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ABSTRACT

This article integrates strategic factors influencing trust with social contextual factors to create a broader understanding of interpersonal trust across organizational boundaries. In contrast to more passive models of trust development, it introduces the construct of threat-reducing behavior as an active interpersonal strategy for building and maintaining trust. Using a sample of 207 executive-level boundary spanners working on knowledge-based projects, it finds a positive relationship between threat-reducing behavior and interpersonal trust across organizational boundaries. The study also considers contextual effects by investigating the network density and demographic composition of a boundary spanner's social network of key counterparts from a partner organization. It proposes and demonstrates support for both negative and positive effects of network demographic diversity on trust.

The phenomenon of alliances and interorganizational collaboration has transformed not only the competitive landscape of business organizations since the early 1980s (Gomes-Casseres, 1996; Powell, 1990), but also the boundary-spanning work of individual knowledge workers. From co-marketing agreements to strategic consulting projects and new product development, interorganizational collaboration has greatly increased the number of professional knowledge workers engaged in projects that span organizational boundaries. Professionals working on these projects must traverse organizational boundaries and often demographic group boundaries (e.g., gender, age, ethnicity) to secure cooperation from people over whom they have no hierarchical control. The ability to develop interpersonal trust across these boundaries can be critical, because trust not only enables cooperation when authority relationships are absent (Bradach & Eccles, 1989), it reduces the need to monitor others' behavior (Currall & Judge, 1995; Ring & Van de Ven, 1994; Uzzi, 1997), increases risk-sharing, and facilitates access to "richer-freer" information (Powell & Smith-Doerr, 1994; Uzzi, 1997). Unfortunately, developing trust across boundaries is often difficult because people frequently perceive individuals from other groups as less trustworthy than members of their own group—that is, as individuals with conflicting aspirations, beliefs, or styles of interacting that threaten their own goals (Fiske & Ruscher, 1993; Kramer, 1991; Kramer, 1994; Kramer & Messick, 1998; Sitkin & Roth, 1993; Williams, 2001).

Strategic interpersonal actions may mitigate the potential negative effects of group boundaries on trust development by signaling trustworthiness. For instance, steps taken to avoid threatening the aspirations, values, self-esteem, or self-image of others may help boundary-spanning individuals signal good will and avoid defensive non-cooperative responses from their counterparts. Empirical research on trust as well as research interorganizational relationships,

however, has not focused on the strategic interpersonal actions people may use to gain the trust of others. In the trust literature, for instance, scholars most often describe trust development as a relatively passive process of gathering data on others people's trustworthiness by watching their behavior in various situations over time (Lewicki & Bunker, 1996; Ring & Van de Ven, 1994; Shapiro, Sheppard, & Cheraskin, 1992). Scant attention is given to the fact that people are evaluating the trustworthiness of individuals, who are often not passive, but engaged in active attempts to influence the evaluation process (Whitener, Brodt, Korsgaard, & Werner, 1998). Consequently, we know little about the interpersonal actions or strategies people use to build and maintain trust with members of other organizations.

Research on interorganizational relationships similarly fails to attend to the interpersonal processes boundary-spanning people use to build and maintain trust. For example, interorganizational research on interpersonal attachments does not investigate the development of trust directly, but instead often uses the duration of an interpersonal boundary-spanning relationship as a proxy for the development of trust, communication, and other aspects of an interpersonal relationship (Baker, Faulkner, & Fisher, 1998; Seabright, Levinthal, & Fichman, 1992; Levinthal & Fichman, 1988). These studies demonstrate the importance of interpersonal relationships for the longevity of interorganizational relationships, but leave the examination of strategies for building and maintaining interpersonal trust to future research.

This article directly addresses the importance of the strategic interpersonal actions taken by boundary spanners to build trust with their primary counterpart from a partner organization. We assert that the concept of threat is central to the strategic action of

boundary spanners and more generally, to building and maintaining trust across boundaries. We introduce the concept of threat-reducing behavior, which we define as a strategic interpersonal action that is intended to minimize or eliminate counterparts' perceptions that one's actions are likely to have a negative impact on their goals, concerns, or well-being. In particular, we argue that threat-reducing behavior signals benevolent intentions and reduces the negative defensive and negative emotional responses often associated with feeling threatened. We further propose that the demographic composition and density of the social network surrounding a specific interpersonal trust relationship will influence trust both directly and indirectly. Some aspects of the demographic composition of the social networks within a partner organization, for example, may influence interpersonal trust relationships directly by providing a more or less socially integrated and trusting social context for building and maintaining trust with key individuals, whereas other aspects may influence interpersonal trust relationships indirectly by generating norms that influence the likelihood that individuals will engage in threat-reducing behavior.

This article integrates strategic interpersonal influences on trust with social contextual influences to create a broader understanding of trust across organizational boundaries. It investigates processes that may only be revealed by simultaneously investigating social network demography and interpersonal dynamics. We proceed as follows. First, we define trust and its relevant outcomes. Next, we define and examine the relationship between the strategic interpersonal action of threat-reducing behavior and trust. We then explore the direct influences of external

social networks on trust and investigate threat-reducing behavior as a mediator of social network demography. We conclude with results, discussion, limitations, and implications.

TRUST

Trust is defined as one's willingness to rely on another's actions in a situation involving the risk of opportunism (Mayer, Davis, & Schoorman, 1995; Williams, 2001; Zand, 1972). For example, when boundary-spanning individuals are willing to reveal sensitive firm information to suppliers, they are willing to risk the harm that would result if the information were shared with their competitors. Trust is based on an individual's expectations that others will behave in ways that are helpful or at least not harmful (Gambetta, 1988). These expectations, in turn, are based both on people's perceptions of others' trustworthiness (e.g., Butler, 1991; Gabarro, 1978; Mayer et al., 1995) and on their affective responses to others (e.g., Johnson-George & Swap, 1982; Jones & George, 1998; Lewis & Weigert, 1985; McAllister, 1995).

Because trust reduces the need to monitor others' behavior, formalize procedures, and create completely specified contracts (Macauley, 1963; Powell, 1990; Williamson, 1975), it is invaluable to organizations that engage in collaborative endeavors (Creed & Miles, 1996; Powell, 1990; Ring & Van de Ven, 1994; Zaheer, McEvily, & Perrone, 1998). Research suggests that trust between boundary-spanning individuals facilitates reliance on informal cooperation and agreements that supplement and improve the efficiency of formal contracts (Currall & Judge, 1995; Ring & Van de Ven, 1994; Uzzi, 1997), while also providing firms with other benefits of cooperation such as more access to tacit knowledge, increased risk-sharing, and "richer-freer" information (Powell & Smith-Doerr, 1994). Further, interpersonal trust allows

boundary-spanning individuals to adjust to unanticipated contingencies in ways that are jointly

optimal without the time and effort associated with renegotiating a contract with opportunistic

partners (Lorenz, 1988; Uzzi, 1997).

In the professional service context of this study, management consulting, cooperation is often

essential for success because consultants and clients are interdependent. Clients not only rely on

their consultants, consultants often depend on their clients to share information and perform tasks

critical to the project—a process formally termed co-production (Bowen, Chase, & Cummings,

1990). For example, success on a consulting project may depend both on the consultant's ability

to translate and express his/her expertise in a way that is interpretable to the client and on the

willingness of people within the client firm to share tacit knowledge (about the firm and its work

processes)--knowledge that enables consultants to apply their expertise appropriately to the

context. The degree to which a client trusts a consultant may facilitate multiple dimensions of

cooperation including cooperative task sharing and information sharing that may, in turn,

influence a consultant's ability to meet the negotiated obligations of an interorganizational

project.

> **Hypothesis 1**: When a counterpart's (client's) dyadic-level interpersonal trust in a
> boundary spanner (consultant) is greater, that counterpart's cooperation with the
> boundary spanner will also be greater.

Threat, Threat-reducing Behavior, and Trust

Threat. Despite the importance of trust for cooperation on interorganizational projects,

developing and maintaining trust is often an elusive goal. Perceived threats to individual well-

being, such as incompatible interests and incongruent values, can undermine trust by influencing

perceptions of benevolence and integrity—key predictors of trust (Sitkin & Roth, 1993; Williams, 2001).   The threat of incompatible interests undermines perceptions of benevolence because people with conflicting goals are not expected to act in ways that are helpful or that protect the other's welfare (Tjosvold, 1988). The threat of incongruent core values, in contrast, undermines perceived integrity. People who do not adhere to values that one finds acceptable are not perceived as having integrity (Mayer et al., 1995) and cannot be trusted because they are more likely "… to approach all situations in an unacceptable way" (Sitkin & Roth, 1993: 373). The potential for threat is also associated with interactions that are relevant to people's identities, in particular their individual self-esteem, their collective self-esteem as group members, and their self-image (Fisher, Nadler, & Whitcher-Alagna, 1982; Kramer, 1994; Vinokur, Price, & Caplan, 1996; Sitkin & Stickel, 1996). Self-esteem threat involves situations in which "…favorable views about oneself are questioned, contradicted, impugned, mocked, challenged, or otherwise put in jeopardy" (Baumeister, et al., 1996 /ft " , p. 8"}. Self-image threat is similar but involves being denied the image, identity, or "face" one overtly claims during an interaction (Goffman, 1967). Although all interactions afford people the opportunity to accept or reject the self-image counterparts put forth (Mead, 1934; Goffman, 1967), the context of knowledge work makes people's image and identity, especially their identity as an expert, more salient. Knowledge work demands an exchange of information and ideas that can expose individual weaknesses and provide people with the opportunity to deny others the valued self-image of a competent, knowledgeable professional or engineer or account manager, etc. (Fletcher, 1998; Lee, 1997; Perlow, 1998). Perlow (1998), for example, describes Max, an engineer, who blatantly behaves in ways that are threatening to other people's self-image and self-esteem.

> When Max helped others, he drew attention to the fact that he was providing them
> support. The person seeking help was often made to feel inadequate. As one

engineer described it, "Max is always putting me down, criticizing my pace and questioning my attack of problems… " (Perlow, 1998, p. 69).

We argue that self-esteem and self-image threats pose a significant risk to trust on knowledge-based projects for several reasons. First, self-esteem threat has been linked to defensive, non-cooperative behaviors, and negative emotions (Fisher et al., 1982), factors that undermine interpersonal trust. Second, the nature of knowledge work exposes people's identity as an "expert" to constant scrutiny and potential rejection, a continual hazard to self-esteem, self-image, and thereby trust. Finally, self-esteem and self-image threats pose an ongoing hazard to trust because they reflect the quality of interpersonal interactions and cannot be eliminated by compatible goals, contractual safeguards, or other common substitutes for trust. We, therefore, propose that threat-reducing behavior is central to trust in a knowledge-based context (See Figure 1).

Insert Figure 1 about here

Threat-reducing behavior. In contrast to current models of trust, which most often portray trust targets (i.e., people to be trusted) as passive individuals whose trustworthiness must be observed over time (e.g., Mayer et al., 1995; Lewicki & Bunker, 1996; Sheppard & Sherman, 1998), we propose that boundary spanners are actors who make active attempts to signal trustworthiness. In particular, we assert that boundary spanners are knowledgeable social actors who are aware of the benefits of being trusted, who recognize at least some of the threats that may prevent them from receiving trust, and who actively engage in threat-reducing behavior as an interpersonal strategy for negotiating trust in a knowledge-based context. We define threat-reducing behavior as a strategic interpersonal action that is intended to minimize or eliminate

counterparts' perceptions that one's actions are likely to have a negative impact on their goals, concerns, or well-being. Threat-reducing behaviors include a variety of actions such as a) refraining from using technical language in front of non-experts; b) inviting a concerned external counterpart to an internal team meeting about strategic goals; c) making esteem promoting or valuing comments; and d) making status equalizing overtures such as the action described below by an engineer.

> Well, the way I work with Frank is a little different. You don't want to bruise any egos. I wanted Frank to feel comfortable so that's why I sat down next to him…It's just a style thing (Fletcher, 1998, p.171).

Threat-reducing behavior and trust. We propose that threat-reducing behavior not only mitigates the negative effects of threat, but also builds and maintains trust by signaling trustworthy, benevolent intentions. Threat-reducing behavior requires attention to the cares and interests of one's counterpart, which signals concern and reduces the risk of adverse outcomes caused by the failure to consider and protect a counterpart's interests when making decisions. Attention to threat-reducing behavior also decreases the risk of damage to a counterpart's self-image and/or self-esteem caused by uncivil, thoughtless, demeaning, or dismissive actions. Sheppard and Sherman (1998) note that both the neglect of counterparts' instrumental interests and the neglect of their identity-related interests (self-esteem and self-image) can undermine trust. Neglect decreases perceived benevolence, a cognitive predictor of trust (Mayer et al., 1995), and generates negative emotion, an affective influence on trust (Williams, 2001). Additionally, because threat-reducing behaviors that focus on protecting and promoting the self-image/self-esteem of others is diametrically opposed to undermining self-esteem and denying self-image, it is particularly likely to influence trust through a counterpart's affective response. Not only may threat-reducing behaviors avoid the negative emotional responses people have to

self-esteem and self-image damage, these behaviors may generate the positive emotional responses people have when their self-esteem and self-image are supported or enhanced (Fisher et al., 1982). Positive emotions impact trust by increasing the "feel" that another is trustworthy (Jones & George, 1998) and by positively biasing perceptions, attributions, and motivations relevant to trust maintenance (Williams, 2001).

> **Hypothesis 2**: When a boundary spanner's threat-reducing behavior is greater, that boundary spanner's experience of dyadic interpersonal trust from a counterpart will also be greater.

THE "BUY-IN" NETWORK CONTEXT OF TRUST

Insert Figure 2 about here

We have proposed thus far that a boundary spanner's threat-reducing behavior toward a primary counterpart from another organization will be positively related to the trust received from that counterpart, which in turn will be positively associated with cooperation received from that counterpart. We next turn to the broader social network context of key decision makers that surround the boundary spanner, the "buy-in" network. A buy-in network represents "those individuals whose support… [a boundary spanner] needs in order to pursue initiatives successfully within the [partner] organization (Podolny & Baron, 1997, p. 676)." Although a boundary spanner will have multiple content networks for task advice, strategic information, friendship, etc., we investigate the "buy-in" network because gaining the trust and cooperation of counterparts in this network is particularly critical for project success and for securing future projects. The "buy-in" networks we investigate are also unique in that all relational ties to

counterparts (i.e., typically termed alters) extend across firm boundaries (See Figure 2).[1] In the following sections, we investigate the effects of the network demographic composition (i.e., age and gender composition) and the network density (i.e., the strength of relationship ties that counterparts have to one another) of a boundary spanner's buy-in network. We examine two aspects of age and gender composition, heterogeneity and proportional composition (See Figure 3).

Insert Figure 3 about here

Demographic Composition: Heterogeneity. By demographic heterogeneity of a boundary spanner's "buy-in" network, we mean the degree to which network counterparts from the partner organization differ from the boundary spanner in demographic characteristics. Social categorization theory (Tajfel, 1981; Turner, 1987) and similarity/attraction theory (Berscheid & Walster, 1978; Byrne, 1971) form the theoretical basis for the influence of demographic heterogeneity on trust. Social categorization theory suggests that people gain self-esteem from positive perceptions of the groups to which they belong (i.e., in-groups) and associate liking and trust with members of their in-groups (Brewer, 1979). Laboratory research on groups formed based on trivial distinctions (the minimal group paradigm) has consistently found that people associate liking and positive beliefs about trustworthiness with others who belong to the same in-group (Brewer & Brown, 1998).

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[1]Although all individuals on the project span boundaries, for clarity and simplicity, we will refer to the focal individual or ego from the first organization as the boundary spanner and the individuals from the partner organization or alters as counterparts.

Consistent with social categorization theory, similarity/attraction theory predicts that demographic similarity increases interpersonal attraction and liking (Berscheid & Walster, 1978; Byrne, 1971). In the organizational literature, Pfeffer (1983) first noted that demographic composition and resulting perceptions of similarity may affect communication and group cohesion. Both similarity/attraction theory and social categorization theory suggest that dissimilar group membership or demographic heterogeneity are associated with what Brewer and Brown (1998) term an absence of positive affect. The absence or "lack of positive affect" associated with demographic heterogeneity may influence trust in several ways—by reducing the number of spontaneous prosocial behaviors in which people engage, by eliminating feelings as a positive source of information about others' trustworthiness, and by reducing people's motivation to trust one another (Williams, 2001). Further, because this lack of positive affect may extend to a group or project, in terms of lower social integration or affective commitment, high demographic heterogeneity may influence the emotional closeness and trust a boundary spanner establishes with all project members, i.e., demographically similar and dissimilar counterparts on the project.

Although research on organizational demography rarely looks at trust directly, it often investigates trust-related outcomes such as communication and conflict. In this study, we examine the demographic categories of gender and age—categories that are visible, salient, and automatically noticed (Kramer, 1991; Pelled, 1996b). Consistent with our argument, Zenger and Lawrence (1989) found that age diversity was negatively related to the frequency of technical communication within a group and that members of different groups who were similar in age communicated more frequently with similarly aged others across project groups than with those

who were more dissimilar in age. Trust, although not measured, may have played a role in these

communication levels since communication and information sharing are a cooperative outcome

of trust (Currall & Judge, 1995). In terms of gender, Pelled (1996b) found that gender

dissimilarity increased emotional conflict. To the degree that emotional conflict is associated

with negative emotions, perceptions of undermining, and devaluing of personal relationships, it

may also have a negative effect on trust. Chatman and Flynn (2001) found that greater

demographic heterogeneity in teams initially resulted in norms stressing lower cooperation.

Finally, based on their finding that tenure and functional diversity had a positive indirect effect,

but a negative direct effect on performance, Ancona and Caldwell (1992) suggested that

demographic heterogeneity, in general, may impede a team's negotiation and conflict resolution

skills, skills that often involve trust building and maintenance.

In sum, social categorization theory and similarity-attraction theory suggest that because of

lower initial liking and perceived trustworthiness, it may take more effort to build trust with a

demographically heterogeneous "buy-in" network than with a homogeneous one. Further, the

lack of positive affect associated with a more heterogeneous "buy-in" network may inhibit trust

by affecting individual's motivation to develop and maintain trust and their prosocial behaviors

toward the group. Our hypotheses follow:

> **Hypothesis: 3a**: When the gender heterogeneity of a boundary spanner's buy-in network of counterparts in a partner organization is greater, the boundary spanner's experience of interpersonal trust from a primary counterpart will be lower.
>
> **Hypothesis 3b:** When the age heterogeneity of a boundary spanner's buy-in network of counterparts in a partner organization is greater, the boundary spanner's experience lower.

Demographic Composition: Proportion. Proportional demographic composition (the proportion of network counterparts in a certain demographic category) may influence trust differently than the demographic heterogeneity. For example, a consultant with a network of clients, who are all substantially younger than the consultant, will have the same level of network heterogeneity as a consultant whose clients are all substantially older. However, the climate of the group and the consultant's interpersonal response may differ greatly depending upon the group's proportional composition (e.g., proportion of older versus younger clients). Research on gender diversity, for example, has found that the proportion of men and women in a group influences the social integration of members of the minority gender, egalitarian attitudes with respect to gender, and the level of sexist stereotyping (Kanter, 1977; Konrad, Winter, & Gutek, 1992; Ibarra, 1992). In this study, we propose that proportional composition in terms of gender and age will influence norms for engaging in threat-reducing behavior through processes related to social category stereotypes and gender socialization.

Gender. The proportion of women in a buy-in network may have a positive effect on group norms for threat-reducing behavior for two reasons. One, women themselves may have more relational/empathetic behavior patterns than men. Two, beliefs associated with the social category of women may evoke more considerate behavior patterns from others. Whereas gender role socialization theory (Eagly, 1987) supports the argument that norms supporting higher levels of threat-reducing behavior may be generated by the behavior of women themselves, social categorization theory (Turner, 1982) and the theory of benevolent gender attitudes (Glick &

Fiske, 1996) support the argument that the social category "women" elicits more threat-reducing

behavior from others. We contend that both sets of explanations may operate simultaneously.

From a gender-role socialization perspective, gender differences are assumed to result from

contrasting societal expectations for men and women (Eagly, 1987; Eagly & Wood, 1999).

Individuals may then internalize these expectations, developing different skills, attitudes, and

behaviors (Valian, 1998). For instance, women, or more precisely, young girls are typically

socialized to be more relational, empathetic, and concerned with relationships and equal status,

than young boys (Gilligan, 1982; Miller & Stiver, 1997; Miller, 1976; Miller, 1976). Consistent

with this socialization, researchers have found that groups with women in the majority tend to be

more equalitarian toward the gender in the minority than groups with men in the majority

(Konrad et al., 1992). Similarly, in her ethnographic study of women engineers, Fletcher (1998)

found that even when their actions went unrewarded, women engineers engaged in a variety of

relationship-oriented interpersonal actions such as empathetic teaching. Because threat-reducing

behavior is both a relational and an empathic interpersonal action, a gender-role socialization

perspective supports the proposition that the proportion of women in a boundary spanner's

egocentric "buy-in" network of counterparts will positively influence the norms for engaging in

threat-reducing behavior, and thereby influence a boundary spanner's individual tendency to

engage in threat-reducing behavior.

Category-based expectations and benevolent sex attitudes reflect two alternative explanations for

the proposed relationship between proportional gender composition and threat-reducing

behavior. Category-based expectations that women are likely to be more warm and nurturing

than tough and aggressive (Eagly & Mladinic, 1994) may affect the behavior of both men and women because people in general tend to believe and act on their beliefs that gender differences in social behavior and emotion exist, irrespective of scientific evidence (Eagly, 1987). Once a gender category is activated, beliefs associated with that category are particularly likely to guide behavior when individuals are under time pressure or a high cognitive load (Fiske & Taylor, 1991). When beliefs that women are warm and nurturing guide behavior, project members including boundary spanners may treat women in a more threat-reducing manner, and as the proportion of women on a project increases, threat-reducing behavior may become an increasingly normative way of interacting on the project.

Finally, the theory of benevolent sex attitudes proposed by Glick and Fiske (1996) suggests that the social category "women" may evoke the positive orientation of protection and affection. Although this behavioral orientation is far less likely in a career-oriented executive team than in a context in which women are engaged in more traditional roles (Glick & Fiske, 1996), the orientation of protection and affection is consistent with increased threat-reducing behavior and may occur. Based on all three theories—gender role socialization, social categorization, and the theory of benevolent gender attitudes, we propose the hypothesis below.

> **Hypothesis: 4a**: When the gender composition of a boundary spanner's buy-in network of counterparts in a partner organization has a greater proportion of women, the boundary spanner's attention to threat-reducing behavior will be greater.

Age. With respect to age composition, we return to social categorization theory. Age like gender is a highly visible demographic category that people are likely to use almost automatically to categorize others (Fiske, 1998; Pelled, 1996a). Once a social category is activated, beliefs

associated with that category may guide behavior (Fiske & Taylor, 1991). In the United States,

age is often associated with the belief that as people age from adolescence to adulthood and

progress through adulthood, they become more resistant to change and more easily threatened by

new ideas and processes (Fiske, 1998; Maurer & Rafuse, 2001). Maurer & Rafuse (2001)

reported that employees 50 years or older have been described as "somewhat inflexible, adverse

to change, and resistant to…understanding new technologies (p. 114)." As the proportion of

older counterparts on a project increases, threat-reducing behavior may become a more

normative way of interacting on the project.

> **Hypothesis 4b**: When the age composition of a boundary spanner's buy-in network of counterparts in a partner organization has a greater proportion of older members, the boundary spanner's attention to threat-reducing behavior will be greater.

Network Density

Investigating the effects of network density complements the examination of the

demographic composition of a boundary spanner's buy-in network of counterparts

because network density reflects the ability of a set of counterparts to build strong,

trusting relationships among themselves given the level of diversity that exists among

them. In the context of an interorganizational relationship, each boundary-spanning

individual has direct relationship ties to multiple counterparts in another organization,

and those counterparts in turn have strong or weak ties to one another (termed indirect

ties) (Figure 2). A dense social network is one in which all counterparts have strong

relationship ties to one another (i.e., strong indirect ties). Dense social networks support

trust through norms of reciprocity that are reinforced with social sanctions against

untrustworthy behavior (Granovetter, 1985). For example, opportunistic behavior by a

member of a dense social network may be sanctioned by other network members with

temporary or permanent exclusion from the group (Coleman, 1990; Granovetter, 1985).

Dense networks also transmit normative expectations and foster one's social

identification with [or sense of personal belonging to] a specific organization (Coleman,

1990; Podolny & Baron, 1997). In fact, Poldony and Baron (1997) argue that:

> [within an]…organization, a dense, redundant network of ties is often a
> precondition for: [1] internalizing clear and consistent set of expectations and
> values in order to be effective in one's role; and [2] developing the trust and
> support from others that is necessary to access certain crucial resources [political
> aid, sensitive information, etc.] and to implement strategic initiatives [p., 676].

However, the invitation extended to boundary spanners, who are organizational

"outsiders" may affect their ability to leverage the trust-building advantages of a dense

buy-in network. Uninvited or unwanted boundary spanners, such as members of a

transition team after a hostile corporate take over, for example, may find it more difficult

to build trust with a dense network of counterparts [many indirect ties] because network

members may use their cohesiveness and clear values to sanction, exclude, and

undermine those boundary spanners. In contrast, for invited boundary spanners, who are

the focus of this study, a dense network of counterparts may provide a substantial trust-

building advantage by conveying clear role expectations, norms, and values. An invited

boundary spanner should be better able to understand counterparts' expectations for

competence, integrity, and benevolence—three core components of perceived

trustworthiness. In turn, that boundary spanner should find it easier to build trust with a

dense network of counterparts with consistent expectations than with a sparse network of

counterparts some of whom will inevitably hold varying expectations and conflicting

preferences. Poldony and Baron (1997) found a positive relationship between the density

of people's "buy-in" network and their career mobility, which they attributed to clear

expectations. We propose that the density of an invited boundary spanner's "buy-in"

network of counterparts also facilitates trust through mechanisms related to clear

expectations.

> **Hypothesis: 5**: When the density of an invited boundary spanner's buy-in network of counterparts in a partner organization is greater, the boundary spanner's experience of interpersonal trust from their primary counterpart will be greater.

METHODS

Sample

Surveys were distributed to 250 executive-level consultants from one of the top 20 international

management-consulting firms headquartered in the United States. We received 227 participant

surveys for a ninety-one percent response rate. After eliminating surveys with missing data, we

obtained a final sample of 207. The final sample did not differ significantly from those receiving

surveys on demographic characteristics. The average age of participants was forty years-old with

an average firm tenure of 6.7 years. Eighty-five percent had an MBA or other graduate degree.

Ten percent were women, which reflected the gender balance of the firm at the executive-level.

Fifty-percent were U.S. nationals and fifty-percent were from outside of the U.S. (mostly

European nationals). Forty-six percent worked with clients in the North America and fifty-four

percent worked globally. Thirty-percent of the sample were new partners with the firm and

seventy-percent were one promotion away from becoming partners.

Procedure

We surveyed participants of an in-house (company designed and implemented) one-week

professional development seminar. Eleven separate but equivalent seminars were held at remote

locations, and twenty to forty consultants participated in each of the eleven seminars given

between July 1999 and May 2001. Participants were given a dedicated half-hour block to fill out

the survey on the second morning of the seminar before topics related to constructs that were

measured in the survey such as trust and relationship building were discussed in the course.

Survey administration was standardized in collaboration with the firm and the author was present

at the second and sixth survey administrations. Responses to survey items were similar across

survey administrations (i.e., scale reliabilities were similar) and no cohort effects were seen for

the different participant groups (i.e., control variables for cohorts were not significant).

Survey Format

The survey consisted of two sections: a project section and a perceived dyadic-relationship

section. The project section included questions about a consultant's current project size and

network measures designed to capture the general interpersonal environment of each consultant-

primary client contact relationship under investigation (Marsden, 1987; Podolny & Baron, 1997).

It collected information about one set of client contacts on one project and was formatted as

follows. First, drawing extensively on the name-generating questions used by Burt (1992) and

modified by Poldony and Baron (1997), a "buy-in" network name-generating question asked

respondents for the names or initials of key senior-level contacts on a current project. In

response to the generator, respondents could list up to five names. Respondents, who provided

the names of five clients, were asked to estimate the number of additional contacts who would

meet the criteria of the name-generating question. This enabled us to gauge the percent of clients

for whom we had reasonably complete egocentric network information. 88% of respondents had

reasonably complete egocentric network information, i.e. they did not list additional senior client

contacts on the project. Next, respondents were asked several questions about the size and

duration the project, and specific information about their contacts. Respondents reported

demographic information about the key contacts that they had identified on that project (e.g.,

gender, age), and the nature of their relationship with each client (e.g., duration, closeness).

Drawing on Burt (1992), respondents also identified indirect ties among the people in their client

network. It should be noted that because we expected that consultants' might have more than

one current project, initial client contact and project size information was collected on two

projects and after random assignment of a project, more in-depth information about contacts was

collect on only one of these projects. Slightly more than half of the consultants answered about

project one (55%), because some people did not have a second project.

Section two of the survey focused on the dyadic relationship between the consultant and their

primary client contact (i.e., first focal client named on the name-generator for the randomly

assigned project, one or two). This section contained multi-item measures of threat-reducing

behavior, trust, and cooperation. Items reflecting the dependent variable appeared first in the

survey.

Measures: Interpersonal Dyad Level

Threat-reducing behavioral intentions. This construct was measured with 7 items that

reflected the intention to protect and promote the self-esteem or self-image of a client as well as

more general attempts to behave in a non-threatening manner (e.g., "I try to interact with this

person in ways that allow him/her to feel self-confident."; "I purposely use what I know about

this person to make suggestion in non-threatening ways."; "I intentionally choose behaviors that

communicate concern for this person's well-being." [reliability coefficient alpha= .82, See Appendix A for all scale items]) A six-item version of this measure was pre-tested on a sample of 83 evening MBA students from a business school in the mid-western United Stated.

Trust (Experienced). Experience/Perceived trust was measured with a four-item measure. The experience or perception of being trusted is a particularly relevant construct in collaborative relationships because the costs associated with renegotiating or cooperating with an untrustworthy counterpart are incurred by the dyad in terms of added suspicion and safeguards when either party harbors distrust or perceives that the other party harbors distrust (i.e., has the experience of being distrusted). Items drew on Schoorman, Mayer, & Davis's (1996) measure of trust and on Currall & Judge's (1995) measure of surveillance/distrust (surveillance items were adapted and reverse coded). Items included the following: "This person feels comfortable giving me a problem that is critical to him/her."; "This person lets me have a great deal of influence on issues that are important to him/her" [reliability coefficient alpha= .79, See Appendix A for all scale items]). We used a seven-point Likert scale (ranging from 1=strongly disagree to 7=strongly agree) to capture responses.

Cooperation. Communicative cooperation or information sharing was the primary dimension of cooperation used in this study. A 4-item measure of information sharing was constructed by adapting items from Currall and Judge's (1995) measure of communication between individuals who span organizational boundaries, and Bulter's (1991) measure of openness, which reflects openly sharing thoughts. Sample items include "When we discuss important matters, this client shares his/her thoughts with me"; "This person minimized the amount of information he/she

gives me"—reverse scored (reliability coefficient alpha= .85, See Appendix A for all scale items). We captured responses using a seven-point Likert scale (ranging from 1=strongly disagree to 7=strongly agree).

Self-report measures, common method issues, and affective bias. Common source, common-method bias is an issue when using perceptual survey measures. In this study, we use two tactics to address common-method bias—t he potential for participants to respond in consistent ways across items based solely on the method. First, using methods set forth by Bagozzi, Yi, and Phillips (1991), we use structural equations modeling to statistically assess whether a "common-method factor" was better able to account for the shared variance among indicators/items than the three theoretically distinct factors we proposed (i.e., a method-only model). Second, because our independent variables are observed demographic variables, which are not influenced by common method issues, finding different patterns of relationships between these demographic indicators and each of the perceptual variables provides further support that the perceptual measures reflect distinct constructs. Finally, we also address the issue of affective/emotional bias in response to our measures. Because each of our perceptual variables reflects a characteristic of a dyadic relationship, the emotional content of the relationship could influence responses to all of our variables of interest in a similar way. We included relationship strength (measured as emotional closeness) as a control variable to eliminate the possibility of spurious correlations among our variables of interest caused by an affective bias.

Measures: Network

Network Heterogeneity. Network heterogeneity was measured using the Euclidean distance measure from Tsui and O'Reilly (1989) $[1/n \sum(x_i-x_{ij})2]^{1/2}$, where x_i=the focal consultant's score on the demographic dimension (e.g., gender: 0=male, 1=female or age: 1=under 35, 2= ages 35-55, 3=over 55); x_{ij}=each the key counterpart's scores on that dimension. Individual relational demography scores representing the demographic distance between each focal consultant and his/her "buy-in" network of senior client contacts were calculated for gender and age. Demography scores for gender ranged from 0 to 1.0 and scores for age ranged from 0-2.0 with higher scores on each measure reflecting greater demographic distance between the consultant and his or her clients.

Demographic Composition: Proportion. The measure of demographic composition reflected the proportion of client contacts with a certain demographic characteristic. The gender composition measure reflected the proportion of women in the client group, whereas the age demographic measured the proportion of group members over 35 years old. The over 35 age group reflected people as old or older than most of the focal consultants, who were all established at the executive-level of their firm.

Density. Density refers to the "mean intensity or strength of the ties joining alters [i.e., counterparts or clients]" (Marsden, 1987, p. 124). Drawing on Burt (1992), respondents were asked to report on the relationship between each person in their client buy-in and each other person. Their responses were coded as 0 if the clients were total strangers, 1 if they were emotionally close and .5 otherwise. The density measure equals the average of these ties and

varies from O to 1 (0 when all clients in a network are total strangers and 1 when all clients are emotionally close).

Control Variables

Proportion of client network in top management. Consultants reported the job level of each client contact in their network. The proportion of counterparts in top management roles was calculated as a proxy for the formal power of the members of the buy-in network.

Strength of Dyadic Interpersonal Relationship. Respondents were asked to indicate the strength/emotional closeness of their relationship to each client on a four-point Likert scale (ranging from 1=especially close to 4=distant). Dyadic relationship strength reflected the score received by the primary client. Dyadic relationship strength controlled for the respondents' general positive affect toward the primary counterpart, which could bias answers. Substantively, because positive affect and liking have been associated with increased empathy and compassionate behavior (Davis, 1996), a positive relationship between dyadic relationship strength and threat-reducing behavior may exist. Similarly, because emotion has been identified as a predictor of trust (Lewis & Weigert, 1985), relationship strength (a positive affective experience) may be positively related to trust. Finally, some research has found that overtime as individuals develop personal relationships initial negative effects of group diversity on group processes may fade (Chatman & Flynn, 2001; Williams & O'Reilly, 1998), measuring relationship strength may control for temporary effects of demographic diversity related to relational closeness.

Duration of Dyadic Interpersonal Relationship. The duration of the interpersonal relationship between the consultant and each client/counterpart was reported by the respondent in years. Because trust develops over time, relationship duration may be positively related to trust. In addition, relationship duration is a variable that has been used as a proxy for interpersonal trust and relationship development in interorganizational research (Levinthal & Fichman, 1988; Seabright et al., 1992; e.g., "Baker et al., 1998) . Finally, relationship duration may function as a control variable for the demographic variables because as mentioned above, overtime the negative effects of group level diversity on group process may fade (Chatman & Flynn, 2001; Williams & O'Reilly, 1998).

Demographic characteristics of the focal consultant. We controlled for the consultant's age, gender, nationality, firm tenure, job level, division membership, and years of industry experience prior to consulting. Each consultant's job level was provided by the firm. Consultants were asked to report all other variables. Gender was coded as a dummy variable with male=0, female=1. Age was operationalized in years. A dummy variable was constructed for nationality, 0=European, 1=non-European (primarily U.S.). A dummy variable was also constructed for the focal consultant's job level: 0= one promotion away from partner, 1=new Partner—promoted to partner during the previous year. A categorical variable was constructed for the division for which the focal consultant worked, 1=larger division A, 2=smaller division, 3=corporate. Consultants' industry experience prior to joining the consulting profession was operationalized in years.

Other control variables. Other control variables include the size of "buy-in" network, the project size/cost, and survey administration. Network size equaled the number of individuals in the focal consultant's egocentric network of client contacts on the project. Project size/cost was measured using the number of fulltime equivalents the consulting firm had working on the project. We controlled for survey cohorts by constructing a categorical variable and assigning each survey administration a number 1-11 corresponding to the sequential timing of the seminars, which were held every few months.

Analyses

We used structural equation modeling (SEM) and regression analysis (Ordinary Least Squares, OLS) to test our hypotheses. OLS was used to test the direct hypotheses, while controlling for multiple project-related and consultant-related characteristics. Structural equations modeling was used on a smaller set of variables to jointly test the statistical strength of hypothesized mediating effects and to rule out alternative mediated pathways. We used LISREL 8.5 software to analyze the measurement model, the structural model corresponding to the hypotheses, and a series of nested structural models that tested alternate hypotheses. Both the measurement and the structural model were tested using a partially disaggregated approach. Partial disaggregation refers to testing a model using two or more composite indicators formed by averaging or summing items on a scale (Bagozzi & Edwards, 1998). These composites then serve as observed indicators of latent constructs (e.g., trust, threat-reducing behavior). In this study, each underlying construct was measured with three to seven items, which were averaged to form two composites per construct (Bagozzi & Edwards, 1998).

RESULTS

Table 1 shows the means, standard deviations, correlations, and reliability estimates (calculated as Cronbach's alphas) for all variables in the analyses. Reliabilities all exceed the .70 criterion suggested by Nunnally (1978), ranging from .79 to .85 with a median of .82.

Structural Equations Analysis

Measurement Model. A saturated measurement model reflects a confirmatory factor analysis that specifies the expected relationships between the observed variables and the underlying construct they reflect (i.e., the factor) (Anderson & Gerbing, 1988). For observable constructs such as demographic composition and demographic heterogeneity characteristic and for the single-item control measure of relationship-tie strength, measurement error was not estimated. The relevant factor loadings were set to 1 in the CFA.

Our measurement model fit well, generating a reproduced covariance matrix that did not differ significantly from the observed covariance matrix (i.e., from the data) as indicated by the non-significant χ^2 statistic [χ^2 (21)=23.39, p =0.32]. The model also fit well according to other goodness of fit criteria [CFI=1.00] and the small size of the residuals [RMSEA=.02]. Table 2 shows the factor loadings for the composite items all load significantly onto their intended factors. To test discriminant validity, a nested model was tested that constrained the correlation between the highly correlated factors of trust and cooperation [φ=.76] to 1, where a correlation of one would indicate the factors were not distinct from one another. A sequential chi-squared

difference test [SCDT] (Anderson & Gerbing, 1988) comparing the constrained model

[$\varphi_{cooperation,trust}$=1] and unconstrained model [$\varphi_{cooperation,trust}$=estimated] indicated that the

constrained model (estimating non-distinct factors) fit significantly worse than the unconstrained

model [χ^2 (22)=37.40, p =.02; SCDT $\Delta\chi^2$ (1)=14.01, p =.00], supporting the discriminant

validity of the measures. In a test of both common-method variance and discriminant validity

constrained all of the composite indicators (i.e., indicators for threat-reducing behavior

intentions, trust, and cooperation) to load onto one factor, a "common-method factor." A SCDT

comparing the models indicated that the constrained model, estimating one common-method

factor instead of three factors (method-only model described by Bagozzi et al.,Bagozzi, Yi, &

Phillips, 1991) did not fit well according to the fit criteria [χ^2 (34)=166.52, P =.00; CFI=.83;

RMSEA=.14], signifying that the indicators were not related solely because of a common

method.

Insert Figure 4 about here

Structural Model. The structural model reflects a test of the theoretical model put forth in this

article. [2] The χ^2 for the structural model was non-significant, [χ^2 (31)=34.42 (p =.31)],

indicating that the observed covariance matrix (from the data) and the covariance matrix

reproduced according to the specifications of our structural model did not differ significantly

from one another. Model fit was also supported by the other fit statistics [e.g., CFI=1.00] and the

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2 Because missing data would have decreased the sample size for the SEM analysis below the
recommended 5:1 sample to parameter estimate ratio, buy-in network density (Hypothesis 5) was not
included in the model. Hypothesis 5 was tested below using regression analysis. SEM analyses that
included the density variable were run on a smaller sample (consultants who reported 2 or more
counterparts and thus had a density score) to confirm that, in the smaller sample, the reported results for
Hypotheses 1-4b were robust. These results are available upon request.

small size of the residuals [RMSEA=.018]. The standardized path coefficients for our theoretical

structural model, presented in Figure 4, provided substantial support for our hypotheses. Dyadic

interpersonal trust was significantly and positively related to dyadic cooperation [β=.79, p<.

001], supporting Hypothesis 1. Consultants' threat-reducing behavioral intentions were positively

and significantly related to the dyadic trust of the primary clients in consultants (as perceived by

the consultant) [β=.37, p< .001], supporting Hypothesis 2. Hypotheses 3a and 3b received

partial support. Gender heterogeneity, the Euclidean distance of the consultant from his/her

network of key client contacts on a current project, was not significantly related to trust [γ=-.11,

p<.11; H3a], whereas age heterogeneity had a significant and negative effect on trust [γ=-.18,

p<.01; H3b]. Hypotheses 4a and 4b both received support. The percentage of women in a client

network [γ=.27, p<.001; (H4a)] and the percentage of client contacts in the "older" age category

[γ=.21, p<.01; (H4b)] both had a significant and positive relationship to threat-reducing

behavioral intentions. The control variable, relationship/tie strength, was positively and

significantly related to both threat-reducing intentions [γ=.33, p<.001] and dyadic trust [γ=.36,

p<.001]. Finally, Figure 4 also presents the error terms (ζs) for the structural equations. In

standardized form, these error coefficients for the equations represent the proportion of the

variance not accounted for by the structural model. More of the variance in cooperation (62

percent) and trust (42 percent) is explained by the model (1-ζ) than in threat-reducing intentions

(25 percent).

We next compared the structural model with a series of nested models to test that our theoretical

model was sufficiently comprehensive. We relaxed some of the assumptions of our theoretical

model to test for partial mediation (see Table 3b). None of the relaxed models significantly

improved the fit of the model, further supporting the theoretical model. These models showed

that the effects of client network proportional age and gender composition were fully mediated

by threat-reducing intentions (models S7-S8) and that the effects of gender and age heterogeneity

on trust were not mediated by threat-reducing intentions (models S3-S4). Further, relaxed

models, S1-S10, which tested non-hypothesized relationships between demographic composition

(heterogeneity and proportional composition) and the respective dependent variables, also

provided evidence that our perceptual variables were not related primarily because of common-

method variance. To the extent that the observable, demographic independent variables were

related to one perceptual dependent variable and not the others (e.g., trust but not threat-reducing

behavior), common-method bias is less of a concern, because common-method bias would

predict highly similar pattern of relationships between each of the dependent perceptual variables

and a particular demographic variable. Finally, in the test for reverse causality, non-recursive

model (S12), the insignificant parameter estimate from trust back to threat-reducing behavior is

consistent with the directionality proposed in Hypothesis 2, which predicted that threat-reducing

behavior would have a positive influence on trust.[3]

Regression Results

In the preceding section, structural equations modeling was used to jointly test

hypothesized mediating effects and to rule out alternative mediated pathways. To test for

robustness, we used OLS to test the direct hypotheses including Hypothesis 5 while

controlling for multiple engagement and consultant characteristics. These equations

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[3] For model S12, instrumental variables were required to provide enough unique information to generate unique
parameter estimates in the reciprocal, non-recursive model (James & Singh, 1978; Berry, 1984). The 4 demographic
composition variables (age and gender heterogeneity and age and gender proportional composition) served this
function as each affected either trust or threat-reducing behavior but not both.

contained more control variables than could be included in the SEM analysis due to the sample size constraints imposed that that methodology. The regression results are summarized in Table 4.

The regression results with multiple control variables supported the SEM results. Trust was positively related to cooperation [b=.52, p<.01], supporting Hypothesis 1.[4] Consultants' threat-reducing behavioral intentions were positively and significantly related to dyadic trust [b=.31, p<.01, Table 4, Trust Model C], supporting Hypothesis 2. Age heterogeneity was negatively and significantly related to trust [b=-.47, p<.01, Table 4, Trust Model C], whereas, gender heterogeneity was not significantly related to trust after controlling for the consultant's gender (trust models A versus B in Table 4). We further tested that the heterogeneity results were network level effects and not tied to the dyadic heterogeneity between the boundary spanner and the focal client by investigating the effects of dyadic heterogeneity on interpersonal trust. Neither dyadic age heterogeneity nor dyadic gender heterogeneity had a significant effect on trust [b=-.09, p<.4; b=-.17, p<.3, respectively].

With respect to the threat-reduction Hypotheses 4a and 4b [Table 4, threat-reducing model], the proportion of women in a client network [b=1.00, p<.01] and the proportion of "older" clients [b=.86, p<.05], were positively related to threat-reducing behavior [Table 4, threat-reducing model]. Hypothesis 5 also received support. The density of the

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4 This equation included all of the control variables in Trust Model C (see Table 4) and all four of the demographic network variables.

client network was positively and significantly related to the perceived interpersonal trust

of the primary client [b=.87, p<.01, Table 4, Trust Model C].

Control Variables. All regression equations controlled for dyadic tie strength measured as

relationship closeness, which was significantly and positively related to both threat-reducing

intentions [b=.26, p<.01] and dyadic trust [b=.29, p<.01]. The percentage of client team members

that were in the top most management level of the client organization had a positive effect on

consultants' threat-reducing behavioral intentions [b=.44, p<.05]. The other control variables did

not have a significant effect on either threat-reducing intentions or dyadic trust at the p<.05 level.

DISCUSSION

Professionals working on interorganizational projects must traverse organizational and

demographic group boundaries to secure the cooperation of people over whom they have no

hierarchical control. In this article, we look at trust targets (i.e., individuals to be trusted) as

knowledgeable actors who make conscious attempts to influence the trust process. We introduce

threat-reducing behavior as an active behavior for influencing trust and contend that threat-

reducing behavior is a fundamental interpersonal action that influences trust when group

boundaries or work tasks are associated with threats to a person's goals, values, image and/or

esteem. Further, because threat reduction and other strategic interpersonal actions are not enacted

in a social vacuum, we not only investigate the construct of threat-reducing behavior as an active

interpersonal strategy for maintaining trust, but also examine boundary spanners' interpersonal

trust relationships in the context of their broader social network of key decision-making

counterparts from the partner firm, i.e., the boundary spanner's "buy-in" network. We

investigate network density as well as two aspects of demographic composition (demographic heterogeneity and proportional demographic composition) that we argue have contrasting effects on trust.

Network Demographic Diversity and Dyadic Trust. This study examines the relationship between the social network context of a cross-boundary "buy-in" network and interpersonal trust. We found that demographic heterogeneity and proportional demographic composition with respect to age and gender had different influences on the interpersonal processes of threat-reducing behavioral intentions and trust. Gender heterogeneity was not associated with trust directly. However, gender composition in terms of proportion of women had a positive effect on threat-reducing behavior. The findings are consistent with the premise that gender role-socialization may predispose women to set up norms and practices that are more relational in nature and facilitate group processes (Fletcher, 1998; 1999). However, the indirect and overall positive effect of proportion of women on trust must be understood in the context of the study. Both the boundary-spanning consultant sample and their counterparts were predominantly male. Thus, gender was most likely a salient characteristic in terms of female representation in buy-in networks and because of this salience, category-based perceptions of women as warm and nurturing and benevolent attitudes of protection may have also influenced threat-reducing behavior.

Age heterogeneity had a direct negative effect on trust while age composition—the proportion of people in the older of two age categories—had a positive effect on threat-reducing intentions (i.e., an indirect positive effect on trust). Thus, age composition in terms of the percent of

counterparts in the older age category could to a certain extent mitigate the negative effect of heterogeneity on trust. Even though we found an older/younger differential, threat-reducing behavior was higher as the proportion of counterparts over 35 increased, the age of 35 is young enough to suggest that we may be unable to fully disentangle category-based perceptions of age and perceptions of power. Fiske (1993) contends that people are more likely to try to understand the expectations and interests of people from more powerful social groups. Executive consultants (73% of whom were over 35 in our sample) may attribute greater power (both formal positional power and informal social network power) to the category of people over age 35 or inversely, dismiss people under 35 as belonging to an age category that is likely to hold relatively little power with an organization. Supporting the premise that power enhances threat-reducing behavior, we found that one of our control variables, the proportion of counterparts in the buy-in network with top management positions, did increase a consultant's general threat-reducing behavior. However, the top management effect did not eclipse the effect of age suggesting that in organizations category-based expectation associated with age may include expectation in terms of the power people have to contribute to and inversely, to disrupt a project. Taken jointly, the positive effect of "older" age composition on threat-reducing behavior and of top management composition on threat-reducing behavior not only suggests that power may have an important influence on interaction strategies with buy-in network members, but also supports the argument that threat-reducing behavior can be motivated by strategic concerns.

It is possible that two complementary social category-based mechanisms are operating in tandem with power perceptions. In-group bias may have promoted positive affect and threat-reducing behavior for one age group (35-55 age group, which was an in-group for 73% of consultants) and

category-based expectations related to the likelihood of "older" people feeling threaten may have influenced threat-reducing behavior for the other group (over 55 age, a group often stereotyped as more threaten by change, Fiske, 1998; Maurer and Rafuse, 2001). Because our findings support the potential for both power and social category mechanisms to explain our age-related findings, future research is needed to fully disentangle these processes.

However, it is interesting to note that the findings clearly indicate that the inverse of our hypothesis is supported, the proportion of younger counterparts in a buy-in network (under 35) is associated with decreased threat-reducing behavioral intentions, and thereby, decreased trust. Thus, category-based expectations of inexperience, perceptions of low power, out-group bias or the dissimilarity-low attraction associated with the proportion of younger counterparts may be driving our positive relationship between proportion of "older" counterparts (over 35) and threat-reducing behavioral intentions.

Threat-reducing behavior and trust. This study introduces threat-reducing behavior—active attempts to behave in a manner that protects or promotes the interests, values, self-esteem, or self-image of another—as a subset of interpersonal behaviors that are particularly relevant to trust in knowledge-work contexts. We found that after controlling for the strength/closeness of the dyadic relationship, a boundary spanner's threat-reducing intentions had a positive relationship to the counterpart's trust in (i.e., willingness to rely on) that boundary spanner. In this study, we found that threat-reducing behavior had positive effects on trust and cooperation consistent with the positive effects of interpersonal sensitivity on employees' acceptance of decisions with negative implications (e.g., smoking ban, Greenberg, 1994).

Threat reducing behavior an empathic predictor of trust? Although threat-reducing behavior

has not been directly linked to empathy, understanding its relationship to trust and examining the

processes underlying threat reduction may support this conclusion. Not only is empathy

recognized as a predictor of trust (Sheppard & Sherman, 1998; Whitener et al., 1998), but threat-

reducing behavior is also consistent with empathic processes in that it reflects compassionate,

considerate behavior (Batson, 1991; Davis, 1996). Threat-reducing behavior requires that one

consider the situations and actions that another would find threatening. For example, consider the

situation below related by an executive boundary spanner:

> I realized that my client, Pat, was losing money, and that it didn't make sense to
> keep the new division he'd created...[but] I couldn't say, 'Look you have to kill
> your baby!' One thing I did was to go to Pat informally. 'Look', I said, 'this is
> how we're coming to understand the numbers.' I never went to Pat with a report
> that was fully produced and never tried to do a group presentation in front of other
> senior managers…[If I'd done that] Pat probably would have felt, 'Well, this is
> what *they* think!' and would have ignored our work…

Empathy-related processes that may underpin threat-reducing behavior include perspective

taking (i.e., imagining another's thoughts or feelings from that person's point of view, Mead,

1934), emotion matching (feeling another's fear or anxiety, Davis, 1996), and/or empathic

concern (feeling compassion, Davis, 1996). Our findings that threat reducing behaviors were

influenced by positive affect (i.e., emotional close ties), gender (i.e., proportion of women

counterparts) and power (i.e., proportion of top management counterparts, a control variable) are

consistent with perspectives on empathy. For instance, the positive relationship found between

liking and increased empathy (Davis, 1996), the suggested positive relationship between gender

and a more relational, empathic approach to work (Fletcher, 1998; 1999), and the suggested

positive relationship between perspective taking (an empathy-related process) and power (Fiske,

1993). Thus, the results of this study further support the inference that threat-reducing behaviors reflect empathy-related processes, and in fact, can be considered what we term "empathic actions." Further, threat-reducing behavior may be an empathic action, i.e., active empathy-related behavior, that can be invoked strategically (as in perspective taking, Goffman, 1967) or evoked non-strategically by feelings of compassion to yield trust—a non-strategic interpersonal outcome. Recognizing threat-reducing behavior as an empathy-related process provides a basis for systematically linking the literature on empathy to trust and defining the influence of a broader set of factors such as age and gender that may uniquely influence trust indirectly through the empathic mechanism of threat-reducing behavior.

Network Density and Dyadic Trust. We found that network density within an organization had a positive effect on the ability of an invited boundary-spanning "outsider" to build trust with counterparts from a partner organization. This finding is consistent with research on intraorganizational and intra-community networks (Coleman, 1990; Granovetter, 1985; Uzzi, 1997). However, the buy-in networks we investigated were external to the boundary spanner's own organization. Given that counterparts with strong ties may choose to confer trusted status on outsiders or withhold trust (Uzzi, 1997), partner firm reputation and initial investment may moderate the relationship between buy-in network density and trust in an invited boundary spanner. For example, if the boundary spanner's firm has a strong reputation and if initial investments are moderately high, this may enhance the extent to which an invited boundary spanner can build trust by leveraging the clear expectations associated with a dense network. In this study, both the positive reputation of the partner firm and the professional service context (relatively high investment) were held constant and may contribute to the strength of the

relationship we found between buy-in network density and trust. Future research will need to look at this external network density-trust relationship in the context of a broader range of interorganizational relationships including relationships with both invited and uninvited boundary spanners.

Study Limitations

The study's findings should be considered in light of its limitations. First, the industry context and gender mix of our sample may limit generalizability to other corporate boundary spanners. In terms of industry, the relationship between threat-reducing behavior and trust may be stronger in a professional service context than in the context of alliances between equals in which boundary spanners receive fewer rewards for building a relationship and less punishment for having a failed relationship. However, we purposely selected an industry for which trust and relationship building were associated with professional rewards (Maister, 1997) so we could hold the importance participants placed on trust building relatively constant. Future research will need to investigate the influence of motivation on interpersonal actions and trust-related processes.

Second, all respondents in the sample were from the same firm. Although this allowed us to hold constant the influence of firm reputation and firm culture on individual threat-reducing intentions and perceived trust, it may limit our ability to generalize to other firms. However, to mitigate this issue, we did examine two divisions/profit centers of the firm that focused on different types of clients and engagements. We also included equal numbers of executives based in Europe and the United States. Thus, our findings may be applicable at the very least to many

professional service projects in the US and Europe, and at best to a variety of knowledge creation and knowledge transfer corporate alliances.

A third limitation of our sample is its gender mix. The low proportion of women at the executive level of the firm in our sample (under 15%) may influence one's ability to generalize our findings to project groups in organizations and occupations that have a more equal gender mix or a predominantly female employee base. Several studies suggest that the proportion of men and women represented in an organization or team can influence the presence and strength of gender effects (Ely, 1994; Kanter, 1977; Ibarra, 1992; Tsui & O'Reilly, 1989). Previous research has found that a greater overall proportion of women can make the social category of gender less salient to women (Ethier & Deaux, 1994), can influence the expectations associated with women (Ely, 1994), and can change the work climate (e.g., egalitarian attitudes, Konrad et al., 1992). To the extent that our finding are based on social categorization processes vs. gender socialization processes, the positive relationship we found between proportion of women and threat-reducing behavioral intentions may be weaker in a context with a greater gender balance. Understanding the influence of firm-level gender composition on the relationship between the proportion of women in a "buy-in" network and trust is an important area for future research. However, the significance of better understanding the influence of gender diversity on threat-reduction and trust in contexts that are predominantly male (e.g., currently the executive levels of many firms, knowledge-work occupations such as aerospace engineering, etc.) remains undiminished.

Another limitation of our study is the use of a self-report survey methodology and the problem of common method variance. To assess the impact of common-source, common method bias, we

preformed Harmon's one-factor test, following Podsakoff and Organ (1986). We also assessed SEM models constraining all variables to load on a single factor and models estimating a method factor. These results suggest that the constructs in our model were not related solely because of a common-method. The pattern of the SEM results also diminishes concerns about common method bias because our mediating variables of interest, threat-reducing intentions and trust, had different patterns of relationships to predictor and outcome variables including the predictors that were based on observed characteristics (e.g., age, gender, top management position). Furthermore, Spector (1987) suggested that method variance is less of a problem with multi-item scales that are well-designed.

Contributions

This study makes several contributions to theory. First, in contrast to most models of trust, we focus on the trust target (i.e., person to be trusted), not as a passive individual with a fixed level of trustworthiness, but as an active participant engaged in behaviors designed to signal trustworthiness and encourage trust. We introduce threat-reducing behavior as an active process used by knowledgeable social actors to negotiate trust. We contend that threat-reducing behavior is a fundamental interpersonal action that influences trust when group boundaries or work tasks are associated with the potential for negative impact to a person's goals, values, image, and/or esteem. Threat-reducing behavior may influence trust by signaling benevolent intentions and reducing the negative emotional responses often associated with feeling threatened. Our results show support for a positive relationship between threat-reducing behavior and trust, and further suggest that trust targets are not passive individuals but intentional actors with mental models that link threat-reducing behavior to trust.

Introducing threat-reducing behavior as an active interpersonal strategy in boundary-spanning situations also contributes to the interorganizational literature which rarely examines the interpersonal processes that build or maintain interpersonal trust. In contrast to research that uses relationship duration as a proxy for trust and other positive interpersonal processes (e.g., Baker et al., 1998; Levinthal & Fichman, 1988; Seabright et al., 1992), we show that duration explains little of the variance in trust once active interpersonal processes and the social network context are taken into account. Thus, this study suggests that the duration of a relationship may be a weak predictor of trust. Further, investigating threat-reducing behavior, which is empathic in nature (i.e., requires interpersonal understanding), may represent an initial step in bringing empathic actions to the forefront of understanding trust within knowledge-based projects that span organizational boundaries.

This study also contributes to social network theory by investigating the influence of a project-based "buy-in" network situated externally to an invited boundary spanner's own organization. It suggests that network density can have a positive effect on dyadic trust even when the network counterparts reside across firm boundaries. Additionally, this study contributes to the literature on organizational demography by examining how demographic heterogeneity and the proportional demographic composition of a group may differentially influence trust negatively and positively, directly and indirectly, through interpersonal behaviors. By proposing contrasting effects of demographic composition on subjective processes, this study both contributes to our understanding of trust and answers Lawrence's (1997) call for more complex intervening process theories of demography.

CONCLUSION

The ability to build and maintain trust is essential when professionals must traverse organizational and demographic group boundaries (e.g., gender, age) to secure the cooperation of people over whom they have no hierarchical control. This study extends prior studies on trust by empirically examining the relationship between trust and interpersonal actions in an interorganizational context. It investigated the empathic construct of threat-reducing behavior as an active interpersonal strategy for building and maintaining trust. It considered the effect of the structure of a boundary spanner's egocentric network of key counterparts, counterparts who are all members of an organization other than the boundary spanner's own. In addition, this study explicated and found partial support for contrasting predictions for the effects on trust of two aspects of network demographic diversity (demographic heterogeneity and proportional composition). Overall, this article integrated strategic interpersonal influences on trust with social contextual influences in order to facilitate a broader understanding of trust across organizational boundaries and to encourage future research.

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Figure 1: Threat-Reducing Behavior and Trust
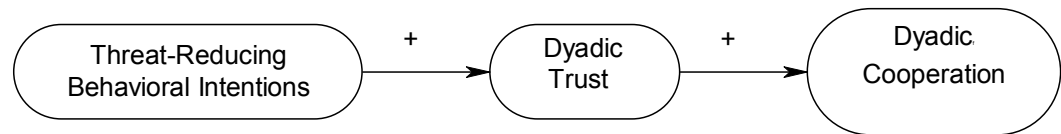
Figure 2: Demographic Diversity and Network Structure of a Boundary-Spanner's Key Contacts: Homogeneous Client Network

Boundary-Spanner Y
Professional Service Firm

Counterparts
Organization B

◆ ●	Person with Demographic Attribute A
——	Bold lines indicate strong relationship
---	Dashed lines indicate weak relationship

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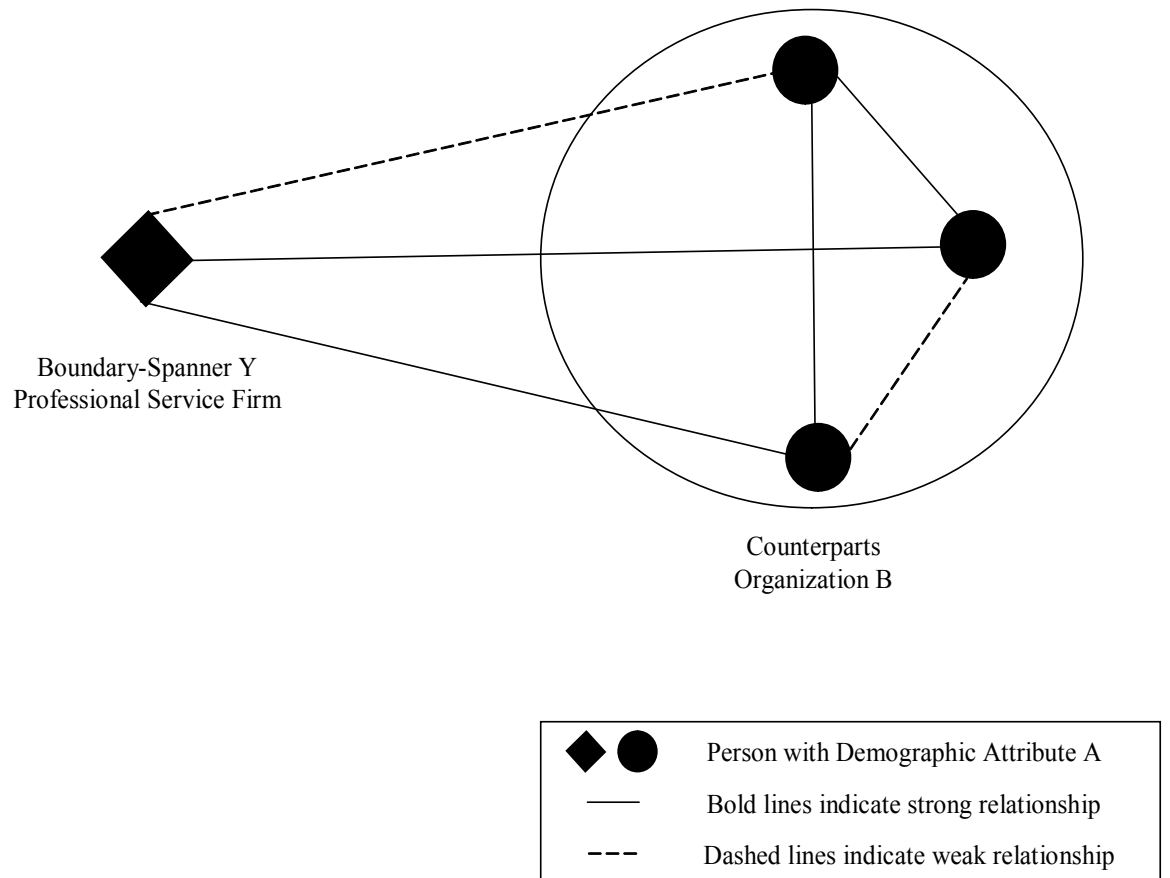
Figure 3: Model of Network effects on Threat-Reduction and Trust
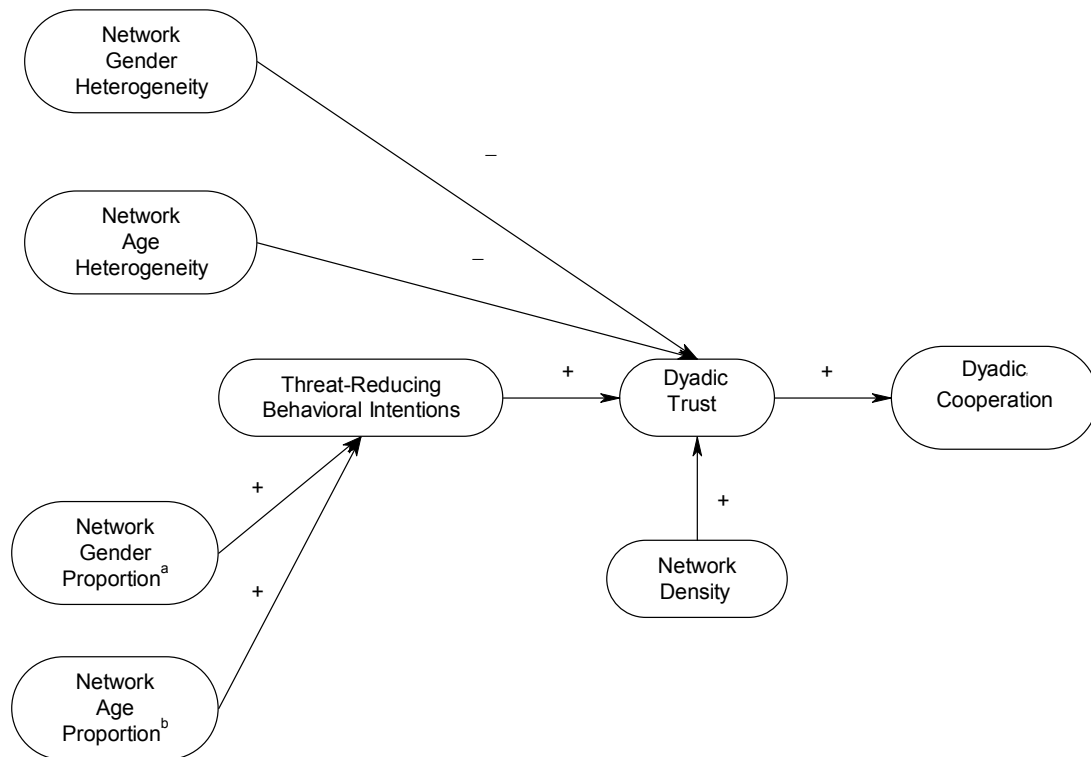
^a proportion of women
^b proportion older age group

Figure 4: LISREL results of demographic network characteristics on dyadic threat-reducing intentions and trust
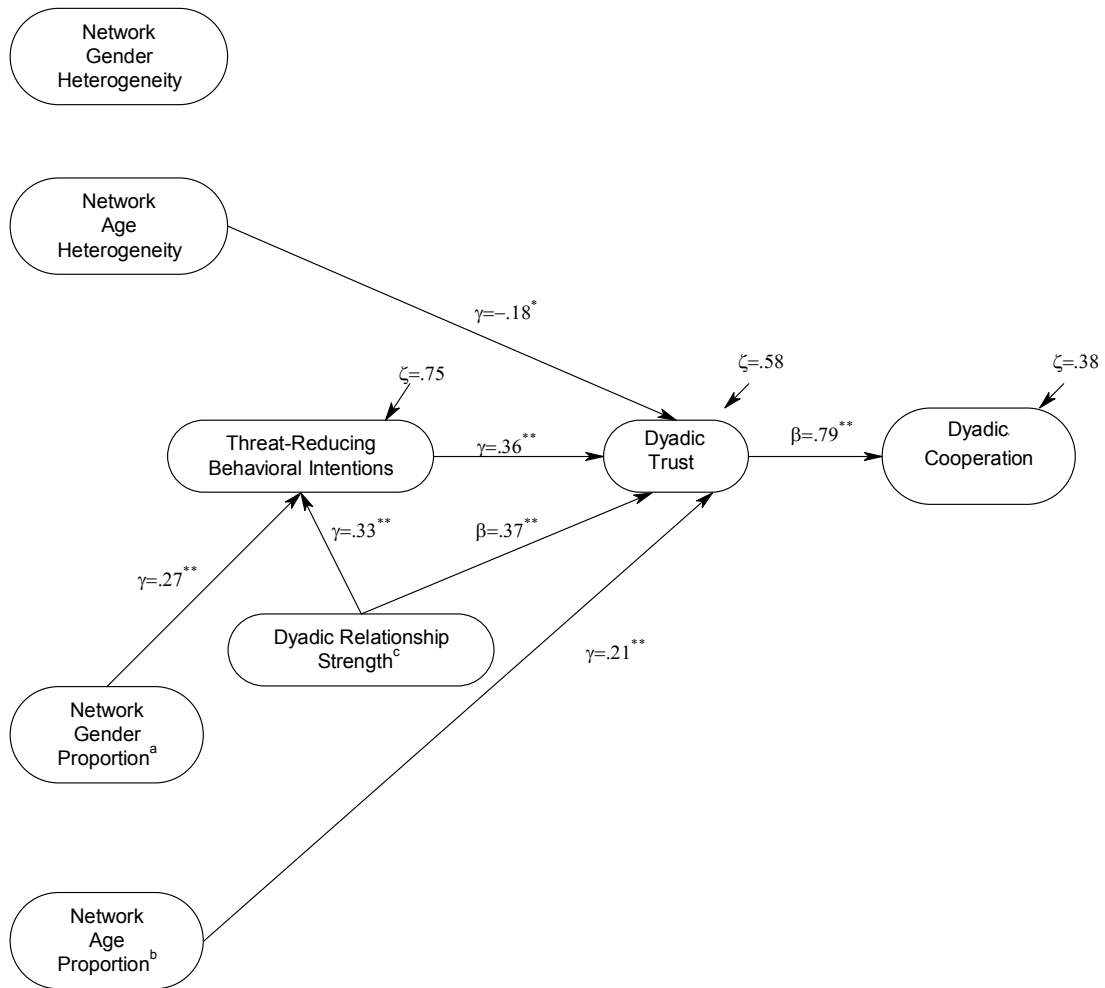
[a] proportion of women
[b] proportion older age group
[c] control variable

$\chi^2 (31)= 34.42, p=.31$
CFI=1.00
RMSEA=.018

Table 1: Descriptive statistics and Correlations

	mean	st. dev.	1	2	3	4	5	6	7	8	9	10	11
1 Threat-reducing intentions	5.70	0.77	0.82										
2 Trust	5.76	0.92	0.40	0.79									
3 Cooperation	5.89	1.02	0.39	0.64	0.85								
4 Network Gender Proportion (women)	0.12	0.20	0.21	0.11	0.06	-------							
5 Network Age Proportion (older)	0.93	0.14	0.18	0.16	0.11	-0.04	-------						
6 Network Heterogeneity (Gender)	0.23	0.31	0.18	0.02	-0.01	0.70	-0.11	-------					
7 Network Heterogeneity (Age)	0.44	0.38	-0.15	-0.22	-0.26	-0.14	-0.25	-0.10	-------				
8 Dyadic Tie Strength (Close Relationship)	5.42	0.90	0.31	0.43	0.36	0.03	0.08	0.09	-0.13	-------			
9 Density	0.63	0.21	0.17	0.26	0.21	0.13	0.05	0.07	-0.06	0.16	-------		
10 Dyadic Relationship Duration	2.17	2.98	0.18	0.17	0.10	-0.03	0.01	-0.01	-0.06	0.41	0.14	-------	
11 Client Top Management (network proportion)	0.24	0.29	0.00	0.00	-0.02	-0.17	-0.06	-0.12	0.10	-0.09	0.04	-0.07	-------
12 Consultant Gender	0.10	0.30	0.09	-0.06	-0.06	0.06	-0.16	0.61	0.00	0.07	0.04	0.06	0.03
13 Consultant Age	39.36	6.84	0.20	0.12	0.13	0.04	-0.02	0.01	-0.22	0.10	0.17	0.32	-0.11
14 Consultant Nationality	0.35	0.48	-0.18	-0.06	0.00	-0.15	-0.06	-0.05	0.24	-0.01	-0.09	-0.08	0.29
15 Consultant firm tenure	6.89	3.97	0.08	-0.05	-0.01	-0.02	-0.06	0.03	-0.04	-0.05	0.02	0.18	-0.09
16 Consultant job level	0.30	0.46	-0.03	0.01	0.07	-0.09	0.05	-0.06	-0.10	0.05	0.03	0.11	0.11
17 Consultant industry experience	6.60	6.82	0.18	0.21	0.13	0.07	0.03	0.01	-0.13	0.13	0.09	0.17	-0.03
18 Project Size	16.20	33.14	0.15	0.06	0.10	0.07	0.07	0.09	-0.18	0.04	0.06	0.01	-0.12
19 Firm Division	1.26	0.44	0.30	0.13	0.06	0.23	0.01	0.19	-0.17	0.15	0.19	0.41	-0.20
20 survey admin cohort	6.05	3.06	0.00	-0.01	0.01	-0.04	0.07	0.01	-0.02	0.10	-0.02	0.03	0.13
21 client network size	3.72	1.13	-0.06	0.07	0.12	-0.08	-0.14	0.06	0.02	0.11	-0.18	-0.01	-0.01

		12	13	14	15	16	17	18	19	20	21
1	Threat-reducing intentions										
2	Trust										
3	Cooperation										
4	Network Gender Proportion (women)										
5	Network Age Proportion (older)										
6	Network Heterogeneity (Gender)										
7	Network Heterogeneity (Age)										
8	Dyadic Tie Strength (Close Relationship)										
9	Density										
10	Dyadic Relationship Duration										
11	Client Top Management (network proportion)										
12	Consultant Gender	-------									
13	Consultant Age	-0.03	-------								
14	Consultant Nationality	0.02	-0.12	-------							
15	Consultant firm tenure	0.16	-0.01	-0.30	-------						
16	Consultant job level	0.01	0.16	0.11	-0.06	-------					
17	Consultant industry experience	-0.08	0.62	-0.09	-0.27	0.06	-------				
18	Project Size	0.03	0.12	-0.22	0.12	0.02	0.04	-------			
19	Firm Division	0.11	0.47	-0.44	0.45	-0.13	0.30	0.34	-------		
20	survey admin cohort	0.12	-0.08	0.03	-0.02	0.22	-0.01	-0.02	-0.12	-------	
21	client network size	0.04	-0.14	0.13	-0.14	0.13	-0.11	0.16	-0.35	0.01	-------

Table 2: Confirmatory Factor Analysis (N=207)*

Latent Variable	Factor Loadings for Model		Error Variance	
	Composite 1	Composite 2	Composite 1	Composite 2
Threat-reducing behavior	0.79	0.81	0.38	0.34
Trust	0.79	0.86	0.38	0.26
Cooperation	0.82	0.89	0.33	0.21
Relationship Strength	1	-------	-------	-------
Network Gender Heterogeneity	1	-------	-------	-------
Network Age Heterogeneity	1	-------	-------	-------
Network Gender Proportion (women)	1	-------	-------	-------
Network Age Proportion (older)	1	-------	-------	-------

*The factor loadings for each composite are completely standardized.

Table 3a: CFA Nested Models

model	description	d.f.	chi-square	chi-difference from M1	p-value
M1	measurement	21	23.39	_____	0.32
M2	CFA [set PHI (trust and coop)=1]	22	37.4	14.01	0.00
M3	CFA [1Factor (trust, threat, coop)]	34	166.52	143.13	0.00

Table 3b: Nested Structural Models

model	description	d.f.	chi-square	chi-difference from S1	p-value
S1	structural/theory	31	34.42	_____	0.31
CFA1	measurement	21	23.39	11.03	0.36
S2	no gender heterogeneity to trust	32	36.66	2.24	0.13
S3	gender heter. to threat	30	34.2	0.22	0.64
S4	age heterogeneity to threat	30	33.54	0.88	0.35
S5	gender heter. to coop	30	34.09	0.33	0.57
S6	age heterogeneity to coop	30	31.35	3.07	0.08
S7	gender *comp. to trust	30	32.31	2.11	0.15
S8	age *comp. to trust	30	34.36	0.06	0.81
S9	age *comp. to coop.	30	34.42	0	1.00
S10	gender *comp. to coop	30	34.07	0.35	0.55
S11	threat to coop	30	31.99	2.43	0.12
S12	trust to threat (recursive model)	30	34.1	0.32	0.57

*network proportional compostion

Table 4: Regression Analysis

	Threat-reducing	Trust model A	Trust model B	Trust model C
Network Gender Proportion (women)	**1.00**** (0.33)	------ ------	------ ------	------ ------
Network Age Proportion (Older)	**.86*** (0.42)	------ ------	------ ------	------ ------
Network Heterogeneity (Gender)	------ ------	**-.40+** (0.20)	**-.24** (0.26)	**-.25** (0.29)
Network Heterogeneity (Age)	------ ------	**-.46**** (0.16)	**-.44**** (0.16)	**-.47*** (0.18)
Thread-reducing Intentions	------ ------	**.34**** (0.09)	**.33**** (0.09)	**.31**** (0.09)
Dyadic Tie Strength (Close Relationship)	**.26**** (0.07)	**.30**** (0.07)	**.31**** (0.07)	**.29**** (0.08)
Density	**.08** (0.27)	**.85**** (0.29)	**.84**** (0.29)	**.87**** (0.30)
Dyadic Relationship Duration	**-.01** (0.02)			**-.01** (0.03)
Client Top Management Proportion (Network)	**.44*** (0.21)			**.19** (0.23)
Consultant Gender	**0.18** (0.19)		**-0.26** (0.26)	**-.22** (0.28)
Consultant Age	**0.02** (0.01)			**-.01** (0.01)
Consultant Nationality	**-.26+** (0.14)			**-.09** (0.15)
Consultant firm tenure	**0.01** (0.02)			**-.01** (0.02)
Consultant job level	**-0.1** (0.13)			**-.21** (0.15)
Consultant industry experience	**0.01** (0.01)			**.00** (0.01)
Project Size	**0.00** (0.00)			**.00** (0.00)
Firm Division	**0.02** (0.23)			**-.09** (0.25)
survey admin cohort	**0.00** (0.02)			**-.01** (0.02)
client network size	**0.01** (0.06)			**.12+** (0.06)
r-squared	**0.33**	**0.37**	**0.37**	**0.40**

Appendix A

Threat-reducing Behavioral Intentions [α= .82]

1. I try to interact with this person in ways that allow him/her to feel self-confident.

2. I make an effort to approach all situations in ways that will allow this individual feel at ease.

3. I attempt to behave in ways that allow this individual to feel good about him/herself.

4. I purposely use what I know about this person to make suggestions in a non-threatening way.

5. I intentionally choose behaviors that communicate concern for this person's well-being.

6. I consciously try to act in ways that minimize the fears others may have.

7. I make others feel that their ideas are valued.

Trust (experienced)[5] [α= .79]

1. This person feels confident that results will follow from our discussions.

2. This individual feels comfortable giving me a problem that is critical to him/her.

3. This person lets me have a great deal of influence on issues that are important to him/her.

4. This person doesn't like to depend on me to handle issues that are important to him/her.(R)

Communicative Cooperation (Information sharing)[6] [α= .85]

1. When we discuss important matters, this client shares his/her thoughts with me.

2. This individual gives me relevant information about important issues.

3. This person minimizes the amount of information he/she gives to me. (R)

4. This person let's me know what he/she thinks about key issues.

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5 Items are drawn from Schoorman, Mayer, & Davis's (1996) measure of trust and Currall & Judge's (1995) measure of surveillance/distrust.
6 Items are drawn from Currall and Judge (1995) and Bulter (1991).