Individual Differences and Group Negotiation: The Role of Polychronicity, Dominance, and Decision Rule

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Abstract

The purpose of the current study was to integrate two streams of research that have remained largely distinct: negotiation and group composition. Specifically, this experiment examined the interactive effects of two individual difference variables (polychronicity and dominance) on multi-party negotiation performance (task conflict and joint profit) in either unanimity or majority rule contexts. Results from business students in a multi-issue negotiation exercise revealed that personality does play a role in group negotiation, but relationships were contingent, as revealed by the presence of a significant two-way interaction for task conflict and a three-way interaction for joint profit. Group polychronicity resulted in higher task conflict, but only when group dominance was low. The polychronicity–dominance interaction significantly predicted joint profit under majority rule, but had little effect under a unanimity decision rule. Consistent with task conflict results, polychronicity negatively predicted joint profit, but only for lower dominance groups under majority rule. Findings reinforce the importance of examining how multiple individual differences interact with each other, as well as with situational factors, to determine group negotiation outcomes.

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Anecdotal accounts suggest that people differ in the ways they negotiate. Bargainers bring to the table their unique backgrounds, experiences, personalities, and perspectives, which may influence both the process and outcome of interactions (Rubin & Brown, 1975, p. 157). However, the study of individual differences in negotiation has not kept up with the shift towards dispositional research that has produced fruitful results in many areas of organizational behavior and psychology, including motivation (e.g., Kanfer & Ackerman, 2000), leadership (e.g., Judge, Bono, Illies, & Gerhardt, 2002), and organizational change (e.g., Wanberg & Banas, 2000). Although personality variables have been found to exert a strong influence on group processes and performance (e.g., Neuman & Wright, 1999), the small body of existing work on group negotiation has virtually ignored individual differences.

The purpose of the current study was to better understand how individual differences affect group negotiation outcomes, and in doing so, to integrate two streams of research that have remained largely distinct: negotiation and group composition. Negotiation scholars have generally tended to examine dyadic negotiations (e.g., Thompson, 1990), while group composition researchers have mostly examined non-negotiation tasks (e.g., Mohammed, Mathieu, & Bartlett, 2002). Thus, by investigating the role of individual differences in the context of group negotiation, we both extend negotiation research beyond the current paradigm as well as add to existing knowledge of group functioning. In addition, whereas personality constructs are often treated as separate, additive predictors, this study contributes to the literature by examining trait *interactions* in the prediction of negotiation outcomes. Following the urging of negotiation (e.g., Beersma & De Dreu, 2002) and personality (e.g., Mischel, 2004) researchers to go beyond main effects, we also consider how individual differences interact with the situation. Specifically, the current study examined how task conflict and joint group profit are affected by the individual difference variables of polychronicity (the preference for engaging in several activities simultaneously) and dominance (the need to influence or direct others), in both unanimous and majority rule negotiation situations.

Individual Differences and Negotiation Research

Although individual differences have been classified as one of three broad domains in negotiation research, more attention has been given to motivational and cognitive models (Thompson, 1990). A sampling of personality characteristics that have been measured in dyadic negotiation research includes extraversion, agreeableness, and conscientiousness (Barry & Friedman, 1998), machiavellianism, dogmatism, and locus of control (Kleinman, Palmon, & Lee, 2003), relationship orientation, tolerance for ambiguity, and need for power (Greenhalgh, Neslin, & Gilkey, 1985), as well as face threat sensitivity (White, Tynan, Galinsky, & Thompson, 2004) and need for closure (De Dreu, Koole, & Oldersma, 1999). In general, attempts to link individual differences to negotiation behaviors have been unfruitful (e.g., Thompson, 1990), as evidenced by insignificant findings (e.g., Kleinman et al., 2003; Mintu-Wimsatt & Lozada, 1999) and contradictory results (see review by Rubin & Brown, 1975). Indeed, in their extensive

review, Wall and Blum (1991) concluded that there was "no consistent stream of research supporting a significant impact for any trait" (pp. 277–278).

The poor research record for individual differences in the negotiation context may be due to at least three factors: (a) the atheoretical use of personality constructs, (b) failure to examine trait interactions, and (c) inadequate consideration of the situation. First, due to the lack of strong theory (Thompson, 1990), individual differences have often been loosely tied to negotiation outcomes without a strong rationale for relationships. Personality characteristics will not predict negotiation behaviors in all situations; therefore, care must be taken to match individual differences to situations that trigger expression of particular traits (Tett & Burnett, 2003).

The need to examine trait interactions may constitute a second reason for the lack of compelling research results concerning personality and negotiation. Although extant negotiation research has mostly examined personality constructs in isolation (e.g., White et al., 2004) or as multiple, independent predictors (e.g., Barry & Friedman, 1998) behavior results from the synthesis of multiple characteristics operating simultaneously in individuals and groups. Although the relationship of any one trait with negotiation performance may be low, personality variables may interact to exert stronger effects on joint outcomes. In identifying future research needs for personality studies, Smith and Schneider (2004) lamented that "personality is an integrated system. Each characteristic conditions the interpretation of others. Yet, most of our models fail to consider or account for these conditional relationships" (p. 400).

In addition to the lack of trait relevance and trait interactions, a third reason for the unimpressive findings regarding individual differences and negotiation may be failure to consider the moderating role of situational factors and/or task characteristics. Consistent with personality scholars (Mischel, 2004), negotiation researchers have concluded that "a full understanding of negotiation processes in small groups cannot be reached by continuing to study main effects only, and we recommend future research to continue designing studies examining the interactions among predictors" (Beersma & De Dreu, 2002, p. 245). Indeed, recent and compelling individual difference results in negotiation research have examined the moderating influence of factors such as negotiator aspirations (Barry & Friedman, 1998) and negotiator role (White et al., 2004).

The current study aims to improve upon past personality-negotiation research by addressing previous study limitations. Polychronicity (preference to work on several tasks simultaneously) and dominance (the need to influence or direct other people) were examined as theoretically relevant dispositional effects on group negotiation. The conceptual relevance of polychronicity in negotiation stems from its role in explaining the preferences of negotiators for parallel versus serial group processing of issues, as will be discussed in more detail below. However, polychronicity was expected to impact the group especially when members also possessed sufficient assertiveness to express their preferences in a collective context. Furthermore, given that the impact of individual differences on negotiation outcomes is likely to be situation-qualified, we examine the moderating role of a uniquely group-level phenomenon reflecting how decision making is structured: decision rule (i.e., majority rule vs. unanimity).

Group Negotiation

According to Brodt and Thompson (2001), a negotiating team is defined as "a group of two or more interdependent persons who join together as a single negotiating party because their similar interests and objectives relate to the negotiation and who are all present at the bargaining table" (p. 209). Although the prototype in both research and practice involves two individuals deciding what each will give and take, negotiation more commonly occurs within and between groups (Ancona, Friedman, & Kolb, 1991; Brodt & Thompson, 2001). Indeed, several studies have found that negotiation teams outperform solos (e.g., Brodt & Tuchinsky, 2000; Morgan & Tindale, 2001; O'Connor, 1997). Nevertheless, there has been relatively little research on team negotiation when compared with dyadic negotiation (e.g., Beersma & De Dreu, 2002; Brodt & Thompson, 2001).

Multi-party negotiations are more complex than their dyadic analogs due to increased information processing demands and the various sets of preferences that must be considered as more people arrive at agreements (Mannix, Thompson, & Bazerman, 1989). Interpersonal dynamics also become more complicated by the potential for coalition formation (Mannix et al., 1989; Thompson, Mannix, & Bazerman, 1988). Therefore, conclusions drawn from research on dyadic negotiation cannot be translated directly into hypotheses about group negotiation (Kozlowski & Klein, 2000). Because group composition research has successfully linked personality variables to group processes and performance (e.g., Mohammed & Angell, 2003; Neuman & Wright, 1999; Stewart, 2006), examining the role of individual differences in group negotiation may also be fruitful.

Theoretical Background

Given the paucity of work integrating negotiation and group composition, an overarching theoretical framework does not exist to unite the two streams of research. Moreover, group composition research has been criticized for being "atheoretical" (Levine & Moreland, 1990, p. 594) and the individual differences approach in negotiation called "a collection of disparate hypotheses, predictions, and low-level theoretical statements" (Thompson, 1990, p. 519). However, we drew from recent conceptual frameworks in negotiation and group composition as well as personality theory to select the variables for this study. Each is described below.

Thompson and colleagues have recently offered a levels of analysis framework for analyzing negotiating teams that features individual, intragroup, and intergroup levels (Brodt & Thompson, 2001; Thompson & Fox, 2001). Drawing from this systematic, multi-level model of the factors that influence negotiations, the current study incorporated both individual (negotiator personality characteristics) as well as intragroup (internal group dynamics) levels to predict negotiation outcomes. In addition, through examining decision rule, we also addressed the polyad level (Thompson & Fox, 2001), which explores the possibility of excluding individuals from an agreement through coalition formation. Further, trait dominance (the need to influence or direct other people) was chosen to represent the social-cognitive category of the individual psychological processes suggested by the Brodt and Thompson (2001) framework, while polychronicity (preference for engaging in several activities simultaneously) was chosen to represent the

cognitive-information category. Because conflict was advocated as a key intragroup process due to its relevance when opposing viewpoints are expressed (Brodt & Thompson, 2001), we also investigated task conflict (disagreement regarding ideas and opinions about the task being performed) in the present research. By examining interrelationships between individual and intragroup psychological processes, we follow the recommendation of Thompson and colleagues to utilize a level of analysis framework and move beyond the dyadic model that has dominated past research.

With respect to group composition, Moynihan and Peterson (2001) proposed a contingent configuration approach to capture the complexity regarding the role of personality in organizational groups. Specifically, the contingency perspective advocates that the interaction between personality and the situation impacts group outcomes, while the configuration perspective advocates that researchers examine the interaction between the varieties of traits represented within the group. In the current study, we integrate the notion of contingency by predicting that the relationship between the personality composition of a negotiation team and group outcomes will be affected by decision rule, an element of the situation. Likewise, when examining dominance, polychronicity, and their interaction, we incorporate the configurationist approach by taking multiple traits into consideration.

In addition to the levels of analysis framework for analyzing negotiating teams (Brodt & Thompson, 2001; Thompson & Fox, 2001) and the contingent configuration approach (Moynihan & Peterson, 2001), a personality trait-based interactionist model also informed the current research. Tett and Burnett (2003) advocate the concept of trait relevance, which is defined as the ''qualitative feature of situations that makes it reasonable to expect expression of one trait rather than another'' (p. 502). In the section below, we review the literature on polychronicity, dominance, and decision rule to describe how these specific traits and situational variables are relevant to the negotiation context.

Polychronicity, Dominance, and Decision Rule

Polychronicity

Polychronicity is defined as the extent to which individuals (a) prefer to be engaged in more than one task simultaneously and (b) believe that their preference is the best way to do things (Bluedorn, Kalliath, Strube, & Martin, 1999). The construct exists on a continuum, with monochronicity and polychronicity being opposite poles rather than distinct concepts (Bluedorn et al., 1999). Highly monochronic individuals focus on one task at a time and perceive other events as interruptions. In contrast, highly polychronic individuals engage in multiple activities at exactly the same time (e.g., talking on the phone while checking e-mail) or switch, intersperse or dovetail several tasks within the same time period (e.g., moving back and forth between writing a report and checking e-mail; Bluedorn, 2002). Based on high test-retest reliability coefficients (e.g., Conte & Jacobs, 2003; Conte, Rizzuto, & Steiner, 1999), polychronicity is considered to be a relatively stable trait. Providing evidence for discriminant validity, polychronicity has not been found to overlap substantially with Type A behavior pattern components (e.g.,

Conte et al., 1999), cognitive ability (Conte & Jacobs, 2003), or the Big Five (Conte & Gintoft, 2005; Conte & Jacobs, 2003).

Whereas monochronicity is advantageous in terms of greater depth of involvement with a decision or activity, polychronicity can be advantageous when moving back and forth among several tasks might result in cross-fertilization and integration (Bluedorn, 2002). In a multi-party multi-issue negotiation context, information and demands are scattered, complex, and interactively open with regard to communication channels, a context in which Schein (1992) suggests that polychronicity will be most effective. Indeed, previous research has shown that groups who considered issues simultaneously instead of sequentially improved outcome quality in a multi-issue negotiation (Mannix et al., 1989; Weingart, Bennett, & Brett, 1993). Although polychronicity was not examined in these studies, the pattern of findings suggests that this personality trait could have special relevance to negotiation groups.

Whereas polychronicity has been investigated primarily at the individual level (e.g., Conte & Gintoft, 2005; Conte & Jacobs, 2003), with some work devoted to the organizational level (e.g., Bluedorn, 2002), considerably less attention has been given to the group level of analysis (see Waller, Giambatista, & Zellmer-Bruhn, 1999, for an exception). With the exception of two previous studies, the impact of polychronicity on negotiation has not been actively investigated. In a dyadic context, polychronicity was associated with the use of an ''interests'' strategy that often requires parties to address multiple issues at the same time to create integrative agreements (Tinsley, 2001). An earlier individual-level study found that polychronicity correlated positively with an integrating interest model for resolving conflict, which focuses on resolving parties' underlying concerns and discovering the reasons behind positions (Tinsley, 1998). Thus, there is reason to believe that polychronicity is important in the negotiation context, although its impact in groups or in interaction with other variables in a controlled experiment has not been investigated.

Dominance

Dominance refers to the extent to which an individual feels the need to voice opinions and to influence or direct other people (Ray, 1981). The construct is characterized by assertiveness, confidence, aggressiveness, determination, argumentativeness, and influence (Burgoon, Johnson, & Koch, 1998; Ray, 1981; Wiggins, 1979). Although dominance is sometimes subsumed under extraversion, this broader trait of the Five Factor Model includes other dimensions (e.g., positive affect and outgoingness; Hough & Ones, 2001) that are not clearly related to the negotiation context. Therefore, we chose to focus on dominance, which is most conceptually germane to the study of multi-party negotiations. This focus on narrow traits in predicting specific behaviors is in alignment with the current consensus among researchers who recommend a match between the specificity of the personality variable and the outcome of interest (Harrison, Newman, & Roth, 2006; Smith & Schneider, 2004). Given that negotiation represents a specific behavioral dimension of decision making, the appropriate level of measurement for personality traits would most likely be narrow as opposed to broad.

The dominance of individuals within groups has been related to greater perceived expertise and participation in discussion (Littlepage, Schmidt, Whisler, & Frost, 1995) as

well as greater centrality in the communication network (Brown & Miller, 2000). In addition, there is a significant relationship between dominance and the tendency to assume a leadership role in groups (e.g., Megargee, 1969; Smith & Cook, 1973). Given that dominance captures the need to voice opinions and influence other people, while the negotiation context involves information exchange and persuasion, it is surprising that this trait has not been more actively investigated in the negotiation literature.

Decision Rule

A decision rule "specifies, for any given set of individual preferences regarding some set of alternatives, what the group preference or decision is regarding the alternatives" (Miller, 1989, p. 327). Decision rule was selected as the situational factor to be investigated in the current study for several reasons. First, decision rule is integral to the study of groups in that it represents one of the prominent ways for members to manage and structure the decision-making process (e.g., Miller, 1989). Second, decision rule is relevant to real-world negotiation contexts and serves as an easily implementable group intervention tool. Third, decision rule is a uniquely group-level phenomenon, in light of Beersma and De Dreu's (2002) assertion that "future research on group negotiation will be especially fruitful when it considers those factors that differentiate group from interpersonal negotiations" (p. 246). Although there are many types of decision rules that groups can employ, majority and unanimity are the most frequently used in American society (Hare, 1976). The most common definition of majority rule is more than 50% of the votes cast (e.g., Thompson et al., 1988).

Development of Hypotheses

Task Conflict

The team negotiation framework presented by Brodt and Thompson (2001) suggests that group dynamics play an important part in how bargainers come to agreement. However, because outcomes (e.g., joint sum and impasse) have been emphasized as primary dependent variables in the negotiation literature (e.g., Curhan, Elfenbein, & Xu, 2006), "future research should look further at how individual differences are related to process features that determine bargaining outcomes" (Barry & Friedman, 1998, p. 357). Conflict was chosen as an intragroup process to investigate in the current research because it is inherent in negotiation when parties compete for scarce resources and attempt to resolve divergent interests (Deutsch, 1973). Although different types of conflict have been proposed, task conflict, or disagreements over viewpoints, ideas, and opinions regarding the content of decisions (e.g., Jehn, 1995), is especially salient in a negotiation context involving incompatible preferences.

As group processes are regarded as proximal criterion variables relative to input variables (e.g., Stewart & Barrick, 2004), it was anticipated that personality traits would impact task conflict directly. Polychronicity has been associated with a negotiation strategy that addresses multiple issues at a time to create more integrative agreements and discover the reasons behind positions (Tinsley, 1998, 2001). Whereas considering issues sequentially reduces information about the overall pattern of group preferences (Mannix et al., 1989),

an in-depth investigation of group deliberations by Weingart et al. (1993) revealed that considering issues as a package cued information sharing about priorities, resulting in a greater understanding of member preferences. In addition, groups considering issues simultaneously engaged in less substantiation than groups considering issues sequentially (Weingart et al., 1993). Therefore, the preference to keep multiple issues on the table simultaneously (polychronicity) was expected to result in lower levels of intragroup task conflict than the preference to deal with one issue at a time (monochronicity).

Hypothesis 1: Groups with individuals higher in polychronicity will be less likely to experience task conflict.

Because dominant individuals are often the first to contend, remain firm in advocating their viewpoints, and persist in argumentation (Burgoon et al., 1998; Ray, 1981), it is likely that groups with dominant individuals will report more task conflict. Indeed, empirical research has shown dominance to relate positively to a dominating conflict style during interpersonal relations (Utley, Richardson, & Pilkington, 1989).

Hypothesis 2: Groups with individuals higher in dominance will be more likely to experience task conflict.

Further, it was expected that polychronicity and dominance would interact to affect group negotiation processes and outcomes. For example, even though group members may have a preference for considering multiple issues simultaneously as opposed to sequentially, polychronicity is unlikely to demonstrate strong effects on negotiation outcomes unless members also possess sufficient dominance to express their preferences in a collective context. That is, unless individuals are willing to speak up and make constructive suggestions about alternate ways of going about the negotiation task, polychronicity as a trait may not manifest itself strongly in the group context. Rather, the interactive combination of both cognitive-informational (polychronicity) as well as social (dominance) characteristics (Brodt & Thompson, 2001) would have the greatest impact on negotiation. Because dominant individuals are less apt to rely passively on others or withhold personal contributions, this trait was predicted to ''give voice'' to monochronic or polychronic tendencies to assert themselves in the group.

Specifically, the preference to consider issues sequentially, coupled with the tendency to be controlling and express opinions forcefully, may result in higher levels of intragroup task conflict. The extent to which the group focuses on one issue at a time, thereby obscuring the potential for trade-offs, as well as the inclination for members to be assertive and authoritative would be expected to increase disagreement about the decision content under consideration. In contrast, the tendency of the group to consider issues simultaneously, along with group members' predispositions to rely passively on others or withhold personal contributions, would be expected to decrease intragroup task conflict.

Hypothesis 3: Polychronicity will interact with dominance to affect task conflict such that there will be a greater negative relationship between member polychronicity and task conflict to the extent that groups also exhibit lower member dominance.

Decision rule may interact with individual differences to affect group processes. Because attention must be paid to all individuals' perspectives under unanimity, group members are placed on a more level playing field under this decision rule. As such, negotiators may not perceive as much of a need to be dominant or to consider issues sequentially under a system that ensures that all viewpoints are represented and encourages the sharing of minority viewpoints. In contrast, majority rule is generally perceived to be less fair because all members do not have an equal say in the decision-making process (Miller, 1989). Therefore, the risk of being excluded when using majority rule might amplify the interaction effect between polychronicity and dominance on task conflict. Under majority rule, members are more likely to see their personal outcomes threatened and will therefore make the expression of dominance and polychronicity more salient in group interactions. This increased expression may create more task conflict.

Hypothesis 4: Decision rule will moderate the relationship between individual differences and group processes such that the polychronicity–dominance interaction will have more of an influence on task conflict under majority rule than unanimity rule.

Joint Profit

Joint profit indicates how much integrative potential negotiators realize in their agreement by capitalizing on the differences in priorities between negotiators (Pruitt, 1981). Similar to the rationale for Hypothesis 4, the type of decision rule operating in a group may affect how individual differences combine to affect group outcomes. According to Miller (1989), "the use of majority rule allows the preferences of relatively extreme members to be disregarded, whereas the use of unanimity rule requires that they be taken into consideration" (p. 333). Having viewpoints excluded from the final negotiated outcome may increase the need to be dominant and push group members to consider issues as more of a package in order to increase the chances that they will not be left out of the decision making. Considering issues integratively requires that group members learn other members' preferences and find ways to expand the pie of resources to accommodate those preferences (Beersma & De Dreu, 2002). Therefore, whereas unanimity may mute the expression of dominance and polychronicity in groups, majority rule may intensify the expression of these personality traits in the negotiation context.

Hypothesis 5: Decision rule will moderate the relationship between individual differences and negotiation outcomes such that the polychronicity–dominance interaction will have more of an influence on joint profit under majority rule than unanimity rule.

Method

Study Design and Participants

Decision rule (unanimity vs. majority rule) was manipulated as a between-groups variable. Dependent variables were task conflict and joint profit. Participants were 156 upper-level undergraduates from a large university located in the mid-Atlantic

region of the United States who received extra credit for their assistance. Most of the participants were self-identified Caucasians (87.7%), juniors (96.8%), and business majors (94.2%). The mean student age was 20.38. Four students were randomly assigned to each negotiation team, which was then randomly assigned to one of the experimental conditions (unanimity or majority rule). Between two and four negotiating groups participated in each session. In order to minimize any confounding effects from mixed gender interactions (e.g., Smith-Lovin & Brody, 1989), same sex groups were used. The total group-level sample size was 39 (20 male and 19 female groups; 20 unanimity and 19 majority rule groups), and sex and decision rule were counterbalanced.

Experimental Task

Students participated in Towers Market, a multi-issue, multi-party group decision-making task, in which each participant plays the role of a representative from one of four stores (grocery, florist, bakery, or liquor store) interested in forming a joint market (Beggs, Brett, & Weingart, 1989). Representatives jointly decide on five issues: advertising style, procedures for hiring and training clerks, custodial costs, the temperature of the building, and the position of the stores in the market. This exercise was selected because it represented a meaningful task for business students, and pilot work revealed a high level of participant task involvement.

For each of the issues, five alternatives could be negotiated. Store representatives had their profit schedule explicitly defined in that each alternative was assigned a certain number of points that represented its value to the negotiator. Each party's issue options and summary of points are reported in Weingart et al. (1993). Towers Market provided the opportunity for integrative agreement, which could be achieved by constructing trade-offs among issues in a way that capitalized on each store's unique preferences.

Procedure

Upon arrival in the laboratory, participants were told that they would be involved in a simulation of a group negotiation based on a real life situation. Students first completed an initial questionnaire measuring polychronicity and dominance as well as demographics. They were then randomly assigned to a four person negotiation group. The one exception to randomization was that students who had significant previous contact with one another were purposely assigned to different groups to avoid variability in member familiarity. Group members first read some background information about Towers Market and were then randomly assigned to represent a store in the Market (grocery, flower shop, bakery, or liquor store). Students were then given role instructions for their store, their own profit schedule, and an explanation of the point system. After participants reviewed the general and confidential information sheets, experimenters collected the forms and administered a quiz assessing the extent to which students attended to and learned their store's decision preferences and profit schedule. In order to increase involvement and understanding, students were asked to indicate the reasons behind

their store's position on each of the issues as well as to generate additional reasons on their own for their store's preferences. After finishing the quiz, confidential role instructions were returned so that participants could compare their questionnaire answers with their profit schedule and clear up any discrepancies.

Students were instructed to take their role seriously and to indicate how they actually would behave if faced with a similar situation. Negotiators wore badges indicating their store identification. After a verbal reminder, participants were given a maximum of 45 min to discuss the five issues that needed to be resolved and were warned when 10 min remained in the negotiation. No restrictions on communication existed, with the exception that negotiators were not permitted to disclose the actual point values in their profit schedules. Experimenters remained with their groups to ensure that this direction was followed. Because impasses would result in 0 points, groups were encouraged, but not required to reach an agreement. After groups reached an agreement or the allotted time ran out, they recorded their decisions on a group questionnaire. Participants then individually completed questionnaires measuring the effectiveness of the manipulation, task conflict, and decision outcomes. Finally, negotiators were thanked for their participation and debriefed. The simulation took approximately 2 hr to complete.

Decision Rule Manipulation

Participants in the majority rule condition were told that a decision could be implemented if three persons were in agreement, even if the fourth person disagreed. Contrastingly, participants in the unanimity condition were instructed that all four persons must be in agreement in order for a decision to take effect. To increase the likelihood that groups would adopt the appropriate decision rule, students were also provided with a rationale for why the decision rule was being followed (e.g., majority rule is efficient, unanimity ensures that every members' viewpoints are accommodated). Participants were also able to review key elements of the decision rule manipulation in written form.

Measures

Individual Differences

Polychronicity was measured with a 10-item scale adapted from Bluedorn et al. (1999) and Conte et al. (1999). Sample items included, "I like to juggle several activities at the same time" and "I believe it is best to complete one task before beginning another" (reverse scored). This scale had an internal consistency reliability of .87. Dominance was assessed through a 16-item scale adapted from Ray (1981), with a Cronbach's alpha of .88. Sample items included, "If I am told to take charge of some situation, this makes me feel uncomfortable" (reverse scored) and "In an argument or discussion, I will argue for my own point of view even though I am in the minority." Both polychronicity and dominance items had a 5-point scale anchored by "strongly disagree or definitely false" and "strongly agree or definitely true."

Task Conflict

Task conflict was measured using three items from the Intragroup Conflict Scale developed by Jehn (1995), with an alpha of .76. Items assessed the frequency of disagreements over ideas, positions, and opinions that occurred during the group discussion, and were rated on a 5-point scale anchored by "none" and "a lot."

Joint Profit

Points across the five issues were summed for each individual to determine the value of the final agreement for their store. Each member's points were then summed across members to determine the value of the final agreement to the negotiation group.

Because the main interest was in *negotiated* group outcomes, we eliminated impasse groups who were unable to reach agreement within the 45-min time limit (Beersma & De Dreu, 1999; Mannix et al., 1989), leaving 28 groups in the analyses involving joint profit. Specifically, 11 groups were unable to reach a decision on at least one of the five Towers Market issues (seven groups failed to reach agreement on one issue, one group failed to reach agreement on two issues, two groups failed to reach agreement on three issues, and one group failed to reach agreement on five issues). Five of the impasse groups were in the unanimity condition, and six were in the majority rule condition.

Results

Achievement of Experimental Conditions

Store Representation

Descriptive statistics for the entire individual sample revealed that participants had a good grasp of their store's assigned positions ($M = 4.42$ on a 5-point scale, $SD = .53$), felt comfortable representing the issues of importance to their store ($M = 4.23$, $SD = .63$), and accepted the initial positions of their store ($M = 4.17$, $SD = .54$).

Decision Rule

Participants were asked to report whether their group was instructed to reach a decision by majority rule (a), unanimity (b), or they were unable to recall (c). Of the 80 students in the unanimity condition, 72 responded as expected (90%), but 8 responded differently (2 individuals answered "majority rule" and 6 did not recall the decision rule). All 76 participants (100%) in the majority rule condition selected the correct answer. As indicated by a one-way ANOVA at the individual [$M_{UN} = 2.05$, $M_{MR} = 1.00$, $F(1, 155) = 848.37$, $p < .01$] and group levels of analysis [$M_{UN} = 2.05$, $M_{MR} = 1.00$, $F(1, 38) = 418.39$, $p < .01$], the differences between the two decision-making conditions were significant for this item.

In order to assess whether the decision rule given to participants affected their group discussions, negotiators were asked to report the extent to which their decisions were reached unanimously or by majority rule on a 7-point Likert scale (1 = strongly disagree and 7 = strongly agree). These items were then aggregated to the group level and

entered as the dependent variable in a one-way ANOVA with decision rule as the independent variable. As expected, compared with the alternate decision rule condition, unanimity participants agreed to a greater degree that their group decisions were reached unanimously [$M_{UN} = 5.85$, $M_{MR} = 1.96$, $F(1, 38) = 93.30$, $p < .01$], while majority rule participants agreed to a greater degree that their group decisions were reached by majority rule [$M_{UN} = 2.53$, $M_{MR} = 6.24$, $F(1, 38) = 239.57$, $p < .01$]. Therefore, manipulation check analyses revealed that the unanimity and majority rule induction worked as intended, yielding significant differences between conditions.

Preliminary Analyses

Aggregation

As all analyses were conducted at the group level, measures completed by individuals (dominance, polychronicity, and task conflict) had to be aggregated. According to multilevel theory, several methods exist for operationalizing team composition, including calculating the mean score for individual measures, the variability of individual characteristics, and the maximum or minimum individual team member score (e.g., Kozlowski & Klein, 2000). Steiner's (1972) task typology recommends mean aggregation for additive tasks (group performance is the sum of each members' contribution) (e.g., Mohammed et al., 2002; Moynihan & Peterson, 2001), and this was considered the best match in the current sample, based on the nature of the task, group interaction, and group outcomes. Specifically, reaching a mutually satisfactory agreement in the selected negotiation task necessitated the participation of all group members in the case of unanimity or three out of four group members in the case of majority rule. Furthermore, each negotiator's points were summed across members to determine the value of the final agreement to the negotiation group.

Because task conflict is conceptualized as a shared group property that is held in common by members of a team, it was necessary to first assess within-group agreement before aggregating respondents' task conflict scores to the group level (Kozlowski & Klein, 2000). Intraclass correlations (ICC) were calculated, which measure interrater reliability or the consistency of responses among raters. ICC(1) reflects the extent of within versus between group variability, and ICC(2) provides an estimate of the reliability of the group means (Bliese, 2000). The ICC(1) value for task conflict was .34, and the ICC(2) value was .68. Values were significant ($p < .001$) and support the use of task conflict as a team measure.

Control Variables

Table 1 lists descriptive statistics and intercorrelations among all study variables. Consistent with previous research examining gender differences in dominance (e.g., Luxen, 2005), male groups were more dominant than female groups ($r = -.38$, $p < .05$); therefore, sex was included as a control variable in regression analyses. Because cognitive ability has been associated with better outcomes in integrative negotiations (e.g., Barry & Friedman, 1998; Kurtzberg, 1998), self-reported SAT (total) scores aggregated to the group-level by mean were included as a control variable when joint sum was the dependent

Table 1
Descriptive Statistics and Intercorrelations at the Team Level

Variable	Means	*SD*	1	2	3	4	5	6	7
Control variables									
Sex	1.49	.51							
SAT total score	1,176.71	74.82	−.49**						
Predictors									
Decision rule	1.49	.51	−.03	−.02					
Mean polychronicity	2.95	.29	.11	.20	.02				
Mean dominance	3.48	.28	−.38*	.48**	−.16	.16			
Dependent variables									
Task conflict	3.82	.54	.00	.43**	.06	.28	.14		
Joint profit	597.14	43.02	−.27	.31	−.14	−.02	.19	−.26	

Notes. $^{**}p < .01$ and $^{*}p < .05$.
$N = 39$ teams; sex (1 = male and 2 = female); decision rule (1 = unanimity and 2 = majority rule).
The sample size for joint profit excludes groups that failed to reach a decision on at least one issue ($n = 28$).

variable. Males had higher SAT scores than females ($r = -.49$, $p < .01$; 1 = male and 2 = female). In addition, higher SAT scores were associated with higher mean dominance ($r = .48$, $p < .01$) and higher task conflict ($r = .43$, $p < .01$). Because of these interrelationships, SAT scores were also controlled for in regression analyses involving task conflict. Indicating that they measure distinct traits, the correlation between mean polychronicity and mean dominance was small in magnitude ($r = .16$, $p > .05$).

Tests of Hypotheses

Two hierarchical moderated multiple regression analyses were used to test hypotheses. Task conflict served as the dependent variable in one analysis, and joint sum was the criterion for the second. Step 1 of the analyses included cognitive ability and sex as control variables. In Step 2, mean polychronicity, mean dominance, and dummy-coded decision rule were added. Step 3 included all two-way interactions, and Step 4 added in the three-way interaction. The interaction term variables were mean centered to enhance interpretability (Aiken & West, 1991).

Hypotheses 1 predicted that groups with individuals higher in polychronicity would be less likely to experience task conflict, and Hypothesis 2 predicted a positive relationship between dominance and task conflict. As shown in Table 2, the main effects for polychronicity ($\beta = .16$, $p > .05$) and dominance ($\beta = -.06$, $p > .05$) were not significant. Therefore, Hypotheses 1 and 2 were not supported. Hypothesis 3 predicted that polychronicity would interact with dominance to affect task conflict such that there would be a greater negative relationship between member polychronicity and task conflict to the extent that groups also exhibited lower member dominance. The interaction between dominance and polychronicity was significant ($\beta = -.38$, $p < .01$), accounting for an additional 22% ($p < .01$) of the variance in task conflict beyond

control variables and main effects. Figure 1 illustrates the interaction by showing the slopes of regression lines linking polychronicity to task conflict under conditions of higher and lower dominance (i.e., at one standard deviation above and below the

Table 2
Hierarchical Regression Analyses Testing the Relationships Between Polychronicity, Dominance, and Decision Rule on Task Conflict

	Model			
Independent Variables	1	2	3	4
Control variable				
Sex	.26	.23	.23	.26
SAT scores	.55**	.53**	.52**	.54**
Individual differences				
Mean polychronicity		.13	.16	.16
Mean dominance		−.04	−.08	−.06
Moderator				
Decision rule		.08	.04	.06
Two-way interactions				
Polychronicity × decision rule			−.05	−.03
Dominance × decision rule			−.23	−.23
Polychronicity × dominance			−.36*	−.38*
Three-way interaction				
Polychronicity × dominance × decision rule				−.09
F	5.52**	2.27^{+}	3.35**	2.94*
R^2	.24	.26	.48	.49
R^2 increment		.02	.22*	.01

Notes. $^{**}p < .01$, $^{*}p < .05$, and $^{+}p < .10$.
Entries are beta weights; $N = 39$ teams; sex (1 = male and 2 = female).

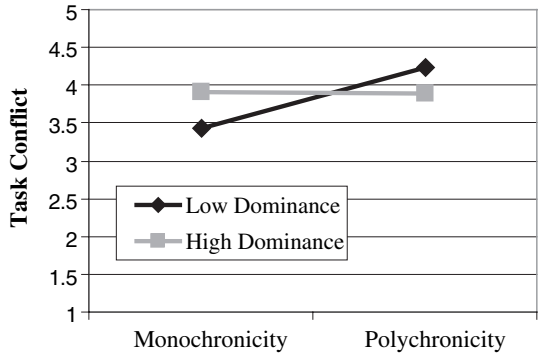

Figure 1. Interaction between polychronicity and dominance on task conflict.

mean; Aiken & West, 1991). A simple slope analysis revealed that polychronicity *positively* predicts task conflict when dominance is lower ($\beta = .72$, $p < .01$), but not when dominance is higher ($\beta = -.03$, $p > .05$). Specifically, when group dominance was lower, polychronicity resulted in *higher* task conflict, suggesting the significant interaction was in the opposite direction from Hypothesis 3. Hypothesis 4 predicted that decision rule would moderate the relationship between individual differences and group processes such that the polychronicity–dominance interaction would have more of an influence on task conflict under majority rule than unanimity rule. As shown in Table 2, no significant three-way interaction ($\beta = -.09$, $p > .05$) emerged to support this prediction.

Hypothesis 5 predicted that decision rule would moderate the relationship between individual differences and negotiation outcomes such that the polychronicity–dominance interaction would have more of an influence on joint profit under majority rule than unanimity rule. As predicted, results in Table 3 revealed a significant three-way interaction between dominance, polychronicity, and decision rule on joint profit ($\beta = .48$, $p < .05$), which accounted for an additional 15% ($p < .05$) of the variance in group negotiation performance beyond main and two-way interaction effects. As shown in Figure 2, the form of the three-way interaction revealed that polychronicity and

Table 3
Hierarchical Regression Analyses Testing the Interactions Between Polychronicity, Dominance, and Decision Rule on Joint Profit

	Model			
Independent Variables	1	2	3	4
Controls				
Sex	−.14	−.11	−.06	−.23
SAT score	.24	.30	.38	.29
Individual differences				
Mean polychronicity		−.05	−.18	−.14
Mean dominance		−.07	−.03	−.19
Moderator				
Decision rule		−.15	−.14	−.25
Two-way interactions				
Polychronicity × decision rule			−.16	−.19
Dominance × decision rule			.47*	.41*
Polychronicity × dominance			.16	.35^{+}
Three-way interaction				
Polychronicity × dominance × decision rule				.48*
F	1.53	.68	1.52	2.35^{+}
R^2	.11	.13	.39	.54
R^2 increment		.02	.26^{+}	.15*

Notes. *$p < .05$ and $^{+}p < .10$.
Entries are beta weights; $N = 28$ teams; sex (1 = male and 2 = female); decision rule (1 = unanimity and 2 = majority).

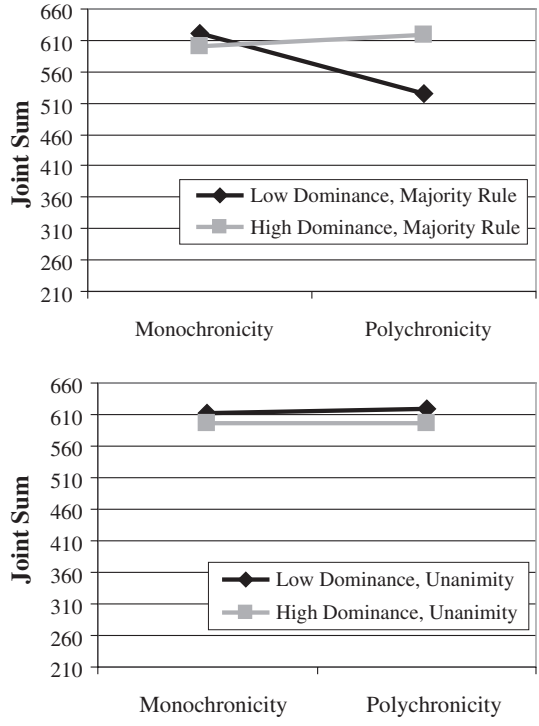

Figure 2. Interaction between polychronicity and dominance on joint sum under majority rule and unanimity conditions.

dominance had little effect in the unanimity condition, but their interaction did significantly predict joint gain in the majority rule condition. Specifically, group polychronicity led to decreased joint gains for lower dominance groups, but only under majority rule. A simple slope analysis revealed that polychronicity negatively predicted joint profit for lower dominance groups ($\beta = -1.26$, $p < .05$), but not higher dominance groups ($\beta = .24$, $p > .05$).

To summarize, polychronicity resulted in higher task conflict than monochronicity when group dominance was lower, but not when dominance was higher. In addition, as predicted, the polychronicity–dominance interaction significantly predicted joint profit under majority rule, but had little effect under unanimity. Showing a pattern consistent with the interaction found for task conflict, polychronicity only had an effect on joint profit when group dominance was lower, but not when it was higher.

Ancillary Analyses: Mediational Effects for Task Conflict

Two contrasting perspectives exist regarding the relationship between task conflict and negotiation outcomes. On one hand, task conflict may exert positive effects on joint

sum because disagreements and differences in opinions about the issues may foster a deeper discussion of member viewpoints, thereby highlighting the potential for integrative agreements. On the other hand, the weight of the extant empirical evidence has not been favorable toward this concept of "productive conflict." Although task conflict has been theorized and found in some studies to result in positive outcomes (e.g., Jehn, 1995, 1997), a recent meta-analysis revealed that task conflict negatively impacts group performance (De Dreu & Weingart, 2003). Current study results were in the direction of the latter viewpoint, as revealed by a negative, albeit not statistically significant, correlation between task conflict and joint sum ($r = -.26$, $p > .05$). A mediated moderation analysis (Baron & Kenny, 1986) found that task conflict's prediction of joint sum did not rise to the level of statistical significance ($\beta = -.30$, $p > .05$) when controlling for polychronicity, dominance, decision rule, and their interactions.

Discussion

Group composition and negotiation researchers have missed an opportunity to capitalize on each other's work to achieve joint gains. Whereas group composition studies have largely ignored negotiation as a context, negotiation studies have largely ignored the role of personality in groups. Despite the fact that group work involves negotiation (McGrath, 1984), and many negotiations are conducted in groups (Ancona et al., 1991; Brodt & Thompson, 2001), the study of group negotiation has received little attention when compared with the study of dyadic negotiation (Beersma & De Dreu, 2002). The present research examined the interactive effects of two individual difference variables (polychronicity and dominance) and one decision making structural variable (decision rule) on task conflict and joint profit in a mixed-motive group negotiation task. In so doing, this study serves as a bridge to aid in connecting personality, group, and negotiation research.

Study results indicated that individual differences do play a role in group negotiation, but relationships were complex, as revealed by the presence of a significant two-way interaction for task conflict and a three-way interaction for joint profit. Had we simply examined main effects for polychronicity and dominance, we would have falsely concluded that these individual differences failed to impact negotiation outcomes. Instead, by investigating the role of dominance and decision rule, we uncovered the conditions under which group polychronicity related to task conflict and joint profit. Supporting both the configuration and contingency perspectives advocated by Moynihan and Peterson (2001), the current research demonstrates the value of examining trait interactions as well as the interaction between group personality and the situation. As group processes are generally regarded as proximal criterion variables relative to team inputs (McGrath, 1984; Stewart & Barrick, 2004), polychronicity and dominance were direct predictors of task conflict, but situational factors (i.e., decision rule) played more of a pronounced role in predicting the distal negotiation outcome (i.e., joint sum).

Across two dependent variables, the effects of polychronicity were cancelled out by high dominance, perhaps because groups with highly dominant individuals were solely focused on asserting their individual positions and attempting to maximize individuals'

own outcomes. In contrast, lower levels of member dominance allowed polychronic preferences to manifest and not be overwhelmed by the strong determination to win concessions from other members. Indeed, at the individual level, more dominant students had a higher sum of points than less dominant students ($r = .22$, $p < .01$). In addition, when asked if they were more interested in representing the positions of their store than in reaching consensus on decisions between all store representatives during the group discussion, dominant individuals were more likely to answer in the affirmative ($r = .20$, $p < .05$). Thus, these analyses bolster the rationale that high dominance members were more motivated to increase their own outcomes rather than the collective outcomes for the group.

In addition, the results were consistent in revealing a negative pattern of findings for high group polychronicity under low group dominance. Specifically, task conflict was highest and joint profit was lowest (majority rule condition) for groups in which members were polychronic and lower in dominance. Undesirable outcomes from polychronicity resulted when groups had members who were perhaps too passive to be as directed and active as needed to successfully handle multiple issues simultaneously. Rather, under conditions of lower group dominance, monochronicity was associated with lower task conflict and higher joint profit. Although considering issues simultaneously has been positively advocated in the negotiation literature (e.g., Tinsley, 1998, 2001; Weingart et al., 1993), the current study suggests that member dominance may need to be taken into account in determining team performance. Whereas Weingart et al. (1993) showed that sequential consideration of issues was inferior to simultaneous consideration of issues in predicting negotiation outcomes, the current research qualifies these results by suggesting that a monochronic approach is preferable when member dominance is low. Although both studies utilized the same Towers Market task among four member groups, the earlier research experimentally manipulated issue consideration and required unanimity, while the present research allowed personality characteristics to vary naturally in groups and manipulated decision rule. Thus, these differences must be taken into account when comparing results.

Research Contributions

The present experiment contributes to existing research on group negotiation in at least five ways. First, whereas existing group negotiation studies have emphasized structural, procedural, and motivational variables (Beersma & De Dreu, 2002), we focused on individual differences, which have been virtually ignored by group negotiation researchers. Second, we also considered the impact of two theoretically driven (Brodt & Thompson, 2001; Moynihan & Peterson, 2001), narrow traits of relevance to the negotiation context that have not received adequate attention among dyadic or group researchers, namely polychronicity and dominance. Third, as recommended by current personality theory (e.g., Mischel, 2004; Moynihan & Peterson, 2001), trait interactions (polychronicity × dominance) were explored in the prediction of task conflict and negotiation effectiveness. Fourth, whereas existing research in this area has mostly examined main effects, we followed the advice of negotiation (e.g., Beersma & De Dreu, 2002) and personality

(e.g., Mischel, 2004) scholars to examine interactions between individual differences and situational variables. In selecting decision rule to represent the situation, we chose a uniquely group-level phenomenon that does not have a dyadic analog, as recommended by Beersma and De Dreu (2002). Fifth, because the negotiation literature has paid relatively little attention to the group dynamics that determine how bargainers come to agreement (Beersma & De Dreu, 2002; Brodt & Thompson, 2001), we also investigated task conflict as an intermediate outcome.

Practical Implications

According to Fulmer and Barry (2004), ''exploring which individual differences matter to negotiator success, and under what conditions, can lead to better negotiator selection where there is choice in the matter'' (p. 246). Should dominant or polychronic members be recruited for group negotiation tasks? The current results reveal that the answer is not straightforward, but depends on trait interactions and the situational context. Staffing a negotiation group with polychronic, submissive individuals can lead to heightened interpersonal conflict, and high levels of dominance in the group may mute other individual differences (e.g., polychronicity). Thus, negotiation-relevant personality traits should perhaps be thought of as a balance or profile of traits.

Given the complexity of manipulating the trait composition of the group by selecting negotiators on the basis of personality traits, decision rule offers a more feasible opportunity for intervention. The current study suggests that unanimity may prove fruitful for minimizing the effects of individual differences on negotiation outcomes. Although the expression of dominance and polychronicity was intensified under majority rule, effects washed out under unanimity. For example, polychronic, submissive groups were not impaired when unanimity rule was imposed. Therefore, a decision rule that ensures all viewpoints are represented and encourages the sharing of minority viewpoints may play a strategic role in curtailing the effect of group composition on negotiation processes and outcomes.

Limitations and Directions for Future Research

Whereas the data were obtained from 156 participants, the relevant sample for our analyses was 39 groups, resulting in limited ability to detect effects. In light of the small sample, obtaining support for significant interactions that followed a consistent pattern across two dependent variables indicates that the relationships under investigation had considerable strength. Nevertheless, the results should be replicated.

Utilizing a negotiation simulation modeled after a real life multi-party setting helped to maximize the realism of the experimental situation. Nevertheless, decisions did not translate into long-term consequences, nor did students experience the type of pressure inherent in organizational contexts. Although multiple efforts were implemented to ensure that students understood and adopted their store perspectives, they did not develop the deep levels of identification with their roles that would occur in a high stakes, mixed-motive situation. Consequently, similar research in field settings should

be conducted. In addition, although manipulated in the present study, the selection of a decision rule may be negotiated among group members. Because little is known about how individuals go about establishing a decision rule or whether decision rules are dynamic versus stable over time, future research should be directed toward these issues.

Although the current research expanded the negotiation literature by examining an intragroup process in addition to joint profit, task conflict was not found to fully mediate the individual difference—negotiation outcome linkage. Therefore, the current study is deficient in identifying the process mechanisms by which personality influences group outputs. It is also important to note that task conflict was measured with a questionnaire administered after the negotiation task, prohibiting claims about causality. Future work should continue to investigate the critical issue of how and why particular traits exert specific effects.

The choice to aggregate polychronicity and dominance by group mean was theoretically driven (e.g., Steiner, 1972), and ancillary analyses on alternative operationalizations (maximum, minimum, standard deviation) revealed that mean aggregation yielded the most consistent effects for task conflict and joint profit. Nevertheless, several different configurations can result in a team with a mean score at the scale midpoint, including a bimodal group with very high and very low scores, all members at the mid-range, or a group covering the whole range of low, medium, and high scores that average into a moderate mean (Harrison & Sin, 2006). Therefore, mean aggregation may obscure important configurations of individual differences. In addition, even though the personality traits of polychronicity and dominance were selected based on previous theoretical work (Brodt & Thompson, 2001; Moynihan & Peterson, 2001) as well their expected relevance in the present context (Tett & Burnett, 2003), group members may have had other individual differences affecting negotiation performance that were not indexed. Therefore, research should continue to increase the range of composition variables investigated in the study of group negotiation.

Conclusion

Although previous attempts to link personality traits to negotiation behaviors have often been unfruitful (e.g., Thompson, 1990), the relevant question is most likely not "*whether* individual differences matter, but the *type* of individual difference that matter" (Foo, Elfenbein, Tan, & Aik, 2004, p. 412) as well as *the conditions under which they matter*. The current experiment expands knowledge concerning group negotiation by examining the interactive effects of two theoretically relevant personality traits (polychronicity and dominance) and one group structural variable (decision rule) on task conflict and joint profit. Results revealed that polychronicity and dominance do matter for group negotiation, but only in combination with each other for task conflict and only in combination with decision rule for joint profit. Findings reinforce for negotiation researchers the importance of examining how multiple individual differences interact with each other as well as in conjunction with situational factors.

References

Aiken, L., & West, S. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.

Ancona, D. G., Friedman, R. A., & Kolb, D. M. (1991). The group and what happens on the way to "yes." *Negotiation Journal*, *7*, 155–173.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173–1182.

Barry, B., & Friedman, R. A. (1998). Bargainer characteristics in distributive and integrative negotiation. *Journal of Personality and Social Psychology*, *74*, 345–359.

Beersma, B., & De Dreu, C. K. (1999). Negotiation processes and outcomes in prosocially and egoistically motivated groups. *International Journal of Conflict Management*, *10*, 385–402.

Beersma, B., & De Dreu, C. K. (2002). Integrative and distributive negotiation in small groups: Effects of task structure, decision rule, and social motive. *Organizational Behavior and Human Decision Processes*, *87*, 222–252.

Beggs, R. J., Brett, J. M., & Weingart, L. R. (1989). *Teaching note for Towers Market*. Evanston, IL: Northwestern University, Dispute Resolution Center.

Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations* (pp. 349–381). San Francisco, CA: Jossey-Bass.

Bluedorn, A. C. (2002). *The human organization of time: Temporal realities and experience*. Stanford, CA: Stanford University Press.

Bluedorn, A., Kalliath, T., Strube, M., & Martin, G. (1999). Polychronicity and the inventory of polychromic values (IPV): The development of an instrument to measure fundamental dimensions of organizational culture. *Journal of Managerial Psychology*, *14*, 205–230.

Brodt, S. E., & Thompson, L. (2001). Negotiating teams: A level of analysis approach. *Group Dynamics*, *5*, 208–219.

Brodt, S. E., & Tuchinsky, M. (2000). Working together but in opposition: An examination of the "good cop/bad cop" negotiating team tactic. *Organizational Behavior and Human Decision Processes*, *81*, 155–177.

Brown, T. M., & Miller, C. E. (2000). Communication networks in task-performing groups: Effects of task complexity, time pressure, and interpersonal dominance. *Small Group Research*, *31*, 131–157.

Burgoon, J. K., Johnson, M. L., & Koch, P. T. (1998). The nature and measurement of interpersonal dominance. *Communication Monographs*, *65*, 308–335.

Conte, J. M., & Gintoft, J. N. (2005). Polychronicity, big five personality dimensions, and sales performance. *Human Performance*, *18*, 427–444.

Conte, J. M., & Jacobs, R. R. (2003). Validity evidence linking polychronicity and big five personality dimensions to absence, lateness, and supervisory performance ratings. *Human Performance*, *16*, 107–129.

Conte, J. M., Rizzuto, T., & Steiner, D. (1999). A construct-oriented analysis of individual-level polychronicity. *Journal of Managerial Psychology*, *14*, 269–287.

Curhan, J. R., Elfenbein, H. A., & Xu, H. (2006). What do people value when they negotiate? Mapping the domain of subjective value in negotiation. *Journal of Personality and Social Psychology*, *91*, 493–512.

De Dreu, C. K. W., Koole, S. L., & Oldersma, F. L. (1999). On the seizing and freezing of negotiator inferences: Need for cognitive closure moderates the use of heuristics in negotiation. *Personality and Social Psychology Bulletin*, *25*, 348–362.

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.

Deutsch, M. (1973). *The resolution of conflict: Constructive and destructive processes*. New Haven, CT: Yale University Press.

Foo, M. D., Elfenbein, H. A., Tan, H. H., & Aik, V. C. (2004). Emotional intelligence and negotiation: The tension between creating and claiming value. *International Journal of Conflict Management*, *15*, 411–429.

Fulmer, I. S., & Barry, B. (2004). The smart negotiator: Cognitive ability and emotional intelligence in negotiation. *The International Journal of Conflict Management*, *15*, 245–272.

Greenhalgh, L., Neslin, S. A., & Gilkey, R. W. (1985). The effects of negotiator preferences, situational power, and negotiator personality on outcomes of business negotiations. *Academy of Management Journal*, *28*, 9–33.

Hare, A. P. (1976). *Handbook of small group research*. New York: Free Press.

Harrison, D. A., Newman, D. A., & Roth, P. L. (2006). How important are job attitudes? Meta-analytic comparisons of integrative behavioral outcomes and time sequences *Academy of Management Journal*, *49*, 305–325.

Harrison, D. A., & Sin, H. P. (2006). What is diversity and how should it be measured? In A. M. Konrad, P. Prasad, & J. K. Pringle (Eds.), *Handbook of workplace diversity* (pp. 191–216). London: Sage.

Hough, L. M., & Ones, D. S. (2001). The structure, measurement, validity, and use of personality variables in industrial, work, and organizational psychology. In N. Anderson, D. S. Ones, H. K. Sinangil, & C. Viswesvaran (Eds.), *Handbook of industrial, work, and organizational psychology* (Vol. 1, pp. 233–277). Thousand Oaks, CA: Sage.

Jehn, K. A. (1995). A multimethod examination of the benefits and detriments of intragroup conflict. *Administrative Science Quarterly*, *40*, 256–282.

Jehn, K. A. (1997). A qualitative analysis of conflict types and dimensions in organizational groups. *Administrative Science Quarterly*, *42*, 530–557.

Judge, T. A., Bono, J. E., Illies, R., & Gerhardt, M. W. (2002). Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology*, *87*, 765–780.

Kanfer, R., & Ackerman, P. L. (2000). Individual differences in work motivation: Further explorations of a trait framework. *Applied Psychology: An International Review*, *49*, 470–482.

Kleinman, G., Palmon, D., & Lee, P. (2003). The effects of personal and group level factors on the outcomes of simulated auditor and client teams. *Group Decision and Negotiation*, *12*, 57–84.

Kozlowski, S. W. J., & Klein, K. J. (2000). A multilevel approach to theory and research in organizations: Contextual, temporal, and emergent processes. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions* (pp. 3–90), San Francisco, CA: Jossey-Bass.

Kurtzberg, T. R. (1998). Creative thinking, cognitive aptitude, and integrative joint gain: A study of negotiator creativity. *Creativity Research Journal*, *11*, 283–293.

Levine, J. M., & Moreland, R. L. (1990). Progress in small-group research. *Annual Review of Psychology*, *41*, 585–634.

Littlepage, G. E., Schmidt, G. W., Whisler, E. W., & Frost, A. G. (1995). An input-process-output analysis of influence and performance in problem-solving groups. *Journal of Personality and Social Psychology*, *69*, 877–889.

Luxen, M. F. (2005). Gender differences in dominance and affiliation during a demanding interaction. *The Journal of Psychology*, *139*, 331–347.

Mannix, E. A., Thompson, L. L., & Bazerman, M. H. (1989). Negotiation in small groups. *Journal of Applied Psychology*, *74*, 508–517.

McGrath, J. E. (1984). *Groups: Interaction and performance*. Englewood Cliffs, NJ: Prentice-Hall.

Megargee, E. I. (1969). Influence of sex roles on the manifestation of leadership. *Journal of Applied Psychology*, *53*, 377–382.

Miller, C. E. (1989). The social psychological effects of group decision rules. In P. B. Paulus (Ed.), *Psychology of group influence* (pp. 327–355). Hillsdale, NJ: Erlbaum Associates.

Mintu-Wimsatt, A., & Lozada, H. R. (1999). Personality and negotiation revisited. *Psychological Reports*, *84*, 1159–1170.

Mischel, W. (2004). Toward an integrative science. *Annual Review of Psychology*, *55*, 1–22.

Mohammed, S., & Angell, L. (2003). Personality heterogeneity in teams: Which differences make a difference for team performance? *Small Group Research*, *34*, 651–677.

Mohammed, S., Mathieu, J. E., & Bartlett, A. L. (2002). Technical-administrative task performance, leadership task performance, and contextual performance: Considering the influence of team- and task-related composition variables. *Journal of Organizational Behavior*, *23*, 795–814.

Morgan, P. M., & Tindale, R. S. (2001). Group vs individual performance in mixed-motive situations: Exploring an inconsistency. *Organizational Behavior and Human Decision Processes*, *87*, 44–65.

Moynihan, L. M., & Peterson, R. S. (2001). A contingent configuration approach to understanding the role of personality in organizational groups. *Research in Organizational Behavior*, *23*, 327–378.

Neuman, G. A., & Wright, J. (1999). Team effectiveness: Beyond skills and cognitive ability. *Journal of Applied Psychology*, *84*, 376–389.

O'Connor, K. (1997). Groups and solos in context: The effects of accountability on team negotiation. *Organizational Behavior and Human Decision Processes*, *72*, 384–407.

Pruitt, D. G. (1981). *Negotiation behavior*. New York: Academic Press.

Ray, J. J. (1981). Authoritarianism, dominance, and assertiveness. *Journal of Personality Assessment*, *45*, 390–397.

Rubin, J., & Brown, B. (1975). *The social psychology of bargaining and negotiation*. New York: Academic Press.

Schein, E. H. (1992). *Organizational culture and leadership* (2nd ed.). San Francisco, CA: Jossey-Bass.

Smith, R. J., & Cook, P. E. (1973). Leadership in dyadic groups as a function of dominance and incentives. *Sociometry*, *36*, 561–568.

Smith, D. B., & Schneider, B. (2004). Where we've been and where we're going: Some conclusions regarding personality and organizations. In B. Schneider & D. B. Smith (Eds.), *Personality and organizations* (pp. 387–404). Mahwah, NJ: Lawrence Erlbaum Associates.

Smith-Lovin, L., & Brody, C. (1989). Interruptions in group discussions: The effects of gender and group composition. *American Sociological Review*, *54*, 424–435.

Steiner, I. D. (1972). *Group process and productivity*. New York, NY: Academic Press.

Stewart, G. L. (2006). A meta-analytic review of relationships between team design features and team performance. *Journal of Management*, *32*, 29–54.

Stewart, G. L., & Barrick, M. P. (2004). Four lessons learned from the person-situation debate: A review and research agenda. In B. Schneider & D. B. Smith (Eds.), *Personality and organizations* (pp. 61–85). Mahwah, NJ: Lawrence Erlbaum Associates.

Tett, R. P., & Burnett, D. D. (2003). A personality trait-based interactionist model of job performance. *Journal of Applied Psychology*, *88*, 500–517.

Thompson, L. (1990). Negotiation behavior and outcomes: Empirical evidence and theoretical issues. *Psychological Bulletin*, *108*, 515–532.

Thompson, L., & Fox, C. R. (2001). Negotiation within and between groups in organizations: Levels of analysis. In M. E. Turner (Ed.), *Groups at work: Theory and research* (pp. 221–266). Mahwah, NJ: Lawrence Erlbaum Associates.

Thompson, L. L., Mannix, E. A., & Bazerman, M. H. (1988). Group negotiation: Effects of decision rule, agenda, and aspiration. *Journal of Personality and Social Psychology*, *54*, 86–95.

Tinsley, C. (1998). Models of conflict resolution in Japanese, German, and American cultures. *Journal of Applied Psychology*, *83*, 316–323.

Tinsley, C. (2001). How negotiators get to yes: Predicting the constellation of strategies used across cultures to negotiate conflict. *Journal of Applied Psychology*, *86*, 583–593.

Utley, M. E., Richardson, D. R., & Pilkington, C. J. (1989). Personality and interpersonal conflict management. *Personality and Individual Differences*, *10*, 287–293.

Wall, J., & Blum, M. (1991). Negotiations. *Journal of Management*, *17*, 273–303.

Waller, M. J., Giambatista, R. C., & Zellmer-Bruhn, M. E. (1999). The effects of individual time urgency on group polychronicity. *Journal of Managerial Psychology*, *14*, 244–256.

Wanberg, C. R., & Banas, J. T. (2000). Predictors and outcomes of openness to changes in a reorganizing workplace. *Journal of Applied Psychology*, *85*, 132–142.

Weingart, L. R., Bennett, R. J., & Brett, J. M. (1993). The impact of consideration of issues and motivational orientation on group negotiation process and outcome. *Journal of Applied Psychology*, *78*, 504–517.

White, J. B., Tynan, R., Galinsky, A. D., & Thompson, L. (2004). Face threat sensitivity in negotiation: Roadblock to agreement and joint gain. *Organizational Behavior and Human Decision Processes*, *94*, 102–124.

Wiggins, J. S. (1979). A psychological taxonomy of trait-descriptive terms: The interpersonal domain. *Journal of Personality and Social Psychology*, *37*, 395–412.

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