoretical foundations, followed by different conceptualizations of trust in teams emphasizing its multilevel, dynamic, and emergent nature. We then review the empirical research and its underlying theoretical perspectives concerning the emergence and development of trust in teams. Based on this review, we propose an integrated conceptual framework that organizes the field and can advance knowledge of the multilevel nature of trust in teams. Our conclusion is that trust in teams resides at multiple levels of analysis simultaneously, is subject to factors across levels in organizations, and impacts performance and other relevant outcomes both at the individual and team levels. We argue that research should not only differentiate between interpersonal trust between members from collective trust at the team level, but also emphasize the interplay within and between these levels by considering cross-level influences and dynamics. We conclude by proposing four major directions for future research and three critical methodological recommendations for study designs derived from our review and framework.

Keywords: trust; teams; team performance; emergence; multilevel

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More than four decades of research has unequivocally shown that trust in teams is vital for the effective functioning of work relationships. Trust becomes especially relevant in environments where high interdependence, close cooperation, teamwork, and requirements for flexibility predominate (Salas, Sims, & Burke, 2005). With the expansion of various forms of team-based work, the study of trust in work teams[1] has gained momentum, and considerable research has accumulated particularly at two specific levels of analysis— interpersonal trust between individual members at the individual level and team trust that is shared among members at the team level. Although significant progress has been made in identifying critical factors and outcomes of trust at these levels, research has yet to comprehensively examine the dynamic influences between individuals, the team, and the context within which teams operate, and how these contribute to explain trust in teams. This is important as work teams are inevitably embedded in a multilevel environment with contextual influences affecting the complex workflow arrangements that develop as team members interact over time (Kozlowski & Ilgen, 2006).

The aim of this article is thus to organize and review past work and new developments on trust in teams by taking a multilevel approach that encompasses both individual- and team-level conceptualizations in order to reflect the dynamic and emergent nature of trust in teams. This integration of theory and research across levels enables us to advance an innovative and comprehensive multilevel framework that can serve as a foundation for future theory and research on trust in work teams. Importantly, this framework considers trust in teams residing both at the individual and team levels. It builds on prior

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[1] Consistent with prior team research, we define teams as groups of interdependent individuals who perceive themselves and are perceived by others as social entities (Guzzo & Dickson, 1996).

research findings and theoretical perspectives to develop a multilevel account that reflects the dynamic and reciprocal influences, as well as cross-level effects, all of which impact team performance and other outcomes.

Our systematic review summarizes 125 empirical studies, research papers, and meta-analyses published between 1972 and 2017 across 54 different journals in Organizational Sciences and Applied Psychology, and 16 books. We searched for papers using various search terms, including *trust in teams*, *team trust*, and *trust between team members*, to retrieve journal articles from the Academic Search Complete, Business Source Complete, PsycArticles, Science Direct, Google Scholar, and Research Gate databases. We review and organize trust studies across a wide range of teams, including ongoing (long-cycled) and project (short-term) teams, as well as cross-functional and virtual teams.

Our review thus builds on and extends prior literature in a number of important ways. First, as the first review targeted at trust research on work teams, we analyze prominent definitions of trust and their theoretical foundations in relation to the team context, noting several prominent issues of debate in the literature. Second, we clarify conceptualizations of trust in teams both at the individual and team levels of analysis, highlighting functional similarities and differences as well as the dynamics between these levels. Third, we comprehensively review different theoretical approaches to the emergence and development of trust in teams. Fourth, we propose an integrative, multilevel framework of trust in teams in order to guide and stimulate future research efforts. We do this by critically reviewing and organizing the extant findings in this area, highlighting key multilevel factors affecting trust in teams and its outcomes. Finally, based on our multilevel framework, we conclude by proposing directions for future research and methodological recommendations derived from our review.

Theoretical Foundations of Trust Research in Teams

A multitude of definitions of trust, including trust in teams, can be found in the literature. Previous reviews have extensively discussed these definitions in terms of their divergent meanings and overlapping features (e.g., Costa, Ferrin & Fulmer, in press; Dirks & Ferrin, 2001; Lewicki, Tomlinson, & Gillespie, 2006; Kramer, 1999). While a unified definition remains elusive, scholars researching trust in teams largely recognize trust as a psychological state (Fulmer & Gelfand, 2012) that is influenced by the complex interrelations between expectations, intentions, and dispositions (e.g., Mayer, Davis, & Schoorman, 1995; McAllister, 1995; Rousseau, Sitkin, Burt, & Camerer, 1998). Mayer et al. (1995) and Rousseau et al. (1998) define trust as a willingness to accept vulnerability based on positive expectations of trustworthiness. Here, *positive expectations of trustworthiness* refer to perceptions, beliefs, or expectations about intentions, motivations, and behavior of the trustee(s) (Fulmer & Gelfand, 2012). A *willingness to accept vulnerability* refers to suspension of uncertainty by assuming that another's actions would be beneficial, favorable, or at least not detrimental (Mayer et al., 1995; Möllering, 2006; Robinson, 1996). Other definitions have emphasized trust's cognitive and affective foundations (McAllister, 1995). We discuss these relevant definitions further below.

Integrative model of trust. Although its primary focus is on interpersonal trust between two specific parties, Schoorman, Mayer, and Davis (2007) contend that their integrative model can apply to trust in a group or organization. According to this model, trust is a function of one's propensity to trust people in general together with perceptions of trustworthiness about the specific other(s) in terms of ability, benevolence, and integrity, which then leads to trusting behaviors, i.e., risk-taking in the relationship. In other words, trust is assumed to mediate relations between propensity to trust, trustworthiness perceptions, and trusting behaviors. This model also assumes that trust is dynamic, such that there is a feedback loop from outcomes of trusting behaviors to perceived trustworthiness of the

trustee. Numerous studies have built upon this model to explain differences in trust across work relationships, yet empirical examination of the full model is rare, particularly in teams. One study by Jarvenpaa, Knoll and Leidner (1998) shows that ability, integrity, and benevolence were associated with team trust in global virtual teams. Meta analytical evidence from a range of interpersonal trust studies, while providing strong support for the influences of both trust propensity and trustworthiness perceptions on trust, also reveals their direct effects on a number of outcomes (Colquitt, Scott, & LePine, 2007).

Cognitive and affective trust foundations. According to this model, trust has distinct cognitive and affective foundations (McAllister, 1995). Cognitive-based trust is based on the available knowledge about the trustee's competence, reliability and dependability (Luhmann, 1979). People choose whom they will trust in which respects and under which circumstances, based on what they consider as being evidence of trustworthiness (Lewis & Weigert, 1985). Affective-based trust is based on emotional investments, genuine care, and concern for the welfare of partners, and the belief that these sentiments are reciprocated (Lewis & Weigert, 1985). In work teams, both affective- and cognitive-based trust has been found to increase the ability of team members to work together (Barczak, Lassk, & Mulki, 2010). Further, the two foundations are assumed to reciprocally affect each other, and their qualitative combination is expected to differ across relationships. While there is evidence supporting this two-factor model, research also indicates that cognitive-based trust precedes affective-based trust (McAllister, 1995) and that cognitive-based trust may be more relevant to team performance than affective-based trust (Chua, Ingram, & Morris, 2008; Hempel, Zhang, & Tjosvold, 2009).

Ongoing Debates

In addition to conceptualizations of trust as a psychological state, it should be noted that in behavioral economics and other related fields, research has focused on behavioral

trust. The game literature has extensively examined trust through cooperation and norms of reciprocity (Axelrod, 1984). Games research highlights two important conditions facilitating cooperation between parties: repeated interaction over time (Berg, Dickhaut, & McCabe, 1995), and a history of past cooperative transactions (Buskens, & Weesie, 2000). Games research has been important to understand the role of behavior (e.g., cooperation) in the reciprocal relation with trust. In a team setting, research by Serva, Fuller, and Mayer (2005) shows the importance of tracking not only behaviors, but also trustworthiness perceptions and psychological trust, as the behavior of one team towards another affects how trustworthy that team is perceived, trusted, and the subsequent behaviors towards them.

Within research on psychological trust, ongoing debates highlight the lack of consensus about two aspects of the trust definitions. First, there are different perspectives regarding the role of willingness to accept vulnerability. Rousseau et al. (1998) and Mayer et al. (1995) consider a willingness to be vulnerable an inherent part of any trust relationship, whereas Lewicki et al. (1998) theorize that perceptions of risks and vulnerability are a non-issue when individuals are confident in their positive expectations about the trustee(s). Core to this discussion is the distinction between confidence and trust. Following Luhmann (1988), trust differs from confidence to the extent that trust implies assuming and recognizing that there is something important to be lost, which is not the case for confidence (Johnson-George & Swap, 1982; Zand, 1972). Furthermore, while both trust and confidence can become routine; "If you do not consider alternatives (every morning you leave the house without a weapon!), you are in a situation of confidence. If you choose one action in preference to others in spite of the possibility of being disappointed by the action of others, you define the situation as one of trust" (Luhmann, 1988, p. 97).

Second, there is a disagreement about the differentiation among trust, low trust, and distrust. Lewicki et al. (1998) conceptualize trust and distrust as two distinct constructs,

arguing that although both trust and distrust refer to expectations about future behavior, trust focuses on the possible occurrence of a desirable behavior, whereas distrust focuses on the probable occurrence of an undesirable behavior. Thus, distrust not only creates an unwillingness to accept vulnerability, but enables preventive and defensive actions to be taken. This suggests that there is a qualitative difference between low trust and distrust, and between low distrust and trust, which research has yet to examine systematically (for further discussion see Lewicki et al., 2006). For the most part, research on trust in work teams has overlooked the influences of low trust and distrust on team outcomes both in theorization and empirical investigation. While there is evidence suggesting that trust and distrust both coexist in a given relationship (e.g., Cho, 2005; Benamati, Serva, & Fuller, 2006), a number of other researchers view trust and distrust as the high and low ends of the same construct, equating distrust to low trust (e.g., Schoorman, et al., 2007). According to this perspective, trust and distrust are bipolar opposites of the same construct (e.g. Rotter, 1971). More understanding is needed of the similarities and differences between low trust and distrust in teams.

While these scholarly debates have exerted significant impact on the field, contributing to the growth of trust research across different contexts and levels of analysis, these unresolved controversies also pose challenges to understand the accumulating studies. In addition to the definitional complexities, conceptualizations of trust in teams also require specification from the level of analysis perspective.

Conceptualization of Trust in Teams

Conceptualizations of trust in teams have predominantly focused at two distinct levels of analysis: i) team trust, which resides at the team level and refers to trust collectively shared among team members, and ii) interpersonal trust between team members, which resides at the individual level and refers to the interpersonal dyadic relationships between pairs of members in the team. To a great extent, scholars have assumed that team trust is an

isomorphic construct to interpersonal trust, capturing the same components of positive

expectations and willingness to accept vulnerability and of cognitive- and affective-bases,

with the key difference being that, at the team level, these are assumed to be shared among

team members (cf. Fulmer & Gelfand, 2012). However, trust between team members refers

to trust with the referent of another member in the team at the individual level, and is thus

based on the interpersonal dyadic relationships between pairs of members in the team. By

comparison collective team trust refers to the aggregated perceptions of trust about the team

as a distinct unit or team members as a whole (Fulmer & Gelfand, 2012; Kramer, 1999).

Further, team trust emerges when team members share consensus in their trust in the team. It

thus behooves researchers to demonstrate a sufficient level of within-team consensus, in

addition to averaging the level of trust among team members, as constructs at the team level

are only meaningful when there is a sufficient agreement among members (Kozlowski &

Klein, 2000). Following Mayer et al.'s (1995) and Rousseau et al.'s (1998) definitions, team

trust thus refers to a collective phenomenon that entails generalized expectations of

trustworthiness and the willingness to accept vulnerability to all members (Costa &

Anderson, 2011; De Jong & Elfring, 2010; Langfred, 2004, 2007).

While trust research has originally reflected conceptualizations of collective team

trust based on composition models of shared states among members (e.g., Chan, 1998;

Kozlowski & Klein, 2000), with the growing prevalence of multilevel research scholars have

begun to view trust as an emergent state that evolves based on interpersonal interactions and

group dynamics (e.g., Kiffin-Petersen, 2004; Shamir & Lapidot, 2003). Team emergent states

are "constructs that characterize properties of the team that are typically dynamic in nature

and vary as a function of team context, inputs, processes, and outcomes." (Marks, Mathieu, &

Zaccaro, 2001, p.357). Importantly, the majority of team level constructs emerge through a

combination of compositional and compilation processes characterized both by sharedness

and differences, often meaningful ones, of attributes among team members (Kozlowski & Klein, 2000). Emergence occurs when lower-level elements coalesce and develop coherence and a meaningful pattern such that the emerging higher-level property transcends individual elements (Fulmer & Ostroff, 2016). The challenge is thus not only to distinguish team trust from interpersonal trust between members, but to address the dynamic interconnectedness between these two levels of trust.

In this respect, researchers have started to examine how individual members' trust in each other influence team trust by focusing on interpersonal trust asymmetries (De Jong & Dirks, 2012) and on the degree of consensus in their trust that members in a team develop over time (Fulmer, 2012). To fully understand the interplay across levels, considerations of the impact of team level trust on individual level trust are also needed. The differentiation between collective team trust and trust between team members is important as there is evidence demonstrating that team members may share a high or low level of collective team trust and yet individually maintain different levels of interpersonal trust between them (e.g., De Jong & Dirks, 2012). The strength of relationship between trust and outcomes may also differ depending on the configuration of trust between members at the individual level. De Jong and Dirks (2012) found that team trust positively influences team performance only under conditions of low trust asymmetry between team members. Overall, trust between teams appears to be more difficult to develop as compared to trust between individuals (Song, 2009).

Emergence and Development of Trust in Teams

As an emergent phenomenon, trust in teams involves a continuous social process of sense making, interpreting, signaling and reciprocating (Möllering, 2013). The trust literature encompasses several theoretical perspectives about how trust in teams emerges and develops over time. While development refers to trust building by which the level of trust increases

over time, emergence refers to the process by which team trust forms from interpersonal trust. We sectionalize the different perspectives under the broader headings of *incremental approaches*, *non-incremental approaches*, and *transformational approaches*.

Incremental Approaches

      Social exchange theory. The incremental approaches assume that trust begins at a zero baseline and develops gradually over time (Lewicki et al., 2006). Within these approaches, social exchange theory is the dominant perspective which assumes that relationships evolve over time into trusting, loyal, and mutual commitments (Blau, 1969). Trust research has emphasized the reciprocity between team members to explain the development of interpersonal and team trust through reinforcing cycles where initial experiences of trust play a critical role in subsequent trust development. Two reinforcing cycles have received particular attention: trust and cooperation and trust and monitoring, on which we will return to in our discussion of our multilevel framework. Importantly, these approaches highlight the dynamic nature of trust. Trust can decrease when the reciprocity rule is violated, though perceptions of imbalanced exchanges may be objective or subjective (Ambrose & Schminke, 2003; Aryee, Budhwar, & Chen, 2002). Social exchange theory has been successfully applied in research on trust at the team level (Serva et al., 2005).

      Social information processing theory. Social informational processing theory (Salancik & Pfeffer, 1978) suggests that individuals' perceptions and attitudes are at least partially influenced by the social context in which they are embedded (i.e., their social and information networks). The social context exerts influences through direct construction of meanings and indirect guidance of attention and expectations. Social information processing theory has been used to study interpersonal trust between members (e.g., Lau & Liden, 2008) and can be especially helpful in understanding trust in teams at both individual and team levels of analysis. According to this theory, the context of the team shapes trust

among members at the individual level, and plays a role in facilitating the emergence of trust at the team level, through team members sharing similar information to one another and reaching a consensus in their trust. Research has used the theory on trust in team members in both virtual and face-to-face teams (Hill, Bartol, Tesluk, & Langa, 2009).

Non-Incremental Approaches

These approaches arise from the need to explain research findings of moderate and high levels of initial trust (e.g., Berg, et al., 1995; Costa, Bijlsma-Frankema, De Jong, 2009). McKnight, Cummings, and Chervany (1998) argue that higher levels of initial trust can occur due to an individual's disposition to trust across situations and people (Rotter, 1980). Trust propensity has been shown to be particularly important in initial trust levels when other potential sources of information about trustworthiness are limited (Colquitt et al., 2007), such as in newly formed project teams (van der Werff & Buckley, 2017) and in virtual teams (Jarvenpaa et al., 1998). However, its importance becomes less evident in later stages of team development as individuals gain more knowledge about one another and form their trustworthiness perceptions accordingly (Costa, et al., 2009).

Social categorization. Higher initial trust can also result from cognitive cues arising from group membership, reputations, and stereotypes from the social categorization process (Brewer, 2008; Lewis & Weigert, 1985). Social categorization occurs when individuals group oneself and others into social categories, such as by gender or profession (Turner, 1987; Williams, 2001). The literatures on social identity (Tajfel & Turner, 1986), attraction-similarity (Byrne, 1971), and relational demography (Tsui, Egan, & O'Reilly, 1992) posit that trust develops more naturally and quickly in teams where members have more commonalities and are more comfortable interacting with each other than in teams where members are more diverse. Similarities can serve as a rule for defining the ingroup boundary, and individuals tend to attribute positive characteristics such as cooperativeness and

trustworthiness to ingroup members (Brewer, 2008; Kramer, Shah, & Woener, 1995; Kramer

& Wei, 1999). Support for this view has been provided in studies investigating the effects of

demographic diversity on trust in teams (e.g., Krebs, Hobman, & Bordia, 2006). The

categorization effect is further amplified through strength and salience with which individuals

identify with the group or organization and its members (Kramer, Brewer & Hanna, 1996).

To a great extent, such collective identities can be nurtured through effective collaborative

cultures, leadership and other management practices (Kramer, Hanna, Su, & Wei, 2001).

      Swift-Trust. Meyerson, Weick, and Kramer (1996) developed the concept of 'swift

trust' to explain how temporary teams can enjoy high levels of trust, even in the absence of

the typical trust sources such as familiarity and shared experiences. This notion suggests that

individuals can build trust initially by importing expectations of trust from role-based settings

with which they are familiar. Swift trust provides the necessary initial or early cognitive basis

to interact as if trust were present, but requires verification that the team is able to manage

vulnerabilities and expectations (Zolin, Hinds, Fruchter, & Levitt, 2004). Particularly in

temporary teams whose existence is formed around a common task with a finite life span,

swift trust de-emphasizes the interpersonal dimension (Meyerson et al, 1996). Partial support

for swift trust has been found in virtual teams where initial trust is based on role-based

information processing and disposition to trust before further knowledge about team

members influencing trust (Jarvenpaa et al., 1998; Robert, Dennis, & Hung, 2009). Jarvenpaa

and Leidner (1999) concluded that swift trust can be maintained only so long as the members

communicate enthusiastically.

Transformational Approaches

      The basic assumption of the transformational approaches is that the basis and form of

trust itself transforms over time. Lewicki and Bunker's (1996) transformation model

identifies three types of trust. Calculus-based trust is based on incentives and deterrents for

the trustee to act as expected when relationships are new. Knowledge-based trust is based on prior interactions and emerges when people have sufficient information about the trustee(s) to be able to predict their likely behavior. Identification-based trust is based on identification with the desires and intentions of the trustee(s) and arises among people who share a common identity and similar values. This model presupposes that, although not all work relationships develop fully to the identification stage, effective cooperation is unlikely without knowledge-based trust. Support for the progression from knowledge- to identification-based trust, but not from calculation-based trust, has been found in trust in coworkers and teammates (van der Werff & Buckley, 2017). However, research has yet to adopt the transformational model to examine trust in teams.

To summarize, the three approaches discussed here explain the emergence and development of trust with different process dynamics. Incremental approaches focus on consequences of initial trust and stress the role of the context and reinforcing cycles between trust and behaviors in subsequent trust development, whereas non-incremental approaches focus on the development of initial trust and emphasize individual dispositions and different categorization processes. The transformational approaches address how that trust changes within work relationships over time. In addition to these perspectives, an integrative approach to trust in teams also requires a multilevel understanding of the emergence of trust and its dynamic nature.

A Multilevel Framework for Trust in Work Teams

Drawing on multilevel and team emergent models (Kozlowski & Klein, 2000; Kozlowski, Chao, Grand, Braun, Kuljanin, 2013; Marks et al., 2001), we propose a multilevel framework in Figure 1 that organizes the extant literature on trust in teams and can serve as a foundation for future research. Our framework acknowledges that trust in teams is multilevel in nature and encompasses both individual-level and team-level processes simultaneously. It

also follows previous research suggesting isomorphism between trust at these two levels (Fulmer & Gelfand, 2012). Furthermore, our framework identifies individual, team, and contextual factors that influence trust in teams. Team research has long recognized the duality of process (emergence) and structure (context) as reciprocal forces (Chen & Kanfer, 2006). Together, these two forces are the fundamental lenses for understanding team level variables as multilevel phenomena (Kozlowski et al, 2013). Moreover, our framework acknowledges the cross-level relationships between these factors and the interplay between interpersonal trust between members and collective team trust.

FIGURE 1 ABOUT HERE

Our framework serves several purposes. First, it provides opportunity for meaningful comparisons between interpersonal trust between members and team trust, and between isomorphic properties of trust at both levels. Second, it acknowledges the cross level relationships among factors affecting trust in teams, and the interaction between interpersonal trust between members and collective team trust. Finally, based on evidence from research, our framework identifies several cross level effects of trust in teams that exert influences on performance and other outcomes. Below we discuss how previous research informs this framework.

Trust in Teams: Within and Between Levels

At the core of our framework, trust in teams encompasses interpersonal trust between team members at the individual level and team trust at the team level. Although, as an emergent state, team trust is assumed to be initially shaped by interpersonal trust between members at the individual level, over time trust at both levels will reciprocally influence team member interaction (cf. Marks et al., 2001). Therefore, our framework considers trust in teams occurring simultaneously at the individual and team levels which involve parallel direct and indirect relationships within each level, as well as relationships that transverse

between levels. These cross-level relationships reflects both "bottom up" and "top down"
processes through which individual members influence their team and the team influences
their members, respectively (Chen & Kanfer, 2006).

Drawing on the integrative model of trust (Mayer et al., 1995) and social exchange
theory, our framework further indicates that trust develops through its manifestation on
behavior (e.g., cooperation and monitoring). This generates reinforcing cycles in which the
outcome of trust behaviors will reciprocally influence trust at both the individual and team
levels. These reinforcing cycles are consistent with the transformational perspectives that
trust is dynamic and evolves over time through repeated interactions and history of seeing
that trust honored or violated (cf. Lewicki et al., 2006). This dynamic pattern is represented
by the expanded arrows in Figure 1, which may differ in instances where teams require more
or less interaction to accomplish their goals. The two reinforcing cycles warrant further
attention: trust and cooperation and trust and monitoring.

Trust and cooperation. The pioneering work of Zand (1972) demonstrated that
members who experienced high trust initially were more willing to share information and
accept influences from team members, which in turn sustained the initial high trust, as
compared to members who experienced low trust initially and subsequently engaged in
behaviors that reinforced the initial low trust. Simons and Peterson (2000) found that initial
low team trust can lead to relationship conflict between individual team members, which can
increase defensiveness and withholding of information that further lowers the level of
collective team trust. Further empirical evidence by Munns (1995) in the context of
construction projects and by Chowdhury (2005) in complex projects also supported this self-
reinforcing cycle in trust development, showing that cooperation was anticipated due to trust
between members, which then was reciprocated with further cooperation validating that trust.
This reinforcing cycle underscores the view that trust in teams is a longitudinal process

whereby collective team trust is influenced by interpersonal trust between its members and vice-versa.

      Trust and monitoring. The dominant perspective subscribed by Mayer et al. (1995) suggests that monitoring implies an absence of trust: "Such behaviors as monitoring are examples of a lack of risk taking in relationship." (p. 729), which is consistent with views of trust as morally decent where parties choose not to require compliance (Baier, 1986). Alternatively, other scholars argue that trust and monitoring can be positively reinforcing (e.g., Das & Teng, 1998; De Jong & Elfring, 2010; McAllister, 1995). Particularly, when there is little (or no information) about the trustee(s), monitoring behavior can increase the speed and reliability with which partners learn about each other's actions, which can ultimately lead to trust (Ferrin, Bligh, & Kohles, 2007). Research findings of the trust-monitoring relationship are mixed, especially in team studies (e.g., Bijlsma-Frankema, De Jong, & Van de Bunt, 2008; Langfred, 2004). Also relevant is the finding that trust and monitoring can relate differently at different stages of a project, i.e., negatively at the start, but positively both in the middle and at the end of the project (Costa et al., 2009). Given that monitoring is known to dominate the action phases of team goal accomplishment (Marks, et al., 2001; McIntyre & Salas, 1995), a number of backing up behaviors can follow such as helping other team members perform their role or to keep their performance on track (Porter et al., 2003). In this sense, when monitoring is enacted and perceived to support team members to succeed, it can be beneficial to trust. Following Ferrin et al. (2007), these results draw attention to how monitoring is perceived and whether it is expected. When monitoring is perceived as being inherent to the task and thus expected (e.g., flight attendant teams; Marks & Panzer, 2004), it is likely that team members will not interpret monitoring as a lack of trust, but rather as a way to support others to perform their tasks, keep on track, and achieve common goals (McAllister, 1995). Conversely, when monitoring is not expected

(e.g., self-managing teams; Langfred, 2004), team members are more likely to interpret it as a lack of trust. In both cases the evidence points to the importance of considering the context when analyzing trust in teams and its relationships with other factors.

<center>**Multilevel Factors Affecting Trust in Work Teams**</center>

Drawing on social exchange theory and the social categorization perspectives, the first part of our framework in Figure 1 shows that a) individual level factors directly affect trust between team members and indirectly influence team trust; b) team level factors directly influence team trust and interpersonal trust between members. Based on social information processing theory and on recent meta-analytical evidence it is noteworthy that contextual factors are included among the direct and indirect determinants of both levels of trust in teams (see Breuer, Hüffmeier, & Hertel, 2016; De Jong, Dirks & Gillespie, 2016). In the sections that follow we organize and discuss empirical findings from the existing research in support of our framework.

Individual level factors. Research on trust in teams has identified factors associated with the trustor, the trustee(s), and the interpersonal relationship between trustor and trustee(s). Individual level factors can influence trust in teams through two different mechanisms. The first mechanism is based on the emergent state theory (Marks et al., 2001) and stipulates that individual level factors influence interpersonal trust between team members, which then through interaction, will lead to the emergence of shared trust at the team level (Shamir & Lapidot, 2003; McKnight et al., 1998). The second mechanism is based on composition models of aggregation (Kozlowski & Klein, 2000), which suggests that individual level factors can aggregate to form a team level variable and then directly influence team trust. There are two general types of aggregation processes (Kozlowski & Klein, 2000). One process consists of averaging team members' attributes such as knowledge, skills, abilities, and other characteristics (KSAOs) to represent a higher-level

construct such as team composition regarding human capital. The other process consists of establishing the variance of configural team properties, including individual characteristics such as age, skills or personality traits, which when aggregated reflect team demographic diversity or functional diversity at the team level. Both mechanisms are incorporated into our framework shown in Figure 1.

Trustor characteristics. One factor that has received particular attention is propensity to trust. People differ in their propensity to trust others in general due to different life experiences, personality types, cultural backgrounds, education, and several other socioeconomic factors (Mayer et al., 1995). Cross-cultural research has also shown that mean levels of propensity to trust vary greatly from country to country (Delhey & Newton, 2005), with individuals in collectivistic societies showing lower levels than in individualistic societies (Huff & Kelley, 2003). Yuki, Maddux, Brewer, and Takemura (2005) showed that such differences may relate to whether propensity to trust others is based more on a categorical differentiation between ingroup and outgroup nationality, or more on the likelihood of relationship connections among individuals. In work teams, individual propensity to trust has been shown to be particularly important in explaining variations in initial trust levels in newly formed project teams (van der Werff & Buckley, 2017) and in virtual teams (Jarvenpaa et al., 1998).

Trustee characteristics. Trustee characteristics are among the most studied determinants of trust (see Dirks & Ferrin, 2001). Three trustee factors have been identified by Mayer et al. (1995) as core trustworthiness dimensions: ability, benevolence, and integrity. Ability and integrity showed the greatest influence on trust in teams in the case of temporary work teams (Aubert & Kelsey, 2003; Jarvenpaa et al., 1998; Robert et al., 2009) supporting the argument that benevolence is less important to short-term performance teams (Meyerson et al., 1996). Mayer et al. (1995) argue that judgments of ability and integrity can be formed

relatively quickly in the course of a relationship, while benevolence judgments will take more time as it requires the development of emotional attachment. Consistent with this point, Levin and Cross (2004) found that benevolence was an important source of trust in knowledge transfer in teams with strong ties.

Interpersonal relationships. Consistent with the theories of social exchange and social categorization, both past history and degree of similarity have been shown to affect how relationships between team members are established (Kramer, 2010; Mayer et al., 1995). While examining the antecedents of cognitive- and affective-based trust among managers in their professional networks, Chua et al. (2008) found that cognitive- and affective-based trust are associated with different types of interpersonal relationships: affective-based is positively related to friendship and career guidance ties, and negatively related to economic ties; whereas cognitive-based trust is positively related to ties that provide task advice, economic assistance, or career guidance. Guanxi between team members (being fellow members of a common group such as family, school, and of the same geographical origin) was found to be particularly relevant to the development of cognitive-based trust in teams (Chou, Cheng, Huang & Cheng, 2006). With a focus on how trustworthiness perceptions develop between team members, Levin, Whitener, and Cross (2006) found that these were predicted by demographic similarity in newer relationships, by trustworthy behaviors in more developed relationships, and by shared perspectives in the most established relationships. This is also in line with the argument that the level of knowledge and identification with the team influence individual perceptions of trustworthiness and beliefs about consequences of trust, which then affect behavior decisions (Kramer, et al., 2001).

Team level factors. The literature has identified several factors that influence trust at the team level. These include both social- and structural-oriented inputs (e.g., Chen & Tesluk, 2012), such as team composition, tie structure, task structure, degree of virtuality, team

leadership, and team climate. Research has shown that several team level factors have a direct influence on team trust and trust between members (e.g., team composition) and others have additional moderating effects on the relation between individual factors and trust between members and between trust and team level outcomes (e.g., task interdependence).

Team composition. Consistent with social categorization theories, research studying the effects of demographic diversity on trust in teams in terms of nationality (Curşeu & Schruijer, 2010; Zolin, et al., 2004), age (Williams, 2016), and functional background (Chowdhury, 2005) found demographic diversity to be negatively associated with team trust and perceptions of trustworthiness between members. Similarly, in cross-functional teams, Newell, David, and Chand (2007) reported that an "us vs. them" attitude often prevails in such teams which is detrimental to team trust. Cross-functional teams are assumed to have more difficulty in developing trust between members due to unshared and sometimes conflicting goals, reporting relationships, and perceived differences in professional backgrounds (Jasswalla & Sashittal, 1999). However, research has also demonstrated that it is primarily during the initial team formation that diversity can hinder trust development (Webber & Donahue, 2001). Thus, strategies can be implemented to mitigate some of the barriers to trust development, including a careful selection of the team members designed to increase perceptions of similarity (Webber & Donahue, 2001) or creating trust-building opportunities to create interpersonal relationships between diverse team members (Newell et al., 2007). In line with multilevel theories, this suggests that interaction and reciprocity between members constitute reinforcing cycles through which trust builds at the team level.

Relationship (tie) structure. Trust in teams also depends upon the existing relationships among members as a whole and their configuration within structure of the team. Balkundi and Harrison's (2006) meta-analysis shows that teams with strong and dense ties not only have higher levels of trust, but also attain their goals more effectively, as compared

to teams with weak and sparse ties. In teams with strong ties, members will be more willing to trust one another because they expect that the trust will be reciprocated (Buskens, & Weesie, 2000; Kramer et al., 2001). Indeed, Chen, Chang, and Hung (2008) found that interpersonal ties and mutual trust within R&D project teams were positively related. Looking at the different trust bases, Levin and Cross (2004) found that tie strength had a significant and positive impact on benevolence- and competence-based trust in teams, which in turn influenced team knowledge exchange. Even after being dormant or inactive for several years, such strong ties when reactivated can display moderately high levels of trust and lead to the receipt of useful knowledge and novel insights for subsequent projects (Levin, Walter & Murnighan, 2011).

Level of task interdependence. The degree to which team members rely on one another and must interact in order for the team to accomplish its goals (Guzzo & Shea, 1992) has been found to have a direct effect on team trust (e.g., De Jong & Dirks, 2012) and on trust between team members (e.g., Edmondson, 2003). At the same time, the level of task interdependence has been shown to positively moderate the relation between team level trust and team outcomes such as team performance (e.g., De Jong et al., 2016), knowledge sharing (Szulanski, Cappetta, & Jensen, 2004), and team effectiveness (Breuer et al., 2016). When task interdependence is high between members, teamwork interactions become critical to accomplish team goals, and trust being a facilitator of such interactions has a more influential role in achieving those goals (De Jong et al., 2016). Conversely, in situations where task interdependence is low, team members work relatively independently and the team has lower requirements for interaction and collaboration, thus trust plays a less significant role in accomplishing team goals (Jarvenpaa, Shaw, & Staples, 2004).

Degree of virtuality. In general, virtual teams have been shown to take longer to develop trust than face-to-face teams at the start of projects because they requires more time

for members to exchange social information (Wilson, Straus, & McEvily, 2006). However, over time, trust in computer-mediated teams can reach levels comparable to those in face-to-face teams. Looking at different trust foundations, Kirkman, Rosen, Gibson, Tesluk, and McPherson (2002) found that trust in virtual teams grows through team member reliability, consistency, and responsiveness when dealing with teammates. Research has further shown that the detrimental effect of computer-mediated communication on trust in teams can be ameliorated if members employ additional communication strategies including taking initiative, expressing enthusiasm, responding in a timely and meaningful manner, increasing feedback, increasing perceptions of virtual co-presence, providing transparent information, focusing on tasks rather than on procedures, and exchanging information about team processes (Alge, Wiethoff, & Klein, 2003; Altschuller & Benbunan-Fich, 2010; DeRosa, Hantula, Kock, & D'Arcy, 2004; Geister, Konradt, & Hertel, 2006; Jarvenpaa & Leidner, 1999; Palanski, Kahai, & Yammarino, 2011; Zornoza, Orengo & Peñarroja, 2009).

Team leadership. Leaders play a primary role in establishing and developing trust in teams (Dirks & Ferrin, 2002). Leaders who engage in high-quality leader-member-exchanges (LMX) are perceived as being more trustworthy, approachable, and providing greater role clarity to subordinates (Graen & Uhl-Bien, 1995). Evidence by Carmeli, Tishler, and Edmondson (2011) suggests that team trust can be nurtured by leadership behaviors that are relationally driven, such as helping, being willing to convey openness, and being emotional accessible, which builds a foundation for high-quality relationships among team members. Research also reveals that leaders' reliance on the team and disclosure of relevant information builds the team's expertise and enhances similar behaviors between team members, which in turn increase team knowledge sharing (Lee, Gillespie, Mann, & Wearing, 2010). Leaders who convey a collective message have also been found to increase team trust among members (Joshi, Lazarova, & Liao, 2009).

***Team climate*.** Several narrative reviews and meta-analytical integrations conceptualize team trust as a sub-facet of overall team climate (e.g., Edmondson, 1999; Hülsheger, Anderson, & Salgado, 2009). Evidence from research on top management teams (TMT) has demonstrated that team climates characterized by interpersonal trust and mutual respect make members believe that the team will not rebuke, marginalize, or penalize them for speaking up or for challenging prevailing opinion (Edmondson, 1999). Such climates then enable reflexivity and learning from failure (Edmondson & Moingeon, 1998). In virtual teams, a high trust climate can compensate for the lack of informational cues in computer-mediated communication (Zornoza et al., 2009). Conceptualizing trust as part of a wider nomological network of team climate allows researchers to situate trust in relation to other concomitant dimensions important for team functioning and ongoing viability.

Contextual factors. The context of a team comprises the environment or larger social system in which the team operates and influences the relationship between team inputs, process/emergent states, and outcomes (Ilgen, Hollenbeck, Johnson, & Jundt, 2005; Kozlowski & Bell, 2003). For work teams, the broader organizational context in which teams operate bears particular relevance in the understanding of how trust emerges and develops in team contexts. According to social information processing theories, individuals continually observe the environment when they consider whether or not to trust their team members (Creed & Miles, 1996). Several studies have highlighted the importance of different contextual features such as organizational structure, HRM practices, and organizational culture and climate.

***Organizational structure*.** The degree of centralized or decentralized decision-making within the organization impacts the level of trust within and between teams (Hardin, 1996). In the context of project marketing, Moorman, Deshpande, and Zaltman (1993) found that highly formal structures were perceived as less conducive to trust at interpersonal and team

levels than more participative structures. This is consistent with the view that structures

characterized by centralization of power where formal rules and regulations predominate

decision-making and by rigid communications and hierarchical channels will constrain

interpersonal interaction that is necessary for the emergence of trust across levels (Creed &

Miles, 1996). By contrast, organic structures, because of their flexibility and reliance on

informal networks and face-to-face communication, tend to make interpersonal interactions

more relevant to the organizational functioning, thus increasing the importance of team trust

and trust between individuals in those interactions (Ambrose & Schminke, 2003).

Human Resource Management (HRM) practices. HRM practices and in particular

how employees perceive such practices have effects on different job attitudes and behaviors

across levels of the organization. Most relevant to trust in work teams has been high

performance or high commitment practices that enhance employees' motivation to perform

and opportunities to participate (Whitener, 1997). For example, having a fair and motivating

reward system is important for trust in work teams (Hertel, Geister, & Konradt, 2005). Team-

based rewards and incentives, although important towards the development of trust within

teams, can also lead to de-motivation particularly for high performing team members

(DeMatteo, Eby, & Sundstrom, 1998). In virtual teams, Hertel, Konradt and Orlikowski

(2004) found that when rewards are *both* individual- and team-based, team members are more

likely to be motivated and feel responsible for their personal contribution to the team's

success. In addition, HRM practices that facilitate employee autonomy to set up cross-

functional team projects increase trust between members (Söderlund & Bredin, 2006) and

foster the development of personal networks and communities of practice, which further

increase trust within and between project teams (Ancona, Bresman, & Kaeufer, 2002; Collins

& Clark, 2003). However, empirical evidence in this regard is still very limited and more

research is needed to clarify the extent to which practices such as recruitment and selection, as well as performance and reward management influence trust in teams.

     Organizational culture and climate. In terms of culture, shared assumptions and beliefs about the organization including ethical values (Li, Bai, & Xi, 2012) and corporate social responsibility (Bhattacharya, Korschun, & Sen, 2009) have been found to facilitate trust in teams. Collaborative cultures have been shown to be positively associated with trust between team members. As individuals are more willing to cooperate, share information, offer differing viewpoints, and openly discuss problems, these behaviors lead to higher trust (Barczak et al., 2010). In such cultures, members in high trust teams perceive each other to have strong functional as well as interpersonal capabilities, which can create a feeling that the team can jointly make decisions and share ideas without fear of criticism (Edmondson, 1999).

     In relation to organizational climate, Chen and Huang (2007) found that innovative and cooperative climates exert its benefits through trust, communication, and coordination behaviors among different individuals and teams in the organization. Similarly, Butler (1999) found that a climate of trust was related to information shared between top managers in their teams. More specifically, in an organizational climate based on trust, coordination and control can be accomplished through empowerment, participation, and interpersonal relations that are supportive, cooperative, and trusting in nature (Patterson et al., 2005).

Outcomes of Trust in Teams

     Trust in teams is not only influenced by multilevel factors but also has an impact on outcomes across different levels. Building on recent cross-level research in this area (e.g., Brown, Crossley, & Robinson, 2014; De Jong & Dirks, 2012) and consistent with multilevel approaches to team phenomena, the final part of our framework shows that trust in teams will directly affect individual and team level outcomes.

Individual level outcomes. Trust between team members has been found to have generally positive effects on general outcomes such as job satisfaction and loyalty to the organization (Matzler & Renzl, 2007), as well as open communication and knowledge sharing between members (Edmondson, 2004), satisfaction with the team (Chou, et al., 2008), proactive idea implementation and problem solving (Parker, Williams, & Turner, 2006), and team performance (Erdem & Ozen, 2003). In addition to exerting their effects through trust, some of the individual level factors, such as team member abilities and relationship history, can be expected to directly influence individual attitudes and performance (Colquitt, et al., 2007).

Team trust has also been found to exert cross-level effects to positively influence attitudes and behaviors at the individual level, such as job satisfaction (Braun, Peus, Weisweiler, & Frey, 2013), and organizational commitment, as well as lower job stress (Costa, Roe, & Taillieu, 2001).

Team level outcomes. A recent meta-analysis has confirmed that the relationship between team trust and team performance is positive and significant (De Jong et al., 2016). This evidence also revealed that the association between team trust and performance was stronger when task interdependence, authority differentiation, and skill differentiation in teams were higher. These findings suggest that team trust is particularly critical to team performance when team members are sufficiently different from each other and subject to each other's actions. Another recent meta-analysis found that team trust was positively related to team level attitudes such as satisfaction, commitment, and cohesiveness, in addition to team information processing and team performance (Breuer et al., 2016). This evidence likewise revealed that these effects were stronger when the degree of virtuality and task interdependence in teams were high. These results corroborate the findings that team trust is more relevant in virtual team contexts particularly under conditions of high task

interdependence (Jarvenpaa et al., 2004). Team trust has also been found to increase

knowledge sharing within the team and between teams (Szulanski et al., 2004), develop a

climate of psychological safety which induces team learning (Bogenrieder & Nooteboom,

2004; Edmondson, 1999), promotes team OCBs (Hempel et al., 2009; Joshi et al., 2009), and

stimulate learning and innovation within the team and across the organization (Anderson,

Potočnik, Zhou, 2014; Edmondson, 1999; West & Anderson, 1996).

To summarize, research demonstrates that trust in teams is influenced by individual-

and team-level factors, as well as by contextual influences at the organizational level. While

studies support the overall positive effects of trust both at the individual and team levels,

fewer studies have considered how considered how trust between team members affect team

performance and other team outcomes (e.g., Chou et al, 2008), or how team trust might

influence individual attitudes and performance (e.g., Costa et al., 2001). Reflecting these

studies, our framework in Figure 1, includes the cross-level effects of trust in addition to the

same-level effects of trust on outcomes.

Future Research Directions

Our review has highlighted that research on trust in teams has become more

theoretically integrated and empirically advanced, with the last two decades witnessing a

proliferation of studies emphasizing multilevel factors affecting trust and outcomes across

multiple levels of analysis. This not only reflects the increasing importance of teams and

teamwork in organizations, but also the growth in meso-analytical research at the interface

between micro-analytical and macro-analytical approaches. Our review further shows that

trust research is increasingly moving away from single level predictors either at the

individual or the team levels and shifting towards multilevel approaches that afford

considerations of dynamics influences on trust and performance outcomes.

The study of trust in work teams provides a privileged context to gather multilevel insights about factors and outcomes, but also offer a context to examine how trust at different levels influences a number of key processes critical for organizations. Particularly as many economies are moving towards knowledge-based and service-based work, organizations are become increasingly dependent on their capability to create, integrate, share and transfer knowledge between their members (McEvily, Das, & McCabe, 2000). However, as many researchers have noted, sharing knowledge is personal, and it can be difficult when individuals are not motivated to share (e.g., McDermott, 1999). Work teams provide critical settings as individuals working together need to share knowledge and the key enabling factor is trust (Staples & Webster, 2008).

In this section, we discuss potential future directions for research using multilevel approaches to trust in work teams, highlighting four areas as being of particular promise to inform our understanding of how team trust operates and influences key outcomes. In tandem with these directions, we also propose three critical future research design imperatives. Together, they hold the promise to advance team-level trust research in both important, outstanding directions and based upon robust study methodologies and design principles.

Integration of Emergent Trust Theory and Research

While the literature is consistent in the view of trust in teams as a phenomenon that emerges from individual level to the team level over time, the great majority of studies in this review still reflect a cross-sectional approach examining snap shots of a single-level trust as either collective team trust or trust between team members. Fewer studies so far have taken a longitudinal perspective, and it is particularly rare that specific reciprocal interaction exchanges are captured and explained as an unfolding process over time in relation to trust emergence. Indeed, research appears to have moved away from a process-based approach, despite earlier publications attempting to dissect the interaction process of emergence of trust

in teams (e.g., Zand, 1972). Therefore, a promising avenue for future research is to examine the role of backing up behaviors that follow from cooperation and monitoring in order to provide further insight into the role of reinforcing cycles in trust development (Porter et al., 2003) and of other key team processes (e.g., team reflexivity and team effort) which have been found to affect trust in work teams (Carmeli et al., 2012; De Jong & Elfring, 2010).

Another related future research direction is to systematically examine sustained changes or trajectories over time in relation to key trust variables simultaneously (e.g., perceived trustworthiness and trust behaviors). The identification of different upward or downward trust trajectories can be an important way forward in identifying relevant transition moments from one type of trust to another, such as from knowledge-based trust to identification-base trust (Lewicki et al., 2006). Equally important is to also investigate how these trajectories impact team performance outcomes. As we note below, both of these issues requires the use of longitudinal study designs to address these research questions adequately.

Given that conceptualizations of trust in teams are increasingly moving beyond mere aggregation to explore other options (e.g., Fulmer, 2012), researchers should also investigate within-team dispersion of trust among members as a team-level variable. In other words, we suggest that in addition to consensus, research should focus on asymmetries of trust between team members in order to gain a more comprehensive understanding of how trust emerges and functions at the team level. Research on team mental models has generally found that a shared understanding among team members about perceptions, cognitions, and situations enhances team outcomes, and that differences in team performance are partly explained by differences of convergence, or sharedness, of team members' mental models (Healey, Vuori, & Hodgkinson, 2015; Mathieu, Heffner, Goodwin, Salas, & Cannon-Bowers, 2000). This notion is corroborated by findings showing that high asymmetries in trust among team members have negative effects on team performance (De Jong & Dirks, 2012). An additional

future research direction could include examining the effects of asymmetries between team members on a number of trust determinants such as composition variables of team diversity.

Integration of Contextual Factors in Trust Research

We also note that contextual factors both at the team and organizational levels have received relatively little attention (McEvily, Soda, & Tortoriello, 2014). Furthermore, organizational and team boundaries are shifting and becoming fluid. Undoubtedly, individuals will now work in more than one team, and their work has become increasingly virtual (Hertel et al., 2005). Newer forms of teamwork structures are likely to impact how team members interact and how collective trust at the team level develops. Thus, another promising avenue for future research is to examine the role of recent changes in structural aspects of the team and the organizational environment, such as the impact of temporary work and multiple team memberships on the development and emergence of trust in teams.

Potential Dark Sides of Trust in Work Teams

The great majority of trust research so far has emphasized the multiple benefits of trust rather than its shortcomings. The presumption seems to have been that all forms of trust are good, and the more the better. Recent meta-analyses likewise focus on the positive effects of trust on individual and team outcomes (e.g., Breuer et al., 2016; Colquitt et al., 2007). Such positive bias toward trust has also been noted by a number of scholars in the field (Gargiulo & Ertug, 2006; Kramer, 1999), but also more widely among sociologists and economists (e.g., Granovetter, 1985; Wintrobe & Breton, 1986). We likewise acknowledge that team trust may lead to negative consequences. In team settings, shared trust may exert an undue yet power pressure on team members to conform to the group's norms (Baron, Vandello, & Brunsman, 1996). Such teams are especially susceptible to decision biases like "groupthink" because, given the trust climate, members may feel it is the norm to trust each other and not to monitor one another which can be detrimental to team performance

(Langfred, 2004). Considering that in reality some situations may warrant lower levels of

team trust (e.g., Jeffries & Reed, 2000; Langfred, 2004), it may be more appropriate to

consider whether there are optimal levels of trust in given situations rather than simply

aiming for high trust (Lewicki et al., 2006). This view highlights the importance of research

on trust calibration in teams rather than trust enhancement, and suggests that not all aspects of

trust are unconditionally positive. Here, future research is called for opening up what has

remained a Pandora's box of potentially and actually negative aspects of trust in teams, and to

counter the positive bias toward trust that view more trust results in linearly better team

performance outcomes. As Granovetter (1985) pointedly asserted: *'Force and fraud are most

efficiently pursued by teams, and the structure of these teams requires a level of internal trust

– "honor among thieves"'*.

Need for Consolidation of Conceptualizations of Trust

The conceptualization of trust discussed in this review is based on a quasi-isomorphic

view of trust in which the same components and forms can be identified across levels

(Fulmer & Gelfand, 2012). Given the divergent views on the definition of trust,

psychometrically-sound research is sorely needed to examine the relationships among

different definitions and forms to bridge the dissensus. We note that such studies are also

needed at the team level of analysis as there is the possibility that the nature of a construct

and its forms and functions may differ across levels (Chen, Bliese, & Mathieu, 2005). As an

example, future research can investigate the nature of trust and distrust at the team level by

examining the factor structure of team trust for its dimensionality.

In addition, existing measures of trust in teams differ in terms of their perspectives.

Some studies assess trust from the respondent's perspective (e.g., "I trust my team members";

Bijlsma-Frankema et al., 2008), while other studies assess trust from the team's perspective

(e.g., "In this team people can rely on each other"; Costa & Anderson, 2011). Research also

differ in the referent of trust in teams, such as trust in the team as a whole (e.g., Olson, Parayitam, & Bao, 2007) and trust in team members (e.g., Hempel et al., 2009). Polzer, Crisp, Jarvenpaa, and Kim (2006) differentiated between trust in teams and trust in team members to examine interteam trust and intrateam trust. These examples highlight the different possibilities for measuring collective trust at the team level. We recommend that researchers align their measures with their theories and the types of trust in terms of research interest, so that appropriate interpretations of the findings can be drawn.

Future Research Designs Imperatives

In addition to these four directions for future research, there are also three pressing imperatives concerning research designs: the need for longitudinal field designs, the need to meta-analytically integrate the increasing volume of primary studies, and the need to expand cross-level and multi-level designs.

Longitudinal designs. While our framework can be seen as a way forward to test the effects of multilevel factors on trust in teams, team contexts have very complex interactive histories that lead to particular trust dynamics, which have yet to be studied systematically. Teams vary in how they develop and maintain trust depending on their social and contextual pressures (Lount & Pettit, 2012). While such dynamics of trust reflects the reality of trust in organizations, they also challenge existing methods and assumptions for understanding the development of trust in teams. Therefore, a better integration of theory and empirical research is necessary and, in particular, longitudinal studies are highly needed (see Cronin, Weingart, & Todorova, 2011; Langfred, 2007). Such studies afford the examination of trust trajectories such that, depending on individual differences and social-contextual factors, teams may exhibit a fast or slow trust building or trust repair (Fulmer & Gelfand, 2012). Longitudinal studies also provide a more systematic approach to identify critical transition stages of trust within teams and relevant predictors at each stage.

Meta-analyses of primary studies. Echoing calls from past reviews, we note the need for meta-analytical integration of trust research at the team level and between different levels of analysis. Recently, two meta-analysis, one on team trust and team effectiveness, and another on team trust and performance demonstrate that collective trust among team members indeed influences the bottom-line outcomes of the team (Breuer et al., 2016; De Jong et al., 2016). Although progress has been made in this regard, there is still much room for future quantitative integration, in particular concerning different types of individual, team, and contextual influences on team trust. Such meta-analyses can reveal differences regarding trust development and reinforcing cycles between trust and the factors that have been examined to advance both scientific and practitioner knowledge.

Cross-level and multilevel studies. As evident in our review, the multilevel design approaches show considerable promise to move forward our understanding of trust in work teams that by nature is multilevel. Further development of the cross-level literature such as in the areas of trust violation and trust repair will be an important contribution to illuminating the dynamics of team trust. Other models that examine the moderating influences of team trust on relationships at other levels and how team trust can affect outcomes across levels (Fulmer & Gelfand, 2012) can also be considered. For example, collective team trust has been found to influence outcomes at both the team and individual levels (e.g., Costa et al., 2001; Costa, 2003). While considering different cross-level and multilevel relationships, future research needs to be explicit about the levels tested and use the methodology informed by the levels of analysis literature. Further knowledge about how factors and outcomes of team trust across levels relate will provide a more comprehensive view of trust in teams.

Conclusion

Trust in work teams is an exciting area of research that contributes to our understanding about how individuals and teams interact and how teamwork dynamics

influence performance and other effectiveness outcomes. Our review covers a large volume of theoretical and empirical findings from the growing literature base in this topic. The range and variety in research we reviewed clearly show that the development of team trust takes place in a multilevel environment, and is subject to individual, team, and contextual factors. Based on this review, we proposed a multilevel framework that organizes the literature on trust in work teams and highlighted key directions for future research. Given the role that team trust plays in increasingly complex organizations, it is our hope that this review provides an effective and timely integration from which future multilevel research on trust in work teams can further develop and advance.

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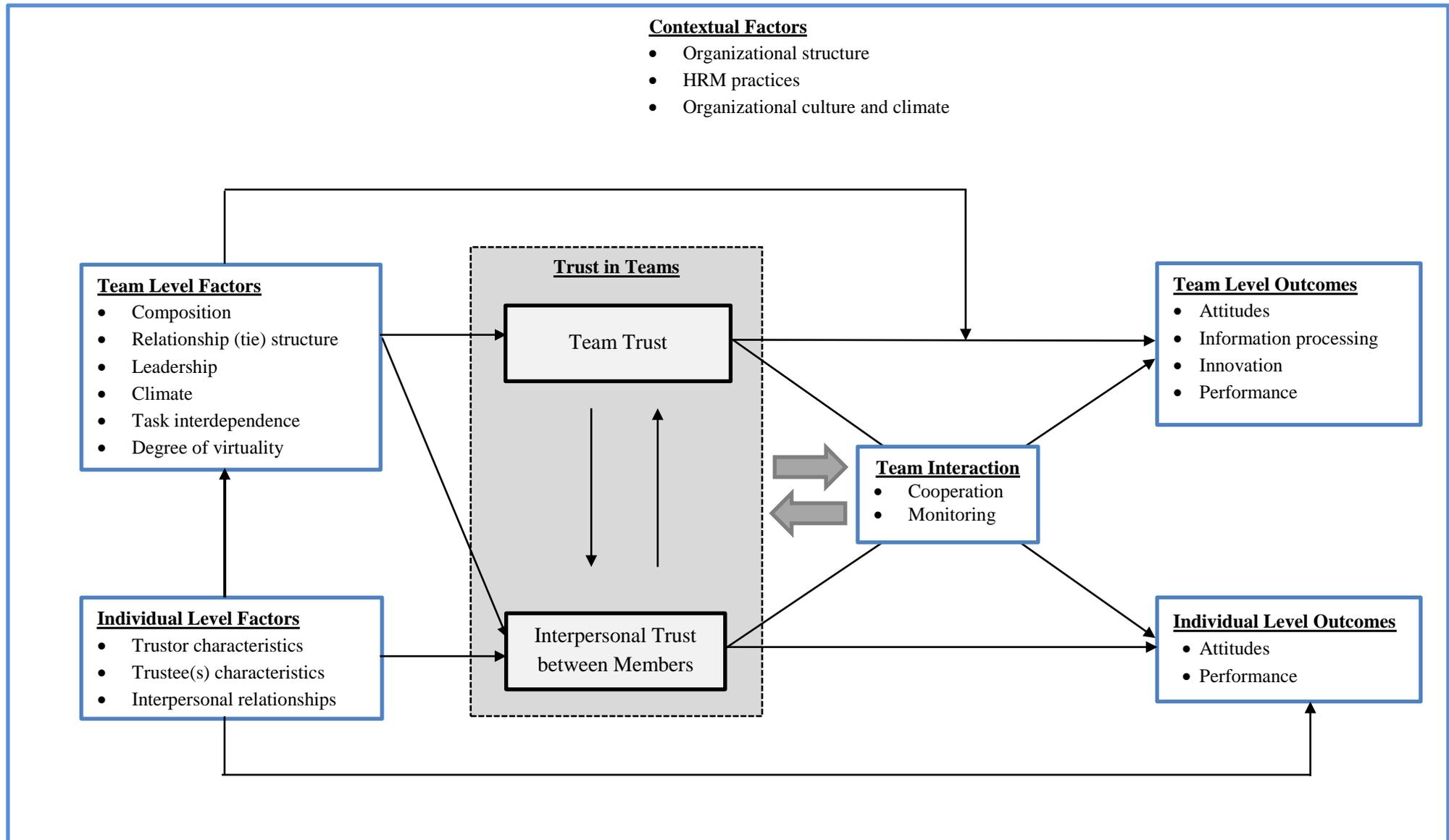
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Figure 1: A Multilevel Model of Trust in Work Teams

Contextual Factors
- Organizational structure
- HRM practices
- Organizational culture and climate

Team Level Factors
- Composition
- Relationship (tie) structure
- Leadership
- Climate
- Task interdependence
- Degree of virtuality

Trust in Teams

Team Trust

Interpersonal Trust between Members

Team Interaction
- Cooperation
- Monitoring

Team Level Outcomes
- Attitudes
- Information processing
- Innovation
- Performance

Individual Level Factors
- Trustor characteristics
- Trustee(s) characteristics
- Interpersonal relationships

Individual Level Outcomes
- Attitudes
- Performance

Note. Variable lists in each box are illustrative rather than comprehensive.