UNDERSTANDING TRUST IN ORGANIZATIONS: A MULTILEVEL PERSPECTIVE

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Chapter 8

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8

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Introduction

To what extent can the phenomenon of trust be accurately understood in the context of an isolated interpersonal relationship? Certainly, trust as a social judgment about the willingness to be vulnerable to the decisions and actions of another is shaped by our direct experiences with a focal individual. Yet, trust is also based on what we learn about a person indirectly through our interactions with others who have also had experiences with the same person and on the surrounding conditions that affect the social dynamics of trust. In the context of organizations, which consist of a web of formal and informal interactions for coordinating efforts, exchanging information, and making decisions (McEvily, Perrone, & Zaheer, 2003; McEvily, Soda, & Tortoriello, 2014; Puranam, 2018; Soda & Zaheer, 2012), an isolated interpersonal relationship would appear to be more of an anomaly than the norm. If correct, we see this as quite striking given that the bulk of organizational research on trust, and dominant models of trust (e.g., Mayer, Davis, & Schoorman, 1995; McAllister, 1995; Rousseau, Sitkin, Burt, & Camerer, 1998), focus exclusively on trust between a specific trustor and trustee who interact directly, while overlooking the influence of the broader network of interactions surrounding a trust dyad (De Jong, Kroon & Schilke, 2017). Indeed, we know of only a handful of empirical studies examining networks and trust

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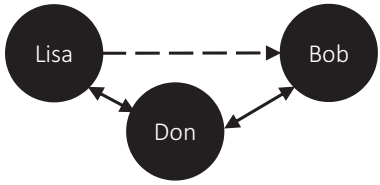
(e.g., Burt & Knez, 1995; Buskens, 1998; Chua, Ingram, & Morris, 2008; Ferrin, Dirks, & Shah, 2006; Gulati, 1995a and 1995b; Gulati & Sytch, 2007; Lau & Liden, 2008; Shazi, Gillespie, & Steen, 2015). Similarly, the chapter by Jones and Shah in this volume is one of the few theoretical treatments of interpersonal trust from a network perspective of which we are aware. While these initial contributions have both confirmed the enhanced explanatory power and clarified the underlying conceptual mechanisms of networks in models of relational trust (e.g., McAllister, 1995; Rousseau, Sitkin, Burt, & Camerer, 1998), the organizational literature has yet to consider the extent to which trust extends beyond dyads.

We argue that a pervasive form of trust occurs among individuals who are not necessarily directly connected. Specifically, we introduce the concept of *network trust*, which we maintain is distinct in terms of its locus of operation, antecedents, and outcomes relative to established forms of trust (e.g., relational, presumptive, swift, institutional, generalized). Central to our notion of network trust is the idea that apart from forming as a result of direct interaction, trust also flows through the *indirect* connections linking individuals to one another and emerges from the inherent design features of the network itself. In this way, network trust is a multilevel phenomenon involving system-level (i.e., network-level) features that condition individual-level actions, which in turn aggregate to produce system-level outcomes (Coleman, 1990). To better illuminate our notion of network trust, we begin with some examples.

The case of the tenure letter: take the situation of a letter of recommendation for a tenure candidate, Beth (see Figure 8.1). Lisa is Beth's senior colleague chairing the tenure review committee. Bob is a letter-writer for Beth. Some of the letters for Beth's case, including Bob's, were controversial. Lisa decided to gather some additional information about the significance of Beth's scholarly impact to help the committee better interpret Bob's letter, so she reached out to her colleague Don for help, who was a co-author of Bob's. In turn, Don asked Bob for some insights and Bob duly obliged. Don relayed the information to Lisa who then passed it on to the committee to inform their deliberations. Even though Lisa and Bob never interacted directly and do not know each other, Lisa trusted the information provided by Bob because of her trust in Don and Don's trust in



Legend
Arrows indicate direction of trust
Solid line arrow = relational trust (direct tie)
Dashed line arrow = secondhand trust (indirect tie)

FIGURE 8.1 Secondhand trust with two degrees of separation.

Bob. While it is possible that as a result of the transmission of information, Lisa and Bob initiate a direct relationship, it is not required for trust to function.

The case of the alumni association: Avi is an alumnus of a leading MBA program. At a professional development event organized by the school, Avi met Barb. Even though Barb graduated four years earlier than Avi and did not have any acquaintances in common, when Avi described his start-up venture aimed at placing artisanal products from India at upscale retailers, Barb offered to introduce Avi to her classmate Claire, who was a senior manager at a luxury department store. When Barb contacted Claire she immediately agreed to the introduction and met with Avi the following week. Despite Barb and Avi being strangers, by virtue of their common affiliation to the school, Barb was comfortable referring Avi to Claire.

The case of social trading: eToro is an open platform for online trading of currencies, stocks, and commodities. Joining the platform is free and requires a nominal deposit of funds to invest. All the traders on the site are visible to everyone, and all traders' investments, transactions, and portfolios are fully transparent. More importantly, for each trader, their daily, weekly, monthly, and yearly financial performance, as well as their portfolio's risk and volatility, is accessible to all. In addition, the platform allows traders to communicate with one another, but only through public posts that everyone can view. Traders can initiate trades on their own, but also choose to 'copy trade' the actions of another trader. To do so, a trader decides the percentage of their funds that they want to allocate to each 'copied' trader. The site then automatically executes all subsequent transactions by the copied trader on the copying trader's account. Copy-trading activity is public and the top 100 highly copied traders are prominently displayed on the platform. Interestingly, in making copy choices traders place more emphasis on the status and social visibility than the financial performance of other traders.

Stepping back from these examples, we make two observations about forms of trust that do not clearly conform to the concept of relational trust. First, we see trust occurring in instances between a trustor and trustee who do not have a direct relationship. In the case of the tenure letter, Lisa's reliance on Bob's private information is based on Don serving as a proxy for Lisa's trust in Bob as opposed to her trust in Bob directly. Likewise, in the case of the alumni association, Claire's willingness to spend time hearing a pitch for new products is based on Barb serving as a proxy for Claire's trust in Avi. The case of the alumni association and the case of the social trading platform also illustrate the propensity for individuals to make themselves vulnerable to the actions and decisions of others based on a premise of trust rather than any personal knowledge of, or experience with, those strangers (e.g., Barb's referral of Avi and traders copying other traders). Second, these two forms of trust occur within the bounds of a network. Thus, in each of the examples trust is not simply a dyadic element, but instead is situated in the larger social space connecting individuals as well as in the shared affiliation to a collective entity (see also Gunia, 2019 for related treatments in negotiations). We maintain that existing conceptualizations do not adequately capture these forms

of trust and we propose that the examples above, as well as other similar instances, fall into a class of trust that we refer to as network trust.

In this chapter, we aim to move beyond the extensive focus on relational trust in the organizational literature by broadening the conceptualization of trust to include its inherent generalizability across a network. In doing so, we aim to broaden the scope of organizational scholarship on trust in order to more fully realize the potential of the intuition that social resources extend beyond dyads and to advance the view that it is not exclusively through direct relationships that the benefits of trust accrue and are realized. That is, trust exists and matters at the level of not only direct relationships, but also indirect connections across, and even lack of connection among members of, a network.

In the remainder of this chapter, we define network trust and identify two separate forms that it takes: *secondhand trust* and *prototrust*. We then ground our definition in core concepts from network theory (reputation, status, and social control) and subsequently proceed to identify the logics (mechanisms, indicators, and contingencies) of the two forms of network trust. Next, we detail the effects of network trust, followed by a discussion of how network trust is distinct from and related to other trust constructs (e.g., relational, presumptive, swift, institutional, generalized). We conclude by exploring how the two forms of network trust can enrich the organizational literature and pave the way for fresh lines of inquiry.

Network Trust Defined

We define network trust as generalized positive expectations about the motives, intentions, and behavior between actors who are not directly connected to each other but are part of a bounded social structure (i.e., the set of formal or informal relations among actors). As opposed to particularized forms of trust (e.g., relational) that are directed at a specific target, network trust is less focused on a single actor and at times extends to multiple members of a bounded social structure. At the same time, our conceptualization of network trust does not encompass the entire network as its point of reference for categorizing whether the members of the network trust one another overall (Gausdal, Svare, & Möllering, 2016). Rather, our notion of network trust resides between the dyadic and network levels as a feature of the social structure within which members are embedded. For the purposes of network trust, it is critical that members of the bounded social system generally agree upon and recognize themselves as part of that system.

Network research points to two approaches to defining the boundary of a social system. The boundary can be defined from the vantage point of the actors themselves, or from the perspective of researchers imposing a boundary constructed to serve a particular analytical or conceptual objective (Laumann, Marsden, & Prensky, 1989). For our purposes, the critical issue is that the members of the social system widely agree on the boundary, such as when they recognize themselves as

members, identify with each other on the basis of shared characteristics, or accept the categorization applied to themselves as meaningful. In this sense, we hew closer to the actor-defined view of defining network boundaries.

We conceptualize network trust as comprised of two forms: second-hand trust and prototrust. *Secondhand trust* refers to the partial spillover of relational trust to socially proximate, indirectly connected actors (e.g., the case of the tenure letter and the case of alumni association), to the nth degree of separation, albeit with decay. The notion of Simmelian (1950) ties – a strong, reciprocal relationship that is supported by a common third party – is apropos in that trust in a common third party serves as a proxy for the disconnected actors' trust in each other. Trust in the third party substitutes for relational trust between the disconnected actors as with, for example, referrals. As Granovetter (1985, p. 490) explained, "Better than the statement that someone is known to be reliable is information from a trusted informant that he has dealt with that individual and found him so." By *prototrust* we mean the latent potential for confident positive expectations to emerge between two actors who are neither directly nor indirectly connected (e.g., in the case of the alumni association, Barb's referral of Avi after meeting him for the first time, and in the case of eToro traders, copying other traders who are strangers). Prototrust enables the members of a bounded social system to activate trust. Prototrust is not trust per se, but rather refers to the conditions giving rise to the emergence of confident positive expectations between any two actors in a network, although it may or may not evolve into relational trust. Even if prototrust does not evolve into relational trust, it still allows two actors to make themselves vulnerable to one another (see Table 8.1).

TABLE 8.1 Relational trust and network trust definitions

Form of trust	*Definition*	*Example*
Relational trust	Trustor's positive expectations about the trustee's intentions based on information from within their direct relationship	The case of the tenure letter: Lisa trusts *Don* (Figure 8.1)
Network trust: secondhand	Generalized positive expectations about the motives, intentions, and behaviors between actors who are not directly connected to each other, but *are indirectly connected* in a bounded social structure	The case of the tenure letter: Lisa trusts *Bob* (Figure 8.1) The case of the alumni association: *Claire* trusts Avi
Network trust: prototrust	Generalized positive expectations about the motives, intentions, and behaviors between actors who are *neither directly nor indirectly* connected to each other in a bounded social structure	The case of the alumni association: *Barb* trusts Avi The case of the social trading platform: eToro

Network Theory and Trust

Whereas trust in the organizational literature is most commonly conceptualized in the context of an isolated individual dyad, network theory considers the relationships among interconnected sets of dyads, with triads being the most basic unit of analysis, and extending to larger and more complex configurations, commonly referred to as social structure. A distinguishing feature of network theory relative to other theories of organization is its focus on *discretionary* relationships, as opposed to those that are formally mandated or assigned by the organization. More specifically, network theory differs from other theories of organization in that the system of discretionary relationships describes and defines social space as a way of differentiating actors both horizontally, in terms of proximity and the flow of valued resources, and vertically, in terms of status and prestige.

By *horizontal network differentiation* we mean the heterogeneity in locations, or positions, occupied by individual actors that defines their access to valued resources flowing through the network. Thus, networks serve as critical channels. Chief among network resources is information, particularly private information, that is not equally accessible to all. Private information flowing through networks includes, but is not limited to: factual knowledge, gossip, second-hand stories, half-truths, distorted facts, and outright lies (Burt & Knez, 1995). Since networks "penetrate irregularly and in differing degrees" (Granovetter, 1985, p. 491), different people hear about, learn about, understand, and believe different things, even polar opposite things, about the same individual. In this respect, what people 'know' about a person, i.e., the *reputation* of the person, can and does vary from complete ignorance to deep insight and, critically, informs the strength and types of social judgments they form, and therefore the very meaning, degree, and valence of trust (or distrust). From a network perspective, therefore, one can see the value of conceptualizing trust in terms of impressions shaped based on private information acquired through indirect channels.

Vertical network differentiation, on the other hand, implies heterogeneity in the respect, or *status*, ascribed to individual actors. When actors are sorted into social positions that carry unequal rewards, obligations, and expectations, a status hierarchy is established. Status refers to the prestige, esteem, and admiration actors enjoy from others (Anderson, Srivastava, Beer, Spataro, & Chatman, 2006). Status is based on both innate attributes, reflecting underlying variations in actors' qualities, and on social judgments that confer privileged positions to actors in a way that is largely independent of their innate qualities. Such judgments are particularly salient under conditions of uncertainty (Podolny, 1993). For our purposes, status is a combination of both innate quality and social judgments. As Gould (2002, p. 1146) argues,

> the reason positions with greater and lesser advantage exist is that judgments about relative quality are socially influenced. Socially influenced judgments amplify underlying differences, so that actors who objectively rank above

> the mean on some abstract quality dimension are over-valued while those ranking below the mean are undervalued – relative to the baseline scenario, in which social influence does not operate. Amplification occurs because observable interactions expressing judgments of quality are also cues to other actors seeking guidance for their own judgments.

From a network perspective, status is related to trust in two ways. First, high-status actors are trusted when their innate qualities or the social judgments about those actors are reflective of their ability, benevolence, and integrity. Second, those judgments are further reinforced as members of a network model their own judgments on those of other network members. Thus, status serves as a proxy for trust when social judgments about an actor's intentions and motives ripple through a network.

Network theory differs from other theories of organization not only with respect to how it differentiates actors horizontally and vertically in a bounded system of discretionary relationships but also in terms of how it defines and describes the governance of such social systems. In networks, governance (i.e., the framework of agreed-upon rules of organization) is emergent, collective, and based on *social control* as opposed to being mandated and based on formal authority. For instance, actors self-select into joining and opting out of networks, and by the same token, members are accepted into, and can be expelled by the members and or organizers of, a network. Likewise, members of a network often internalize the norms, expectations, and codes of conduct to the extent they share a social identity (Mehra, Kilduff, & Brass, 1998) with other members. From a network perspective, there are no legally binding contracts detailing performance duties and obligations, nor is there hierarchical fiat that serves as the ultimate arbiter of divergent preferences and priorities. Instead, order in the context of networks is a matter of socially defined, constructed, and maintained understandings.

Taken together, network theory offers a distinctive lens through which trust can be understood. Most important is the idea that trust is able to operate in the absence of a direct relationship between a trustor and trustee by virtue of the bounded system of discretionary relationships that differentiates actors both horizontally (in terms of reputation) and vertically (in terms of status), as well as the framework of governance (in terms of social control). Using the network mechanisms of reputation, status, and social control, we now explain the logic of secondhand trust and prototrust.

Logics of Network Trust

Secondhand Trust

As noted previously, we define secondhand trust as trust between two actors who are not directly connected but are socially proximate to each other. Secondhand

trust is based on (one or more) intermediate third parties acting as proxies for trust between two disconnected actors. Third parties who broker trust in this way occupy the role of a trust "advisor" (Coleman, 1990; McEvily et al., 2003). More specifically, the two disconnected actors both have a relationship of mutual trust with the advisor. Returning to the case of the tenure letter, secondhand trust exists between Lisa and Bob, who are not directly connected to each other. Lisa trusts the information provided by Bob because she has a relational trust tie with Don and, in turn, Don has one with Bob. Thus, Don is not only a direct connection to Lisa, but also an indirect channel to Bob through which private information flows. The private information includes both the veracity, or reputation, of Bob and the details about Beth that Bob divulges. Critically, it is relationships of mutual, as opposed to unidirectional, relational trust with the advisor that undergird secondhand trust. Clearly, Lisa is vulnerable to misinformation from Don, as is Don from Bob. Yet, Bob is also vulnerable to Don mishandling sensitive information, as is Don to Lisa. Thus, for secondhand trust to function the advisor needs to be trusted by, and trust, both the trustor and trustee.

Drawing on and extending the network bases of trust (McEvily et al., 2003), we now articulate the mechanisms, indicators, and contingencies of secondhand trust (see Table 8.2). As we explain in detail below, secondhand trust is based on the mechanism of transitivity. The primary network indicator for secondhand trust is the open triad. Key contingencies of secondhand trust include tie strength, social distance, and network closure.

Mechanism

Relational trust gives rise to the potential for secondhand trust to emerge through the network process of transitivity. Formally, transitivity refers to a system of relationships among all three actors in a triad (Simmel, 1950; Granovetter, 1973; Krackhardt, 1999). When a focal actor (Don), who is strongly connected to two other actors (Lisa and Bob), facilitates a connection between those two actors,

TABLE 8.2 Logics of network trust

Form of network trust	*Mechanisms*	*Indicators*	*Contingencies*
Secondhand trust	Transitivity	Open triad	Tie strength Social distance Network closure
Prototrust	Social prospecting	(Dis)assortativity - Interest-based - Status-based	Governance veracity Network closure Identity authenticity

transitivity occurs (Aven, 2015). In the context of secondhand trust, transitivity occurs when the relational trust between Don and Lisa, and between Don and Bob, is generative of a secondhand trust tie between Lisa and Bob. Note that the secondhand trust tie between Lisa and Bob is of a different kind than those between Lisa and Don and between Don and Bob. Rather than a relationship of direct mutual trust with each other, Lisa and Bob have an indirect, secondhand tie to one another through Don. The secondhand tie has the latent potential to evolve into a direct relationship between Lisa and Bob,[1] although that is not necessary for secondhand trust to occur.

Indicators

Secondhand trust is most directly observable in a system of triadic relationships; specifically, an 'open' triad (Granovetter, 1973; Burt, 1992) in which two of the actors are not directly connected to each other, but are connected to the same advisor with reciprocal trust ties.[2] For instance, in Figure 8.1, the Lisa–Don–Bob triad is open in the sense that Lisa and Bob are only indirectly connected through Don. The structural configuration of an open triad by itself is necessary, but not sufficient to capture secondhand trust. In addition, the conditions giving rise to the need for trust – i.e., risk and interdependence (Rousseau et al., 1998) – are also required. Risk is inherent in the structural configuration. Interdependence, however, is likely to vary across open triads and needs to be activated by one or both of the disconnected parties. Secondhand trust may also be observable in open systems of relationships beyond triads, such as quads and larger.

Contingencies

The incidence and intensity of secondhand trust are amplified (or diminished) by features of the first-order ties (e.g., between Lisa and Don, and Don and Bob) and the configuration of the network surrounding the secondhand trust triad (i.e., trustor, trustee, and advisor). Not all first-order ties and network configurations are equally potent in enabling secondhand trust.

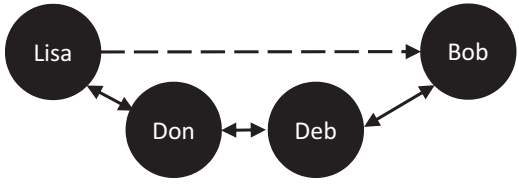
Tie strength. First-order tie strength – comprised of the frequency and duration of interaction, expressiveness, and reciprocation (Casciaro & Lobo, 2008; Granovetter, 1973; Krackhardt, 1990) – will act as a catalyst (Tortoriello, McEvily,

1 We note that the formation of such a direct relational trust tie is consistent with the core prediction of structural balance theory, whereby actors are motivated to eliminate strain or tension resulting from a triadic system of relationships of inconsistent valence (Cartwright & Harary, 1956; Heider, 1946, 1958; Hummon & Doreian, 2003).

2 For a triad to serve as an indicator of secondhand trust, both the secondhand trustor (Lisa in Figure 8.1) and the secondhand trustee (Bob) need to have positive and reciprocal relations of trust with the advisor (Don).

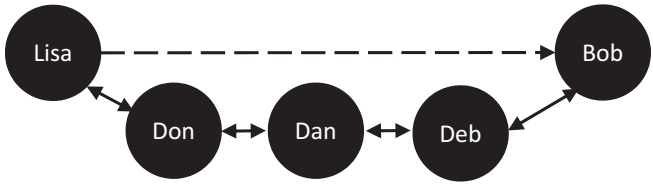
& Krackhardt, 2015) for secondhand trust. The stronger the trust in the first-order ties, the greater the confidence in and willingness to rely on the judgment of the trust advisor (Don). When both first-order ties are strong, the potential for secondhand trust is the greatest. However, if one first-order tie is weak, the stronger tie may compensate up to a point, but only to a limited degree and secondhand trust is less likely. Thus, secondhand trust is not simply a multiplicative function of first-order tie strength.

Social distance. The logic of secondhand trust extends beyond two degrees of separation, e.g., beyond a friend of a friend (Watts & Strogatz, 1998). We believe, however, that secondhand trust will decay rapidly with increasing social distance in terms of the number of intermediaries on the shortest path between a potential trustor and trustee. As the number of intermediaries increases, the trustor and trustee increasingly rely on actors to whom one or both are not directly connected. For instance, as shown in Figure 8.2, if only Lisa is directly connected to Don and Bob is only directly connected to Deb, who in turn is directly connected to Don, Lisa and Bob are now three degrees of separation from each other as opposed to the two degrees separating Lisa and Bob in Figure 8.1. As a result, Don is able to vouch for Lisa and Deb, but not Bob, while Deb is able to vouch for Bob and Don, but not Lisa. Thus, neither trust advisor (Don and Deb) is able to vouch for both the secondhand trustor (Lisa) and secondhand trustee (Bob). Even so, both the trustor and trustee have direct relationships with one of the two trust brokers, which is why there continues to be the potential for secondhand trust. Further extending secondhand trust to four degrees of separation, involving three trust advisors (e.g., Don to Dan to Deb in Figure 8.3), one of whom (Dan) neither the secondhand trustor nor secondhand trustee is directly connected to, further diminishes the prospects for secondhand trust due to the limited veracity of information accessed and the heightened risks of the trustor and trustee relying on the referral of a stranger. That is, Dan is able to vouch for neither Lisa nor Bob since he does not have a direct relationship with either.



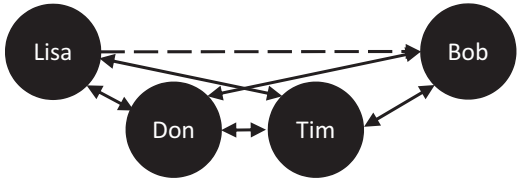
Legend
Arrows indicate direction of trust
Solid line arrow = relational trust (direct tie)
Dashed line arrow = secondhand trust (indirect tie)

FIGURE 8.2 Secondhand trust with three degrees of separation.



Legend
Arrows indicate direction of trust
Solid line arrow = relational trust (direct tie)
Dashed line arrow = secondhand trust (indirect tie)

FIGURE 8.3 Secondhand trust with four degrees of separation.



Legend
Arrows indicate direction of trust
Solid line arrow = relational trust (direct tie)
Dashed line arrow = secondhand trust (indirect tie)

FIGURE 8.4 Secondhand trust with network closure.

Network closure. The occurrence of secondhand trust also depends on the extent to which there is network closure around a trust triad. Network closure exists when the members of a secondhand trust triad have mutual connections to common third parties outside the triad (Coleman, 1988; Burt, 2005). For instance, if Lisa, Don, and Bob are all connected to Tim as shown in Figure 8.4, Tim is a common third party to all three individuals and there is complete closure around the secondhand trust triad. In networks characterized by closure, information circulates rapidly and is relatively easy to calibrate and confirm. As a result, individuals are more likely to have common knowledge and shared understandings in closed relative to open networks (Reagans & McEvily, 2003). More critically, closed networks permit a more robust form of social control than open networks by sanctioning anti-social behavior and rewarding pro-social behavior (Coleman, 1990). Moreover, in closed networks, news of actors' pro- and anti-social behavior (e.g., sharing versus withholding requested information, clarifying versus distorting sensitive details, etc.) also circulates rapidly and as a result, magnifies the reputational consequences of one's behavior (Burt & Knez, 1995). Whereas in an isolated dyad, reputational consequences are limited to the counterparty in

the relationship, in a closed network, one's reputation in the eyes of mutual third parties is also altered. Given this, actors tend more toward pro- rather than anti-social behavior in closed networks. Analogously, norms are easier to create and enforce in closed, relative to open, networks since actors can more readily coordinate expectations and sanction norm violation. Taken together, network closure around a secondhand trust triad will heighten the potential for secondhand trust between a secondhand trustor and trustee.

Additionally, the potential for secondhand trust to emerge is likely to vary with the extent of network closure around a secondhand trust triad. Specifically, the degree of network closure around a secondhand trust triad can be partial, rather than complete. For instance, there would be partial network closure if Tim is connected to Don and Bob, but not Lisa (Figure 8.4). Even so, the force of social control in the form of reputation and norms would still exist and, therefore, heighten the prospects for secondhand trust, albeit less intensely than in the case of complete closure. The effect of partial closure is particularly interesting given that secondhand trust is amplified even though the third party (Tim) is not directly connected to the trustor (Lisa). Likewise, in the situation where partial network closure exists around the trustor rather than the trustee, if for instance Tim is connected to Lisa and Don, but not Bob, the potential for secondhand trust to emerge is heightened. Lastly, as the number of mutual third parties to whom the members of a secondhand trust triad are connected increases, the prospects for secondhand trust are further amplified.

To summarize, secondhand trust is based on the transitivity of trust flowing through third-party intermediaries who connect two actors indirectly. A key proxy for trust transitivity is the open triad. The propensity for secondhand trust also increases with the strength of ties connecting the trustor and the trustee to the intermediary, increases with network closure, and decreases with social distance.

Prototrust

Like secondhand trust, we see prototrust as a property of social structure (i.e., beyond the dyad). However, unlike secondhand trust, we see prototrust as a social-structural property that may systematically vary across dyads within the same network. Analogous to secondhand trust, prototrust is a form of trust that occurs among actors in a network who are not directly connected to each other. Prototrust differs from secondhand trust, however, in that an indirect connection (i.e., through an advisor) is not a defining feature of this form of trust. Rather, prototrust refers to the latent potential for confident positive expectations to emerge between two actors who are neither directly nor indirectly connected. Prototrust also differs from secondhand trust in that prototrust primarily occurs in affiliation networks, which involve joint participation or membership in collectivities, such as the case of the alumni association above, as well as other examples like social groups, clubs, and professional associations. Within affiliation networks, subgroups – such as activities, events, committees, organizations, and the like – exist, where

members interact more intensively (Faust, 1997). Additionally, members may have multiple, overlapping subgroup memberships (e.g., two members participating in the same social activities, and events, and committees), in which interaction intensity increases even more. Thus, affiliation networks are often nested structures of primary membership in the bounded social system and secondary memberships on committees, events, and other subgroups.

Prototrust is based on (1) taken-for-granted, background assumptions about what constitutes trustworthy behavior in the context of an affiliation network and (2) the capacity of the network to curate and match members with compatible interests. Basic assumptions about the expected behavior of other members of the affiliation network in pursuit of shared goals are the genesis of prototrust. In the absence of such assumptions, individuals may still affiliate within a network, but the potential for prototrust is limited due to uncertainty about expected behaviors. For instance, in the case of the alumni association, there is a strong belief in giving back and helping other alumni whenever possible. New members are tacitly socialized by both the alumni association and existing members. Through events and other activities organized by the association, new members have a chance to see other alumni engaging in expected behaviors. Similarly, becoming a member of an organized crime syndicate entails clear understanding and acceptance of the behavioral rules of involvement in crime, solidarity, and *omertà*, i.e., code of silence (Gambetta, 1993). The clearer the rules and the more the rules circumscribe behaviors, even if they are informal or tacit, the less the uncertainty and the greater the potential for prototrust.

While necessary, background assumptions by themselves are not sufficient to initiate prototrust. In addition, members of affiliation networks are more likely to realize prototrust to the extent that the network facilitates the discovery of and connection with other members with whom their goals are aligned. The curating and matching of members can occur in a number of different ways but is often enabled by a network architect (McEvily & Zaheer, 2004). The primary activities performed by a network architect include the initial design of the network and recruitment of members, as well as the ongoing evolution of the network. In particular, the rules of affiliation and rules of engagement (e.g., participation, contributions, and value creation), determine the extent to which prototrust may arise. Rules of affiliation encompass both the principles, conventions, and expectations that govern attracting members to join the network and govern the inclusion of members into the network. Rules of engagement circumscribe the manner in which members may, and may not, interact with one other and the mechanisms of social control (e.g., sanctioning, ostracism, expulsion, etc.) that the members may exercise.

Drawing on network theory, we now articulate the mechanisms, indicators, and contingencies of prototrust (see Table 8.2). As we explain in detail below, prototrust is based on the mechanism of social prospecting. The primary indicator for prototrust is assortativity. Key contingencies of prototrust include governance veracity, network closure, and identity authenticity.

Mechanism

The inclination to connect with a stranger in an affiliation network is based on heuristic processes (Lewicki & Brinsfield, 2011; McEvily, 2011; Uzzi, 1997) in which an actor's background assumptions about, and the perceived quality of, the prospective match are fitted together in order draw an inference about the value of connecting with the prospective match. We refer to this class of social judgments as "social prospecting." Returning to the example of the alumni association, prototrust exists between alumni by virtue of the school attracting and selecting students who share common interests (career advancement, professional development, helping others, etc.) and shared social experiences (e.g., work, education, extra-curricular, etc.). Members of the alumni association are open to connecting with each other to the extent that the association has attracted like-minded individuals who accept, internalize, and reinforce a shared set of norms, expectations, and codes of conduct for appropriate behavior. These normative expectations are driven in part by shared social experience and in part by the alumni association's network governance.

Indicators

Prototrust at the network level is indicated by assortativity, which is defined as the tendency for actors in a network to preferentially connect with similar others (Newman, 2002). For instance, in the case of the alumni association, two individuals may connect based on their common interests in promoting gender equity and diversity in their respective organizations. Likewise, in the case eToro, two traders may connect on the basis of their shared interest in socially responsible investing. The specific form of similarity upon which assortativity is based varies depending on the nature of the context (social, professional, organizational). At the same time, matching may occur preferentially such that dissimilar actors connect, which is known as disassortativity (Uzzi & Spiro, 2005; Watts, 2004). For instance, in the case of the alumni association, two individuals with different years of work experience may connect to form a mentorship relationship. In the case of prototrust, both assortativity and disassortativity are operative. Assortativity underlying prototrust is based on factors such as common interests, while disassortativity could be based on factors such as status asymmetry. The potential for (dis)assortativity in a network is a function of the extent to which the network has tightly defined and enforced rules of affiliation and rules of engagement. Put another way, to the extent that the network is better able to curate and match members with compatible interests, the greater the assortative matching success of social prospecting among members. Likewise, to the extent that the network is better able to reveal underlying differences in quality that are relevant to the formation of a status hierarchy (Ertug & Castellucci, 2013; Podolny, 1993), the greater the disassortative matching success of social prospecting among members.

Prototrust at the dyad level is indicated by the capacity of the network to differentiate members both horizontally (i.e., similar interests) and vertically (i.e., status). Differentiation, both horizontally and vertically, in a network refers to the distribution of attributes among members such that differentiation is lower when attributes are highly concentrated, and differentiation is higher when attributes are highly dispersed across members. Horizontal network differentiation clarifies the strength and overlap of interests shared by some, but not all, members. One common instantiation of horizontal differentiation in affiliation networks is via subgroups that enable, concentrate, and accelerate the flow of valued resources among members who share similar interests. Subgroups form organically by member initiation and may be enabled by structures put in place by the network architect. For instance, an organic member-initiated group indicative of horizontal differentiation might include industry-based, topic-based, or regional activities initiated by alumni. Similarly, horizontal differentiation in the alumni association may form cohort-based or interest-based (e.g., finance, consulting, marketing) groups at events such as reunions to help alumni meet and interact with others who share some commonality. Critically, both of these are examples of informal groups in the sense that members freely choose to join (or not) the group regardless of whether the group is initiated by the members or by the network architect.

Another way that horizontal differentiation occurs in affiliation networks is by referral and recommendation algorithms that are intentionally designed by the network architect. Such algorithmic processes are pervasive in online networking platforms (e.g., LinkedIn, ResearchGate, Match.com) of many forms. As these examples suggest, formal structures, systems, and rules create the context within which individuals choose whether or not to affiliate with other members. While the structures, systems, and rules are formally designed and maintained by the network architect, the choice to affiliate is informal in the sense that rather than being assigned to interact, individuals choose to do so.

Vertical network differentiation in terms of status clarifies the perceived differences in quality among members and in social judgments about members independent of their innate quality. Status in affiliation networks often takes the form of rankings, recognition, and reviews. For instance, vertical differentiation is manifested in eToro (the case of social trading discussed earlier) through compilation and display of information on highly copied traders for all to see, which proxy for not only innate quality but also the aggregate social judgments of other members. Such rankings are intentionally devised and highlighted by the network architect in an effort to reduce uncertainty and promote the potential for relationship initiation.

Contingencies

At both the network and dyadic levels, prototrust is amplified (or dampened) by the perceived reliability or veracity of network governance, the visibility of

the network configuration, and the extent to which members can discriminate between each other on the basis of authentic identities.

Governance veracity. By veracity, we mean the extent to which members accept that the network applies the rules of affiliation and rules of engagement consistently and rigorously, such that members who share common interests and background assumptions with the existing members are selected into the network, while prospective members who do not share interests and background assumptions are screened out. Governance veracity is also relevant for allowing members to make better matches with other members who share the same interests through the creation of subgroups and algorithms. To be clear, we are not claiming that there is a change in the formality of the network structure due to the rules. The rules are formal in the sense that they are originated by the network architect, but the rules are more accurately understood as a framework for interaction, within which members decide for themselves whether or not to informally interact with certain other members.

Network closure. Prototrust is also enhanced to the extent that the architect of the network provides information enabling members to view the network and differentiate each other in terms of status. In the context of affiliation networks, the social structure in which members are embedded is a further signal that can enhance prototrust. For instance, consider a new member of eToro. The actual structure of copy trading ties that she observes, which the architect makes transparent to all the members, influences prototrust in other members. The level of network closure she observers around others, particularly other high-status members, amplifies the potential for trust.

Identity authenticity. Finally, the greater the extent to which members perceive others as authentic in their projected personas, the more the prototrust. Networks "confer social identity through the segmentation of social space into clusters and positions populated by actors who share common social characteristics and who are, therefore, social referents for each other" (Ibarra, Kilduff, & Tsai, 2005, p. 362). The degree of congruence, or lack thereof, between a member's social identity and self-projected identity determines the authenticity of identity and, respectively, amplifies or attenuates the potential for prototrust. For instance, in eToro members are allowed to choose nicknames and avatars to represent themselves or to use their actual names and photographs. The latter are more likely to receive copy-trading ties since they are seen as more authentic.

Effects of Network Trust

Taken together, the logics of secondhand trust and prototrust provide a wide variety of promising avenues for further research. A key priority for advancing the research agenda on network trust is exploring the extent to which, and ways in which, secondhand trust and prototrust matter for valued outcomes in and between organizations.

Risk-Taking Outside of Relationships

While in traditional models of relational trust, risks are concentrated at the level of the dyad, in network trust, risks are distributed and shared across larger systems of relationships. In this sense, network trust is 'in the air' and becomes a resource that is shared beyond just the two members of a dyad to other members of the network in close proximity, and in the case of prototrust, extending throughout the network to members who are disconnected from one another. As a consequence, the assessment of the risks associated with placing trust is based not on the properties of the dyad, but rather on the features of network structure and governance. A key implication of theorizing trust from a network perspective is that the concepts of secondhand trust and prototrust advance our understanding of the micro–macro links as posited by Coleman (1990).

In his 'bathtub' model Coleman displays the links between the micro and macro levels of social systems (see Figure 8.5). Arrow A represents the effect of system-level features, in our case structural features of the network such as open relational trust triads and (dis)assortativity, on a system-level outcome, which is network trust. Arrow B shows how the system-level conditions the individual-level by means of mechanisms such as transitivity of relational trust for secondhand trust and social prospecting for prototrust. These mechanisms, in turn, influence generalized positive expectations about the motives, intentions, and behaviors between individuals at the micro level. Arrow C conveys the individual-level actions that occur as shaped by the system or macro level, which in our case constitutes risk

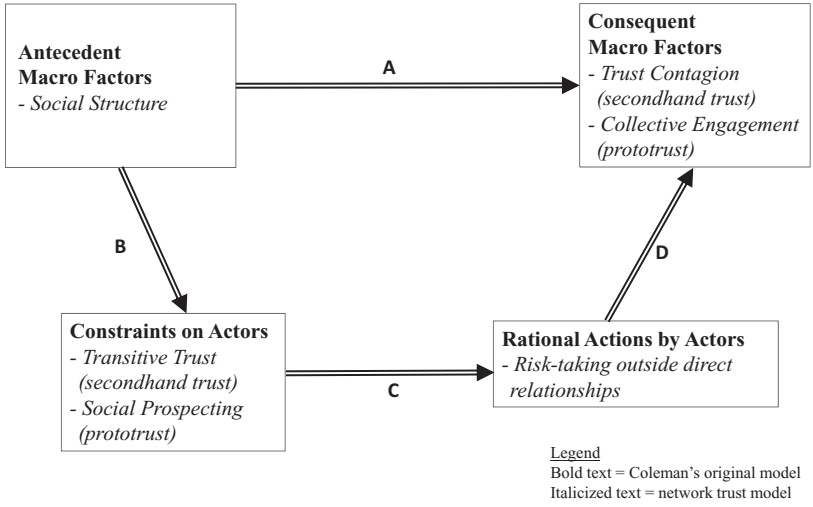


FIGURE 8.5 Macro–micro links of network trust.

Adapted from Source: Coleman, J. S. (1990). *Foundations of Social Theory*. Cambridge, MA: Belknap Press of Harvard University Press.

taking outside of direct relationships. Lastly, arrow D indicates the extent to which the individual-level actions aggregate to produce macro-level outcomes. In our case, while the aggregation generated by secondhand trust is the contagion of trust among network members, the aggregation created by prototrust is the engagement of individuals with the collective community in the form of citizenship, participation, cohesion, and solidarity. Taken together, our theory also extends to the percolation of trust between macro and micro levels of social systems in a way that identifies and details the mechanisms, actions, and links that underlie the notion of trust being 'in the air.'

Substitute for Relational Trust

From a collective perspective, then, networks that are able to enhance secondhand trust and prototrust are capable of yielding trust-like advantages on a large, distributed scale. For example, the costs associated with developing relational trust at the micro level are not only time-consuming and high but also concentrated in socially proximate relationships. In contrast, the production of trust in networks occurs at a relatively larger scale. Imagine a team of 20 people who, in order to engage in joint activities, have to develop relational trust with every other member of the team. The investment in terms of the number of relational trust ties to be activated is $n(n-1)/2$, or 190, assuming trust is reciprocal. By comparison, suppose the same group of 20 people are at a maximum distance from each other of two ties. By virtue of secondhand trust, the number of relational trust ties needed is reduced to as little as 19 (with a hub and spoke structure). The efficiency gains are achieved by substituting direct relational trust ties (171 in the example above) with secondhand trust ties (19 ties), which involve considerably lower investment than relational trust. Clearly, the efficiency gains are considerable; an order of magnitude lower for secondhand trust. At the same time, a question arises as to whether such efficiency of secondhand trust also translates into comparable effectiveness relative to relational trust. Further, for a team of 20 people that embodies the conditions for prototrust, the emergence of trust is potentially automatic, or swift, by virtue of the co-affiliation network ties. While secondhand trust is a substitute, prototrust is an enabler, precursor, or "lubricant" (Arrow, 1974) for relational trust. Both secondhand trust and prototrust establish the notion that risk taking in network settings is not solely based on direct relational ties.

Complement to Relational Trust

In addition to acting as a substitute for relational trust, network trust may also serve as a complement. Returning to the tenure letter case (Figure 8.1), the result of Lisa's secondhand trust in Bob may spill over to Lisa's direct relational trust with Don and Don's direct relational trust with Bob. For instance, if Lisa's trust in Bob's private information is well-placed, Lisa's relational trust in Don is further enhanced. In this way, secondhand trust begets relational trust. At the same time,

when Lisa's secondhand trust is misplaced, her relational trust in Don is compromised. Here, misplaced secondhand trust corrodes relational trust, and the same sorts of spillovers of secondhand trust onto relational trust apply to the relational trust between Bob and Don. Note that such spillover effects need not be symmetric. For instance, if Lisa lacked discretion in how she handled the private information from Bob via Don, both Don's trust in Lisa and Bob's trust in Don would be compromised.

Positioning Network Trust

As we argue in the preceding pages, network trust is not relational trust, which requires firsthand knowledge or experience. At the same time, network trust is related to, although distinct from, other trust constructs including presumptive, swift, institutional, and generalized trust, which we discuss below.

Network trust is akin to *presumptive* trust (Kramer, 2010) in the sense that it involves generalized positive expectations in the context of a collective. Importantly, however, network trust differs from presumptive trust in terms of the unit of analysis. For presumptive trust, the unit of analysis is the average, or stereotypical, member of the collective as perceived by the trustor, which then provides the content for presumptive trust in "the collective as a whole" (Kramer & Lewicki, 2010, p. 259). In contrast, the unit of analysis for network trust is the social structural position of members in the network. Thus, while presumptive trust implies a set of diffuse expectations in an entire collectivity, network trust is enabled and shaped by features of networks and is directed toward specific members of the network. Although presumptive trust may extend to "individuals who are considered ingroup members," it is based on the "generic features of all the members of that collective" (p. 259). Unlike such a diffuse conceptualization, network trust differentiates among the members of a collective and is best understood as being an embedded form of trust that percolates among members to differing degrees. That is, our concept of network trust identifies the process and flow of trust based on the features of a network and the relative positioning of members in the network.

Network trust is also similar to, but different from, *swift* trust. Swift trust refers to the trust that forms in the context of temporary systems, characterized by high interdependence, high risk, and complex tasks among individuals who typically have never worked together in the past and have no expectation of working together again in the future. As Meyerson, Weick, and Kramer (1996) explain,

> Trust (or distrust) in temporary systems can develop swiftly because the expectations that are invoked most quickly tend to be general, task-based, plausible, easy to confirm, and stable, all of which implies the care of valuable things can be entrusted to those who seem to fit these institution-driven categories.
>
> *(1996, p. 175)*

Whereas swift trust is grounded in institution-driven categories that allow roles to be invoked instantly, network trust is based on social structures that facilitate the flow of trust and provide the conditions for relational trust to potentially emerge.

Further, network trust is not *institutional* trust – i.e., it is not "the safety one feels about a situation because of guarantees, safety nets, or structures" (McKnight et al., 1998). With respect to secondhand trust, it is not the effect of safeguards in shaping context that engenders trust, but rather the effect of actors and the configuration of actors that account for trust. More precisely, secondhand trust is based on the informal norms, expectations, values, and reputations that are widely held among a bounded set of actors. In terms of prototrust, it is the signals of assortativity that differentiate it from institutional trust. At the institutional level, affiliation is highly diffuse and extends to broad categories of membership (e.g., the nation-state, religion, etc.). For prototrust, network affiliation is crucial because it is one of the key bases upon which assortativity occurs. Moreover, relative to institutional trust, the signals of assortativity underlying prototrust are clearer and more informative for the creation of ties and the potential to realize relational trust. Thus, while institutional regulations, guarantees, and laws facilitate, for example, banking transactions by mitigating downside risks, those safeguards are not informative for differentiating among prospective transactors (e.g., banks). In contrast, prototrust is precisely the latent potential for confident positive expectations to emerge due to the assortativity of a network.

Lastly, network trust is not *generalized* trust, which is defined as a belief in the benevolence in human nature in general. Yamagishi and Yamagishi (1994, p. 139) call this type of trust "general trust," as it reflects "a belief in the benevolence of human nature in general." Generalized trust is most frequently assessed at the societal level, using survey items such as "Generally speaking would you say that most people can be trusted or that you can't be too careful in dealing with people?" Network trust applies within the boundary of the network and is based on expectations about members of the network.

Discussion and Conclusion

Scholarly understanding of trust is concentrated at two extremes. On the one hand, trust is considered inherently personal in terms of the relational features of direct interactions. On the other hand, trust is treated as impersonal in terms of the institutional properties safeguarding exchange. The gulf between these poles remains conceptually bereft. Into this void, we propose a class of trust that is situated in the enduring pattern of social connections among actors – network trust. Given the widespread prevalence of social networks in and between organizations, it behooves us to understand the distinctive forms of trust to which networks give rise.

Network trust is especially relevant in the organizational context where getting things done routinely requires relying on others with whom there is no direct

connection (Krackhardt & Hansen, 1993) and where formal roles and structures do not explicitly specify how all decisions and actions are to be organized and coordinated (McEvily et al., 2014). As a result, informal arrangements for achieving organizational goals and outcomes emerge and are put in place based on socially devised understandings. At the same time, it is important to recognize that the informal side of organizations need not necessarily enable trust and at times may even undermine it or engender distrust due to, for instance, inter-departmental skullduggery, organizational politics, opportunistic behavior, and the like. Thus, organizations are a prime arena for examining network trust and distrust given the inherent interdependencies that exist and the discretion that individuals have, to varying degrees, to support the activities and role-responsibilities of their co-workers.

We see a number of exciting implications for organizational scholars from examining trust through the lens of the network forms that we have conceptualized. The first-order implication of embracing network trust is to revisit the basic premise of the genesis and realization of trust. Thus far, scholarly understanding of trust has been heavily based on the psychological view of trust as personal and the sociological view of trust as impersonal. We maintain that there is also a distinct network view of trust that is multi-level and recognizes both structure (in terms of patterns of connections) and behavior (in terms of the actions taken by individuals under constraints). Viewed this way, network trust bridges a multi-level space between the micro and the macro, between the personal and impersonal, between the psychological and sociological. Network trust is a phenomenon in and of itself. Thus, while network trust could be considered in relation to other forms of trust (e.g., as a substitute or complement), the prime implication is to treat network trust as a novel form and consider the unique understandings that it permits. Indeed, we see a wide range of promising avenues for network trust to enrich scholarly understanding. Three areas in particular are ripe for discovery.

From Stocks to Flows

Most organizational research on trust is principally concerned with explaining the level of trust within a relationship. In addition to informing our understanding of such 'stocks,' network trust introduces the potential to consider how trust ebbs and flows through a network. By virtue of the structural features of a network, trust and distrust have the potential to spread, as do trends, fads, gossip, and good ideas. Importantly, the 'contagion' of trust does not just happen on its own, but rather is agentic in the sense that it is intentionally passed along and accepted when individuals pursue interests that require them to rely on strangers for valued resources. At the same, network trust can be latent to the extent that it resides in network structures that can lie dormant for an extended period until triggered by a critical event. When network trust is activated at a large scale, it has the potential to fuel social movements for collective action. For instance, when a manager is

promoting a new initiative, program, or product that requires the buy-in and support of colleagues from across the organization who are not directly connected to the manager, those colleagues typically draw on the reservoir of network trust to create a well-spring of support, apathy, or resistance toward the initiative.

From Emergent to Designed

Part of the allure of trust is its potential to enable actions that would be exceedingly costly or difficult to achieve in its absence. Analogous to conventional forms of capital in economic models (e.g., human, financial, physical), trust has been characterized as a type of social capital with similar value-generating properties (Coleman, 1988). As a factor of production, scholars have also considered the modes of production by which trust is constructed and reconstituted (Zucker, 1986a). Like the broader organizational literature, trust production modes are conceptualized in terms of personal (i.e., character-based and exchange processes–based) and impersonal (institutional-based) mechanisms. Alongside these modes, we maintain that informal networks of connections also create trust, albeit via a distinct production function. In some cases, the production of trust is emergent and automatic as a consequence of common shared experiences. In other instances, the production of trust in networks is more intentional and by design (Hurley, Gillespie, Ferrin, & Dietz, 2013). And in still other situations, both the emergent and intentional combine.

Consider again the example of alumni networks. By virtue of graduating from the same educational institution, two alumni are members of a common affiliation network and to the extent that they are indirectly connected by other alumni, they may experience secondhand trust. At the same time, even if they are not indirectly connected, the fact that they belong to a community with shared values and identity creates the potential for prototrust. Further, a number of educational institutions organize reunions, events, and other activities with the express intent of creating opportunities for alumni to meet, reconnect, and interact. In this way, the alumni network strengthens the potential for trust by reinforcing the sense of shared identity and social norms and enhances the potential for network closure. Here, governance veracity is less salient given the alumni's prior socialization into the network by virtue of being selected into and matriculating from the educational institution.

The production of trust by networks is of course not limited to the alumni of educational institutions, but extends to shared prior organizational affiliations (e.g., McKinsey, GE, State Department). It is important to note that for each of these examples, the presence of an affiliation network is the minimum required necessary condition for prototrust. In addition, the production of prototrust for a given type of affiliation network (e.g., MBA alumni networks) varies depending on the intrinsic prestige of the institution as well as the design of the affiliation network in terms of creating opportunities for effective social prospecting through assortativity (i.e., status-based and interest-based matches).

From Dyads to Networks

The past three decades of organizational scholarship on trust has laid a critical foundation for understanding the nature of trust in and between organizations – how the willingness to be vulnerable has been investigated as a relational property between a pair of directly connected actors. The bulk of trust theory has been predicated on the dyadic level. Our understanding of the antecedents, formation, duration, dissolution, repair, concomitants, (a)symmetry, intensity, and outcomes, among others facets, have as their locus the dyad. How these dyadic elements link to macro-level organizational dynamics remains a critical but relatively less studied aspect of scholarship. We argue that network forms of trust provide a bridge to discovering the contextual underpinnings of trust. The network perspective presents the opportunity to consider the ways in which system-level features influence trust beyond the micro-dyadic level to also encompass more network-level elements such as the governance and design of social systems to generate and deploy trust.

Taken together, the network forms of trust we have proposed lay the foundation for moving from stocks to flows, from emergent to designed, and from dyadic to network. In so doing, we aim to promote a richer, deeper, and enhanced understanding of the nature of trust in organizational settings.

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