# WHEN BROKERAGE BETWEEN FRIENDSHIP CLIQUES ENDANGERS TRUST: A PERSONALITY-NETWORK FIT PERSPECTIVE

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Workplace friendship obligations of openness and favoritism are likely to conflict with organizational norms of discretion and neutrality. This dilemma is especially apparent for Simmelian brokers, who divide time and attention across multiple, otherwise disconnected, friendship cliques. In two samples, we found support for the core idea that the fit between the requirements of the network role and the personality of the individual facilitates trust. Simmelian brokers are trusted by their friends if they exhibit a roleappropriate diplomatic personality style involving flexibility of self-presentation (high self-monitoring) and inhibition of verbal loquaciousness (low blirtatiousness). Of course, not everyone engages in Simmelian brokerage. Some individuals experience a strongly cohesive situation—i.e., a single friendship clique within which they are embedded. For these nonbrokers, we hypothesized and found that the most appropriate trait combination likely to maintain the trust of a group of tightly bound colleagues involved a forthright, be-true-to-yourself, loquacious personality style (i.e., low self-monitoring, high blirtatiousness). In introducing a personality-network fit perspective concerning whether Simmelian brokers are trusted by their colleagues, we help reconcile discrepancies in prior literature concerning whether these brokers are paralyzed into indecision by cross-pressures. Brokers who flexibly and guardedly manage individuality facilitate interconnection across cliques.

Rees' power stemmed from his receiving, or assuming, the role of unofficial spokesman.... He [and others]... were all in varying degrees adroit at moving in and out of clique activities...as a way of dealing with situations too urgent and dynamic for formal handling.

-Dalton, 1959: 30

Workplace friendships are common in organizations (Morrison & Cooper-Thomas, 2013) and have been investigated by organizational behavior researchers from the very beginning of the discipline, both in terms of dyadic relationships and in terms of cliques (e.g., Roethlisberger & Dixon, 1939). Workplace friendships facilitate productivity, employee retention, job satisfaction, job involvement, team cohesion, and other positive outcomes (Balkundi & Harrison, 2006; Berman, West, & Richter, 2002; Rath, 2006) including personal growth and emotional support (Colbert, Bono, & Purvanova, 2016). However, these business friendships (i.e., friendships between coworkers—Ingram & Zou, 2008) are difficult to manage because the overlap between affective

and instrumental obligations (Lincoln & Miller, 1979) subjects friendship pairs to stresses and strains (Ingram & Zou, 2008; Methot, Lepine, Podsakoff, & Christian, 2016) that can undermine trust (Lewicki & Bunker, 1996). Friendship is a role that comes with clear obligations (Henderson & Argyle, 1986) to provide assistance, to be fully open and honest, to share confidences, to keep disclosures from others, and to provide special treatment and favoritism (Bridge & Baxter, 1992). Many of these obligations conflict with governing principles of workplace interaction emphasizing efficiency and rationality (Ingram & Zou, 2008).

The undermining effects on trust of business friendships may be particularly evident when an individual has two sets of friends who are not friends with each other—a relatively common phenomenon in organizations (Burt, 2016). The individual who is caught between obligations and time demands to two internally cohesive groups may find that friends in each group expect priority when it comes to the

transmission of valuable gossip and advice (Casciaro & Lobo, 2008). The person caught between two or more cliques has been labeled a Simmelian broker<sup>1</sup> (Krackhardt, 1999) and a multiple insider (Vedres & Stark, 2010). The situation has been analyzed from a balance-theory perspective, according to which an individual who has friendship bonds to two nonoverlapping groups finds it difficult to adopt a stable attitude toward those ideas or people about which the groups differ (Davis, 1963: 450-51). A recent case study illustrated the paralyzing effect of such crosspressures on a Simmelian broker who was "frozen by the set of constraints imposed by the numerous cliques" of friends to which he belonged (Krackhardt, 1999: 206). There has also been research on brokerage between cohesive groups more generally (not exclusively concerned with friendship relations) in terms of how the brokers have to overcome the appearance of ambiguous loyalties to two different groups and manage the possible disruption of trust if they are to facilitate knowledge transfer, innovation (de Vaan, Stark, & Vedres, 2015; Vedres & Stark, 2010), and their own productivity (Burt, 2015). As a recent review of brokerage noted, "highly cohesive groups may develop a belief that the broker is not 'one of us,' which could in turn trigger skepticism of the broker's motives" (Stovel & Shaw, 2012: 144). Left unexamined in

this literature is the possibility that the personality of individuals helps explain why they differ in how well they manage the potential for disruption of trust that is one possible consequence of the Simmelian broker's multiple insider role (e.g., Vedres & Stark, 2010: 1159).

The dilemma, therefore, is that brokers between friendship cliques must be trusted by others in order to succeed in the vital organizational role of bringing new and incompletely understood combinations of previously disconnected ideas across boundaries (Vedres & Stark, 2010). However, trust itself tends to be engendered within closed, rather than open, network structures (Burt, 2001; Coleman, 1988; Granovetter, 1985), and to be amplified by the presence of mutual friends and other third parties (Burt & Knez, 1995). In particular, one of the challenges facing Simmelian brokers is to sometimes hide and sometimes share knowledge across friendship clique boundaries. Being seen to hide knowledge that is useful to the members of a particular clique is likely to engender distrust (e.g., Černe, Nerstad, Dysvik, & Skerlavaj, 2014). However, to give away the secrets of one clique to another is to betray one's membership of the clique, as discussed in Dalton's (1959) classic analysis of how cliques are formed around secrecy (Costas & Grey, 2014).

Some people, we suggest, are better than other people at managing the challenge of conversations and interactions across disconnected friendship cliques. The research question is: Does personality affect whether Simmelian brokers are trusted by their friends? To answer this question, we build on pioneering (e.g., Burt, Jannotta, & Mahoney, 1998) and recent (e.g., Burt, 2012; Kleinbaum, Jordan, & Audia, 2015) work on the personalities of those who occupy structurally important positions in friendship networks (Fang, Landis, Zhang, Anderson, Shaw, & Kilduff, 2015). The research focus is on how the combination of self-monitoring (i.e., flexibility of selfpresentation to different groups [Snyder, 1974]) and blirtatiousness (i.e., disinhibition of verbal expressiveness [Swann & Rentfrow, 2001]) relates to trust for those in Simmelian brokerage roles.

Thus, we ask how people with different combinations of self-monitoring and blirtatiousness deal with potential mistrust inherent in the Simmelian brokerage role. Over a century ago, James wrote that the individual has "as many different social selves as there are distinct groups of persons about whose opinion he cares" (James, 1890: 294). In the current research, these distinct groups of people are the friendship cliques who claim the time and attention of their members, including brokers whose loyalties

<sup>&</sup>lt;sup>1</sup> Following Krackhardt (1999: 188), we define a Simmelian broker as one who connects at least two cliques such that no member of one clique except the broker is directly connected to any member of the other clique; and where within each clique all members are strongly and reciprocally tied to each other.

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are divided between two or more such cliques. We predict that trust will be greatest when the personality of the individual and the structural characteristics of the individual's network fit in ways that play to the expression of behaviors that meet the demands of the specific social situation while downplaying situationally inappropriate behaviors (Tett, Simonet, Walser, & Brown, 2013).

Our paper makes three main contributions to theory and research. Prior work has dealt with brokerage between cliques as a structural dilemma. Supplementing this emphasis, the current paper contributes to the micro-foundations approach to organizational social networks (Tasselli, Kilduff, & Menges, 2015) via a consideration of how a combination of personality traits affects whether individuals are trusted by colleagues. Second, by introducing a personalitynetwork fit perspective, we help resolve the debate among structuralists concerning whether the constraints of Simmelian brokerage suppress or liberate the broker's individuality. Third, in examining the extent to which Simmelian brokers are trusted, we necessarily examine the contrasting situation of nonbrokers whose friendship ties are captured within single cliques. Thus, we go beyond prior research that has focused only on the personalities of brokers (e.g., Burt, Kilduff, & Tasselli, 2013; Sasovova, Mehra, Borgatti, & Schippers, 2010) in considering how a range of personality orientations is likely to find effective expression across social network roles in organizations.

# TRUST IN SIMMELIAN BROKERAGE

We focus on trust between friends as the dependent variable. Trust has been described as the most fundamental judgment that can be made about another person (Ferrin, Dirks, & Shah, 2006: 871). Trust is critical to the brokerage role in organizations given the requirement to coordinate across clusters of people who themselves are not connected (see the extensive discussion of trust in relation to brokerage and closure in Burt [2005]). In order to transfer knowledge across even strong ties, it is necessary to be trusted (Levin & Cross, 2004). Trust is a central characteristic of relationships in that it promotes effective knowledge creation and sharing in networks (Abrams, Cross, Lesser, & Levin, 2003) and relates to many other aspects of individual, group, and organizational functioning, including work performance (at individual and group levels), organizational commitment, and intention to leave (Dirks & Ferrin, 2001). The gossip of co-clique members can impose strains on the Simmelian broker's maintenance of cross-clique trust relationships (Burt & Knez, 1995: 275).

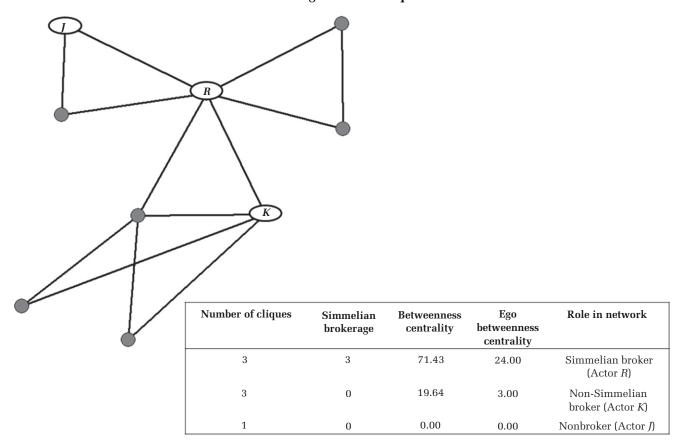
Friendship networks in organizations are "systems for making decisions, mobilizing resources, concealing or transmitting information, and performing other functions closely allied with work behavior and interaction" (Lincoln & Miller, 1979: 196). We define friendship as a reciprocated liking relationship between two people who frequently interact (e.g., Krackhardt, 1999). In organizational contexts, however, relationships are often multifaceted (Lewicki, McAllister, & Bies, 1998: 439) and feelings of positivity and negativity toward friends are common, as the literature on "frenemies" (e.g., Redman, 2013) and ambivalent friendships (i.e., those that are simultaneously both positive and negative) (e.g., Holt-Lunstad, Uchino, Smith, & Hicks, 2007) has described. From this we infer that two people may express mutual liking even though, in certain aspects of their interactions, one may have low trust in the other.

Trust in a Simmelian broker is likely to come under strain given that the members of each clique to which the broker belongs have no friends (other than the broker) in the broker's other cliques. In each clique, the broker faces the expectation from friends to be honest and open, to share confidences, and to keep such disclosures confidential (Bridge & Baxter, 1992). Establishing and maintaining friendships generally requires significant investments of support and attention that can prove fatiguing (Methot et al., 2016). The demands placed on Simmelian brokers to maintain separate sets of friendship relations can accentuate the conflicting expectations and energy depletion characteristic of workplace friendships (Methot et al., 2016).

Even if cliques share similar norms and values, the Simmelian broker is likely to face expectations by each set of friends to spend time with and give attention to one set of friends rather than another, to favor one set over the other, and to be transparent and confidential—expectations that contribute to the mixed blessings of friendship (Methot et al., 2016; Shackelford & Buss, 1996). If trust is to be maintained in the eyes of one particular clique, the Simmelian broker is expected to exhibit altruistic behavior toward the members of that clique rather than investing time, resources, and effort in one or more other cliques (McAllister, 1995; Shackelford & Buss, 1996).

We illustrate how Simmelian brokerage differs from other types of structural arrangements in Figure 1. The figure shows person R as a member of three cliques that would be disconnected but for R's multiple insider status. Person R is, therefore, a Simmelian broker in being the only person who connects multiple cliques.

FIGURE 1 Brokerage between Cliques



Person R's attitudes and behavior are subject to scrutiny by a range of coworkers whose views can influence how much trust interaction partners place in R (Ferrin et al., 2006). By contrast, person Kis one of two people who connect across the three cliques to which he or she belongs. Person K is, therefore, not a Simmelian broker because he or she is not unique in the role he or she plays in helping to broker across partly overlapping groups. Note that person I in the figure has no brokerage role at all, but is captured within a single clique. Our theory and our empirical analyses focus on the situations faced by Simmelian brokers such as *R*, not on the situation of people like *I* or *K* who occupy different structural positions than R. We ask: How, given the pressures on people (like R) in Simmelian brokerage roles, are personality differences likely to affect who is trusted?

# Personality-Network Fit

Personality theory concerning Simmelian brokerage is scant or nonexistent, so we offer a new theoretical approach that is guided by ideas from personality theory and research. Multiple clique memberships, of the kind that actor R experiences, are likely, we suggest, to activate different personality expressions (e.g., Colbert & Witt, 2009; Tett & Guterman, 2000) depending on individuals' personality profiles (e.g., Mischel & Shoda, 1995). The experience of having to juggle scarce time and attention across interpersonal situations (e.g., Stanko & Beckman, 2015) is likely to prompt individuals to exhibit characteristic coping behaviors. Some individuals, we suggest, will respond to multiple cliques with flexible adjustment to the differing needs of the clique members (i.e., high self-monitoring) and inhibited verbal expressiveness (i.e., low blirtatiousness). These trait-related behaviors are likely to represent a good fit with the demands of the multiple-clique structure, thereby providing a positive experience to the individual (e.g., Kristof-Brown, Jansen, & Colbert, 2002: 985) and providing evidence of the good citizenship behavior that enhances and maintains trust (McAllister, 1995). Based on person-organization fit research (see Kristof, 1996,

for a review), we suggest that a fit between the individual and the network structure occurs when there is compatibility between the individual and the surrounding network such that the individual has the abilities required to meet situational demands (Kristof, 1996: 3). Some individuals, we suggest, will experience the Simmelian brokerage position as an opportunity to liberate aspects of their personality that otherwise might remain relatively unused. Other individuals will respond with trait-related behaviors that are ill-suited to the demands of a multiple-clique situation. They will lose clique members' trust to the extent that they fail to detect and adjust behavior to the differing requirements of different interpersonal situations, and are seen as talking uninhibitedly about matters that clique members consider should be kept private.

Self-monitoring. Self-monitoring theory is familiar to social network researchers (e.g., Kilduff, 1992; Mehra, Kilduff, & Brass, 2001). The self-monitoring construct has emerged across studies as the strongest personality predictor of who occupies roles of structural advantage (Fang et al., 2015). Indeed, self-monitoring has been described as "a psychological analogue to bridging structural holes" (Burt, 2012: 548). Relative to low self-monitors, high self-monitors are predisposed to act out potentially incompatible roles with distinct groups (Snyder, 1987: 62–63), they are skilled in social interactions (Furnham & Capon, 1983), and they emerge as informal leaders in organizations (Kilduff, Mehra, Gioia, & Borgatti, 2016).

A Simmelian broker is the only person who connects otherwise unconnected cliques. The demands of this multiple insider role, connecting people across multiple cliques, represents a good fit with the high selfmonitor's boundary-spanning ability (e.g., Caldwell & O'Reilly, 1982) to flexibly adjust to the demands of different situations (e.g., Zaccaro, Foti, & Kenny, 1991). High self-monitors accurately perceive relationships within social networks (Flynn, Reagans, Amanatullah, & Ames, 2006), provide help to colleagues in need (Toegel, Anand, & Kilduff, 2007), and are skilled at maintaining positive impressions across different groups (Flynn, Chatman, & Spataro, 2001). Thus, high self-monitors in the Simmelian brokerage role (relative to low self-monitors in this role) are likely to maintain their social standing, including their colleagues' trust, despite their membership in multiple cliques.

In contrast, low self-monitors (relative to high selfmonitors) are likely to win the trust of their colleagues when the structural situation consists of membership in a single clique. The expression of authentic attitudes and behaviors with little regard for impression management—characteristic of the low self-monitoring orientation—is likely to represent a good fit with the structural situation of being captured within a single clique of like-minded friends. Low self-monitors are likely to gain trust within single cliques because of their evident authenticity: they choose to be in social situations that are congruent with their underlying dispositions (Snyder & Gangestad, 1982). With respect to friendship, research in self-monitoring has noted that "low self-monitoring individuals seek to maximize the fit between their friends and their own personal attributes" (Snyder & Simpson, 1984:1281). Low selfmonitors (relative to high self-monitors) are likely to engage in more frequent interaction within the clique with their friends (Snyder & Simpson, 1984), and thus gain trust (McAllister, 1995). Low self-monitors commit themselves to their friends across a range of different activities, whereas high self-monitors are less committed to relationships in general (e.g., Kilduff & Day, 1994; Norris & Zweigenhaft, 1999; Snyder & Simpson, 1984) and choose activity partners on the basis of their skills for particular activities rather than on the basis of liking (Snyder & Simpson, 1984).

Thus, high self-monitors are likely to overcome the lack of trust endemic to the Simmelian brokerage role but to suffer a lack of trust to the extent that their friendship relations are restricted to a single clique. Past research has failed to find a significant interaction between self-monitoring and network position with respect to outcome measures (e.g., Mehra et al., 2001). Therefore, we break new ground in anticipating that colleagues' trust will be influenced by the interaction between self-monitoring personality orientation and the extent to which individuals broker between multiple, disconnected friendship cliques.

Hypothesis 1. The more the individual's friendships span across disconnected cliques, the greater the positive effect that a high self-monitoring orientation has on how much the individual is trusted by others.

Blirtatiousness. A separate question of fit refers to how the structural situation of Simmelian brokerage relates to differences in the speed of self-revelation. Some individuals engage in rapid, frequent, and effusive communication that reveals thoughts, feelings, and attitudes to others (Swann & Rentfrow, 2001). High blirters, or verbal disinhibitors, tend to express themselves as soon as thoughts occur to them, whereas low blirters, or verbal inhibitors, are relatively slow and inhibited in responding to others (Swann & Rentfrow, 2001; Swann, Rentfrow, & Gosling, 2003), whether the interaction is affectively neutral (for example, conversation in

a classroom) or contentious (such as confrontation during a phone call).

There are several positive aspects to the blirtatious, rapid verbal-responding propensity. High blirters, relative to low blirters, are seen as more intelligent, more likable, more physically attractive, and more interesting. They deal with annoying interactions with more humor, and exhibit less stress (Swann & Rentfrow, 2001). People high in blirtatiousness are easier to get to know because their good and bad characteristics are amplified (Swann & Rentfrow, 2001). However, blirtatiousness can lead to impulsive verbal outbursts, particularly in response to provocation (Park, Ickes, & Robinson, 2014). Because blirtatiousness amplifies individuals' reactions, it is easier for third parties to infer negative emotional states, including irritation, of high than of low blirters (Swann & Rentfrow, 2001: 1172). Moreover, third parties might consider the speediness and effusiveness of high blirters as inappropriate for professional contexts, and thus report that they give away secrets and fail to display necessary discretion and diplomacy (Swann et al., 2003).

Most of the research on blirtatiousness relates either to couples' therapy (Sellers, Woolsey, & Swann, 2007; Swann, McClarty, & Rentfrow, 2007; Swann et al., 2003) or to consumer behavior (Bolkan & Goodboy, 2011). However, no research has looked at blirtatiousness in organizational contexts or related blirtatiousness to brokerage or trust.

From a personality-network fit perspective, high blirters in Simmelian brokerage roles are likely to impair the trust of their colleagues. A major challenge for the Simmelian broker is to act with discretion in terms of being seen by friends in both cliques as likely to keep, rather than reveal, secrets. Such discretion with respect to confidential information is a contributing factor to the maintenance of trust (e.g., Abrams et al., 2003). The high blirter is likely to suffer censure in moving from one clique to another for failing to control verbal expression when socially required to do so (Swann et al., 2003). However, for high blirters who are members of single cliques, there is an opportunity to build trust through the transparency of frequent communication with clique members (Abrams et al., 2003). Thus, low blirtatiousness is likely to represent a good fit with the requirements of the Simmelian brokerage role, whereas high blirtatiousness is likely to represent a good fit with the requirements of membership in a single clique. Overall, therefore, the prediction is that the more that the situation calls for brokerage between unconnected cliques, the greater the advantage that low blirters will have in maintaining trust.

Hypothesis 2. The more the individual's friendships span across disconnected cliques, the greater the positive effect that a low blirtatiousness orientation has on how much the individual is trusted by others.

**Combining the traits.** The first two hypotheses summarize the separate cases for the relevance of selfmonitoring and blirtatiousness in explaining trust in Simmelian brokers. However, individuals who combine high self-monitoring and low blirtatiousness are likely, we argue, to represent an enhanced fit with the trust requirements of the Simmelian brokerage role. For example, the high self-monitoring tendency to speak first in social interactions (Ickes & Barnes, 1977) may be curbed in people with low blirtatiousness. The high self-monitors may encourage communication through the nonverbal expression of emotion (Friedman & Miller-Herringer, 1991) as part of their characteristic effort to make social interactions succeed (Ickes, Holloway, Stinson, & Hoodenpyle, 2006). The high self-monitor, low blirter flexibly presents across different cliques but does so guardedly so as to limit thirdparty gossip. Of course, there are other possible combinations of these two personality orientations. The high self-monitor, high blirter flexibly presents feelings, attitudes, and ideas across different cliques, but does so effusively. The low self-monitor, high blirter is effusive in revealing current emotions, attitudes, and ideas to different cliques. The low self-monitor, low blirter avoids the limelight, sticks with the same enduring self-presentation, and suffers verbal inhibition. We summarize these four personality styles in Figure 2.

The time, resource, and confidentiality requirements of Simmelian brokerage across different cliques are likely to represent a match with the traits that people who combine high self-monitoring and low blirtatiousness offer in terms of their talents for flexible self-presentation and discretion in self-revelation. The Simmelian brokerage situation places the individual as the sole representative of each clique to the other. This situation calls for a diplomatic personality style that combines the high self-monitor's flexible adjustment to the demands of each clique, and the low blirter's restricted effusiveness when it comes to sharing confidential information. There is also a match between personality and situation for individuals low in self-monitoring and high in blirtatiousness whose activities are restricted within cliques. Being enclosed within a group of mutual friendship relationships is likely to allow these authentic-seeming, talkative individuals to express their innermost feelings and ideas to likeminded others (Snyder, 1974). Their

# FIGURE 2 Combinations of Self-monitoring and Blirtatiousness

#### Flexibility of Self-Presentation

Low Self-monitor

High Self-monitor

High Blirter

Consistent self-presentation and effusive self-revelation

Speed of Self-Revelation

Low Blirter

Consistent self-presentation and effusive self-revelation

Consistent self-presentation and slow self-revelation

Flexible self-presentation and slow self-revelation

blirtatiousness (which amplifies their distinctive characteristics [Swann & Rentfrow, 2001]) is likely to be encouraged given that their loyalties are to just one set of friends. They are likely to gain trust with their friends as long as they are "blirting" within, and not across, cliques.

Therefore, we see trust accruing to those in situations of both high and low Simmelian brokerage, depending on individuals' levels of self-monitoring and blirtatiousness. An individual who belongs to several otherwise disconnected friendship cliques (representative of a high level of Simmelian brokerage) is likely to be trusted by friends across these different cliques if the cross-pressures are matched by a diplomatic personality style that combines high self-monitoring and low blirtatiousness. This diplomatic personality style involves the appropriate adjustment of self-presentation and the avoidance of inappropriate self-revelation to the different constituencies to which the individual belongs. An individual whose friendships are restricted to a cohesive group of mutual friends (representative of a low level of Simmelian brokerage) is likely to be trusted by these interconnected friends if the pressure to be authentic is matched by a personality style characterized by a transparent, principled presentation of self.

Hypothesis 3. There is a three-way interaction among Simmelian brokerage, self-monitoring, and blirtatiousness in the friendship network. When the individual's friendships span across many disconnected cliques, the higher the self-monitoring score, and the lower the blirtatiousness score, the more the individual is trusted; when the individual's friendships span across few or no disconnected cliques, the lower the self-monitoring score, and the higher the blirtatiousness score, the more the individual is trusted.

It is less clear how the other two combinations of individual differences might represent a fit with structural conditions with implications for trust. We speculate, however, that the Simmelian brokerage role may trigger in high self-monitors who are also high blirters an effusiveness toward the expectations of different audiences that may remedy the lack of trust that might otherwise compromise their performance in the Simmelian brokerage role. Similarly, to the extent that the Simmelian brokerage role requires discretion, individuals characterized by low self-monitoring and low blirting may exhibit verbal inhibition that protects individuals from low trust.

We tested these ideas in two settings in which relations of trust are important: a graduate program for young professionals intent on trying to build and maintain their reputations with peers in the process of career transition (Master's sample); and a hospital setting in which medical staff rely on trust with fellow professionals to implement critical care (Hospital sample).

## **METHODS**

# **Participants**

Master's sample. We surveyed 148 members of a full-time, two-year European business school master's degree program designed for those transitioning to business careers whose first degrees were mainly in nonbusiness subjects, such as social science, politics, economics, and law. We presented people with a paper-based questionnaire during the third semester and 126 people (i.e., 85%) responded (average work experience = 2.31 years). We analyzed data from the program's administrative office and found no statistical difference between respondents and nonrespondents on age, gender, class section, or citizenship.

*Hospital.* We surveyed 84 professionals employed in a critical-care unit of a publicly funded European

hospital. Work involved diagnosis, surgical intervention, pharmaceutical care, and continuous checks of patients' health conditions. Seventy-five people (20 doctors, 39 nurses, 16 paramedical staff) responded to a paper-based questionnaire (response rate = 89%). We analyzed the administrative data and found no statistical difference between respondents and nonrespondents on demographic, organizational, or professional variables.

### **Network Data**

Across both samples, we used the roster method to collect network data (Wasserman & Faust, 1994: 46); this approach reduces the likelihood that respondents forget important contacts (Marsden, 2011: 372). Each respondent was presented with a complete alphabetical list of all those in the relevant master's or hospital network and asked to indicate the names of "people you consider as 'friends'—that is, people with whom you frequently and regularly have friendly and pleasant relationships during classes and during your stay at the business school" (Master's sample) or "...during your stay at work" (Hospital sample).

Consistent with the definition of Simmelian ties as "super strong and sticky" (Krackhardt, 1998:21), we restricted the analysis to reciprocated relations between individuals who were embedded in friendship cliques. Specifically, we only included relations between those individuals who met both of the following two conditions: they expressed reciprocated friendship for each other (i.e., theirs was a strong relationship), and there was at least one other person in the dataset who reciprocated each of their friendships (i.e., theirs was a sticky relationship in that it involved a mutual friend who could mediate between them). Thus, across both samples we excluded from the final database all unreciprocated friendship ties and all ties that were not tied to at least one common third party.

Technically, we symmetrized the friendship matrix using the interaction rule: a friendship link between two people was defined as existing only when it was reciprocated by both people (Krackhardt, 1998). The symmetrized matrix included 1,063 ties in the Master's sample (78% of total ties) and 589 ties in the Hospital sample (75% of total ties). From the symmetrized matrix, we identified 168 cliques involving 108 individuals in the Master's sample and 109 cliques between 68 individuals in the Hospital sample using the clique indicator matrix procedure in the statistical package UCINET VI (Borgatti, Everett, & Freeman, 2002), with each single clique

having at least three members all reciprocally tied to each other. The final datasets included only reciprocated friendship ties embedded in cliques: 692 ties involving 108 people (Master's sample) and 418 ties involving 68 people (Hospital sample).

Independent variables. For Simmelian brokerage, we considered the number of times an actor played an exclusive brokerage role between otherwise disconnected friendship cliques. For example, an actor spanning across the single gap between two otherwise disconnected cliques would have a Simmelian brokerage score = 1. In Figure 1, R brokers across three gaps between three otherwise disconnected cliques, so R's Simmelian brokerage score = 3. In addition, brokerage across four otherwise disconnected cliques involves spanning across the six possible relations between the four cliques, so the Simmelian brokerage score would equal 6. In summary, consistent with the definition of Simmelian brokerage as strongly and reciprocally connecting at least two cliques such that no member of one clique except the broker is directly connected to any member of the other clique (Krackhardt, 1999), we considered an individual to be a Simmelian broker only when spanning between nonoverlapping cliques. In Figure 1, therefore, K belongs to three cliques that are also connected through another actor; thus, the Simmelian brokerage score for K = 0. We assessed Simmelian brokerage from the clique census procedure in UCINET VI (Borgatti et al., 2002).

We repeated the analysis, assessing Simmelian brokerage as the *number of otherwise disconnected cliques* to which an individual belongs. If a person belonged to two otherwise unconnected cliques, we considered his or her brokerage score as 2, and so on. Results were unchanged.

Our theory of personality-network fit applies to situations of Simmelian brokerage; i.e., situations that involve people (such as R in Figure 1) who are the sole links between otherwise disconnected cliques (Krackhardt, 1999). We assessed whether our results would hold for two other measures that, as Figure 1 illustrates, also differentiate between Simmelian and other types of brokerage. Betweenness centrality assesses the extent to which an actor serves as a potential go-between for other pairs of actors by occupying an intermediary position on the shortest paths connecting other actors across the whole network, including both direct and indirect relationships (Freeman, 1979). Ego betweenness centrality assesses the extent to which an actor serves as a potential go-between for other pairs of actors to whom the focal actor is only directly connected (Everett & Borgatti, 2005). Using either of these

measures, Simmelian brokers consistently show higher brokerage scores than non-Simmelian brokers (as illustrated in Figure 1). Across the two datasets, analyses using either betweenness centrality or ego betweenness centrality showed the same patterns of results as those found using the Simmelian brokerage measure.

For *self-monitoring*, we used the 18-item true–false scale (Gangestad & Snyder, 1985; Snyder & Gangestad, 1986) (Kuder–Richardson reliability: Master's sample = .77, Hospital sample = .69). For *blirtatiousness*, we used the eight-item BLIRT scale (Swann & Rentfrow, 2001; Cronbach's α: Master's sample = .85, Hospital sample = .79). Five-point Likert scale items included "If I have something to say, I don't hesitate to say it" and "I always say what's on my mind."

Dependent variable. The dependent variable was the extent of affect-based trust from one person (the rater) to another (the ratee). Affect-based trust is the extent to which the individual is perceived to be genuine in showing interpersonal care and concern for colleagues (McAllister, 1995). We focused on affectbased trust (rather than cognitive-based trust) because of its critical role in facilitating managerial working relationships (McAllister, 1995). Warmth judgments are made more swiftly than competence judgments and have a larger effect on how we see others (Wojciszke & Abele, 2008). Affect-based trust improves the usefulness of both tacit and explicit knowledge exchange (Levin & Cross, 2004) and is characteristic of the communal interpersonal relations that characterize friendship cliques (McAllister, 1995).

In each clique, there were at least three members, with all clique members reciprocally tied to each other (e.g., Tortoriello & Krackhardt, 2010). Each rater, therefore, provided a trust score for at least two ratees, and each ratee received, in turn, at least two trust scores from raters. The trust score was constructed as the mean of five items with anchors of 1 (strongly disagree) and 7 (strongly agree) (McAllister, 1995; Cronbach's  $\alpha$ : Master's sample = .92, Hospital sample = .85). Scale items (adapted in the Master's sample for use in an academic context) included "If I shared my problems with this person, I know (s)he would respond constructively and caringly." Thus, for each ratee we computed two or more affect-based trust scores representing the levels of trust accorded to the ratee by fellow clique members, a procedure similar to that used for relational measures in prior research (e.g., Reagans & McEvily, 2003: 249). Based on this procedure, for the Master's sample we computed 692 trust scores (provided by 108 people), and for the Hospital sample we computed 418 trust scores (provided by 68 people). To deal with issues of nonindependence of these scores (given that each individual both provided, and was the target of, two or more scores) we used linear regression models with error terms clustered around individual IDs; and we checked results with other approaches, as described in the Analysis section.

Control variables. Some individuals may be trusted more than others because of their better performance (Colquitt, Scott, & LePine, 2007). In the Master's sample, we assessed performance as the arithmetic mean of each student's marks across the 10 classes taken by all students during the first year of the Master's sample (normalized range: 1-100). At the conclusion of each of these common classes, students could access not only their own scores but also the scores of other class members. In the Hospital sample, the three head supervisors (one for each professional function) evaluated each subordinate's performance with a five-point Likert scale on the three items used in Mehra et al. (2001: 132), including "the overall job performance of the individual" (1 = poor, 5 = excellent; Cronbach's  $\alpha$ : .84).

The number of friends that an individual has may be an indicator of how much the person is trusted by others (McAllister, 1995). In both samples, we controlled for each participant's number of friends in terms of *network size* (Freeman, 1979).

In the Hospital sample, we controlled for three aspects of organizational position that might affect affiliation patterns or trust. First, we coded for rank (0 = nonsupervisor, 1 = supervisor or manager) given that rank relates to social status, and, thus, the extent to which people are trusted (e.g., Oh, Chung, & Labianca, 2004). Second, we used a dummy variable to represent the three types of  $professional\ function$  (doctor = A; nurse = B; paramedical staff = C, serving as the reference category in the models). Third, we measured organizational tenure as the number of years each respondent had been in the organization (Mehra et al., 2001).

The length of time over which people interact may affect perceptions of trust (Lewicki & Stevenson, 1997), and the more frequently people interact, the more information they gain about each other, thus affecting trust development (Lewicki, Tomlinson, & Gillespie, 2006). The repetition of cooperative exchange promotes trust (Burt, 1999: 215). In the Master's sample, therefore, for each friend listed by a respondent, we measured both *relationship duration* as the number of years the respondent had known the classmate, and *frequency of interaction* with each friend, with anchors labeled 1 (infrequent interaction) and 4 (daily interaction).

We controlled for several proximity factors that could affect interactions. In the Master's sample, we coded for *on-campus residence* ("1") and off-campus residence ("0") (Festinger, Back, & Schachter, 1950); whether each person had attended a *previous program* ("1") or not ("0") at the same school; and whether each friendship pair belonged to the *same section* ("1") or not ("0") at the moment of data collection (e.g., Feiler & Kleinbaum, 2015). Students were randomly assigned each semester to one of two class sections that met in different lecture rooms. However, activities were conducted with classmates across the entire cohort rather than within each section.

We controlled for demographic variables including each individual's age (as a continuous variable in years) at the time of data collection (e.g., Van de Bunt, Van Duijn, & Snijders, 1999); gender (0 = male, 1 = female) (e.g., Brass, 1985); and, in the Master's sample, whether individuals had the citizenship right to work within the European Union (0 = non-European citizen, 1 = European citizen) (e.g., Kilduff, 1992).

Finally, in the Hospital sample we also collected the 10-item short version of the Big Five Personality Inventory (Rammstedt & John, 2007), which included two items per factor (anchors: 1 = disagree strongly, 5 = agree strongly) to control for extraversion, conscientiousness, openness to experience, agreeableness, and emotional stability (McCrae & John 1992). For all analyses that included the Big-Five variables, the pattern of results remained unchanged. For parsimony in presenting the findings, we omitted these variables from the analyses reported in the results section.

# **Analysis**

The dependent variable was affect-based trust. We analyzed a total of 692 clique-embedded friendship ties involving 108 people in the Master's sample; the equivalent numbers for the Hospital were 418 cliqueembedded friendship ties involving 68 people. There were multiple measures of each ratee's trust from clique members, and each rater provided multiple measures of trust, one for each clique comember. Standard statistical tests are not appropriate for these data because the dyadic observations cannot be assumed to be independent. The analyses may exhibit substantial bias (Kilduff & Krackhardt, 1994) due to autocorrelation: error terms may be correlated across observations both from the same source (the rater) and object (the ratee) of the relationship, as noted in prior network research using a dyadic-based dependent variable (Kilduff, 1990). We used linear regression models with error terms clustered around the individual IDs of both the raters and the ratees to control for nonindependence of the trust observations (e.g., Reagans & McEvily, 2003). The estimates of the coefficients are the same as the ordinary least square (OLS) estimates, but tend to be more conservative because they generate larger standard errors that better reflect the sampling error in the pooled linear regression coefficients (Wooldridge, 2015: 483; see Huckman & Pisano, 2006 for an example).

To test for robustness and possible additional sources of heteroskedasticity and endogeneity, we also analyzed the data using other approaches. First, we ran OLS regression models with a dummy variable that corresponded to each respondent. Results remained unchanged in both studies (e.g., Levin & Cross, 2004). Second, because in the dyadic analysis individuals with more ties may be overrepresented in the sample compared to individuals with fewer ties (e.g., Feiler & Kleinbaum, 2015), we repeated the analysis at the individual level, adopting Tobit regression models and taking into account as the dependent variable, for each individual, the average level of trust assigned by friends. Across both samples, the pattern of results remained confirmed; in addition, t-tests showed no significant mean differences at the dvadic level versus the individual level for the demographic or personality characteristics of individuals (i.e., gender, age, tenure, self-monitoring, blirtatiousness). Third, we used another approach that controls for unobserved heterogeneity in the data and nonindependence of observations—the exponential random graph model (ERGM) framework (e.g., Carnabuci & Diószegi, 2015; Lusher, Koskinen, & Robins, 2012). This approach makes no assumptions about the nonindependence of actors or ties (Cranmer & Desmarais, 2011), although it requires binary data as input. We reran the hypothesis tests with the dependent variable structured as the likelihood of receiving a trust tie from another participant. In both studies, we considered a trust tie from i to j to exist when i assigned a mean trust score to j of 5 or more on the seven-point affect-based trust scale. The results paralleled those we present below.

To assess interaction effects, in each model interaction terms were entered in a separate step after the main terms were entered. To correct for the multicollinearity that can arise when testing moderated relationships among continuous variables, independent and interaction variables were centered before generating interaction terms (Aiken & West, 1991).

Despite the clear conceptual distinction between the size of the individual's network and the extent to which individuals are brokers between cliques, size and brokerage tend to be highly correlated (Bonacich, Oliver, & Snijders,1998: 135; Mehra et al., 2001) and were so both in the Master's sample (r = .82; p < .01) and in the Hospital sample (r = .81; p < .01). People with many friends tend to have high brokerage scores. Collinearity between variables can inflate the standard errors of their regression coefficients. To check the severity of multicollinearity, we examined the conditioning index and variance proportions associated with each independent and control variable (e.g., Belsley, Kuh, & Welsch, 1980). According to Tabachnick and Fidell (1996: 89), a conditioning index greater than 30 and variance inflation factors higher than 10 can indicate serious multicollinearity. None of the independent variables violated this criterion; there was thus no serious threat to the significance of each independent variable. To further check for possible effects of collinearity, we repeated the models across both samples, dropping network size from the analysis. Results remained unchanged.

#### **RESULTS**

Tables 1 and 2 present means and standard deviations for the two samples. The two personality variables (self-monitoring and blirtatiousness) were not significantly correlated with each other (Master's sample, r=-.10, n.s.; Hospital sample, r=-.04, n.s.). We also note that the independent variables exhibited a suitable range of scores. Self-monitoring scores (which can vary from 0–18) ranged from 2–18 (Master's sample) and 3–16 (Hospital sample). Blirtatiousness scores (which can range from 8–40) ranged from 9–34 (Master's sample) and 13–28 (Hospital sample). Simmelian brokerage scores ranged from 0–21 (Master's sample), and from 0–6 (Hospital sample).

The results of regression models are reported in Tables 3 and 4. Recall that Hypothesis 1 suggested that the greater the individual's Simmelian brokerage (as measured by the number of the individual's exclusive bridging roles between otherwise disconnected friendship cliques), the greater the positive effect of a high self-monitoring orientation on how much the individual is trusted by others. This hypothesis was supported. For the Master's sample, as shown in Model 2 in Table 3, with all controls in place, the interaction between self-monitoring and Simmelian brokerage (B = .19, p < .01) improved variance explained by 4% ( $R^2 = .35$ , p < .01) over the

direct-effects Model 1 ( $R^2 = .31$ , p < .01). For the Hospital sample, as shown in Model 3 in Table 4, the interaction of self-monitoring and Simmelian brokerage (B = .58, p < .01) improved explained variance by 8% ( $R^2 = .36$ , p < .01) over Model 2 ( $R^2 = .36$ ) .28, p < .01). To interpret these results, we plotted the predicted values of affect-based trust using ± two standard deviations to represent high and low values of variables. As illustrated in Figure 3, in both samples a simple slope test showed that the predicted positive relationship between levels of self-monitoring and trust was significantly evident for those with high Simmelian brokerage scores (Master's, t = 4.07, p < .01; Hospital, t = 3.28, p < .01); but for those with low brokerage scores, the relationship between selfmonitoring and trust was either negative (Hospital, t = -2.83, p < .01), or significant at p < .10 and negative (Master's, t = -1.68, p < .10).

Thus, we found support for the hypothesized fit between self-monitoring and the situation of brokering between disconnected cliques: people who flexibly represent themselves are trusted in the role of Simmelian broker. Did we find a similar pattern with respect to blirtatiousness—i.e., the verbal effusiveness with which people respond to social situations? Recall that Hypothesis 2 suggested a trust advantage for Simmelian brokers who were low blirters rather than high blirters: the greater the individual's Simmelian brokerage, the greater the positive effect of a low-blirtatiousness orientation on how much the individual is trusted by others. This hypothesis was supported. For the Master's sample, as shown in Model 3 in Table 3, with controls in place, the interaction between blirtatiousness and Simmelian brokerage (B = -.24, p < .01) improved variance explained by 9% ( $R^2 = .40$ , p < .01) over the direct-effects Model 1 ( $R^2 = .31$ , p < .01). For the Hospital sample, as shown in Model 4 of Table 4. the interaction between blirtatiousness and Simmelian brokerage (B = -.43, p < .05) improved explained variance by 5% ( $R^2 = .33$ , p < .01) over Model 2, which included only independent variables and controls ( $R^2 = .28$ , p < .01). To interpret this result, we plotted the predicted values of affectbased trust for high and low levels of the variables in both samples. As illustrated in Figure 4, a simple slope test showed that the predicted negative relationship between blirtatiousness and trust was significantly evident for those with high Simmelian brokerage scores (Master's, t = -5.75, p < .01; Hospital, t = -2.16, p < .05), but the relationship between levels of blirtatiousness and trust for those with low Simmelian brokerage scores was either

TABLE 1
Means. Standard Deviations. and Correlations among Variables. Master's Sample

		LATCHIES, O		a Deviae	June, erro	COLLCIA		ons van	antico, m	tandan de Viations, and Corrections among variables, master s Campre	arrbire				
Variable	Mean	as	1	2	3	4	5	9	7	8	6	10	11	12	13
1. Gender	0.42	0.50													
2. Citizenship	0.64	0.48	0.09												
3. Age	26.02	4.54	0.35	0.09											
4. Living on campus	0.26	0.44	0.01	0.00	-0.14										
5. Same class	0.54	0.36	-0.06	-0.12	-0.09	0.07									
6. Previous program	0.28	0.45	0.10	0.12	-0.05	-0.04	0.04								
7. Average marks	99.98	4.31	0.08	0.16	-0.05	0.12	-0.17	0.12							
8. Relationship duration	2.01	0.29	0.01	0.10	-0.16	0.07	90.0-	0.23	0.14						
9. Frequency of interaction	2.81	0.37	0.00	-0.18	-0.02	0.05	0.10	0.13	90.0	-0.15					
10. Network size	6.41	3.37	0.09	-0.00	0.13	0.00	-0.12	0.10	0.14	-0.01	-0.05				
11. Simmelian brokerage	2.29	3.11	0.04	0.04	0.14	-0.12	-0.13	90.0	0.07	0.01	-0.01	0.82			
12. Self-monitoring	10.27	3.87	-0.08	-0.03	-0.12	.01	-0.09	0.02	0.09	90.0-	0.02	-0.04	-0.04		
13. Blirtatiousness	20.31	5.53	-0.05	-0.11	-0.08	-0.05	-0.09	-0.02	-0.10	.01	-0.02	-0.11	-0.02	-0.10	
14. Trust	4.63	0.98	-0.12	-0.10	-0.23	0.17	0.08	0.09	0.13	-0.02	0.16	-0.02	-0.13	0.18	-0.12

Notes: n = 108; all coefficients below -.19 and above .19 are significant at the .05 level. Means, standard deviations, and correlations are reported at the individual level for ease of interpretation.

TABLE 2
Means, Standard Deviations, and Correlations among Variables, Hospital Sample

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. Gender	0.63	0.49										
2. Tenure	10.78	5.40	0.00									
3. Profession = $A$	0.25	0.44	-0.05	-0.02								
4. Profession = $B$	0.54	0.50	0.28	0.11	-0.63							
5. Rank	0.12	0.32	0.09	0.29	0.00	0.06						
6. Performance	3.22	0.74	-0.06	0.33	-0.00	0.10	0.22					
7. Network size	6.15	3.96	0.06	0.20	-0.06	0.21	0.40	0.30				
8. Simmelian brokerage	1.12	1.63	-0.00	0.05	-0.06	0.14	0.14	0.22	0.81			
9. Self-monitoring	9.10	3.18	0.03	0.20	0.21	-0.13	0.12	0.19	0.23	0.19		
10. Blirtatiousness	20.00	3.52	0.18	0.06	0.22	-0.08	-0.13	0.05	-0.25	-0.09	-0.04	
11. Trust	4.17	1.03	0.09	0.29	-0.33	0.42	0.17	0.30	0.19	0.14	-0.21	0.05

Notes: n = 68; all coefficients below -.24 and above .24 are significant at the .05 level. Means, standard deviations, and correlations are reported at the individual level for ease of interpretation.

positive (Master's, t = 3.61, p < .01), or significant at p < .10 and positive (Hospital, t = 1.72, p < .10). Thus, we found support for the predicted fit between low blirtatiousness and the situation of brokering between disconnected cliques: the more individuals' friendships span across cliques, the more they are

trusted to the extent that they control verbal expressiveness.

Hypothesis 3 posited a three-way interaction between Simmelian brokerage, self-monitoring and blirtatiousness in affecting the extent to which people are trusted. The results show support for this

TABLE 3
Regression Models Predicting Trust, Master's Sample

	Model 1	Model 2	Model 3	Model 4	Model 5
(Intercept)	3.40 (2.55)	4.19 (2.36) <sup>†</sup>	3.56 (2.12) <sup>†</sup>	3.58 (2.27)	4.29 (2.29)†
Gender	-0.17 (0.22)	-0.24 (0.22)	-0.14 (0.19)	-0.21 (0.20)	-0.12 (0.20)
Age	-0.04 (0.04)	-0.04 (0.04)	-0.04 (0.03)	-0.03 (0.04)	-0.04(0.04)
Citizenship	$-0.35 (0.20)^{\dagger}$	-0.29 (0.19)	-0.38 (0.18)*	$-0.33(0.18)^{\dagger}$	-0.35 (0.17)*
Living on-campus	0.28 (0.22)	$0.37 (0.22)^{\dagger}$	0.22 (0.21)	0.32 (0.22)	0.29 (0.21)
Same class	-0.01 (0.12)	-0.08 (0.12)	-0.09 (0.11)	-0.11 (0.10)	-0.12 (0.10)
Previous program	0.33 (0.24)	0.26 (0.24)	0.22(0.24)	0.24(0.24)	0.19 (0.24)
Average marks	0.02 (0.02)	0.02 (0.02)	0.03 (0.02)	0.03 (0.02)	0.02 (0.02)
Relationship duration	-0.06 (0.07)	-0.06 (0.07)	-0.05 (0.06)	-0.06 (0.06)	-0.06(0.06)
Frequency of interaction	0.04 (0.05)	0.03 (0.05)	0.04 (0.04)	0.03 (0.04)	0.03 (0.04)
Network size	0.07 (0.05)	0.04(0.04)	0.02 (0.04)	-0.01 (0.05)	-0.01 (0.05)
Self-monitoring	0.07 (0.03)*	0.06 (0.03)*	0.06 (0.02)**	0.06 (0.02)*	0.06 (0.02)**
Blirtatiousness	-0.04 (0.02)*	-0.04 (0.02)*	-0.05 (0.02)**	-0.05 (0.01)**	-0.05 (0.01)**
Simmelian brokerage	$-0.93 (0.50)^{\dagger}$	-0.36 (0.40)	-0.15 (0.42)	0.23 (0.43)	0.34(0.43)
Self-monitoring × Simmelian brokerage		0.19 (0.06)**		0.13 (0.04)**	13 (0.04)**
Blirtatiousness × Simmelian brokerage			-0.24 (0.05)**	-0.22 (0.04)**	-0.18 (0.04)**
Self-monitoring × blirtatiousness				-0.00(0.00)	-0.00 (0.00)
Self-monitoring × blirtatiousness × Simmelian brokerage					.02 (0.01)*
$\operatorname{Model} F$	3.43	7.79	15.54	21.15	28.49
$R^2$	0.31**	0.35**	0.40**	0.42**	0.44**
Root mean squared error	1.01	0.98	0.96	0.96	0.91

Notes: n = 692 observations with the standard errors clustered for the subjects who are the source (raters) (n = 108) and the target (ratees) (n = 108) of trust assessment. Entries represent unstandardized parameter estimates; standard errors are in parentheses.

 $<sup>^{\</sup>dagger}p$  < .10

<sup>\*</sup> *p* < .05

<sup>\*\*</sup> p < .01

TABLE 4
Regression Models Predicting Trust, Hospital Sample

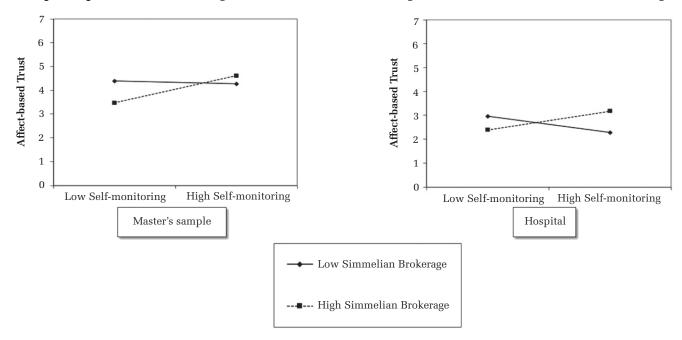
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
(Intercept)	2.19 (0.61)**	2.14 (0.72) **	2.70 (0.68)**	2.10 (0.70)**	2.98 (0.51)**	2.67 (0.55)**
Gender	0.21(0.25)	0.08 (0.26)	-0.19(0.23)	0.32(0.23)	0.15(0.19)	0.23 (0.20)
Tenure	$0.04~(0.02)^{\dagger}$	$0.04~(0.02)^{\dagger}$	0.03 (0.02)	$0.04~(0.02)^{\dagger}$	0.02 (0.02)	0.02 (0.02)
Profession = A	-0.42 (0.29)	-0.40 (0.31)	-0.26(0.29)	-0.41 (0.31)	-0.14(0.25)	-0.29(0.25)
Profession = B	0.60 (0.28)*	$0.51 (0.30)^{\dagger}$	0.72 (0.27)**	0.23 (0.30)	0.21 (0.25)	0.18(0.26)
Rank	0.24(0.45)	0.17 (0.45)	0.40 (0.39)	0.28(0.39)	0.43 (0.27)	0.55 (0.26) *
Performance	0.40 (0.18) *	0.38 (0.18)*	$0.26~(0.15)^{\dagger}$	0.39 (0.17)*	0.18(0.12)	0.26 (0.11)*
Network size		0.01 (0.05)	0.00(0.05)	0.01(0.05)	0.01 (0.05)	-0.00 (0.05)
Self-monitoring		-0.00(0.05)	0.01 (0.05)	0.01(0.05)	0.01 (0.04)	0.03(0.04)
Blirtatiousness		-0.03 (0.05)	-0.04(0.05)	-0.03 (0.04)	-0.04 (0.04)	-0.05 (0.03)
Simmelian brokerage		-0.01 (1.13)	0.42 (1.13)	-0.20 (1.11)	0.39 (1.21)	0.12 (1.22)
Self-monitoring × Simmelian brokerage			0.58 (0.15)**		0.71 (0.20)**	0.95 (0.20)**
Blirtatiousness × Simmelian brokerage				-0.43 (0.19)*	-0.69 (0.19)**	-0.71 (0.18)**
Self-monitoring × blirtatiousness					-0.02 (0.01)*	-0.02 (0.01) *
Self-monitoring × blirtatiousness × Simmelian Brokerage						0.09 (0.04) *
Model F	7.98	5.93	11.47	8.02	16.63	40.34
$R^2$	0.27**	0.28**	0.36**	0.33**	0.53**	0.55**
Root mean squared error	1.06	1.05	0.99	1.01	0.96	0.84

Notes: n = 418 observations with the standard errors clustered for the subjects who are the source (raters) (n = 68) and the target (ratees) (n = 68) of trust assessment. Entries represent unstandardized parameter estimates; standard errors are in parentheses.

hypothesis across the two datasets. For the Master's sample, as shown in Model 5 in Table 3, with all controls and two-way interactions present, the three-way

interaction of Simmelian brokerage, self-monitoring, and blirtatiousness (B = .02, p < .05) improved variance explained by 2% ( $R^2 = .44 p < .01$ ) over Model 4's test of

FIGURE 3
Simple Slopes for Self-monitoring and Affect-based Trust for High and Low Levels of Simmelian Brokerage

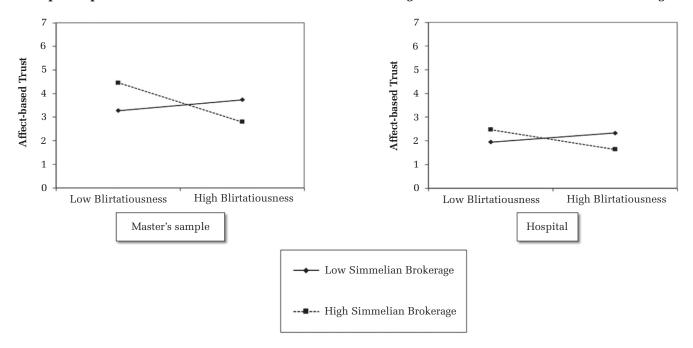


 $<sup>^{\</sup>dagger} p < .10$ 

<sup>\*</sup> p < .05

<sup>\*\*</sup>p < .01

FIGURE 4
Simple Slopes for Blirtatiousness and Affect-based Trust for High and Low Levels of Simmelian Brokerage



the relevant two-way interactions ( $R^2=.42$ , p<.01). For the Hospital sample, as shown in Table 4, Model 6, the three-way interaction of Simmelian brokerage, self-monitoring, and blirtatiousness (B=.09, p<.05) improved variance explained by 2% ( $R^2=.55$ , p<.01) over Model 5's test of the relevant two-way interactions ( $R^2=.53$ , p<.01). The combination of personality traits, therefore, represented a better fit with the Simmelian brokerage role than did either personality trait by itself.

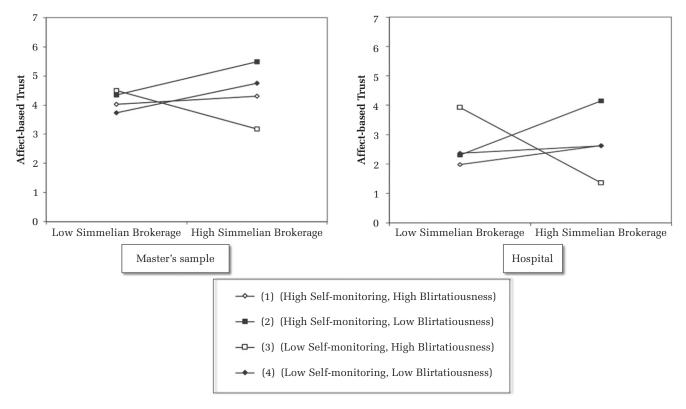
To illustrate the result, we show in Figure 5 that the highest levels of trust were found to be as expected for those Simmelian brokers who exhibited a diplomatic personality style: high self-monitoring combined with low blirtatiousness (Master's sample, M = 5.48; Hospital, M = 4.15); and for those nonbrokers who exhibited a forthright, effusive personality style that combined low self-monitoring with high blirtatiousness (Master's sample, M = 4.51; Hospital, M = 3.92). A simple slope test showed that both the slope of the high self-monitoring, low blirters (Master's sample, t = 2.11, p < .05; Hospital, t = 2.19, p < .05) and the slope of the low self-monitoring, high blirters (Master's sample, t = -4.94, t = -4.94,

A question remains, however, concerning the extent to which other personality combinations represented a fit with aspects of the Simmelian brokerage role. A pairwise comparison of the slopes reported in Figure 5 (Dawson & Richter, 2006) shows that the slopes of those brokers combining high self-monitoring and low blirtatiousness (line 2) were different from the slopes of those brokers combining low self-monitoring and high blirtatiousness (line 3; Master's sample, t=5.62, p<0.1; Hospital, t=5.03, p<0.1) and from the slopes of those high in brokerage combining high self-monitoring and high blirtatiousness (line 1; Master's sample, t=-1.44, p<0.10; Hospital, t=-2.01, p<0.05). The pattern of results suggests that a high-blirting orientation represented a poor fit with the requirements of the Simmelian brokerage role irrespective of the individual's self-monitoring orientation.

#### **Robustness Tests**

All reciprocated ties. In the hypothesis tests presented so far, we have followed the Simmelian approach (Krackhardt, 1998) in restricting analysis to "super strong and sticky ties"—that is, reciprocated friendship ties between people who had at least one mutual friend. We repeated the analysis on all reciprocated friendship ties in the whole network (i.e., all strong ties) whether or not there was a mutual friend to render the relationship sticky (i.e., hard to break). We detected 1,063 ties in the Master's sample and 589 ties in the Hospital sample. In both samples,





with all controls and two-way interactions in place, the three-way interaction of brokerage (measured as betweenness centrality), self-monitoring, and blirtatiousness on trust was significant at p < .10, with variance explained dropping (in the Master's sample) from the 44% reported in the original tests to 20% (p < .01) and (in the Hospital sample) from 55% to 25% (p < .01).

All friendship ties. We extended the analysis to include all friendship ties, reciprocated or not, in the whole network, irrespective of whether there was a third party in common: 1,369 ties (Master's sample) and 784 ties (Hospital sample). In both samples, with all controls and two-way interactions in place, the three-way interaction of brokerage (measured as betweenness centrality), self-monitoring, and blirtatiousness on trust was nonsignificant, with the overall variance explained by the full model dropping to 12% in the Master's sample and to 20% in the Hospital sample.

Overall, these additional analyses show that the more we moved away from the concept of Simmelian brokerage (Krackhardt, 1999) to examine less demanding varieties of brokerage, the less we found the fit between personality and brokerage related to interpersonal trust.

Network size. As detailed in the analysis section, including or excluding network size from the hypothesis tests did not affect the patterns of results. However, perhaps the size of an individual's friendship network, in combination with relevant personality, signals trust to colleagues? In both the Master's and Hospital samples, with controls in place (including Simmelian brokerage), the three-way interaction of network size, self-monitoring, and blirtatiousness was nonsignificant. These results are consistent with the idea that it is the fit between personality and Simmelian brokerage (rather than the fit between personality and popularity) that explains trust.

Cognition-based trust as dependent variable. For the Hospital sample, we repeated the analysis with a different dependent variable: cognition-based trust (the extent to which colleagues perceive the focal individual to be reliable and dependable [McAllister, 1995]). Cognition-based trust represents a more instrumental aspect of trust relative to affect-based trust. To allow comparability for each participant between the two types of trust, for each tie between a person *i* and

a person j, we took into account the cognition-based trust of i on j only if we had included in the reported analysis the affect-based trust score for the same tie. We found unchanged patterns of results when using cognition-based trust as the dependent variable.

# DISCUSSION

The social network context of this research is friendship, which is frequently observed in work settings and is important for both the individual's personal growth (Colbert et al., 2016) and employee productivity (Balkundi & Harrison, 2006). Friendship is a demanding relationship requiring investments of time and attention, as well as involving friends' expectations of openness and favoritism (Bridge & Baxter, 1992). Friendship obligations are likely to conflict with organizational norms of discretion and neutrality (Ingram & Zou, 2008). Across two quite different samples, we found support for the core idea that Simmelian brokers are trusted by their friends if their personality represents a fit with the demands of the brokerage role. Specifically, Simmelian brokers are trusted if they exhibit a role-appropriate diplomatic personality style involving flexibility of selfpresentation (i.e., high self-monitoring) and inhibition of verbal loquaciousness (i.e., low blirtatiousness). Of course, not everyone engages in Simmelian brokerage between two or more otherwise disconnected friendship cliques. Some individuals experience a strongly cohesive situation: a single friendship clique within which they are embedded. For these nonbrokers, we hypothesized and found that the most appropriate trait combination likely to maintain the trust of a group of tightly bound colleagues involved a forthright, betrue-to-yourself, loquacious personality style (i.e., low self-monitoring, high blirtatiousness).

# Contribution to Theory and Research

People belonging to multiple cliques have been described as insiders who facilitate processes of intercohesion between separate social groups (Vedres & Stark, 2010: 1150). This work has stressed the structural constraints on action and the ways in which multiple memberships undermine clique stability. There has been no discussion of how different types of people can maneuver between clique pressures in ways that may be more, rather than less, congruent with group outcomes. Prior work, therefore, has dealt with brokerage between cliques as a structural dilemma. Supplementing this emphasis, we contribute to the developing science of personality and social

networks (e.g., Fang et al., 2015) an emphasis on how some individuals exhibit personality characteristics (e.g., flexibility of self-presentation, inhibition of verbal effusiveness) that match the demands of the Simmelian brokerage role and thereby maintain trust in the eyes of others (including third parties watching for discrepancies in role display [Burt & Knez, 1995]). We bring attention, therefore, both to self-monitoring as representative of flexibility of role-play across different audiences (Snyder, 1974), and also to blirtatiousness as representative of the effusiveness or guardedness with which the self is expressed in any specific role (Swann & Rentfrow, 2001).

Second, we contribute to network theory in helping to reconcile discrepancies concerning whether Simmelian brokers are effective in bridging between cliques in organizations (see Krackhardt [1999] on the "ties that torture" for a pessimistic view, and de Vaan et al. [2015] on brokerage across structural folds for an optimistic view). Prior research has discussed the importance of trust in the Simmelian brokerage role (Vedres & Stark, 2010), but there has been disagreement over whether individuality is suppressed for those occupying this role (e.g., Krackhardt, 1999) or whether there might be opportunities for individuality to be liberated (e.g., Burt, 2015). The key to understanding these different views, we suggest, is that membership in cliques stimulates the expression of trait-related behaviors (e.g., Tett & Guterman, 2000) in ways that differentially meet the demands of these interpersonal situations. Thus, we help solve the puzzle of how the pressure of having to satisfy the demands of disconnected friendship cliques can paralyze some people (e.g., Krackhardt, 1999) but not others (e.g., Vedres & Stark, 2010).

Individuality is liberated, therefore, for those for whom the situational cues represent a match with their inherent traits (Murray, 1938; Tett & Guterman, 2000). For these individuals, James' (1890) maxim is likely to ring true: they are able to engage with different social groups in ways that are personally rewarding. However, for those whose traits represent a mismatch with situational cues, interpersonal interactions are likely to prove less liberating as they experience the loss of trust. In organizational network research, there is emerging interest in relational pluralism, defined (at the individual level) as the extent to which a person derives meaning and possibility of action from relations with other people (Gulati, Kilduff, Li, Shipilov, & Tsai, 2010: 1556; James, 1890; Simmel, 1955). The results we presented suggest that the management of relational pluralism is dependent on the match between individual traits and interpersonal configurations.

Third, personality—network fit, we suggest, is not restricted to Simmelian brokers but also includes individuals whose friendship interactions are captured within a single clique. For these individuals, it is not flexibility of self-presentation and inhibition of self-expression that is important for the maintenance of trust, but rather the reverse. We argue and show that for these inhabitants of single cliques, trust is maintained to the extent that self-presentation is forthright and verbal expression is uninhibited. We thus help to balance the considerable emphasis in social network research on the positive aspects of psychological flexibility (e.g., Carnabuci & Diószegi, 2015; Sasovova et al., 2010).

We also note that the results suggest a compelling symmetry in the theoretical expectations regarding the fit between personality and network situation: when the situation demands brokerage, trust is maintained by those individuals whose personality traits combine to facilitate the dance between obligations to different friendship cliques; but when the situation demands cohesion, trust is maintained by those individuals whose personality traits combine to provide authentic and unfiltered expressiveness.

# **Future Research**

One of the axioms of conventional personality theory is that personality has little effect in a strong situation such as membership in a cohesive friendship group (e.g., Beaty, Cleveland, & Murphy, 2001; Mischel, 1977). Social network cliques are strong situations, and, conventionally, such situations are theorized to suppress personality differences. Particularly in organizational behavior, the situational strength hypothesis (according to which dispositional effects are likely to be strongest in relatively weak situations and weakest in relatively strong situations) has achieved the status of a taken-for-granted axiom (Cooper & Withey, 2009). The alternative perspective we put forward in this paper is that competing demands for time and attention across friendship cliques evoke flexible self-presentations and inhibit selfexpressiveness in the service of Simmelian brokerage.

Thus, we contribute to a new research direction in suggesting that personality does have a role to play in differentiating outcomes for individuals who manage interpersonal obligations across two or more strong situations relative to individuals who manage obligations within a single strong situation. Recent research (Burt & Merluzzi, 2016) has shown that oscillation between brokerage across groups and deep engagement in a group enhances the individual's

career outcomes. Future research can examine whether personality research may help explain the success of individuals who succeed, over time, in managing oscillating engagements across such different interpersonal arenas as closed networks and open networks.

We build on recent meta-analytic results that show self-monitoring (relative to the Big-Five personality dimensions) to be key to understanding personality effects on social networks (Fang et al., 2015). Selfmonitoring theory represents a distinctive approach within personality research because it differentiates people on the basis of how flexibly they adjust their underlying orientation to the demands of different situational pressures (e.g., Barrick, Parks, & Mount, 2005). Blirtatiousness is different from self-monitoring in that it involves the extent of verbal disinhibition, rather than the extent of flexible self-presentation. We anticipate future research incorporating blirtatiousness as an individual difference variable relevant to the micro-foundations of social networks research agenda, from which it has been absent despite the importance of verbal expression in the workplace (e.g., Von Glinow, Shapiro, & Brett, 2004).

High blirters express their thoughts as soon as they occur and, in this sense, exhibit a transparent individuality. Indeed, blirtatiousness has been described as "a particularly powerful amplifier of people's qualities and personality attributes" (Swann & Rentfrow, 2001: 1161). Future research can examine the extent to which blirtatiousness contributes to the effectiveness of authentic leaders, given the emphasis within this literature on relational transparency between leader and followers (see Gardner, Cogliser, Davis, & Dickens, 2011, for a review).

Recent research has alerted us to the activity of alters in the formation of ego's network (Kleinbaum et al., 2015), raising the question as to whether it matters whether the cliques between which ego is brokering have different personality profiles. We know that certain dyadic personality pairings (e.g., low blirter man, high blirter woman) exhibit relational precariousness (Swann et al., 2003). Would a similar "bad chemistry" make brokerage between a generally guarded clique and a generally effusive clique particularly difficult?

In examining the effects of personality on trust we have alluded to the wider interpersonal context within which cliques are embedded. Trust and distrust emerge from gossip (Burt & Knez, 1995). Third parties tell stories that enhance the extent to which ego trusts or distrusts alter (Burt, 1999). Indeed, ego may be more affected by the views of structurally

equivalent others than by those to whom ego has close ties (Ferrin et al., 2006). Future research could profitably examine personality differences in relation to the production and consumption of gossip. It may well be that the personality type combining high self-monitoring and high blirtatiousness is the generator of gossip, whereas the diplomatic personality type combining high self-monitoring and low blirtatiousness is active in discerning and evaluating the validity of third-party information.

#### Limitations

Our call for further work in these areas stems in part from the acknowledgment of limitations of this research. Given the cross-sectional nature of the data, we were unable to establish causality or completely exclude the possibility of spurious effects. Individuals can have distinctive characteristics (i.e., expertise, abilities, and social skills) that differentiate them from others and can explain both the extent to which they are trusted and their structural positions in the whole network. Although we cannot fully exclude this possibility, the risk of such endogeneity in the data is likely to be reduced given the range of covariates potentially related to the elicitation of trust we examined across two different settings. In addition, we conducted tests (including dyadic network models through ERGM framework, as explained in the analysis section [see Carnabuci & Diószegi, 2015]) to control for possible alternative patterns.

A further limitation is that we showed effects of brokerage and personality on interpersonal trust, but did not analyze how the independent variables affected performance outcomes. Prior research has shown, however, that interpersonal trust relates to improvements in communication, increased organizational citizenship behavior, higher performance, reduced conflict, and increased job satisfaction (see Dirks & Ferrin, 2001, for a review). Trust, therefore, is an important outcome in itself, given its connection to many issues of interest to organizational behavior researchers.

# **Practical Implications**

Spanning across boundaries gives rise to inconsistent and even conflicting expectations that can cause stress for the broker (e.g., Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964) and can lead to distrust among organizational members (Xiao & Tsui, 2007). These conflicting expectations are likely to be even more

evident for Simmelian brokers. One implication for management, therefore, is to acknowledge and reward individuals who operate as Simmelian brokers in the service of knowledge transfer and organizational coordination. Shout-outs at departmental meetings and commendations during performance evaluations can encourage good citizenship behavior on the part of those playing brokerage roles across otherwise non-overlapping friendship cliques. Simmelian brokers may offer critical help in articulating and transferring tacit knowledge across the autonomous units within which specialized expertise is developed (e.g., Simon, 1991).

Moreover, although personality orientations are predictive of outcomes for individuals, many people desire to change aspects of their personality (Hudson & Roberts, 2014). Behavioral changes repeated over time can contribute to enduring personality change (Burke, 2006; Magidson, Roberts, Collado-Rodriguez, & Lejuez, 2014; Roberts & Jackson, 2008; Roberts, Wood, & Caspi, 2008). Specifically, social roles (such as Simmelian brokerage) can contribute to change in underlying personality traits (Lodi-Smith & Roberts, 2007). Thus, it is possible that the experience of the Simmelian brokerage role may not only elicit existing personality expression, but also nurture relevant personality change in the service of role effectiveness (Ibarra, 1999).

Further, the managerial implications of this research include providing a better understanding of the role of expressive ties in relation to a range of organizational processes, from collaboration to knowledge transfer patterns (e.g., Casciaro & Lobo, 2008: 655). Friendship relations provide the foundation for further exchange of knowledge and other resources across the organizational space (Molm, 2000). It is through emotionally intense ties that the diplomatic personality style can facilitate processes of intercohesion within or between the boundaries of organizational life.

In conclusion, the research shows that individuals whose friendships span across cliques are likely to be trusted to the extent that they exhibit a diplomatic personality style that combines high self-monitoring and low blirtatiousness. This specific combination of a flexible presentation of self together with a cautious revelation of beliefs, attitudes, and feelings is likely to match, we suggest, the competing demands for time and attention characteristic of membership in multiple cliques. For the individual whose friendships are within a single clique rather than across cliques, competing pressures are less evident. For this nonbroker, a personality style that combines low self-monitoring

and high blirtatiousness is likely to help maintain colleagues' trust. Bringing a personality perspective to bear on the dilemma facing brokers across cliques adds to the understanding of what otherwise would appear to be a straightforward situation of structural constraint. Brokers who flexibly and guardedly manage their individuality facilitate interconnection across cliques.

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