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Abstract

This study utilized the social relations model (SRM) to examine the influence of interpersonal perceptions on team processes and outcomes. We hypothesized that the three components of the SRM (assimilation, consensus, and unique relations) would yield differential relationships with group process outcomes. We proposed that unique relations in members' perceptions of group members, perceptual relationships specific to particular dyads within a focal group, would be a source of negativity within teams' outcomes. Participants were undergraduates who worked in small groups for assignments for the duration of one semester; each member rated themselves and their teammates on five individual-level characteristics. Hypotheses about unique relations were supported. This component of the SRM model was positively related to conflict and negatively related to cohesion, showing the greatest relative importance among the three SRM components in predicting team process and outcomes.

Keywords

team cognition, social relations model, deep-level diversity, conflict, cohesion

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A fundamental and defining characteristic of teams or work groups is that members are dependent on one another to carry out tasks and accomplish goals (e.g., Arthur, Edwards, Bell, Villado, & Bennett, 2005; Janz, Colquitt, & Noe, 1997; Sundstrom, DeMeuse, & Futrell, 1990). This property distinguishes groups from simple collections of individuals (Marcus, 1998) and varies with concern to rewards, goals, and tasks, among others. In short, team members are not independent of one another in their behaviors or in their perceptions.

The focus of the present study is on team-member perceptions of one another (i.e., interpersonal perceptions). Interpersonal perceptions refer to members' beliefs and attitudes about and toward other team members (Kenny, 1994). Specifically, we examine the impact of interpersonal perceptions on a set of three key team process outcomes: conflict, cohesion, and team efficacy. Moreover, we model this examination as an analysis of social relations among team members. This approach moves beyond traditional approaches that view team perceptions as simple aggregates of individual team-member perceptions, by considering multiple dyad-based interactions among team members.

Our primary goal in the present study is to examine how team member perceptions influence team processes and outcomes. We examine this relationship through the use of the social relations model (SRM), which proposes that three independent processes vary across dyads and within groups: assimilation, consensus, and unique relations. We examine the differential associations between these three variables and team processes and outcomes. The present research represents an introduction of the SRM theoretical and methodological framework into research directed toward within-group processes and outcomes.

The SRM

The SRM provides a conceptual and statistical basis for modeling group interactions and perceptions (Kenny, 1994). Conceptually, the SRM is predicated on examining individuals' behavior and/or perceptions within the context of dyadic interactions. Within the SRM framework, three major types of effects are posited: assimilation, consensus, and unique relations. Assimilation refers to the tendency for members to perceive (e.g., rate) other group members (i.e., rates) as similar on a particular characteristic. The general question here is "Do individuals perceive each team member to be different, or all team members to be similar?" For assimilation to occur, different perceivers must perceive differences across team members, but indi-

vidual perceivers must view all team members similarly. Consensus refers to the degree to which members are perceived in similar ways by other members. Consensus requires that all members view each specific target the same way. In essence, consensus reflects the level of agreement across team members with respect to a given target so the question here is "Do different individuals agree in their perceptions of various team members?" Unique relations refer to perceptual relationships that are specific to particular dyads within the focal group. The general question addressed here is "Do individuals have unique perceptions of different team members?" Although the focus is on the perceiver within assimilation and the target within consensus, the focus of unique relations is on the relationship (Kenny, 1994). That is, when considering variation across group members' interpersonal perceptions, specific relationships between these perceptions may account for variation in members' interpersonal perceptions *beyond* variation accounted for by individual member's perceptual tendencies and agreement concerning other teammates. When studying interpersonal perceptions in the context of peer evaluations, the prevalence of these three sources of variances can become important. The SRM proposes that these processes vary across groups and may be examined at the group level, and thus are available for examinations of between-group processes.

Consider the following example relevant to the present research, similar to an example provided by Marcus (1998). Bob and Alice are working in a group with two other members. After completing an exercise, each member rates their group members on their level of cooperation. The extent to which Bob perceives all of his group members as similarly cooperative is represented by assimilation. Consensus represents the extent to which Bob's group members all perceive him to be cooperative. Unique relations are indicated by dyadic-level perceptions not represented by assimilation and consensus. Specifically, unique relations represent the degree to which Bob's perception of Alice's cooperativeness goes beyond his tendency to perceive his other group members as cooperative (assimilation) and beyond Alice's tendency to be perceived by other members as cooperative (consensus). In other words, unique relations refer to phenomena that do not extend beyond specific dyads within groups, in line with assimilation and consensus. In each case, the levels of these three phenomena are proposed to vary in a continuous fashion.

A considerable amount of recent research highlights the applicability of the SRM to the study of a variety of group or team-based issues. Specifically, the SRM has been applied to the study of interactions in group psychotherapy (Marcus & Kashy, 1995; Marcus, Kashy, & Baldwin, 2009), family therapy

(Cook & Kenny, 2004), interactions at zero acquaintance (Marcus & Leatherwood, 1998; Marcus & Lehman, 2002), nonverbal communication (Sabatelli, Buck, & Kenny, 1986), and peer evaluations (e.g., Greguras, Robie, & Born, 2001; Greguras, Robie, Born, & Koenigs, 2007). In general, this research has been used to examine interpersonal behavior and perceptions within group settings. For example, the SRM may be used in group psychotherapy settings to determine how therapists and multiple clients influence one another (Marcus et al., 2009). With regard to the study of interactions at zero acquaintance, the SRM can be applied to understand how perceptions of group members develop over time (e.g., Marcus & Lehman, 2002). However, little, if any, research has been conducted with respect to the impact of interpersonal perceptions on team effectiveness.

Present Research and Hypotheses

The evaluation of teams encompasses a variety of components. Many theories have addressed the multifaceted nature of team effectiveness (e.g., Gladstein, 1984; Hackman, 1987; Shea & Guzzo, 1987). According to Hackman (1987), group effectiveness may be defined in terms of three criteria. Specifically, effectiveness may be defined as the extent to which (a) the final outputs produced by the team meet or exceed the standards set by key constituents within the organization; (b) the internal social processes operating as the team interacts enhance, or at least maintain, the group's ability to work together in the future; and, (c) the experience of working in the team environment satisfies rather than aggravates the personal needs of team members. In the current study, we focus on the second of these three, namely team process criteria. Thus, we examine intragroup conflict, team cohesion, and team efficacy.

Intragroup conflict has emerged as an integral team process variable. Previous research has differentiated two components of intragroup conflict: relationship conflict and task conflict. Jehn (1994) describes relationship conflict as interpersonal incompatibilities between team members such as annoyance and animosity. Task conflict occurs when members convey divergent ideas and opinions about specific aspects related to task accomplishment (Jehn, 1994). Research to date indicates that relationship conflict is largely detrimental to team performance (e.g., Baron, 1991; Pelled, 1996; Vodosek, 2007). The impact of task conflict is less clear. Although it has been argued that task conflict facilitates enhanced performance through task analysis (e.g., Amason & Schweiger, 1994), empirical evidence is equivocal. Some

research has found positive relationships between task conflict and novel idea generation and strategic planning (Amason, 1996; Baron, 1991), but others have shown task conflict may hinder goal accomplishment and implementation (Amason, 1996; Vodosek, 2007). In a direct investigation of task conflict, Jehn (1994) found only a small amount of task conflict was beneficial, after which team performance began to deteriorate, and a recent meta-analysis demonstrated a negative relationship between task conflict and team satisfaction and performance (De Dreu & Weingart, 2003). Nonetheless, both types of conflict have proven to be significant correlates of a variety of team-effectiveness criteria.

Team cohesion is another important process variable (Swezey & Salas, 1992). Although a multitude of definitions and measures have been offered (Mullen & Copper, 1994), basically, cohesion is viewed as “a general indicator of synergistic group interaction—or process” (Barrick, Stewart, Neubert, & Mount, 1998, p. 382). Meta-analyses have revealed significant team cohesion-performance effects (Beal, Cohen, Burke, & McLendon, 2003; Mullen & Copper, 1994). Furthermore, cohesion has been linked to greater coordination during team tasks (Morgan & Lassiter, 1992) as well as improved satisfaction, productivity, and group interactions (Bettenhausen, 1991).

Finally, team efficacy is another important team process construct. Team efficacy refers to team members’ perceptions of task-specific team competence (Gibson, 1999). This construct is thought to create a sense of confidence within the team that enables the group to persevere when faced with hardship (Gully, Incalcaterra, Joshi, & Beaubien, 2002). Several researchers have related team efficacy to aspects of team effectiveness (e.g., Campion, Medsker, & Higgs 1993; Gibson, 1999; Gibson, Randel, & Earley, 2000), and a recent meta-analysis demonstrated that the relationship between team efficacy and performance was greater than that between cohesion and performance (Gully et al., 2002).

Given the importance of conflict, cohesion, and efficacy for final team performance, it is important to identify factors that play a role in shaping these process variables. Moreover, the importance of interpersonal perceptions for team functioning cannot be understated. Yet, to date, little research has directly addressed this issue.

Deep-Level Diversity

Before proposing hypotheses, it is important to discuss the concept of deep-level diversity within teams, an area of research that lends itself to the current discussion of the three SRM components. Harrison, Price, and Bell (1998)

called attention to the importance of components of diversity, including those unrelated to demographics. The authors made a distinction between surface-level diversity (e.g., demographic heterogeneity) and deep-level diversity (e.g., attitude, belief, and value heterogeneity). Deep-level diversity was defined as “differences among members’ attitudes, beliefs, and values” (Harrison et al., 1998, p. 98). This type of diversity lends itself to the present discussion of the SRM components, as it relates to how team members perceive one another.

The results of Harrison and colleagues’ (1998) research suggested that deep-level information becomes available over time through verbal and non-verbal interaction. Furthermore, the importance of surface-level diversity appears to decrease in its effect on group cohesion over time, whereas deep-level diversity gains importance. Other research has addressed similar points of interest. For example, Connor and Becker (1975) asserted that value congruity would lead to increased communication accuracy. Furthermore, findings have shown that similarity in values is related to successful interaction and ease of communication (Jackson, 1992), and that individuals gather more information from liked others (Byrne, 1971). Dose and Klimoski (1999) insisted that increased diversity in work values of teams will lead to less information exchange, because members are likely to withhold information that would lead to conflict in the group.

Further research has elaborated on relationships present between various social processes and group outcomes. For example, organizations with strong intergroup social ties may have less conflict (Nelson, 1989). Labianca, Brass, and Gray (1998) concluded from their study that negative relationships resulting from interpersonal interaction lead to increased perceptions of interpersonal conflict within an organization. Indeed, attributional biases arising from interpersonal perceptions may lead to intergroup conflict (Pronin, Gilovich, & Ross, 2004). Furthermore, Schyns’ (2006) study of leader–member exchange (LMX; for example, Graen, Novak, & Sommerkamp, 1982; Graen & Uhl-Bien, 1995) emphasized the importance of consensus in within-group interpersonal perceptions of their leader. Consensus was related to job satisfaction and commitment.

Like the SRM, leader–member exchange theory also focuses on dyads within work groups, though unlike the SRM, LMX theory proposes the leader as the center of the unit with exchange relationships occurring with each group member. Thus, LMX theory does not take into account the various relationships that exist between all other members within the group. However, studies of LMX focusing on differentiation are important within the current review of within-group processes. This area of research lends support to the

premise that factors beyond those occurring at the level of the individual are important within the functioning of work groups, a point that is central to the SRM and the current study. For example, Cogliser and Schriesheim (2000) examined the effects of contextual factors on the quality of these dyadic exchange relationships. Their findings suggest that these relationships were affected by higher level factors, such as cohesion and autonomy. The findings of Henderson, Wayne, Shore, Bommer, and Tetrick (2008) further pointed to the effect of these within-group dyadic relationships on group members' perceptions (e.g., psychological contract fulfillment). Other research suggests that interdependence, a fundamental characteristic of teams as discussed above, may play a role in the importance of such differentiation (Liden, Erdogan, Wayne, & Sparrowe, 2006).

The above discussion provides a conceptual linkage between deep-level diversity and diversity as it pertains to team members' interpersonal perceptions. The purpose is to emphasize the importance of this type of diversity, as it relates to team processes and outcomes. Indeed, within groups and teams, there are perceptual and attitudinal differences that influence the functional processes and interactions among team members. Moreover, the diversity, or variation, among members' attitudes toward one another is represented within the theoretical framework of the SRM. Implications follow from this conceptualization, specifically regarding the relationship between the various components of the SRM and team process outcomes.

Hypotheses

The primary goal of the current research is to examine the relationship between within-group interpersonal perceptions and team process outcomes described above. The input-process-outcome (IPO) model of team effectiveness (McGrath, 1964) offers a popular theoretical framework for the relationship between within-group interpersonal perceptions and team process outcomes (Campion et al., 1993; Guzzo & Shea, 1992; LePine, Piccolo, Jackson, Mathieu, & Saul, 2008). Specifically, we view interpersonal processes as an input that should directly impact team process outcomes. Within the SRM, assimilation, consensus, and unique relations represent distinct forms of underlying interpersonal processes that should differentially affect team processes.

Assimilation, or the tendency for a team member to perceive others as alike, should be positively related to conflict and negatively related to cohesion and team efficacy. Higher levels of assimilation are represented by the degree to which each member perceives his or her teammates to be similar and these similar perceptions across teammates varies among group

members' perceptions (Kenny, 1994). In other words, Bob sees all of his teammates as generally supportive, and Alice sees all of her teammates as generally unsupportive. There are two implications of assimilation within groups. First, assimilation, in comparison to consensus, suggests that individual group members view others and may see the world in idiosyncratic ways. As groups work together, group members become more similar in the way they make sense of events and their environment (e.g., Salancik & Pfeffer, 1978). Salancik and Pfeffer (1978) noted that work groups develop shared perceptions of reality over time via group processes that facilitate considerations of the group, rather than of the individual.

Thus, to the degree that individuals abstain from shared perceptions of one another, these higher levels of assimilation will be problematic regarding within-group processes. For example, coordination of tasks among group members may be less effective and inefficient in providing positive group processes facilitating effective performance among groups whose members disagree regarding the various members' characteristics. In addition, communication is likely to be influenced by levels of assimilation. Specifically, individuals who are aware that their perceptions differ from those of particular group members may refrain from critical communication with these identified members. Team members who perceive teammates as uncooperative and unhelpful may be less likely to work with these individuals during the completion of tasks. The lack of intragroup communication, such as information sharing and direction of activities, along with poor coordination are likely to influence the highlighted team process outcomes in a negative fashion.

Hypothesis 1a: Levels of assimilation within groups will be positively correlated with task and relationship conflict.

Hypothesis 1b: Levels of assimilation within groups will be negatively correlated with team cohesion.

Hypothesis 1c: Levels of assimilation within groups will be negatively correlated with team efficacy.

In addition, there is an assumption that consensus in interpersonal perceptions will be positively related to cohesion and team efficacy and negatively related to conflict. Consensus represents shared perceptions among group members, and thus shared sense making within the group context (Salancik & Pfeffer, 1978). According to the SRM framework, consensus represents team members' shared perceptions of one another, indicative of more supportive interactions among team members and positively facilitated group processes and outcomes. This point highlights the relative positive influence

of consensus within group processes in that sharedness of these interpersonal perceptions is likely to positively relate to facilitation of positive group outcomes and negatively to conflict.

Hypothesis 2a: Levels of consensus within groups will be negatively correlated with task and relationship conflict.

Hypothesis 2b: Levels of consensus within groups will be positively correlated with team cohesion.

Hypothesis 2c: Levels of consensus within groups will be positively correlated with team efficacy.

Underlying, unique relationships among interpersonal perceptions of team members may inhibit shared perceptions, and in addition, may lead to adverse effects. Several points are worth noting. First, these relationships go beyond assimilation (i.e., the perceiver) and consensus (i.e., the target), such that they represent within-group effects that occur at the level of the relationship. As discussed above, shared perceptions facilitate and should positively relate to various group processes as group members make sense of their environments in similar ways. Research studying LMX differentiation provides additional support for the directional effects associated with shared perceptions within group contexts. For example, Schyns (2006) found consensus (i.e., LMX consensus) to be an important factor in producing positive outcomes (e.g., members' job satisfaction) within group settings. Differentiation among group members' relational quality (indicated in the current study by unique relations) negatively influenced positive work outcomes (e.g., goal fulfillment). These results suggest that team members within teams with greater levels of consensus are more satisfied with their work and perform better, through the facilitation of positive team-member relationships and cooperation (Schyns, 2006). According to Schyns (2006), team members like one another more when they have consensus, and cooperate better with one another. We propose that this effect of differentiation extends beyond relational quality to members' interpersonal perceptions. In the current study, the level of unique relations within groups should be positively related to conflict and negatively related to cohesion and team efficacy.

Hypothesis 3a: Levels of unique relations within groups will be positively correlated with task and relationship conflict.

Hypothesis 3b: Levels of unique relations within groups will be negatively correlated with team cohesion.

Hypothesis 3c: Levels of unique relations within groups will be negatively correlated with team efficacy.

Harrison and colleagues (1998) asserted that deep-level diversity (e.g., differences among team members' attitudes, beliefs, and values) may have strong effects on social integration within teams, more so than surface-level diversity (e.g., demographic variables). Also important is the proposition posed within the SRM that group interpersonal perceptions and interactions exist at the level of the dyadic relationship. Given the emphasis on dyadic relationships, unique relations are proposed to be most important in influencing team processes. Kenny (1994) asserted that these unique views are dominant within interpersonal perceptions relative to assimilation and consensus. We posit that unique relations will hold the greatest importance in prediction of team process outcomes.

Hypothesis 4a: Unique relations will account for the greatest relative importance of the three SRM effects in prediction of task and relationship conflict.

Hypothesis 4b: Unique relations will account for the greatest relative importance of the three SRM effects in prediction of cohesion.

Hypothesis 4c: Unique relations will account for the greatest relative importance of the three SRM effects in prediction of team efficacy.

Method

Participants

Fifty-six teams of undergraduate college students enrolled in an upper level organizational management course at a large university in the southeastern United States participated in the present study. The total sample consisted of 270 participants, 50% (136) of whom were male and 88% (237) of whom reported their race as White. The mean age of participants was 21.58 years, and the ages ranged from 19 to 38 years ($SD = 2.32$).

Procedure

Participants were randomly assigned to teams of 4 to 6 individuals at the beginning of the semester to complete group assignments. The same team members worked together throughout the duration of the course for group

assignments. The current task was a regularly scheduled class assignment (a team-building exercise).

All participants first viewed the task overview presentation as a group and then were broken up into their teams and assigned to their individual rooms to complete the task. Team members completed each of the four phases of the simulation and then each participant individually completed the team process measures. Data were collected approximately 6 weeks into the semester. Thus, teams had been working cooperatively together for approximately 5 weeks at the point of data collection.

Task. In the present study, participants performed a complex team-based simulator called the Chinese Bridge (Arciniega & Castañón, 2002). The task is a relatively difficult one requiring both the design and building of a complex structure. Specifically, the task requires each team to design and build a replica of a real Chinese bridge using 33 plastic pipes of three different sizes and 20 rubber bands (with instructions that all of the materials are to be used in the bridge). The task is designed such that, given the material available, there is one optimal solution. In addition, the task is designed so that even if a team were given specific plans for the bridge, it requires multiple people working together to actually build the structure (e.g., one must hold pieces while another connects them). Thus, successful completion requires team members to work interdependently. The simulation consists of four phases: (a) a multimedia presentation describing the task and presenting a picture of the real bridge, (b) a 20-min period for team members to familiarize themselves with the materials, (c) a 30-min period to sketch a proposed design of the bridge, and (d) the building phase lasting approximately 60 min.

Measures

Team member ratings. Team members evaluated each other with respect to five adjectives that describe teamwork: (a) cooperative, (b) helpful, (c) agreeable, (d) creative, and (e) open to new ideas. Participants rated the extent to which each adjective described each of their team members and themselves using a 7-point Likert-type scale ranging from 1 (*not at all*) to 7 (*very much so*).

Task and relationship team conflict. Team conflict was measured using Jehn's (1994) Intragroup Conflict Scale. The scale contains four items measuring the task conflict dimension (e.g., *How often did people in your work group disagree about ideas regarding the task?*), and four items measuring the relationship conflict dimension (e.g., *How much friction was present in*

your work group?). Participants provided their responses using a 5-point Likert-type scale ranging from 1 (*none*) to 5 (*a lot*). The 4-item task conflict scale exhibits an internal consistency reliability of $\alpha = .85$. The 4-item relationship conflict scale exhibits an internal consistency reliability of $\alpha = .86$.

Team cohesion. Team cohesion was measured using an adapted combination of three items from Podsakoff and MacKenzie's (1994) Substitutes for Leadership Scale and four items from Zaccaro (1991). Each item consists of a short statement regarding the cohesion of the individual's team (e.g., *I generally get along well with my fellow group members*). Respondents were asked to rate the extent to which they agree with each item on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). A principal components factor analysis yielded two factors with eigenvalues above 1.0. The primary component accounted for approximately 40% of the construct's variance, and the secondary component accounted for approximately 16%. Six of the seven items yielded acceptable factor loadings on the primary component, ranging from .55 to .84. The additional item was removed due to poor fit with the primary component (factor loading = .10), and the 6-item scale exhibits an internal consistency reliability of $\alpha = .76$.

Team efficacy. We assessed team efficacy with a 2-item scale constructed specifically for this study (*My team has an effective plan for completing the bridge task; My team works as an effective unit*). Respondents rated the extent to which they agreed with each item using a 7-point scale from 1 (*strongly agree*) to 7 (*strongly disagree*). The intercorrelation between the two items was .59, $p < .001$.

Data Analysis

The SRM allows for the analysis of round-robin data from groups of four or more, in which each team member rates themselves and each of his/her other team members (Kenny, 1998). In the present study, teams of four to six members participated in an interdependent team task. Each member rated themselves and their teammates on five teamwork traits related to the task (cooperation, agreeableness, helpfulness, creativity, and openness). Ingraham and Wright (1986) warned against accepting group-level values for the unique relations component when only one assessment is used for each dimension being rated. This is because measurement error is included within the level of unique relations at this point, as the value reflects all variance remaining after accounting for assimilation and consensus (Kenny, 1994). Therefore, correlations between the five dimensions' level of unique relations and team variables are not considered accurate, because unique rela-

tions levels are confounded with error variance. However, in the present analyses, we accepted the results of the level of unique relations as unconfounded with error variance, because we obtained a composite of the effect across the five items, which are therefore considered five separate indicators of the teamwork construct. True variance associated with unique relations is identified when multiple items are used, in that variance consistent across items represents the true level of unique relations present.

Data were first analyzed using software designed by Kenny (WINSOREMO; Kenny, 1996). WINSOREMO partitions the self- and other perceptions into the three components of the SRM. From this, the program estimates the average response across partners (i.e., assimilation), the average response elicited by a partner (i.e., consensus), and the contribution to responses by the specific dyads (i.e., unique relations). Because each trait was only measured once, the relationship effects generated also included error variance. However, each item was also included as an indicator of a general teamwork construct. The computer program separates stable from unstable variance for the general construct, producing variance estimates for assimilation, consensus, and unique relations for each team. Stable variance refers to variance, pertaining to a particular source that is consistent across the five indicators (Kenny, 1998). Therefore, the unique relations component is no longer confounded with error for the teamwork construct (Kenny, 1994). Each dependent variable was aggregated to the team level for analysis. Consistency across members' ratings of task ($r_{wg} = .77$) and relationship ($r_{wg} = .87$) conflict, cohesion ($r_{wg} = .94$), and team-efficacy ($r_{wg} = .81$) were acceptable for aggregation (James, Demaree, & Wolf, 1984). We chose to use this specific within-group statistic over other similar statistics (e.g., intraclass correlations), because researchers (e.g., James et al., 1984) have cautioned against intraclass correlations for its associated problems (e.g., restriction of range).

Results

Means, standard deviations, and correlations for the survey variables are presented in Table 1 for individual-level data and Table 2 for team-level data. Table 3 displays the absolute variance estimates for each of the three SRM effects. For each of the five teamwork indicators, assimilation held the majority of the variance ranging from 58% to 68%. Unique relations held the vast majority of the remaining variance, ranging from 26% to 34%. It is important to note, however, that the unique relations component is confounded with error at this point. For all five items, levels of assimilation were

Table 1. Bivariate Correlations Among Survey Variables (Individual Level)

Variables	N	Mean	SD	1	2	3	4
1. Task conflict	260	2.44	1.12	.85			
2. Relationship conflict	262	1.78	.86	.57***	.86		
3. Cohesion	264	5.54	.75	-.44***	-.51***	.76	
4. Team efficacy	262	5.6	1.01	-.38***	-.41***	.54***	.71

Note: Internal consistency reliability is presented in bold on the diagonal.
 * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2. Bivariate Correlations among Survey Variables (Team Level)

Variables	Mean	SD	1	2	3	4
1. Task conflict	2.43	.73	—			
2. Relationship conflict	1.78	.56	.69***	—		
3. Cohesion	5.56	.52	-.55***	-.56***	—	
4. Team efficacy	5.61	.63	-.59***	-.63***	.61***	—

Note: $n = 56$.
 * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3. Absolute Variance Estimates for Teamwork Items and Construct

	Assimilation	Consensus	Unique relations
Cooperation	.27* (.68)	.01 (.02)	.12 (.30)
Helpfulness	.29* (.58)	.04* (.08)	.17 (.34)
Agreeableness	.37* (.68)	.03 (.06)	.14 (.26)
Creativity	.60* (.65)	.07* (.07)	.26 (.28)
Openness	.33* (.64)	.05 (.09)	.14 (.27)
Teamwork construct ^b	.27 (.89)	.01 (.02)	.03 (.09)
Stable ^c (52.6%)			

Note: $n = 56$.
 a. The unique relations component is confounded with error at the indicator level; tests of significance are not produced. The component is separated from error at the construct level (Kenny, 1994).
 b. Represents the construct indicated by the five items above.
 c. Represents stable variance estimates in the teamwork construct. Values indicating the relative stable variance estimates for each effect are given in parentheses.
 * $p < .05$.

Table 4. Correlations & Relative Importance Estimates of SRM Effects in Relation to Conflict, Cohesion, and Team Efficacy

Team variables	SRM effects		
	Assimilation	Consensus	Unique relations
Task conflict	.19 (.37)	-.05 (.02)	.23 (.61)
Relationship conflict	.26* (.34)	.11 (.11)	.31* (.55)
Cohesion	-.13 (.12)	-.03 (.03)	-.29* (.85)
Team efficacy	-.18 (.10)	.04 (.01)	-.45** (.89)

Note: $n = 56$, Relative importance percentages are given in parentheses.

* $p < .05$. ** $p < .01$.

significantly greater than zero ($p < .05$). Only two of the dimensions (i.e., helpfulness and creativity) were significantly greater than zero for estimations of consensus, suggesting greater within-group consensus for these variables. The unique relations component is not tested for significance, in that it cannot contain a negative value (Kenny, 1998).

Christensen, Cohan, and Stein (2004) asserted that SRM components that do not contribute statistically significant variance should not be correlated with other variables. However, as previously mentioned, our correlations and regressions included the three sources of variance for the overall teamwork construct with the five items as indicators. Thus, they are exempt from this stipulation, because only individual indicators (and not multiple-item constructs) are subject to tests of statistical significance. As discussed above, stable variance is separated from unstable variance for constructs with multiple indicators. Approximately 53% of the teamwork construct's variance was consistent across the indicators (i.e., stable variance). Assimilation accounted for approximately 89% of the construct's stable variance, whereas unique relations accounted for about 9%. Consensus accounted for less than 2%.

Hypotheses 1 through 3 addressed the relationships between each component in the SRM and the team process outcomes of interest: task and relationship conflict, cohesion, and team-efficacy. Correlations are presented in Table 4. Hypothesis 1 pertained to assimilation. Assimilation was significantly related to relationship conflict ($r = .26$, $p < .05$) but was not significantly related to task conflict, though the correlation was positive ($r = .19$). Thus, Hypothesis 1a received only partial support. Hypotheses 1b (cohesion) and 1c (team-efficacy) were not supported. The correlations between assimilation and cohesion ($r = -.13$) and team efficacy ($r = -.18$) were not significant, though both correlations were negative as hypothesized.

Hypothesis 2 pertained to consensus of group members' interpersonal perceptions. All correlations with consensus were nonsignificant. Therefore, the three subparts of Hypothesis 2 were not supported. Hypothesis 3 addressed unique relations. The level of unique relations was positively related to relationship conflict ($r = .31, p < .05$) but was not significantly related to task conflict, though there was a small positive correlation ($r = .23$). Thus, Hypothesis 3a received partial support. Unique relations were negatively correlated with cohesion ($r = -.29, p < .05$) and team efficacy ($r = -.45, p < .01$). Therefore, Hypotheses 3b and 3c were supported.

Hypothesis 4 pertained to the relative importance of levels of unique relations, in relation to the additional SRM components, in predicting team process outcomes. Relative importance refers to "the proportionate contribution each predictor makes to *R*-squared [the predicted variance of the dependent variable], considering both the unique contribution of each predictor by itself and its incremental contribution when combined with the other predictors" (Johnson & LeBreton, 2004, p. 238). Dominance analysis, developed by Budescu (1993), seeks to determine the relative importance of multiple predictors in a multiple regression framework. Each team received a variance estimate for each of the three SRM components for the construct. The three predictors were then entered into multiple regression models for each of the dependent variables, entering all possible combinations of the predictors. The relative importance of each of the three SRM effects was then determined using a computer program developed by LeBreton (Dominance Analysis Version 3.1; LeBreton, 2002).

Unique relations accounted for the greatest amount of predicted variance for task and relationship conflict (4a), cohesion (4b), and team efficacy (4c). Thus, the three subparts of Hypothesis 4 were supported. Relative importance estimates are presented along with correlations in Table 4. Unique relations accounted for approximately 61% and 55% of the observed variance for task and relationship conflict, respectively. Assimilation accounted for approximately 37% and 34% of the observed variance for the conflict types, whereas consensus accounted for about 2% and 11%, respectively. Unique relations accounted for approximately 85% of the observed variance in prediction of cohesion, whereas assimilation and consensus accounted for 11% and 3%, respectively. Finally, unique relations accounted for approximately 89% of the observed variance in prediction of team efficacy, whereas assimilation accounted for about 10%. Consensus accounted for less than 1%. Tables 5-8 list the *R*-squared coefficients for each of the three predictors.

Table 5. Dominance Analysis Results for SRM Effects Predicting Task Conflict

Predictors	R-squared	Additional contribution of:		
		A	B	C
A. Perceiver	.03	—	.00	.05
B. Target	.00	.04	—	.05
C. Relationship	.05	.02	.00	—
A., B.	.04	—	—	.03
A., C.	.07	—	.00	—
B., C.	.05	.02	—	—
Total R-squared	.07			
General dominance weights		.03	.00	.04
Rescaled weights		.37	.02	.61

Note: $n = 56$.

Table 6. Dominance Analysis Results for SRM Effects Predicting Relationship Conflict

Predictors	R-squared	Additional contribution of:		
		A	B	C
A. Perceiver	.07	—	.01	.06
B. Target	.01	.07	—	.11
C. Relationship	.09	.04	.03	—
A., B.	.08	—	—	.08
A., C.	.13	—	.02	—
B., C.	.12	.03	—	—
Total R-squared	.15			
General dominance weights		.05	.02	.09
Rescaled weights		.34	.11	.55

Note: $n = 56$.

Discussion

Our study utilized the SRM to help understand how within-group interpersonal perceptions are related to team process outcomes. We found that unique relations among group members' perceptions were related to higher levels of task and relationship conflict and lower levels of cohesion and self-efficacy to a greater extent than assimilation and consensus. Concerning assimilation, associations with the team process outcomes were in the hypothesized direc-

Table 7. Dominance Analysis Results for SRM Effects Predicting Cohesion

Predictors	R-squared	Additional contribution of:		
		A	B	C
A. Perceiver	.02	—	.00	.07
B. Target	.00	.02	—	.09
C. Relationship	.08	.01	.01	—
A., B.	.02	—	—	.08
A., C.	.09	—	.01	—
B., C.	.09	.00	—	—
Total R-squared	.09			
General dominance weights		.01	.00	.08
Rescaled weights		.12	.03	.85

Note: *n* = 56.

Table 8. Dominance Analysis Results for SRM Effects Predicting Team Efficacy

Predictors	R-squared	Additional contribution of:		
		A	B	C
A. Perceiver	.03	—	.00	.18
B. Target	.00	.04	—	.20
C. Relationship	.20	.01	.00	—
A., B.	.04	—	—	.17
A., C.	.21	—	.00	—
B., C.	.20	.01	—	—
Total R-squared	.21			
General dominance weights		.02	.00	.19
Rescaled weights		.10	.01	.89

Note: *n* = 56.

tion, but most were small and nonsignificant. Assimilation was significantly correlated with relationship conflict but not task conflict, suggesting that groups in which members tend to view other members in idiosyncratic ways are likely to experience greater levels of affective friction, relative to friction associated with the work itself. This premise also held for unique relations, which displayed a stronger association with relationship conflict, relative to task conflict. With regard to within-group consensus, all correlations with

team process outcomes were nonsignificant, with results suggesting that consensus was relatively low across groups and did not play an important role in influencing team process outcomes. We assert that the single most important aspect of this study was evaluating the relative importance of the three components in the SRM in predicting team process outcomes, which, to our knowledge, has never been examined. These results suggest that the manner in which group members perceive one another on a number of individual characteristics (e.g., creativity, helpfulness) influences the process of their work.

Moreover, we believe the finding that unique relations held the highest level of relative importance across all team variables is most significant. Hence, unique relations between individuals' perceptions within groups were related to increased conflict and decreased cohesion and team efficacy. Assimilation yielded correlations with the process outcomes in the hypothesized direction, though only the correlation with relationship conflict was significant. We attribute the insignificant correlations between assimilation and the group variables to the fact that assimilation was so abundant in our study. Specifically, Marcus (1998) advised caution in the interpretation of assimilation due to the confounding influence of response bias. There was very little consensus in the teamwork construct, suggesting that consensus was not stable across the indicators. Moreover, consensus was significant only for two of the five teamwork items; therefore, the correlations between this SRM component and the group variables should be examined with caution. In addition, stable consensus (i.e., variance consistent across all five items) was represented by small values across groups in the present study, making it difficult to detect significant correlations with other variables.

There are implications of the associations between the SRM components and team process outcomes. Assimilation represents interpersonal perceptions derived from the person, or perceiver, according to the SRM. In general, assimilation is associated with negative effects on group processes; and thus, shared perceptions are proposed to positively influence group process outcomes. Though consensus in within-group interpersonal perceptions was not significantly associated with group process outcomes, several points are worth noting. First, favorable or unfavorable perceptions may yield consensus. Specifically, group members can agree that Bob is very helpful and Alice is not. These two variations of within-group consensus may produce differential effects on group processes. For example, agreement among group members that Alice is neither helpful nor cooperative will not necessarily produce positive effects upon group processes. Future research should examine this question in greater detail.

Unique relations may be indicative of several potential within-group tendencies. Kenny (1994) outlined several facets of unique relations. Unique relations may represent the different information regarding a particular target (i.e., group member) that may be exposed to various group members. Alternatively, this component may represent different attribution biases among group members, in that members may react to various target behaviors in different ways. In addition, members may use information (e.g., affect, mood) beyond the target's behavior in the development of their perceptions. It is important to note that the focus of the current article is on the effect of unique relations, rather than their structure or form. However, additional research is needed to determine potential differential effects these facets may have on unique relations within groups. Our understanding of unique relations would also benefit through an examination of potential individual- and group-level antecedents.

Limitations and Directions for Future Research

The generalizability of our results may be questioned because we used undergraduate teams participating in a class project. However, the students in these teams worked together over the course of several months as a course requirement. Thus, like many work teams in organizations, the participants in our study were experienced members of existing project teams. Additional research is needed to determine the effects of time on the interpersonal processes within teams. In the present study, team members had worked cooperatively together for approximately 5 weeks prior to data collection. A second limitation results from the use of multiple indicators for the general teamwork construct used in the present study. As mentioned above, we adjusted for the confounding presence of error in the dominance analysis by using a teamwork construct with the five teamwork items as the construct's indicators. This technique, however, creates an additional limitation with regard to the use of the SRM components as team variables. Specifically, error is removed from the unique relations component at the cost of losing potentially important variance that is not consistent across multiple indicators.

Values for the consensus and unique relations components were quite small across teams. However, this suggests two additional important findings. First, assimilation was relatively stable across all five teamwork indicators. This suggests that assimilation may be more consistent across multiple variables in comparison to consensus and unique relations. It further suggests that rater response bias was likely an important part of the great amount of stable assimilation. Second, although the small stable variance estimates for

consensus may have hindered the variable in producing significant correlations, the unique relations component produced moderate correlations with team process outcomes even with small values. This suggests that unique dyadic relationships among team members' perceptions may serve as a strong predictor of team processes. A final limitation concerns the content of interpersonal perceptions assessed in the current study. Although the five items represent individual characteristics consistent with measures of personality (e.g., Big Five; Costa & McCrae, 1994), other important traits and relational factors were not assessed. For example, group members may differentially perceive teammates' ability to work with others; and this particular individual characteristic may be especially important in relation to within-group conflict and cohesion. Other relational factors include interpersonal affect, such as liking one another. How might these relationships influence group processes? One potential area of interest may be how interpersonal affect differentially associates with task and relationship conflict, where one might expect the latter to display a stronger association with this particular type of perception.

We believe that dominance analysis is an interesting technique that can be applied to studies utilizing the SRM. Our study, examining the relative importance of the SRM effects as predictors of conflict, cohesion and team-efficacy, only scratches the surface of potential uses of dominance analysis within studies where round-robin data is available. Additional explanations for unique relations may have utility for future research. Kulik, Bainbridge, and Cregan (2008), for example, developed a model that focuses on stigma-by-association effects in the workplace. Though this line of research operates at the level of organization, it may still be useful to apply certain characteristics of the model to an SRM analysis. Additionally, we did not investigate the temporal aspect of interpersonal perceptions in the present study. It may be interesting to investigate the process of change in interpersonal perceptions across time. Related research has shown the importance of performance feedback on subsequent ratings of team members' performance (e.g., Taggar & Brown, 2006).

Summary

In sum, the empirical research presented has yielded significant contributions with regard to several areas of research. The findings suggest that deep-level diversity concerning group members' interpersonal perceptions may be understood through the SRM, which posits three distinct within-group processes associated with group members' perceptions of one another. The results showing significant associations between the SRM components

and the team process outcomes lend further support to the IPO model of group processing, suggesting that underlying group factors may be influential in relating group inputs (e.g., group composition) to group processes (e.g., cohesion, conflict, team efficacy). Finally, the current research serves as a framework for continued research utilizing a social relations approach in studies of within-group interpersonal perceptions and processes.

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References

- Amason, A. C. (1996). Distinguishing the effects of functional and dysfunctional conflict on strategic decision making: Resolving a paradox for top management teams. *Academy of Management Journal*, *39*, 123-148. doi:10.2307/256633
- Amason, A. C., & Schweiger, D. M. (1994). Resolving the paradox of conflict, strategic decision making, and organizational performance. *International Journal of Conflict Management*, *5*, 239-253. doi:10.1108/eb022745
- Arciniega, L. M., & Castañón, M. A. (2002). *El puente chino: un reto de equipo*. [The Chinese bridge: A team challenge]. Available from Luis M. Arciniega, Department of Management. ITAM. Mexico City, Mexico.
- Arthur, W., Jr., Edwards, B. D., Bell, S. T., Villado, A. J., & Bennett, W. Jr. (2005). Team task analysis: Identifying tasks and jobs that are team based. *Human Factors*, *47*, 654-669. doi:10.1518/001872005774860087
- Baron, R. A. (1991). Positive effects of conflict: A cognitive perspective. *Employee Responsibilities & Rights Journal*, *4*, 25-36. doi:10.1007/BF01390436
- Barrick, M. R., Stewart, G. L., Neubert, M. J., & Mount, M. K. (1998). Relating member ability and personality to work-team processes and team effectiveness. *Journal of Applied Psychology*, *83*, 377-391. doi:10.1037/0021-9010.83.3.377
- Beal, D. J., Cohen, R. R., Burke, M. J., & McLendon, C. L. (2003). Cohesion and performance in groups: A meta-analytic clarification of construct relations. *Journal of Applied Psychology*, *88*, 989-1004. doi:10.1037/0021-9010.88.6.989
- Bettenhausen, K. (1991). Five years of group research: What have we learned and what needs to be addressed. *Journal of Management*, *17*, 354-381. doi:10.1177/014920639101700205

- Budescu, D. V. (1993). Dominance analysis: A new approach to the problem of relative importance of predictors in multiple regression. *Psychological Bulletin*, *114*, 542-551. doi:10.1037/0033-2909.114.3.542
- Byrne, D. (1971). *The attraction paradigm*. New York, NY: Academic.
- Campion, M. A., Medsker, G. J., & Higgs, A. C. (1993). Relations between work group characteristics and effectiveness: Implications for designing effective work groups. *Personnel Psychology*, *46*, 823-850. doi:10.1111/j.1744-6570.1993.tb01571.x
- Christensen, P. N., Cohan, S. L., & Stein, M. B. (2004). The relationship between interpersonal perception and post-traumatic stress disorder-related functional impairment: A social relations model analysis. *Cognitive Behaviour Therapy*, *33*, 151-160. doi:10.1080/16506070410026417
- Cogliser, C. C., & Schriesheim, C. A. (2000). Exploring work unit context and leader-member exchange: A multi-level perspective. *Journal of Organizational Behavior*, *21*, 487-511. doi:10.1002/1099-1379(200008)21:5<487::AID-JOB57>3.0.CO;2-P
- Connor, P. E., & Becker, B. W. (1975). Values and the organization: Suggestions for research. *Academy of Management Journal*, *18*, 550-561. doi:10.2307/255684
- Cook, W. L., & Kenny, D. A. (2004). Application of the social relations model to family assessment. *Journal of Family Psychology*, *18*, 361-371. doi:10.1037/0893-3200.18.2.361
- Costa, P. T. Jr., & McCrae, R. R. (1994). Stability and change in personality from adolescence through adulthood. In C. F. Halverson, G. A. Kohnstamm, & R. P. Martin (Eds.), *The developing structure of temperament and personality from infancy to adulthood* (pp. 139-150). Hillsdale, NJ: Erlbaum.
- De Dreu, C. K., & Weingart, L. R. (2003). Task versus relationship conflict, team performance, and team member satisfaction: A meta-analysis. *Journal of Applied Psychology*, *88*, 741-749. doi:10.1037/0021-9010.88.4.741
- Dose, J. J., & Klimoski, R. J. (1999). The diversity of diversity: Work values effects on formative team processes. *Human Resource Management Review*, *9*, 83-108. doi:10.1016/S1053-4822(99)00012-1
- Gibson, C. B. (1999). Do they do what they believe they can? Group efficiency and group effectiveness across tasks and cultures. *Academy of Management Journal*, *42*, 138-152. doi:10.2307/257089
- Gibson, C. B., Randel, A. E., & Earley, P. C. (2000). Understanding group efficacy: An empirical test of multiple assessment methods. *Group & Organization Management*, *25*, 67-97. doi:10.1177/1059601100251005
- Gladstein, D. L. (1984). Groups in context: A model of task group effectiveness. *Administrative Science Quarterly*, *29*, 499-517. doi:10.2307/2392936
- Graen, G., Novak, M. A., & Sommerkamp, P. (1982). The effects of leader-member exchange and job design on productivity and job satisfaction: Testing a dual

- attachment model. *Organizational Behavior & Human Performance*, *30*, 109-131. doi:10.1016/0030-5073(82)90236-7
- Graen, G., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *Leadership Quarterly*, *6*, 219-247. doi:10.1016/1048-9843(95)90036-5
- Greguras, G. J., Robie, C., & Born, M. P. (2001). Applying the social relations model to self and peer evaluations. *Journal of Management Development*, *20*, 508-525. doi:10.1108/02621710110399792
- Greguras, G. J., Robie, C., Born, M. P., & Koenigs, R. J. (2007). A social relations analysis of team performance ratings. *International Journal of Selection & Assessment*, *15*, 434-448. doi:10.1111/j.1468-2389.2007.00402.x
- Gully, S. M., Incalcaterra, K. A., Joshi, A., & Beaubien, J. M. (2002). A meta-analysis of team efficacy, potency, and performance: Interdependence and level of analysis as moderators of observed relationships. *Journal of Applied Psychology*, *87*, 819-832. doi:10.1037/0021-9010.87.5.819
- Guzzo, R. A., & Shea, G. P. (1992). Group performance and intergroup relations in organizations. In M. D. Dunnette, & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (Vol. 3, pp. 269-313). Palo Alto, CA: Consulting Psychologists.
- Hackman, J. R. (1987). The psychology of self-management in organizations. In M. S. Pallak & R. O. Perloff (Eds.), *Psychology and work: Productivity, change, and employment* (pp. 89-136). Washington, DC: American Psychological Association.
- Harrison, D. A., Price, K. H., & Bell, M. P. (1998). Beyond relational demography: Time and the effects of surface- and deep-level diversity on work group cohesion. *Academy of Management Journal*, *41*, 96-107. doi:10.2307/256901
- Henderson, D. J., Wayne, S. J., Shore, L. M., Bommer, W. H., & Tetrick, L. E. (2008). Leader-member exchange, differentiation, and psychological contract fulfillment: A multi-level examination. *Journal of Applied Psychology*, *93*, 1208-1219. doi:10.1037/a0012678
- Ingraham, L. J., & Wright, T. L. (1986). A cautionary note on the interpretation of relationship effects in the social relations model. *Social Psychology Quarterly*, *49*, 93-97. doi:10.1037/0033-2909.103.3.379
- Jackson, S. E. (1992). Consequences of group composition for the interpersonal dynamics of strategic issue processing. *Advances in Strategic Management*, *8*, 345-382.
- James, L. R., Demaree, R. G., & Wolf, G. (1993). Estimating within-group interrater reliability with and without response bias. *Journal of Applied Psychology*, *69*, 85-98. doi:10.1037/0021-9010.69.1.85

- Janz, B. D., Colquitt, J. A., & Noe, R. A. (1997). Knowledge worker team effectiveness: The role of autonomy, interdependence, team development, and contextual support variables. *Personnel Psychology, 50*, 877-904. doi:10.1111/j.1744-6570.1997.tb01486.x
- Jehn, K. A. (1994). Enhancing effectiveness: An investigation of advantages and disadvantages of value-based intragroup conflict. *International Journal of Conflict Management, 5*, 223-238. doi:10.1108/eb022744
- Johnson, J. W., & LeBreton, J. M. (2004). History and use of relative importance indices in organizational research. *Organizational Research Methods, 7*, 238-257. doi:10.1177/1094428104266510
- Kenny, D. A. (1994). *Interpersonal perception: A social relations analysis*. New York, NY: Guilford.
- Kenny, D. A. (1996). *WINSOREMO*. Computer software. Retrieved from <http://davidkenny.net/srm/srmp.htm>
- Kenny, D. A. (1998). *SOREMO*. Unpublished manuscript. Retrieved from <http://davidkenny.net/srm/srmp.htm>
- Kulik, C. T., Bainbridge, H. T., & Cregan, C. (2008). Known by the company we keep: Stigma-by-association effects in the workplace. *Academy of Management Review, 33*, 216-230. doi:10.2307/20159384
- Labianca, G., Brass, D. J., & Gray, B. (1998). Social networks and perceptions of intergroup conflict: The role of negative relationships and third parties. *Academy of Management Journal, 41*, 55-67. doi:10.2307/256897
- LeBreton, J. M. (2002). *Dominance Analysis Version 3.1*. Computer software. Retrieved from <http://www2.psych.purdue.edu/~lebreton/relative.htm>
- LePine, J. A., Piccolo, R. F., Jackson, C. L., Mathieu, J. E., & Saul, J. R. (2008). A meta-analysis of teamwork processes: Tests of a multidimensional model and relationships with team effectiveness criteria. *Personnel Psychology, 61*, 273-307. doi:10.1111/j.1744-6570.2008.00114.x
- Liden, R. C., Erdogan, B., Wayne, S. J., & Sparrowe, R. T. (2006). Leader-member exchange, differentiation, and task interdependence: Implications for individual and group performance. *Journal of Organizational Behavior, 27*, 723-746. doi:10.1002/job.409
- Marcus, D. K. (1998). Studying group dynamics with the social relations model. *Group Dynamics: Theory, Research, and Practice, 2*, 383-389. doi:10.1037/1089-2699.2.4.230
- Marcus, D. K., & Kashy, D. A. (1995). The social relations model: A tool for group psychotherapy research. *Journal of Counseling Psychology, 42*, 230-240. doi:10.1037/0022-0167.42.3.383

- Marcus, D. K., Kashy, D. A., & Baldwin, S. A. (2009). Studying psychotherapy using the one-with-many design: The therapeutic alliance as an exemplar. *Journal of Counseling Psychology, 56*, 537-548. doi:10.1037/a0017291
- Marcus, D. K., & Leatherwood, J. C. (1998). The interpersonal circle at zero acquaintance: A social relations analysis. *Journal of Research in Personality, 32*, 297-313. doi:10.1006/jrpe.1998.2222
- Marcus, D. K., & Lehman, S. J. (2002). Are there sex differences in interpersonal perception at zero acquaintance? A social relations analysis. *Journal of Research in Personality, 36*, 190-207. doi:10.1006/jrpe.2001.2346
- McGrath, J. E. (1964). *Social psychology: A brief introduction*. New York, NY: Holt, Rinehart, and Winston.
- Morgan, Jr., B. B., & Lassiter, D. L. (1992). Team composition and staffing. In R. W. Swezey & E. Salas (Eds.), *Teams: Their training and performance* (pp. 75-100). Westport, CT: Ablex.
- Mullen, B., & Copper, C. (1994). The relation between group cohesiveness and performance: An integration. *Psychological Bulletin, 115*, 210-227. doi:10.1037/0033-2909.115.2.210
- Nelson, R. E. (1989). The strength of strong ties: Social networks and intergroup conflict in organizations. *Academy of Management Journal, 32*, 377-401. doi:10.2307/256367
- Pelled, L. H. (1996). Demographic diversity, conflict and work group outcomes: An intervening process theory. *Organization Science, 7*, 615-631. doi:10.1287/orsc.7.6.615
- Podsakoff, P. M., & MacKenzie, S. B. (1994). An examination of the psychometric properties and nomological validity of some revised and reduced substitutes for leadership scales. *Journal of Applied Psychology, 79*, 702-713. doi:10.1037/0021-9010.79.5.702
- Pronin, E., Gilovich, T., & Ross, L. (2004). Objectivity in the eye of the beholder: Divergent perceptions of bias in self versus others. *Psychological Review, 111*, 781-799. doi:10.1037/0033-295X.111.3.781
- Sabatelli, R. M., Buck, R., & Kenny, D. A. (1986). A social relations analysis of non-verbal communication accuracy in married couples. *Journal of Personality, 54*, 513-527. doi:10.1111/j.1467-6494.1986.tb00410.x
- Salancik, G. R., & Pfeffer, J. (1978). A Social Information Processing approach to job attitudes and task design. *Administrative Science Quarterly, 23*, 224-253. doi:10.2307/2392563
- Schyns, B. (2006). Are group consensus in leader-member exchange LMX and shared work values related to organizational outcomes? *Small Group Research, 37*, 20-35. doi:10.1177/1046496405281770
- Shea, G. P., & Guzzo, R. A. (1987). Group effectiveness: What really matters? *Sloan Management Review, 28*, 25-31.

- Sundstrom, E., DeMeuse, K. P., & Futrell, D. (1990). Work teams: Applications and effectiveness. *American Psychologist, 45*, 120-133. doi:10.1037/0003-066X.45.2.120
- Swezey, R. W., & Salas, E. (1992). Guidelines for use in team-training development. In R. W. Swezey & E. Salas (Eds.), *Teams: Their training and performance* (pp. 219-245). Westport, CT: Ablex.
- Taggar, S., & Brown, T. C. (2006). Interpersonal affect and peer rating bias in teams. *Small Group Research, 37*, 86-111. doi:10.1177/1046496405284382
- Vodosek, M. (2007). Intragroup conflict as a mediator between cultural diversity and work group outcomes. *International Journal of Conflict Management, 18*, 345-375. doi:10.1108/10444060710833469
- Zaccaro, S. J. (1991). Nonequivalent associations between forms of cohesiveness and group-related outcomes: Evidence for multidimensionality. *Journal of Social Psychology, 131*, 387-399.

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