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Sinking Slowly: Diversity in Propensity to Trust Predicts Downward Trust Spirals in Small Groups

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This paper examines the phenomenon of trust spirals in small groups. Drawing on literature on the spiral reinforcement of trust, we theorize that diversity in propensity to trust has affective and cognitive consequences related to trust (i.e., feelings of frustration and perceptions of low similarity), reducing the level of experienced intragroup trust early in a group's development. Reduced experienced trust then fuels relationship conflict and lowers trust even further over time, ultimately having a negative effect on group performance. These ideas are tested using a sample of MBA student groups surveyed at 3 time periods over 4 months. Results confirm our hypothesis that diversity in propensity to trust is sufficient to trigger a downward trust spiral and poor performance in small groups.

Keywords: propensity to trust, trust diversity, intragroup trust, intragroup conflict, personality composition

He who does not trust enough, will not be trusted.

—Lao Tzu

Trust within workgroups is an integral part of the "social glue" that allows members to effectively work together in the service of organizational goals. Indeed high trust, defined as "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another" (Rousseau, Sitkin, Burt, & Camerer, 1998, p. 395), has been shown to positively influence a whole range of outcomes for groups including information sharing among members (Boss, 1978; Zand, 1972), member satisfaction (Ward, 1997), and task performance (Klimoski & Karol, 1976; Rispens, Greer, & Jehn, 2007). How newly forming groups develop intragroup trust over time, therefore, is a central concern in small groups research.

One influential approach to understanding the development of intragroup trust over time is the notion of trust spirals. Zand (1972) first proposed that trust among group members is reinforced or undermined through a spiral process of reciprocity. Specifically, he argued that trust increases or decreases over time as a result of behaviors that are triggered by initial levels of trust. His model has never been fully tested. However, subsequent research demonstrates that when members of newly formed groups have initially low trust in each other, they tend to conceal or distort information, resist each other's influence attempts, and/or minimize their vulnerability to one another (cf. Butler, 1999; Dirks & Skarlicki, 2009). These behaviors ultimately affect the long-term viability of the group by further reducing trust.

Initial intentions to trust are perhaps best captured in the notion of *propensity to trust*, which is an individual difference factor that reflects a person's generalized expectancies about the trustworthiness of others (Rotter, 1967, 1971). Existing evidence on propensity to trust substantiates the notion that groups in which all members have low initial intentions to trust experience low levels of experienced trust later in their development (Boss, 1978; Butler, 1995, 1999; Costa & Anderson, 2011; Zand, 1972). However, very little is known about how *diversity* in initial intentions to trust affects the development of intragroup trust in small groups. Propensity to trust can and does vary among members of small groups, suggesting that group members will have differing expectations regarding the attitudes and behaviors of others. We surmise, therefore, that differences in propensity to trust, beyond any mean level effects, may have an important influence on the development of intragroup trust. Indeed, one of the groups in Zand's (1972) original study of managerial problem solving did have diversity in initial trust among its members, and all attempts to address the resulting trust issues failed.

To date, we are aware of only two studies that have formally investigated the effects of trust diversity in small groups (i.e., Bergman, Small, Bergman, & Rentsch, 2010; De Jong & Dirks, 2012), and both suggest that diversity in perceptions of trustworthiness, termed *trust asymmetry*, are negatively related to team performance. Unfortunately, both of these studies look at differences in judgments of trust after the group has had some degree of interaction, which limits the conclusions that can be drawn about the causal effects of diversity in propensity to trust on trust perceptions over alternative explanations that take into account the history of interaction between members of the group (e.g., demonstrated trustee competence, integrity, benev-

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olence: Mayer, Davis, & Schoorman, 1995). Consequently, we do not know if diversity in propensity to trust, independent of group member interaction, is alone sufficient to trigger a downward spiral.

The purpose of this paper is to combine both Zand's (1972) original insights into how trust spirals begin, and the emerging literature on trust diversity, in order to examine the spiral reinforcement of trust in newly forming groups. We pay particular attention to how diversity in group members' propensity to trust might trigger downward trust spirals in small groups, which past studies show negatively affect group performance. We propose and test a theoretical model that describes how diversity in propensity to trust results in affective and cognitive consequences related to trust (i.e., feelings of frustration and perceptions of low similarity), reducing the group's initial level of experienced trust and fueling relationship conflict behavior. In testing our model, we also replicate past findings demonstrating that relationship conflict leads to reductions in trust and, eventually, poor group performance. We contribute to the literature on trust in small groups, revealing the origins of how downward trust spirals occur over time. We also contribute to the literature on diversity in deep-level traits like personality and needs among members of small groups (e.g., Barrick, Stewart, Neubert, & Mount, 1998; Chun & Choi, 2014; Harrison, Price, Gavin, & Florey, 2002; Neuman, Wagner, & Christiansen, 1999), uniquely demonstrating that diversity in propensity to trust is sufficient to trigger downward trust spirals in groups.

The Role of Propensity to Trust in the Development of Intragroup Trust

For trust to exist, two or more parties (e.g., individuals, groups, or organizations) must be in a relationship that presents risk, in which the parties are also dependent on each other (Rousseau et al., 1998). In small group settings, group members often depend upon one another to achieve task-related outcomes (Campion, Medsker, & Higgs, 1993; Guzzo & Dickson, 1996; Kozlowski & Bell, 2003) and these relationships present risks for individuals within the group in that their individual rewards are often tied to the success of the group (Wageman, 1995). As such, developing trust within small groups is paramount to working together cooperatively to achieve important outcomes. Yet trust among newly forming groups is often fragile and the process through which it develops is not entirely understood. For example, Meyerson, Weick, and Kramer (1996) observe in new groups that: "Expectations are high but so are reservations. One foot is in the water, but the other is braced firmly on solid ground" (p. 184).

While the development of trust can rest on key characteristics of the actors in a trustor–trustee relationship, such as the trustee's benevolence, competence, and integrity (Colquitt, Scott, & LePine, 2007; Mayer et al., 1995), or on the quality of any prior relationships between the trustor and the trustee (Kramer, 1999; McAllister, 1995), a large proportion of the initial trust one has for another can be attributed to the trustor's general propensity to trust others. Propensity to trust can be conceptualized as an individual difference that reflects generalized expectations about the trustworthiness of others (Rotter, 1967, 1971). Rotter proposed that propensity to trust is a relatively stable belief based on early life experiences and that propensity to trust is especially relevant in novel situations and when working with new people. For example, when individuals are in new relationships in which information about the other party is ambiguous and nondiagnostic (e.g., the beginning stages of working with a new group), their initial propensity to trust will be a significant factor in predicting their intention to trust the other party (Gill, Boies, Finegan, & McNally, 2005).

Individuals with high or low initial propensities to trust other people often engage in behaviors that reinforce those positive or negative expectations. People with high propensity to trust assume that others are generally trustworthy and are likely to act in ways that make them vulnerable to others because they believe that others will not take advantage of them (e.g., Butler, 1999). Reciprocally, those who expect others will not be trustworthy are cynical and skeptical, and behave in ways that make it difficult to demonstrate trust to them (Chatman, 1991; Zand, 1972). This suggests that diversity in propensity to trust not only affects a trustor's behavior, but is also likely to influence the general climate of trust in the group. For example, in Zand's (1972) original study of managerial problem solving, he speculates that members of a group with diverse intentions to trust might experience a downward trust spiral. Specifically, he describes one group with differences in willingness to trust among its members. The group leader sensed some lack of trust in the group and disclosed information to the members in an attempt to build trust. However, the initial low trust of the other group members persisted in spite of this attempt by the leader to build trust. Worse yet, the negative nature of the information disclosed by the leader exacerbated the mistrust among some of the group members, prompting them to reject the group leader entirely. This suggests to us that differences among group members in their individual levels of propensity to trust are likely to result in reduced experienced trust and precipitate a downward trust spiral within the group.

The extant literature exploring the effects of propensity to trust takes one of two forms. The majority of our understanding comes from experimental research in which groups are placed in conditions in which high or low initial trust expectations are manipulated (e.g., Boss, 1978; Butler, 1999; Zand, 1972). The strength of these experimental designs is that they demonstrate that differences in expectations of trustworthiness cause groups to experience trust in line with those expectations. Importantly, though, the experimental designs in this research are such that all group members assigned to one of these conditions have either high or low trust expectations—corresponding to a high mean level of expected trust or a low mean level of expected trust, and that every individual in the group agrees. Thus, while these studies look at expectations of trust before interaction with the group, they do not address the issue of diversity in expectations of trust.

The second form of research on the effects of propensity to trust are the Bergman et al. (2010) and De Jong and Dirks (2012) studies that do directly address the weaknesses of the experimental studies by looking at diversity in perceptions of trust. Bergman and colleagues (2010), for example, found that group members differ in the extent to which they perceive each other as trustworthy. Their study reveals that that diversity in perceptions of trustworthiness (i.e., trust asymmetry) is positively related to relationship conflict and negatively related to team performance. The De Jong and Dirks' (2012) paper looks at the effects of mean level of intragroup trust and trust asymmetry on team performance among

members of established groups, finding that diversity in perceptions of trustworthiness dampened any positive effect of mean levels of trust on team performance. These studies both point to the importance of studying diversity in trust perceptions. However, the limitation of these studies is that perceptions of trustworthiness were measured after teams worked together on tasks, which limits the conclusions that can be drawn about the causal effects of initial trust expectations on these outcomes. Neither of these studies informs our understanding of how diversity in initial individual member expectations to trust (i.e., propensity to trust) might independently affect the development of trust spirals over time. Rather, both of these studies look at the perceptions of the trustworthiness of others after some degree of interaction, which introduces other possible explanations of trust perceptions besides propensity to trust (e.g., trustee competence, benevolence, integrity: Mayer et al., 1995).

In short, research suggests that expectations of trust in a small group affect experienced trust and group outcomes. However, we do not fully understand the specific role of propensity to trust as an individual difference variable and how it affects the development of intragroup trust. Existing experimental evidence is limited in not exploring diversity in propensity to trust, and existing research on trust asymmetry is limited in only measuring trust perceptions after the group has interacted. Thus, the current literature does not fully inform our understanding of how diversity in group members' propensity to trust might independently affect the development of trust spirals over time. We address the problem of prior interaction here by looking at propensity to trust as a dispositional trait, measured before any interaction as a group. We are specifically interested in how small groups composed of members with different views about the trustworthiness of others evolve over time.

Diversity in Propensity to Trust Triggers Downward Trust Spirals

Building on the existing literature on propensity to trust, as well as Zand's (1972) untested suggestion that groups with different levels of trust expectations can spiral to a lower level of trust, we explore how diversity in propensity to trust precipitates these downward trust spirals. We specifically argue that diversity in propensity to trust among group members of a newly forming group results in affective and cognitive consequences related to trust (i.e., feelings of frustration and perceptions of low similarity), which encourages an initially low level of experienced trust, and subsequent conflicts then fuel even lower intragroup trust (See Figure 1). Our main proposition here is that diversity in group members' propensity to trust will be sufficient to trigger a downward spiral in intragroup trust over time, even after controlling for mean levels of propensity to trust.

The Trigger Point

When diversity in propensity to trust exists among members of a newly forming group, individual members will differ in their behaviors and responses to the behavior of others in the group such that some individuals will be in a state of intragroup trust while others are in a state of intragroup distrust (Jones & George, 1998). Members who are high in propensity to trust will act in ways that demonstrate their faith in human nature and beliefs that others are

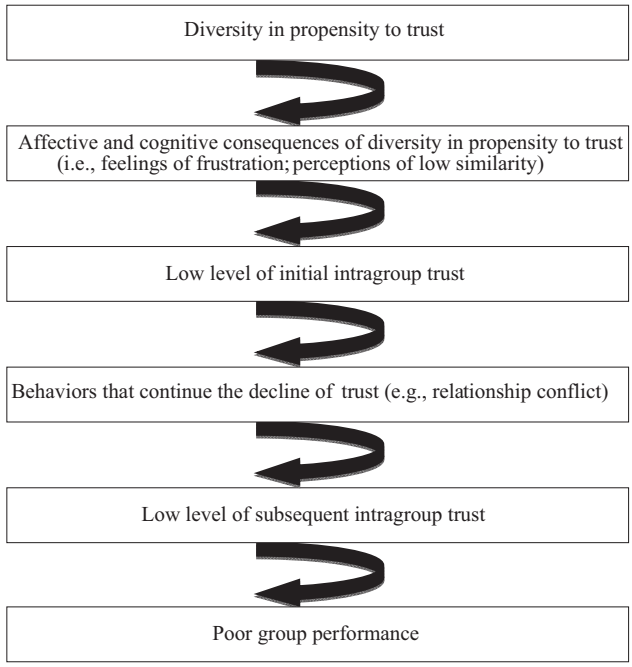

Figure 1. A downward trust spiral resulting from diversity in propensity to trust.

well-intentioned. For example, they freely disclose information and personal feelings to others (Butler, 1999; Zand, 1972) and generally expect reciprocity in kind. However, members low in propensity to trust believe that trust is earned, and will behave in newly formed groups in ways that communicate their lack of trust in others. For example, they are likely to withhold information or resources (e.g., Butler, 1999; Dirks & Skarlicki, 2009), define their team roles narrowly (Morrison, 1994), display low commitment to the group's task (Porter & Lilly, 1996), exhibit negative attitudes and emotions toward other individuals or the group as a whole (Jones & George, 1998), and take steps to minimize their reliance on other group members (Zand, 1972). As such, the behaviors of group members with a low propensity to trust are likely to reflect their suspicion of the motives of others by being "guarded" or careful of others—undermining others' initial steps toward or assumptions of trust.

Interactions characterized by these different approaches to trust are likely to result in group-level consequences that are both cognitive (e.g., perceptions that they are different from others in the group) and affective (e.g., frustration that others do not act in ways that they expect). Past research on deep-level group composition such as personality has argued that the group acts as a context that draws out individual traits and prompts behaviors that affect not only the behaviors of other members, but also the interpersonal dynamics within the group as a whole (e.g., Bell, 2007; Chun & Choi, 2014; Fisher, Bell, Dierdorff, & Belohlav, 2012). As such, we examine how diversity in propensity to trust affects interpersonal dynamics specifically related to the development of trust. Scholars have long noted the affective and cognitive dimensions of trust, arguing that it reflects both emotional bonds as well as judgments about reasons to trust or not to trust others

(Lewis & Weigert, 1985; McAllister, 1995; Meyerson et al., 1996; Williams, 2001). Following this overarching framework, we argue that the interpersonal dynamics of groups characterized by diversity in propensity to trust are likely to reflect affective feelings of frustration and cognitive appraisals of low similarity among group members. Moreover, we expect these affective and cognitive responses to reduce experienced trust within the group.

We anticipate diversity in propensity to trust should lead to negative affect, especially frustration among members of a newly formed group. Frustration is associated with group diversity in general (Sessa & Jackson, 1995), and it is associated with violations in expectations related to trust (Lewicki & Bunker, 1996). The attitudes and behaviors displayed by members both high and low in propensity to trust are likely to violate the inherent expectations of those in the opposite state of trust. For example, those high on propensity to trust may interpret behaviors of those low on propensity to trust as sufficiently negative to be signals of lack of trust, not simply cautionary behavior. Reciprocally, instantaneous displays of trust on the part of those high in propensity to trust (e.g., freely sharing resources) are unexpected by those low in propensity to trust, and may make them wary of others' motives (Costa & McCrae, 1992; Fein, 1996). Thus, we expect that misunderstandings and miscommunication due to diversity on propensity to trust will lead to member feelings of frustration within the group as a whole. Further, this negative affect should reduce the motivation to trust others, culminating in a context of low intragroup trust (Williams, 2001).

We anticipate diversity in propensity to trust is likely to also result in cognitive appraisals of low similarity among group members. Research on group diversity in general indicates that various forms of diversity result in social categorization (Harrison et al., 2002; Van Knippenberg, De Dreu, & Homan, 2004; Williams & O'Reilly, 1998), with implications for group member perceptions of similarity. For example, Zellmer-Bruhn, Maloney, Bhappu, and Salvador, (2008) found that social category diversity (i.e., nationality diversity) was negatively related to group-level perceptions of similarity, supporting the notion that diversity can be subjectively experienced as a group-level phenomenon. The link between diversity and group-level subjective perceptions of diversity has also been shown for deep-level diversity dimensions (Harrison et al., 2002). Likewise, we expect that diversity in propensity to trust will result in perceptions of low similarity, which in turn is likely to reduce trust. Several authors have proposed that similarity between parties is an important cognitive basis for trust (McAllister, 1995; McKnight, Cummings, & Chervany, 1998), and evidence suggests that people distrust those who do not share similar characteristics with them (Brewer, 1979). As such, we argue that perceptions of low similarity will lead to low levels of experienced trust among groups with diversity in propensity to trust.

The Downward Spiral

To this point, we have argued that diversity in propensity to trust results in affective and cognitive responses (i.e., feelings of frustration and perceptions of low similarity) that reduce the overall level of experienced intragroup trust. However, once a newly formed group establishes a relatively low initial level of experienced intragroup trust among members, ongoing behaviors based on those initial feelings and cognitions are likely to continue to undermine subsequent intragroup trust over time. For example, low intragroup trust is likely to result in greater monitoring (Langfred, 2004; Zand, 1972) and less information or resource sharing and cooperation (Boss, 1978; Butler, 1999; Dirks & Skarlicki, 2009; Zand, 1972). Moreover, it should increase negative conflict experiences (e.g., relationship conflict) (Porter & Lilly, 1996). In the conflict literature, relationship conflict, or conflict due to personality clashes and negative emotions, is very strongly associated with negative group functioning (De Dreu & Weingart, 2003; de Wit, Greer, & Jehn, 2012). Relationship conflict is often the culmination of several factors such as misattribution of task conflict behaviors (Simons & Peterson, 2000) or as a response to negative performance feedback (Peterson & Behfar, 2003). Consistent with this stream of research and with other studies that have found a negative relationship between trust and relationship conflict (e.g., Jehn & Mannix, 2001; Rau, 2005; Rispens et al., 2007), we argue that low levels of initial intragroup trust are likely to increase relationship conflict later in a group's tenure.

Next, as groups with low initial intragroup trust experience relationship conflict, these conflict behaviors are likely to reinforce and further diminish the group's climate of trust. Specifically, relationship conflict should worsen intragroup trust over time as negative emotions and interpersonal friction make it more difficult for individuals to accept vulnerability and expect positive outcomes from their group relationships. Rispens et al. (2007), for example, found that relationship conflict negatively predicted group trust and subsequent perceptions of group task performance. Thus higher levels of relationship conflict should further deteriorate group trust, reciprocally reinforcing the downward spiral of trust.

Finally, the downward trust spiral that began with diversity in propensity to trust among group members is likely to culminate in poor group performance. Several studies have found that trust positively influences group performance (e.g., De Dreu, Giebels, & Van de Vliet, 1998; De Jong & Dirks, 2012; Klimoski & Karol, 1976). For example, Klimoski and Karol (1976) found that groups with high trust outperformed groups with low trust on creative problem-solving tasks. More recently, De Jong and Dirks (2012) found that board members of student association groups were rated more highly on planning, allocating budgets, and interacting with internal and external stakeholders when they had greater intragroup trust. Thus we suspect that trust is integral for group performance and, specifically, that the performance of groups that experience a downward trust spiral will decrease as a result of this pattern of reinforcement over time.

In summary, we argue that diversity in group members' propensity to trust is sufficient to trigger a downward trust spiral in groups, even beyond any mean-level effects. The behaviors of members low in propensity to trust are likely to undermine early attempts to build trust by members high in propensity to trust, and early attempts to build trust on the part of members high in propensity to trust are likely to be distrusted by those who are low in propensity to trust. These attitudes and behaviors should affect interpersonal dynamics within the group as a whole, specifically leading to feelings of frustration and cognitive appraisals of low similarity among group members. Frustration and low similarity are likely to result in low experienced intragroup trust, followed by intragroup conflict behaviors, and specifically increased relationship conflict. Relationship conflict, in turn, should further diminish

the group's climate of trust, ultimately decreasing group performance. In short, we propose one way in which downward trust spirals can happen in newly formed groups, with specific attention to the relationship between diversity in propensity to trust, affective and cognitive consequences of this diversity, intragroup trust, and relationship conflict. We next investigate these ideas in a longitudinal multiround survey study of MBA student groups.

Method

Sample and Procedure

Our sample was taken from a larger longitudinal survey study of MBA student groups at a graduate business school in the United Kingdom. The current study included 801 MBA students from 76 different nationalities assigned to 130 groups of five to seven members ($M_{\text{group size}} = 6.16$). Groups were of an average age of 28.3 years (age range: 23 to 39 years) and 72.4% were male. On average, team members had 5.3 years of work experience (work experience range: 2 to 14 years), most frequently in the management consulting and financial services industries. This particular sample was advantageous for examining relationships between study variables for three reasons: a) teams were newly formed at the beginning of the study period, effectively eliminating team tenure or familiarity as factors affecting perceptions of trust and conflict, b) teams worked on the same tasks (i.e., group reports and presentations) intensively throughout the study period, and c) it was possible to survey team members at different points in time of the course of the study to assess the sequential relationships proposed in the theoretical model.

Data were gathered at four time periods for each group. The first survey was conducted prior to the students' arrival at the university or assignment to work groups, and consisted of questions assessing propensity to trust and other personality traits as well as demographic data (Time 1 survey). Individuals were assigned to groups the first week of the university term, during which they completed teambuilding activities (e.g., a decision-making simulation, formulating a team contract regarding their roles, decision-making rules, and participation expectations, etc.) as part of a leadership assessment orientation program. The second survey of the study was administered after this first week of interacting together as a group, and included items related to initial intragroup trust, as well as items to measure the different mechanisms that may explain how diversity in propensity to trust reduces initial intragroup trust (e.g., affective feelings of frustration and cognitive perceptions of similarity; Time 2 survey). The students then worked with members of their groups in various MBA courses (e.g., Financial Accounting, Business Statistics, Entrepreneurship) throughout the academic term. In some courses (e.g., Business Statistics), the groups worked together to learn problem sets or to help one another with assigned homework, while in other courses the groups worked on dedicated group projects. For example, the final group project for the entrepreneurship course was to create a new product or service and to pitch the business idea to a group of potential funders. The third survey was administered at the end of the academic term and assessed group trust again as well as relationship conflict (Time 3 survey). After this survey was completed, students received course-related grades. Since the entrepreneurship course group project required the most task and team interdependence compared to group work in other courses, the final grade for the entrepreneurship group project served as group performance data (Time 4).

Measures

Propensity to trust. For propensity to trust, we used the trust facet of the agreeableness personality trait from the NEO-PI-R (Costa & McCrae, 1992). This facet was measured with eight items, including statements like, "I believe that most people are basically well-intentioned," "I think most of the people I deal with are honest and trustworthy," and "I'm suspicious when someone does something nice for me" (reverse-scored) on 5-point scales (1 = *strongly disagree* to 5 = *strongly agree*) ($\alpha = .83$). We calculated both the mean and standard deviation of propensity to trust at the group level to test our theoretical model. Specifically, we adopted an additive model when calculating the mean of the individual personality traits within the group (to reflect the average propensity to trust among members within the group), and a dispersion model when calculating the standard deviation (to represent differences among group members in propensity to trust; cf. Chan, 1998). Standard deviation is the recommended index for dissimilarity or separation on characteristics (Harrison & Klein, 2007). The standard deviation of propensity to trust thus served as our independent variable; the mean level of propensity to trust is included in our analysis as a control variable.

Frustration. To assess feelings of frustration caused by diversity in propensity to trust, we used two items from Peters, O'Connor, and Rudolf (1980) that we adapted by replacing the "job" with the "group" as the focal referent of frustration: "Working in this group is a very frustrating experience" and "Overall, I experienced a lot of frustration in my workgroup" ($\alpha = .92$). These items were assessed on 7-point scales (1 = *strongly disagree* to 7 = *strongly agree*) and aggregated to the group level after calculating appropriate interrater reliability indexes (Chan, 1998; LeBreton & Senter, 2008; Median $R_{wg} = .84$, ICC(1) = .24, $F(129, 635) = 2.85$, $p = .00$, ICC(2) = .65).

Similarity perceptions. To assess members' perceptions of similarity, we used three items: "Our team members are very similar to one another," "I feel similar to my team members," and "I have a lot in common with my team members" assessed on 7-point scales (1 = *strongly disagree* to 7 = *strongly agree*) ($\alpha = .83$). As with frustration, we aggregated these items to the group level (Median $R_{wg} = .80$, ICC(1) = .11, $F(129, 638) = 1.75$, $p = .00$, ICC(2) = .43).

Intragroup trust. For intragroup trust, we used five items from Simons and Peterson (2000), such as, "To what extent are the members of your team certain they can trust each other?" and "To what extent do your team members count on each other to fully live up to their word?" assessed on 7-point scales (1 = *not at all* to 7 = *to a great extent*; Time 2: $\alpha = .85$; Time 3: $\alpha = .91$). We again calculated interrater reliability indexes to verify that aggregation to the group mean was appropriate (Time 2: Median $R_{wg} = .95$, ICC(1) = .19, $F(129, 638) = 2.35$, $p = .00$, ICC(2) = .57; Time 3: Median $R_{wg} = .93$, ICC(1) = .32, $F(124, 387) = 2.87$, $p = .00$, ICC(2) = .65). In addition, because frustration and similarity perceptions were assessed at Time 2 along with initial intragroup trust, we ran a principal components analysis (PCA) with promax rotation to ensure that these scales loaded on different factors. The analysis revealed three factors with an Eigenvalue

above one (the three factors explained 72.97% of the variance). The first factor included the five initial intragroup trust items, the second factor included the three items measuring similarity perceptions, and the third factor included the two items measuring frustration. Note that each individual scale item had a factor loading of .57 or above on their respective factors.

Relationship conflict. For intragroup conflict we used Behfar, Mannix, Peterson, and Trochim's (2011) scale of relationship conflict rated on a 7-point scale (1 = *none* to 7 = *a lot*). A sample item is "How much are personality conflicts evident in your team?" (Time 3: $\alpha = .94$). Interrater reliability indexes indicated that aggregation of relationship conflict to the group mean was appropriate (Time 3: Median $R_{wg} = .90$, ICC(1) = .49, $F(125, 392) = 4.85$, $p = .00$, ICC(2) = .79). Finally, because trust and relationship conflict were both assessed at Time 3, we again ran a principle components analysis (PCA) with promax rotation to ensure that these scales loaded on different factors. The trust items and relationship conflict items loaded onto different factors, each with an Eigenvalue above one (the two factors explained 79.33% of the variance), and each individual scale item had a factor loading of .70 or above on their respective factors.

Group performance. Group performance was assessed using grades the groups received on the final project for an entrepreneurship course that involved identifying a business opportunity based on consumer needs, creating a product or service to meet those needs, and pitching the business idea to a group of potential investors. Groups worked interdependently on the task over several weeks and presented their entrepreneurial solutions to a group of investors who were invited to a trade show event to view the groups' proposals. Projects were judged on a scale with a minimum of 0 and a maximum of 100 points. Of the 100 possible points, 30 were determined by entrepreneurs at the trade show based on their interest in the idea as a result of the group presentation, and 70 were determined by the professors of the entrepreneurial course based on the quality of the proposal's written analysis—of which 40 of the 70 points were based on a customer need identification and solution, as well as whether the proposal contained reflective and critical insights, and 30 of the 70 points were based on how accurately the proposal applied course frameworks. The professors who taught the course are not a part of this study and were unaware of the study hypotheses. Scores on these group projects represented a significant percentage of the students' grades in their entrepreneurship course and the students were informed that the quality of their presentations at the trade show could potentially lead to actual entrepreneurial funding opportunities with the network of investors. Students were highly motivated to perform well on the task since for some it could result in investment in their ideas and the chance to run their own business. Actual scores on the task ranged from 54 to 80 out of the possible 100, with a mean of 67.33 points ($SD = 6.29$). Scores below 50 were considered failing, and above 75 were considered as having achieved distinction.

Control Variables

We included the mean level of propensity to trust as a control variable when modeling the hypothesized downward trust spiral. In addition, we controlled for several measures of demographic diversity that could also affect the development of trust. First, we controlled for age diversity by calculating the coefficient of variation for age (Allison, 1978). Next, we calculated Blau's (1977) index of diversity for both gender and nationality. Note that in our sample no two members of any group had the same nationality. As such, the Blau index for nationality was effectively a function of group size (cf. Harrison & Klein, 2007). Thus the inclusion of this variable in our models accounts for both nationality diversity and group size. Finally, we included a dummy variable to control for class year, which differed among groups in our sample.

Results

Descriptive statistics and correlations between study variables are presented in Table 1. Note that there is a significant negative correlation between mean levels of propensity to trust and diversity in propensity to trust ($r = -.36$, $p = .00$), suggesting that there is less diversity when mean levels of propensity to trust are higher among groups in this sample.

To examine the process of the downward trust spiral in these groups, we used Hayes's (2013) PROCESS macro for SPSS to estimate a serial mediation model. This technique investigates the effect of an independent variable on a dependent variable through a series of mediating variables which are assumed to be causally

Table 1
Descriptive Statistics and Correlations Among Study Variables

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11
1. Class	0.50	0.50											
2. Age diversity	0.08	0.04	.03										
3. Gender diversity	0.38	0.08	.10	.00									
4. Nationality diversity	0.84	0.01	−.07	.13	.11								
5. Propensity to trust (T1)	3.50	0.23	−.13	−.22*	−.01	.04							
6. Propensity to trust (*SD*) (T1)	0.54	0.19	−.05	.07	.04	.01	−.36**						
7. Frustration (T2)	2.19	0.80	.02	.00	.07	−.04	−.08	.15					
8. Similarity (T2)	3.20	0.64	−.10	−.10	−.03	.12	.19*	−.16	−.26**				
9. Intragroup trust (T2)	5.54	0.49	−.16	−.13	−.06	.06	.09	−.19*	−.66**	.37**			
10. Relationship conflict (T3)	2.99	1.18	.15	.05	.15	−.23*	−.22*	.05	.53**	−.21*	−.43**		
11. Intragroup trust (T3)	5.30	0.83	−.11	−.07	−.10	.20*	.17	−.01	−.37**	.17	.47**	−.75**	
12. Performance (T4)	67.33	6.29	.04	−.04	−.08	.01	.03	.08	.06	.00	.12	−.06	.14

Note. T1 = Time 1; T2 = Time 2; T3 = Time 3; and T4 = Time 4. Sample size ranged from 125 to 130 groups because of missing data.
* $p < .05$. ** $p < .01$.

related to one another. Specifically, this technique allows us to test the idea that diversity in trust propensity at Time 1 affects group-level affect and cognition (i.e., frustration and similarity perceptions) at Time 2, which then affect intragroup trust at Time 2, which affects relationship conflict at Time 3, which affects intragroup trust at Time 3, which ultimately affects group task performance assessed at Time 4. The PROCESS macro for serial mediation does not allow mediators to be entered in parallel; therefore, we ran two models: our first model included frustration as the first mediating variable in the sequence, and our second model included the measure of similarity perceptions as the first mediating variable in the sequence. In both models, we used 5,000 bootstrap estimates to construct 95% bias-corrected confidence intervals for the hypothesized indirect effect. Control variables were included at all stages of the serial mediation analyses.

The bootstrap analysis revealed that the indirect effect of diversity in propensity to trust on group performance through frustration, initial intragroup trust, relationship conflict, and subsequent intragroup trust was not significantly different from zero (−.04, 95% CI: −.4870 to .0167). However, the indirect effect of diversity in propensity to trust on group performance through similarity perceptions, initial intragroup trust, relationship conflict, and subsequent intragroup trust was significantly below zero (−.10, 95% CI: −.4633 to −.0017). This finding suggests that the mechanism that best explains how diversity in propensity to trust negatively affects the climate of trust within the group is the cognitive appraisal of low similarity among group members (see Table 2 for the unstandardized regression coefficients, standard errors and model summary information for the steps in this particular sequence, and Figure 2 for a visual representation of these relationships).

However, to address concerns about the concurrent measurement of some of the mediating variables, we specified models in which the variables that were measured at the same time were reversed in the serial mediator models analyzed via PROCESS. First, we specified a model in which similarity perceptions and initial intragroup trust, which were both measured at Time 2, were reversed, such that the serial model was from diversity in propensity to trust to initial intragroup trust to similarity perceptions to relationship conflict to subsequent intragroup trust to group performance. However, the indirect effect of diversity in propensity to trust on group performance through this sequence of mediators was not significantly different from zero (.00, 95% CI: −.0509 to .1050). Next we specified a model in which relationship conflict and subsequent intragroup trust, which were both measured at Time 3, were reversed, such that the serial model was from diversity in propensity to trust to similarity perceptions to initial intragroup trust to subsequent intragroup trust to relationship conflict to group performance. Again, the indirect effect using this sequence of mediators was not significant (.10, 95% CI: −.0179 to .4915). These analyses thus support the hypothesized order of mediating variables. See Table 3 for a full list of indirect effects for the hypothesized and alternative serial mediation models.

Next, to further take into account the possibility that simply controlling for mean level of propensity to trust in the serial mediation model does not fully eliminate the potential confound between mean levels and diversity in propensity to trust due to their collinearity, we conducted additional analysis of a matched subsample of the data derived through propensity score matching. Propensity score matching is a technique that matches cases distinguished by a binary independent variable (i.e., treatment vs. control) but that have similar covariate distributions (Rosenbaum & Rubin, 1983). This technique allows researchers to replicate randomized experiments using observational data by reducing potential bias associated with covariates in order to make stronger causal inferences (Stuart, 2010). In our sample, propensity score

Table 2
Regression Coefficients, Standard Errors, and Model Summary Information for the Proposed Serial Mediation Model

	Outcomes														
	Similarity perceptions (M1)			Initial intragroup trust (M2)			Relationship conflict (M3)			Subsequent intragroup trust (M4)			Group performance		
Predictors	Coeff	*SE*	*p*	Coeff	*SE*	*p*	Coeff	*SE*	*p*	Coeff	*SE*	*p*	Coeff	*SE*	*p*
Controls															
Class year	−0.12	0.11	0.31	−0.12	0.08	0.17	0.05	0.19	0.78	0.03	0.10	0.76	1.27	1.17	0.28
Age diversity	−1.41	1.39	0.31	−1.09	1.02	0.29	−0.58	2.32	0.80	−0.14	1.23	0.91	−7.32	14.16	0.61
Gender diversity	−0.25	0.71	0.72	−0.29	0.52	0.58	2.01	1.17	0.09	−0.04	0.63	0.95	−6.91	7.22	0.34
Nationality diversity	8.05	5.76	0.16	1.06	4.24	0.80	−24.92	9.59	0.01	3.70	5.21	0.48	−5.47	60.21	0.93
Mean propensity to trust	0.27	0.27	0.33	−0.12	0.20	0.54	−1.13	0.45	0.01	0.11	0.25	0.65	2.00	2.84	0.48
Independent variable															
Diversity in propensity to trust	−0.55	0.32	0.09	−0.44	0.24	0.07	−0.69	0.55	0.21	0.33	0.29	0.27	3.39	3.38	0.32
Mediators															
Similarity perceptions (M1)	—	—	—	0.26	0.07	0.00	0.02	0.16	0.88	−0.05	0.09	0.57	−1.00	0.98	0.31
Initial intragroup trust (M2)	—	—	—	—	—	—	−1.00	0.21	0.00	0.35	0.12	0.01	1.92	1.44	0.19
Relationship conflict (M3)	—	—	—	—	—	—	—	—	—	−0.46	0.05	0.00	0.88	0.75	0.24
Subsequent intragroup trust (M4)	—	—	—	—	—	—	—	—	—	—	—	—	1.52	1.08	0.16
Constant	−3.91	4.86	0.42	4.76	3.56	0.18	32.90	8.11	0.00	1.27	4.58	0.78	47.72	52.81	0.37
	$R^2 = .09$			$R^2 = .19$			$R^2 = .29$			$R^2 = .60$			$R^2 = .07$		
	$F(6, 118) = 1.90$, $p = .09$			$F(7, 117) = 4.04$, $p = .00$			$F(8, 116) = 5.90$, $p = .00$			$F(9, 115) = 19.16$, $p = .00$			$F(10, 114) = 0.85$, $p = .58$		

Note. $N = 125$.

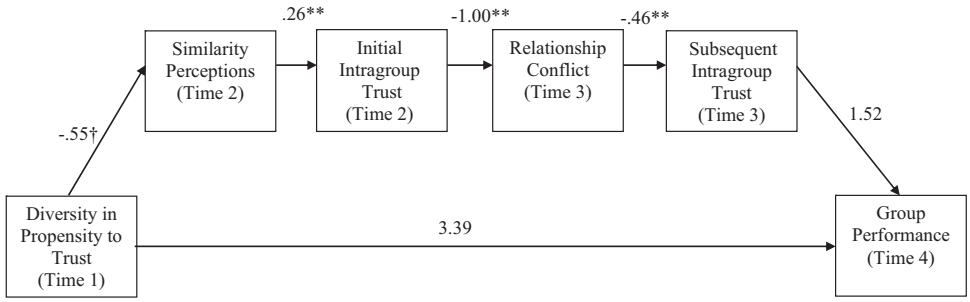

Figure 2. Serial mediation model of a downward trust spiral. Unstandardized regression coefficients are shown. The hypothesized indirect effect from diversity in propensity to trust to group performance is significantly different from zero (−.10, 95% CI: −.4633 to −.0017). † $p < .10$. * $p < .05$. ** $p < .01$.

matching allows us to differentiate between groups that are high or low in diversity in propensity to trust, but balanced on the covariates, particularly mean level of propensity to trust. To begin, we first dichotomized diversity in propensity to trust using a median split to differentiate groups with high diversity from those with low diversity. We then conducted propensity score matching in the statistical program R using the MatchIt package (Ho, Imai, King, & Stuart, 2011). To estimate the propensity scores, we used all five covariates (i.e., class year, age diversity, gender diversity, nationality diversity, and mean level of propensity to trust) and ensured that the estimated propensity scores of matched units were similar to one another by imposing a caliper, or a maximum allowable difference between any two cases, of .25 (Rosenbaum & Rubin, 1985). The propensity score matching procedure resulted in 32 groups with high diversity and 32 groups with low diversity, all matched on mean levels of propensity to trust as well as demographic diversity and class year. The matching was successful in that the correlation between diversity in propensity to trust and mean levels of propensity to trust in the matched subsample was nonsignificant at $r = -.01$, $p = .92$, and an independent samples t test revealed no significant differences on mean levels of propensity to trust between high diversity groups ($M = 3.52$, $SD = .18$) and low diversity groups ($M = 3.52$, $SD = .18$), $t(62) = -.03$, $p = .98$.

We then conducted the serial mediation analyses using 5,000 bootstrap resamples as described above in the matched subsample to analyze the indirect effect of the dichotomized diversity in propensity to trust variable through similarity perceptions, initial intragroup trust, subsequent relationship conflict and intragroup trust, and finally group performance (control variables were taken into account during the matching procedure and so were omitted from this serial mediation model). Because this matched sub-

Table 3
Serial Mediation Analysis Using the Hypothesized and Alternative Serial Models of Mediators

	X: Diversity in propensity to trust					
	Hypothesized model M1: Similarity perceptions M2: Initial intragroup trust M3: Relationship conflict M4: Subsequent intragroup trust Y: Group performance		Alternative model 1 M1: Initial intragroup trust M2: Similarity perceptions M3: Relationship conflict M4: Subsequent intragroup trust Y: Group performance		Alternative model 2 M1: Similarity perceptions M2: Initial intragroup trust M3: Subsequent intragroup trust M4: Relationship conflict Y: Group performance	
Indirect effects	Effect	95% CI	Effect	95% CI	Effect	95% CI
M1	0.55	−0.3496, 2.7483	−1.12	−3.5480, 0.1539	0.55	−0.4011, 2.5620
M1, M2	−0.28	−1.1178, 0.0523	0.26	−0.0988, 1.0182	−0.28	−1.1036, 0.0343
M1, M3	−0.01	−0.3258, 0.1324	0.52	−0.0747, 2.0880	0.05	−0.0917, 0.6392
M1, M4	0.04	−0.0744, 0.5259	−0.31	−1.2929, −0.0065	0.02	−0.0947, 0.4137
M1, M2, M3	0.13	−0.0212, 0.6254	−0.01	−0.1448, 0.0570	−0.18	−0.7646, −0.0004
M1, M2, M4	−0.08	−0.3889, −0.0005	0.02	−0.0321, 0.2633	0.03	−0.0073, 0.2655
M1, M3, M4	0.01	−0.1077, 0.2352	−0.41	−1.5262, −0.0067	−0.03	−0.3957, 0.0478
M1, M2, M3, M4	**−0.10**	**−0.4633, −0.0017**	0.00	−0.0509, 0.1050	0.10	−0.0179, 0.4915
M2	−0.85	−3.0113, 0.1281	0.30	−0.2718, 2.1020	−0.85	−3.1265, 0.1137
M2, M3	0.39	−0.0511, 1.7644	−0.01	−0.2409, 0.0800	−0.54	−2.1791, 0.0108
M2, M4	−0.23	−1.0460, 0.0012	0.02	−0.0449, 0.4109	0.09	−0.0228, 0.9218
M2, M3, M4	−0.31	−1.2360, 0.0013	0.01	−0.0662, 0.1800	0.30	−0.0466, 1.3778
M3	−0.61	−3.0324, 0.2372	−0.61	−3.0902, 0.1864	0.98	−0.1016, 3.5700
M3, M4	0.49	−0.1277, 2.0070	0.49	−0.1092, 2.0678	−0.54	−2.3672, 0.1349
M4	0.49	−0.1971, 2.0999	0.49	−0.2283, 2.1392	−0.07	−1.3381, 0.5660

Note. $N = 125$. The hypothesized indirect effect is indicated in bold type.

sample of high versus low diversity groups was balanced on all the covariates, it provides a test of the hypothesized serial mediator model as if diversity in propensity to trust was manipulated in a randomized experimental design. The analysis revealed that, consistent with the effects found using the full unmatched sample, our hypothesized indirect effect in the matched subsample was significantly below zero (−.12, 95% CI: −.6448 to −.0026).

Finally, we conducted supplemental analysis using multilevel models to further explore how diversity in propensity to trust affects initial intragroup trust through perceptions of similarity. In this analysis, we wanted to discover whether perceptions of similarity differed among group members who scored relatively high on propensity to trust versus group members who scored relatively low on propensity to trust. First, we calculated the relative distance between an individual in the group and all the others in the group on propensity to trust using Tsui and O'Reilly's (1989) measure of relational demography. Scores on this variable ranged from .19 to 2.04 ($M = .68$, $SD = .30$), with higher scores representing greater differences between an individual and his or her group members on propensity to trust. However, this measure fails to take into account the direction of the relative distance; that is, a member of the group could be different from the others due to relatively higher or relatively lower propensity to trust. Therefore, following Sung, Choi, and Kim-Jo (2014), we divided the entire sample into two subgroups: a) members with a higher propensity to trust than the average of their group ($N = 424$), and b) members with a lower propensity to trust than the average of their group ($N = 374$). Next, for each subgroup we conducted random-intercept multilevel models using maximum likelihood estimation to predict individual perceptions of similarity using the individual's distance from the other group members as the independent variable. Results revealed that the distance measure did not significantly predict perceptions of similarity among group members who were lower in propensity to trust than the others ($\beta = -.34$, $p = .11$). However, the distance measure was marginally significantly related to perceptions of similarity among group members who were higher in propensity to trust than the others ($\beta = -.42$, $p = .06$). These analyses suggest that group members who are relatively higher than others in propensity to trust felt the least similar to their other group members.

In all, therefore, these results support the notion that, holding the mean level of propensity to trust among members of a group constant, greater diversity in propensity to trust triggered a downward trust spiral. Specifically, groups characterized by greater diversity among members in propensity to trust had low perceptions of similarity, which led to lower initial intragroup trust, which led to greater relationship conflict, which was negatively related to subsequent intragroup trust, which ultimately decreased group performance.

Discussion

Our paper presents theory and empirical evidence describing one way in which downward trust spirals happen among members of newly formed groups. We argue and show that diversity in group members' propensity to trust, or individual differences among group members in their tendency to trust others, is sufficient to trigger a downward trust spiral in groups. Specifically, diversity in propensity to trust others results in cognitive perceptions of low similarity among group members, which reduces the climate of trust early in a group's development. Once initial intragroup trust is low, the group then experiences relationship conflict behaviors that further reduce intragroup trust and ultimately results in poor group performance. Results from an empirical study of MBA student groups support this general theoretical model, providing not only a longitudinal test of the spiral pattern of trust reinforcement in groups, but also initial evidence that diversity in propensity to trust is an important antecedent of downward trust spirals, even after controlling for mean level effects of propensity to trust.

Theoretical Implications

The ideas presented here contribute to the literature on trust, diversity, and conflict in small groups in several ways. First, they build on prior work on trust spirals (Zand, 1972) to show that group members' diversity in propensity to trust, beyond mean level of early trust between parties or even mean level of propensity to trust, is a sufficient condition to precipitate a self-reinforcing spiral of trust over time. While a number of studies show that groups experience low trust when their members share uniformly low initial trust expectations (e.g., Boss, 1978; Butler, 1999; Zand, 1972), few studies have considered the influence of diversity in trust expectations on intragroup trust. Of the studies that do look at diversity in trust expectations, all consider perceptions of trustworthiness after group interaction, when factors other than generalized trust expectations (e.g., trustee competence or benevolence) likely influence these perceptions (Bergman et al., 2010; De Jong & Dirks, 2012). Our study examines diversity in propensity to trust prior to any group interaction, and documents its effects on the development of initial and subsequent group trust in newly formed groups, thus revealing the independent effects of diversity in propensity to trust as an antecedent of trust spirals.

Next, our study addresses the mechanisms by which diversity in propensity to trust reduces initial intragroup trust by drawing upon literature describing deep-level group composition (Bell, 2007; Chun & Choi, 2014; Fisher et al., 2012) and the affective and cognitive bases of trust (Lewis & Weigert, 1985; McAllister, 1995; Meyerson et al., 1996; Williams, 2001). We theorized that diversity in propensity to trust would result in feelings of frustration and cognitive perceptions of low similarity among group members, and that these affective and cognitive responses would reduce the level of experienced trust within the group. Our data demonstrates that the downward spiral resulting from diversity in propensity to trust is explained by perceptions of low similarity, but not feelings of frustration. These findings are consistent with evidence from the minimal group paradigm in social identity literature, in which simply categorizing others as low in similarity leads to distrust (Brewer, 1979). This study also answers a call for research to more fully explain relationships between deep-level personality characteristics and social categorization processes (Van Knippenberg et al., 2004). In particular, research typically associates social categorizations with surface-level characteristics like age and gender rather than deep-level characteristics like personality. Our study reveals that diversity in personality traits, specifically diversity in propensity to trust, elicits social categorizations in the form of similarity perceptions even after taking surface-level characteristics into account.

Our research contributes to literature on diversity as well as intragroup conflict by modeling the processes that result from diversity in propensity to trust over time. Evidence suggests that diversity's effects on social categorization processes may change over time (e.g., Harrison, Price, & Bell, 1998), yet few studies utilize a longitudinal design when researching the effects of work group diversity (Van Knippenberg et al., 2004). Our study examines these longitudinal effects, and reveals that the influence of diversity on initial social categorization processes (i.e., similarity perceptions) extends to later intragroup processes (e.g., relationship conflict and trust) and group performance. Similarly, this study contributes to literature examining the reciprocal relationships between trust and relationship conflict in groups. While previous papers have found correlations between trust and relationship conflict (e.g., Rau, 2005) or show that relationship conflict can lead to lower trust (Rispens et al., 2007), our results support an iterative story where reduced perceptions of similarity and low initial levels of experienced trust lead to relationship conflict, which further reduces perceptions of trust. In other words, our results replicate past findings but with a more longitudinal story in the context of a downward trust spiral. Ultimately, the results of this research contribute to the body of literature on trust and performance in small groups (e.g., Dirks, 1999; Dirks & Ferrin, 2001), showing that the development of trust through an iterative process of initial trust expectations and subsequent trust experiences is essential for small group effectiveness.

Limitations and Future Research

This study's theoretical implications should be considered along with its limitations. The use of MBA student groups allowed us to examine the development of trust spirals over time in a relatively controlled setting in which groups had no prior interaction and in which they had similar tasks and training experiences. However, this longitudinal research should also be conducted among different types of teams and team tasks to better understand the generalizability of the findings. In addition, our assessment of some of the study variables occurred during the same survey periods, which introduces some doubt about the causal mediation sequence. For example, feelings of frustration and perceptions of similarity were measured at the same time as initial intragroup trust, and relationship conflict was measured at the same time as subsequent intragroup trust. As such, we first ran exploratory factor analyses to ensure that the scales measured at the same time were empirically distinct. Next, we examined several different serial multiple mediator models in which variables measured at the same time were reversed, but found no empirical support for these alternative models (see Table 3). Despite these steps to ensure the robustness of our results, future research should more clearly separate perceptions of similarity and initial intragroup trust, as well as relationship conflict and later intragroup trust, in time.

A second future research direction relates to the lack of results for our suggestion that diversity in propensity to trust would result in feelings of frustration among group members. We can think of at least three interrelated explanations for the lack of complete correspondence between our theorizing and our data. The first is related to our theory—perhaps expectancy violation is simply a more cognitive than affective process. A second explanation focuses on the possibility that frustration may have been experienced more individually and less as a group-level construct than similarity perceptions, making it difficult to observe its effects on group-level trust. Third and we believe most likely, however, is the possibility that this nonfinding may be a result of our data. In our sample, every member of the group was from a different country. So it is likely that members were expecting to encounter different approaches to working together and thus were not as frustrated as one might expect when working with a group of people who share nationality, but not propensity to trust. Group members may well have noted that their teammates were even more dissimilar than anticipated, but were not frustrated by those differences since they anticipated a high degree of dissimilarity. The best way to address this issue, of course, is to replicate our findings using a sample that is all or primarily from a single nation.

A third research direction builds on our supplemental analysis showing that perceptions of similarity differed among members who were high versus low in propensity to trust. Our initial arguments suggested that members of groups with diversity in propensity to trust would feel frustration and perceive low similarity within the group equally whether they are high or low in propensity to trust. We found that when individuals were more different from their other group members because they were high in propensity to trust, this difference negatively predicted similarity perceptions. However, this relationship was not significant among individuals who were more different from their other group members because they were low in propensity to trust.

One possible explanation is that those who are high in propensity to trust are more sensitive to diversity in propensity to trust and/or the attitudes and behaviors of those who are low in propensity to trust. For example, evidence suggests that those high in generalized trust expectancies are better able to read nonverbal cues than those low in generalized trust expectancies (Sabatelli, Buck, & Dreyer, 1983), which may mean that they pick up on deep-level dissimilarities more readily than those low in propensity to trust. Another explanation is that in response to others, those high in propensity to trust may alter their behaviors such that dissimilarities are not as salient to those who are low in propensity to trust. Chatman and Barsade (1995) found that people who are inclined to cooperate with others (i.e., higher propensity to trust) are more responsive to the individualistic or collectivistic norms of the culture in which they are working compared with those who are inclined to compete with others. In other words, cooperative people display greater flexibility and range in their level of cooperative behavior in response to culture than individualistic people, and thus when faced with a competitive culture will be more competitive. These changes in behavior may then be mimicked by others in the group and thus those who are low in propensity to trust are less likely to notice dissimilarities within the group. In short, it might be that high propensity to trust individuals a) are more likely to notice the behaviors of those who are low in propensity to trust, enhancing their perceptions of dissimilarity, and/or b) respond more than low propensity to trust individuals to what they see by adjusting their behavior in response to emerging group norms so that those low in propensity to trust genuinely see less dissimilar behavior. However, future research is needed to examine these ideas a priori, potentially using an experimental

design to capture reactions to specific behaviors and nonverbal cues.

Finally, future research could examine the influence of group norms and organizational culture in conjunction with individual differences related to propensity to trust. Where clear group norms of behavior such as expectations of information sharing exist, we expect these strong situations might minimize the extent to which individuals rely upon their generalized expectancies when interacting with other new group members (Gill et al., 2005). Moreover, when expectations are clear and met, there is less likelihood for uncertainty or misattribution between group members who have high and low propensity to trust.

Practical Implications

Notwithstanding these limitations, our findings fit nicely within the existing literature on trust and conflict and thus build on them to create some practical implications for managers of small groups in organizations. Namely, our results suggest that similarity in propensity to trust—regardless of the mean levels of this personality trait within the group—can engender a climate of trust within a newly forming group. For example, a group of relatively trusting individuals is likely to be characterized by perceptions of similarity, which should strengthen experienced intragroup trust. In contrast, the asymmetric or diverse group where members behave differently toward each other is likely to experience perceptions of low intragroup similarity and experienced trust. Therefore, managers should be aware that the individual predispositions that members have about others' trustworthiness are likely to affect the group's ability to build actual intragroup trust. One potential implication of this finding is that managers might be inclined to put those with low propensity to trust all in one group rather than spreading them into many groups. This is, of course, unrealistic for most organizations as they are trying to balance many differences simultaneously. Rather, we suggest that managers need to actively manage expectations early in group life, especially those behaviors that have the potential to trigger conflict and reduced perceptions of similarity (cf. Behfar, Peterson, Mannix, & Trochim, 2008), including and especially the deep-level differences that are not visible, such as propensity to trust (cf. Cronin & Weingart, 2007).

Conclusion

In conclusion, our research affirms and extends prior research on the spiraling reinforcement of trust by describing one process by which groups experience downward trust spirals. Diversity in propensity to trust is sufficient to create perceptions of low similarity, which in turn negatively affects the emergent state of experienced trust within a group, increasing relationship conflicts, further reducing subsequent trust, and then reducing group performance. Since trust is essential for coordination and social integration among members of small work groups, understanding how and why trust develops or deteriorates among newly formed groups is important for researchers and practitioners alike. The theoretical model presented in this paper contributes to this effort. It also illustrates the observation of former British Prime Minister, Harold MacMillan:

> "A man who trusts nobody is apt to be the kind of man nobody trusts."

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