

THE EFFECTS OF ABSTRACTION ON INTEGRATIVE AGREEMENTS: WHEN SEEING THE FOREST HELPS AVOID GETTING TANGLED IN THE TREES

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The present research suggests that negotiators who represented negotiation issues more abstractly were more likely to reach integrative agreements. Specifically, participants who were prompted to directly think about their negotiation issues in a more abstract manner by generating *general* descriptions of the issues rather than more concretely about the negotiation issues by generating *specific* descriptions of the issues made more multi-issue offers and achieved higher joint gain from the negotiation. The role of abstraction in negotiation and conflict resolution is discussed.

Much of negotiation research is concerned with behaviors that promote integrative (win-win) agreements—behaviors that include, for example, considering multiple issues at once rather than issues one at a time (see Bazerman, Curhan, Moore, & Valley, 2000; Pruitt & Carnevale, 1993, for reviews). Negotiators who deal with issues one at a time rather than multiple issues at once tend to miss opportunities for reciprocal concessions and opportunities for high joint gain (e.g., Froman & Cohen, 1970). That is, negotiators who argue and fight over each issue one at a time tend to be resistant to conceding on any particular issue (as if each issue is the most important issue), whereas negotiators who deal with multiple issues together tend to be more open to conceding on less important issues as long as their preferences on more important issues are obtained (Pruitt, 1981). The current study examines the proposition that more abstract mental representations of negotiation issues promote multi-issue consideration and appropriate concessions during the negotiation process.

Surprisingly, there is a relative paucity of research on the factors that determine the type of issue consideration that occurs during negotiation. However, recently,

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Henderson, Trope, and Carnevale (2006) examined the effects of temporal distance from the realization of negotiated agreements on issue consideration and the quality of outcomes reached in negotiation (see also Okhuysen, Galinsky, & Uptigrove, 2003). They found that negotiators who had a more temporally distant perspective were more inclined to rely on multi-issue offers instead of single-issue offers and engage in greater logrolling. Presumably, these effects occurred because increased temporal distance from the realization of an agreement led negotiators to construe the issues in a more abstract manner (see Liberman, Trope, & Stephan, 2007; Trope & Liberman, 2003), which then promoted a more global approach toward the issues and a greater emphasis on primary rather than secondary issues. The current work tests this idea directly by examining the impact of abstraction on negotiators' communication and concession preferences.

ABSTRACTION

Cognitive processes have long been regarded as important factors in negotiation (see Ross & Ward, 1995; Thompson, 1990, for reviews). Interestingly, there has been very little work on the effects of different *levels* of abstraction on negotiation (for an exception, see Loewenstein, Thompson, & Gentner, 1999). The content of higher level, more abstract construals consist of the perceived essence, gist, or summary of the given information about objects and events. The content of lower level, more concrete construals consist of the context-dependent, readily observable features of objects and events (Medin & Ortony, 1989; Reyna & Brainerd, 1995; Schul, 1983). For example, a higher level construal may represent "going on a vacation" in terms of having fun rather than in terms of packing one's luggage.

In order to understand the gist of something or summarize what something is essentially about, that is in order to form a more abstract construal of something, one must go beyond the context-dependent features of it. Specifically, one must understand what is defining rather than nondefining about it. Consequently, forming more abstract construals involves a more wholistic consideration and integration of information about objects and events, followed by a distinction and emphasis on what is defining and primary about them. Because lower level, more concrete construals do not call for such an emphasis on what is defining or primary about something, such representations allow for many more details about secondary, peripheral features. Note, however, that although the process of abstraction consists of structuring information about objects and events around fewer, more defining dimensions (Rosch & Lloyd, 1978; Smith, 1998), it is important to stress that it is orthogonal to more or less effortful processing, as abstraction can occur relatively effortlessly when available information is thematically related (e.g., Smith, Adams, & Schorr, 1978) or more deliberately when available information is inconsistent or unrelated (e.g., Burnstein & Schul, 1982).

ABSTRACTION IN NEGOTIATION

There has not been any work that has examined different ways in which negotiators might be induced to think in a more abstract manner during negotiation. Nevertheless, it is possible to extrapolate from abstraction research about how such

changes might occur. For example, one might expect that individuals who focus on general traits (e.g., tough, generous) rather than specific behaviors (e.g., concessions, arguments) would be more likely to adopt a more abstract construal during negotiation (see Semin & Fiedler, 1988). Moreover, one might expect individuals who consider negotiation alternatives that contain options that are nonalignable (noncomparable) rather than alignable would be more likely to adopt a more abstract construal during negotiation, namely because features that are not directly comparable would require one to engage in abstraction in order to make a decision on the basis of nonobservable features (see Johnson, 1984; Malkoc, Zauberman, & Ulu, 2005). Of course, probably one of the most direct ways in which negotiators' construal might vary is for them to think about negotiation issues in a more abstract manner by focusing the issues in more general rather specific terms. For example, when labor negotiates with management, they might think about the issues that matter to them (e.g., health coverage, salary, vacation time, sick leave, grievance procedures) as "ways to support a family" rather than on the specific alternatives available.

Regardless of how an individual's construal might vary in a negotiation, the overarching question that drives the current research is whether changes in construal will influence the process and outcome of negotiation. Specifically, how does a negotiating party's construal level affect the kind of offers (single vs. multi-issue) and concessions he or she is willing to make? When negotiators construe issues in a more abstract, higher level manner, two consequences should emerge. First, information about the issues should be considered in a more global manner, and as a result, negotiators with a more abstract construal should be more prone to engage in multi-issue consideration. Second, information related to the defining rather than nondefining features of a negotiation should receive more emphasis, and as a result, negotiators with a more abstract construal should place more concern on their primary issues and less concern on their secondary issues. Specifically, we hypothesize that negotiators with a more abstract construal should exhibit a greater willingness to reach an agreement that requires a concession on their low-priority issue in order to gain what they want on their high-priority issue (i.e., greater logrolling). Taken together, we hypothesize that having a more abstract construal during negotiation will be beneficial for achieving higher joint outcomes when the issues being negotiated have integrative (tradeoff) potential. The current experiment tests these hypotheses.

METHOD

PARTICIPANTS AND DESIGN

Participants were 80 students enrolled in one of several psychology courses, who participated for \$10 or in partial fulfillment of a course requirement. Forty dyads took part in the experiment (23 female-female dyads, 4 male-male dyads, 13 female-male dyads), with 20 dyads in the concrete and abstract construal conditions. We borrowed a manipulation of motivational orientation used in previous

negotiation research (O'Connor & Carnevale, 1997; Pruitt & Lewis, 1975), and instructed all participants to adopt an individualistic orientation.¹ Participants were told that a cash prize (\$100) would be awarded to an individual at the end of the semester, and that their chance of winning the cash prize was based on their negotiation performance.²

NEGOTIATION TASK

For this experiment, we used a modified version of a role-playing exercise developed by Thompson and DeHarpport (1998), which had the basic elements of a simulated bilateral negotiation as used by other researchers (e.g., Pruitt & Lewis, 1975).³ We modified Thompson and DeHarpport's original exercise to center around a business trip instead of a vacation in order to facilitate the individualistic orientation that was adopted by our participants. Specifically, our exercise asked pairs of participants to assume the roles of two interns who are interested in attending a business conference because they have been told that it would look good on their resume. Neither intern wishes to take on the entire cost of the business trip, and thus, there are four issues that remain to be agreed on before any decision is made about whether to go on the business trip together. For this negotiation exercise, we constructed a point-scoring scheme to illustrate participants' position on these issues. Participants were told that the use of points might seem somewhat artificial but that it would allow them to compare how they feel about the various alternative agreements. Specifically, participants were told that the points define their interests for the business trip. The two point schedules that were presented to each dyadic member are presented in Appendix A. Associated with each issue were five possible options, with an associated payoff.

On one of the negotiator's schedule, the issue of length of stay had the highest potential for payoff (120) and the issue of type of hotel had the lowest potential

1. We held the motivational orientation constant because prior research (Weingart, Bennett, & Brett, 1993) has demonstrated that having negotiators adopt an integrative approach during negotiation mainly serves to alleviate the negative consequences of having an individualistic orientation.

2. Participants read the following: "As an incentive for maximizing your points, participants will be entered into a lottery for a cash prize worth \$100. The more points you receive, the more lottery tickets you will receive. Specifically, the total number of points you get from the agreement that you reach on all of the issues will determine how many tickets you earn. Each point equals one ticket. Therefore, the number of points you earn as a negotiator determines your probability of winning the cash prize." Given that there was one cash prize, participants were motivated to compete for the best outcome for themselves, and given that failure to reach an agreement meant that participants would be ineligible to win the cash prize, participants were motivated to cooperate with each other. Thus, we were successful in creating the mixed-motive property of negotiation (see Carnevale & De Dreu, *in press*; Schelling, 1960).

3. We decided to include nonlinear subjective utilities in our task (see Appendix A) because we were concerned that participants might easily discover their opponents' payoff structure during negotiation if we included linear subjective utilities. However, in order to avoid concession crossover (Northcraft, Brodt, & Neale, 1995), we made sure that any concession by the other dyadic member on a participant's highest priority issue was preferred to any concession on their lowest priority issue. Moreover, we included nonlinear subjective utilities that did not feature decreasing marginal subjective utility to avoid concerns about paradoxical concessions (Northcraft et al., 1995).

(40); these priorities were reversed for the other negotiator. Thus, the task had integrative (logrolling) potential for negotiators (some issues were of differing importance to each negotiator), and therefore, high joint outcomes could be achieved if the negotiators exchanged concessions on their low- and high-priority issues. The issue of mode of travel and type of conference were distributive issues (i.e., the issues were of equal priority to each negotiator and each negotiator had opposing preferences for them). A compromise solution (midpoint on each issue) yielded a joint outcome score of 260 points (130 points for each negotiator). The maximum joint outcome score possible was 390 (e.g., 180 points for one negotiator and 210 points for the other negotiator). Participants were not given any information about their opponent's payoff, and they were told not to share with their opponent the specific numbers on their point schedule.

PROCEDURE

Each participant arrived alone, was assigned to a private room, and paired with another participant during the negotiation. Each participant in a dyad was told that they would be working on a role-playing negotiation task over American Online (AOL) Instant Messenger with another participant. The experimenter gave each member of the dyad a folder that contained a brief description of the business trip, a point schedule, and the instructions that were used to assign them to their respective experimental condition. These folders were prepared ahead of time by another person, thus allowing the experimenter to remain blind to condition. Participants were told that their main task was to try to reach an agreement and to get as many points as possible from their agreement on the issues. They were told that they would have 20 minutes to arrive at a mutually acceptable solution. Afterwards, participants were immediately asked to verify that their concern during the negotiation was only with their own outcome and to indicate that they understood that they had no more than 20 minutes to negotiate.⁴

We manipulated negotiators' level of construal by directly asking each member of the dyad to think more abstractly or concretely about their negotiation. Note that both participants in a dyad were always randomly assigned to the same abstract or concrete condition. Specifically, after reading the negotiation exercise, participants were asked to complete a "negotiation thought exercise" that supposedly facilitated negotiation satisfaction, which was labeled "Thinking about the Issues in a Concrete Manner," or "Thinking about the Issues in an Abstract Manner," depending on construal condition.

Participants assigned to the *concrete* construal condition were asked to generate specific, subordinate descriptions for the negotiation issues. In order to give participants an idea about how they might go about thinking more concretely about the negotiation issues, we presented participants with an example unrelated to negotiation of how one might go about generating specific, subordinate descriptions of silverware that a collector might have in his or her private collection (see Appendix B). After reviewing this example, participants assigned to the concrete construal condition then proceeded to generate their own specific, subordinate

4. The average length of negotiation for concrete ($M = 16.28$ min, $SD = 4.97$ min) versus abstract ($M = 15.21$ min, $SD = 5.73$ min) construal dyads was not significantly different, $t < 1$.

descriptions of the negotiation issues. Specifically, they were presented with the question, "What is a more concrete way to think about the issues that need to be negotiated?" After providing an answer, participants were then asked for a more concrete answer. For example, one participant responded to the question "What is a more concrete way to think about the issues that need to be negotiated?" by writing, "air travel vs. land travel, short stay vs. long stay, self-employed style conference vs. workers conference, rating of hotel." The participant was then asked, "What is a more concrete way to think about "air travel vs. land travel, short stay vs. long stay, self-employed style conference vs. workers conference, rating of hotel?" The participant then responded to the question by writing, "travel by airplane vs. other travel technology, number of days of stay, self-employed style business conference vs. blue collar style conference vs. white collar style conference, number of stars of hotel." After responding, the participant's subsequent response was then used as a prompt for another "concrete" question. All participants in this condition were asked to provide five responses in this manner.

Participants assigned to the *abstract* construal condition were asked to generate general, superordinate descriptions for the negotiation issues. In order to give participants an idea about how they might go about thinking more abstractly about the negotiation issues, we presented participants with an example unrelated to negotiation of how one might go about generating general, superordinate descriptions of silverware that a collector might have in his or her private collection (see Appendix C). After reviewing this example, participants assigned to the abstract construal condition then proceeded to generate their own general, superordinate descriptions of the negotiation issues. Specifically, they were presented with the question, "What is a more abstract way to think about the issues that need to be negotiated?" After providing an answer, participants were then asked for a more abstract answer. For example, one participant responded to the question "What is a more abstract way to think about the issues that need to be negotiated?" by writing, "arguments between coworkers." The participant was then asked, "What is a more abstract way to think about "arguments between coworkers?" The participant then responded to the question by writing, "conversations about work." After responding, the participant's subsequent response was then used as a prompt for another "abstract" question. All participants in this condition were asked to provide five responses in this manner.

Following the negotiation, participants were given another folder that contained follow-up questions about the negotiation. If dyads were able to reach a solution, then each dyadic member was entered into a lottery at the end of the semester. Dyads were told that if no agreement was reached, both dyadic members would receive zero points and that neither member would be entered into the lottery. After the negotiation, participants were debriefed and thanked.

MEASURES

We examined the number of points that dyads earned from their agreement. This served as our measure of joint outcome and logrolling, because the most probable way of increasing joint outcome in negotiation is to logroll (trade-off across high and low priority issues). In addition to the outcome measures, we also included several measures aimed at the process of the negotiation. Specifically, through the

online interaction of the dyad that was coded from the computer transcript of the negotiation we counted the number of offers that were made that involved a single issue (e.g., "I want to fly") and/or multiple issues (e.g., "How about 5 days but only if we go to the workers united affiliation"). Based on this count, we created an index of multi-issue offers by taking the number of multi-issue offers that occurred within the dyad and dividing them by the total number of offers that occurred within that dyad. Two independent raters who were blind to condition coded each transcript for the number of single-issue and multi-issue offers that were made, and an index of multi-issue offers was created from each set of codes ($r = .81$). Disagreements were resolved by the expert coder, yielding one set of codes for each transcript.

We were also interested in the subjective experience of conceding during the negotiation on high- and low-priority issues. Specifically, we measured participants' self-reported degree of concession behavior on high- and low-priority issues by means of the following 7-point rating scales: "During your negotiation, how often did you make offers that involved you giving in or making a compromise on an issue that was worth a large amount of points to you?" "During your negotiation, how often did you make offers that involved you giving in or making a compromise on an issue that was worth a small amount of points to you?" The answer scales for all of the items ranged from 1 (*not very often*) to 7 (*very often*).

Participants also completed a series of additional questions. Specifically, we checked whether our experimental groups differed in motivation to do well in the negotiation by means of the following 9-point rating scale: "During your negotiation, how motivated were you to win the cash lottery?" The answer scale ranged from 1 (*not at all motivated*) to 9 (*extremely motivated*). We also measured the cognitive effort that participants expended while engaging in their respective construal manipulation task using the following items: "Think back to when you filled out the mental exercise ('Thinking about the Issues'). How difficult was it to fill out?" "Think back to when you filled out the mental exercise ('Thinking about the Issues'). How mentally challenging was it to fill out?" "Think back to when you filled out the mental exercise ('Thinking about the Issues'). How much did it mentally wipe you out for your negotiation?" The answer scale ranged from 1 (*not at all*) to 9 (*extremely*). Finally, participants were debriefed and dismissed.

RESULTS

OUTCOME

Twenty-seven out of 40 of the dyads reached an agreement. Out of the 13 dyads that did not reach an agreement, 6 in the abstract construal condition and 4 in the concrete construal condition indicated that it was because of time constraints, whereas 3 in the concrete construal condition indicated that it was because of impasse.⁵

5. Included in our post-negotiation questionnaire was an item that was directed at dyads that were not able to reach an agreement. We included an item that asked those participants that were not able to reach an agreement if it was because they ran out of time or if it was because they reached a point during the negotiation in which neither party wanted to give in or change their mind (i.e., impasse).

Joint Gain. Of the dyads that did reach an agreement, results revealed that dyads with an abstract construal earned a greater number of points ($M = 345.00$, $SD = 37.26$) than dyads with a concrete construal ($M = 310.77$, $SD = 41.68$), $t(25) = 2.25$, $p < .05$, $d = .90$.

Difference in Outcomes. We also calculated the difference in outcomes between the high- and low-scoring dyadic members. Although the discrepancy in outcomes was smaller when dyads had an abstract ($M = 37.14$, $SD = 35.83$) rather than concrete ($M = 44.62$, $SD = 40.08$) construal, the difference failed to reach significance, $t < 1$.

PROCESS

Issue Consideration. First, the index of multi-issue offers during negotiation was examined. Results showed, as expected, that dyads with an abstract construal made a greater proportion of multi-issue offers ($M = .40$, $SD = .28$) than dyads with a concrete construal ($M = .24$, $SD = .19$), $t(38) = -2.16$, $p < .05$, $d = .70$. Second, we analyzed the number of single-issue and multi-issue offers that were made during negotiation using a 2 (level of construal: concrete vs. abstract) \times 2 (type of issue consideration: single-issue vs. multi-issue) repeated measures ANOVA, with the first factor as a between-participants variable and the last factor as a within-participant variable. The main effect of level of construal was not significant, $F < 1$. However, the main effect of type of issue consideration was significant, $F(1, 38) = 23.09$, $p < .001$, with dyads making a greater number of single-issue offers ($M = 4.48$, $SD = 2.30$) than multi-issue offers ($M = 1.94$, $SD = 1.78$). Importantly, this main effect was qualified by a significant level of construal \times type of issue consideration interaction effect, $F(1, 38) = 4.24$, $p < .05$.

Although specific comparisons revealed that participants in the concrete construal condition made a greater number of single-issue offers ($M = 5.03$, $SD = 2.12$) than participants in the abstract construal condition ($M = 3.93$, $SD = 2.39$), the difference failed to reach statistical significance, $t(38) = 1.54$, $p = .13$, $d = .50$. Specific comparisons did reveal, however, that participants in the abstract construal condition made a significantly greater number of multi-issue offers ($M = 2.48$, $SD = 2.13$) than participants in the concrete construal condition ($M = 1.40$, $SD = 1.15$), $t(38) = 1.98$, $p = .05$, $d = .64$. We also analyzed the within-construal comparisons for the number of different types of offers made. Although specific comparisons revealed that participants in the concrete construal condition made a greater number of single-issue offers than multi-issue offers, $t(19) = 6.12$, $p < .001$, $d = 2.81$; no significant difference emerged for participants in the abstract construal condition, $t(19) = 1.66$, $p = .11$, $d = .76$.

Concession Behavior. Participants' self-reported degree of concession behavior on low- and high-priority issues were analyzed using a 2 (level of construal: concrete vs. abstract) \times 2 (type of concession: low-priority vs. high-priority) repeated measures ANOVA, with the first factor as a between-participants variable and the last factor as a within-participants variable. Neither the main effect of level of construal, $F < 1$, nor the main effect of type of concession, $F < 1$, was significant. However, as expected, there was a significant level of construal \times type of concession interaction effect, $F(1, 38) = 6.37$, $p < .05$. Although participants in the abstract construal condition reported more offers that involved a concession on an issue

that was worth a small amount of points ($M = 4.75$, $SD = 1.14$) than participants in the concrete construal condition ($M = 4.30$, $SD = 1.09$), the difference was not significant, $t(38) = 1.27$, $p = .21$, $d = .41$. However, as expected, participants in the abstract construal condition did report fewer offers that involved a concession on an issue that was worth a large amount of points ($M = 4.38$, $SD = .99$) than participants in the concrete construal condition ($M = 5.03$, $SD = .75$), $t(38) = 2.35$, $p < .05$, $d = .76$. We also analyzed the within-construal comparisons for the self-reported degree of concession behavior. Specific comparisons revealed that participants in the concrete construal condition reported fewer offers that involved a concession on an issue that was worth a small amount of points than an issue that was worth a large amount of points, $t(19) = -2.79$, $p < .05$, $d = 1.28$; no significant difference emerged for participants in the abstract construal condition, $t(19) = 1.07$, $p = .30$, $d = .49$.

TESTS OF MEDIATION

To test whether the proportion of multi-issue offers mediated the effects of abstraction on joint outcome, multiple regression analysis following Kenny, Kashy, and Bolger (1998) were performed. First, abstraction level significantly predicted joint outcome, $\beta = .41$, $t(25) = 2.25$, $p = .03$, and the proportion of multi-issue offers, $\beta = .52$, $t(25) = 3.08$, $p = .005$. Second, the proportion of multi-issue offers significantly predicted joint outcome, $\beta = .42$, $t(24) = 2.10$, $p = .05$, with abstraction held constant. Finally, abstraction no longer significantly predicted joint outcome, $\beta = .19$, $t < 1$. These results indicate that the proportion of multi-issue offers mediated the effects of abstraction on joint outcome. A Sobel test of mediation (Sobel, 1982) confirmed that the proportion of multi-issue offers significantly mediated the relationship between experimental condition and subsequent joint outcome (Sobel test = 2.16, $p = .03$).

POTENTIAL CONFOUNDS

Results revealed no significant difference between the concrete and abstract construal groups in their motivation to do well in the negotiation ($M = 5.40$, $SD = 1.58$ vs. $M = 5.42$, $SD = 1.44$). Results also revealed that participants in the concrete and abstract construal groups did not differ in the amount of cognitive effort that went into engaging in their construal manipulation. Specifically, the concrete construal group did not perceive a difference from the abstract construal group in the difficulty ($M = 7.08$, $SD = 1.31$ vs. $M = 7.10$, $SD = 1.05$), mental challenge ($M = 6.60$, $SD = 1.28$ vs. $M = 6.73$, $SD = 1.22$), or mental exhaustion ($M = 3.13$, $SD = 1.16$ vs. $M = 3.58$, $SD = 1.47$, $t(38) = -1.08$, $p = .29$) associated with their respective construal task. Moreover, adjusting for these variables as covariates did not change the pattern of any of the results reported in the previous paragraphs, suggesting that they do not mediate the effect of construal on any of our dependent measures.

DISCUSSION

Theories of cognitive representation describe how the process of abstraction relies on a global consideration of available information and a focus on relations among pieces of information (e.g., see Kimchi, 1992; Medin & Ortony, 1989; Reyna & Brainerd, 1995; Schul, 1983). Accordingly, strategies that center on considering issues in a more packaged format were expected to seem more attractive to negotiators with a more abstract construal of the issues, because such individuals were likely to have already adopted a more global approach toward the negotiation issues. Indeed, our results indicated that dyads who had a more abstract construal of the negotiation issues did in fact exhibit a greater degree of multi-issue consideration during negotiation. We believe this finding offers some insights into why exactly negotiators prefer to consider issues one way or another when they begin a negotiation.

Some of the earliest work on integrative bargaining (Kelley, 1966; Kelley & Schenitzki, 1972) consistently found that when individuals entered a negotiation for the first time, they overwhelmingly preferred to consider issues one at a time rather than multiple issues at once. Our results showed that this overwhelming preference for single-issue consideration was considerably reduced when negotiators had a more abstract construal of the issues. This suggests that the overwhelming preference for piecemeal over multi-issue consideration typically observed at the start of a negotiation might stem from a readiness to construe a negotiation at a lower level when a negotiation is set to begin soon. Indeed, the results from the present research provide support for Henderson et al.'s (2006) claim that a near temporal perspective toward a negotiation increases negotiators' preference for piecemeal consideration because it activates a lower level construal of the issues.

Of course, the type of issue consideration that occurs during a negotiation has a profound impact on the quality of concessions that occur and outcomes that are reached during a negotiation. Specifically, negotiators who consider issues in a piecemeal manner tend to make concessions irrespective of whether an issue is of low or high value (Pruitt, 1981). In contrast, negotiators who deal with issues through packaged trade-offs tend to make concessions on issues of low importance in return for concessions from the other party on issues of high importance to them, reflecting a better understanding of the priority structure surrounding the negotiation (Pruitt, 1981). This, in turn, results in higher joint outcomes for the parties involved. Importantly, the current experiment demonstrated that negotiators that had a more abstract construal exhibited a greater degree of reciprocal concessions (logrolling) on low- and high-priority issues. Consequently, such appropriate concession behavior culminated in better negotiated outcomes for dyads with a more abstract construal. Of course, a key element of what it means to have a more abstract representation of negotiation issues is to have a better discernment of what the negotiation is essentially about (i.e., a gist or summary of the negotiation). Such construal allows for a representation of the issues that more clearly differentiates or maintains which issues are defining (high priority) versus nondefining (low priority) for the negotiation, which no doubt facilitates logroll-

ing and mutually beneficial outcomes when the issues have integrative (trade-off) potential.

IMPLICATIONS FOR NEGOTIATION

The findings from the current research highlight a useful strategy that mediators might adopt for promoting better outcomes from negotiation (e.g., see Carnevale, 1992; Esser & Marriott, 1995; Greig, 2001; Grigsby & Bigoness, 1982; Pruitt & Johnson, 1970; Wall, 1984; for reviews see Kolb, 1983; Wall, 1981; Wall, Stark, & Standifer, 2001). In addition to sequencing the order in which issues are dealt with during negotiation, mediators are frequently responsible for the packaging of issues and the shaping of proposals during negotiation (Lim & Carnevale, 1990). As negotiating parties are likely to be initially resistant to dealing with multiple issues at the same time, our findings suggest that at least one possible procedure for increasing negotiators' likelihood of dealing with issues in a more global manner is to have them focus on the more general categories that encompass the issues. Such a procedure should benefit the conflict resolution process when at least some of the negotiation issues are of varying importance or priority to those involved, as they are likely to promote greater acceptance of mediator suggested trade-offs on those issues that are of a lower priority to the parties (Pruitt, 1981).

Importantly, our results also have implications for how negotiators are likely to handle conflict in a variety of situations that do not necessarily allow for trade-offs, including conflict over minor versus major issues (Druckman & Rozelle, 1975) and conflict over specific interests versus broad values and ideological differences (Druckman & Broome, 1991; Druckman, Broome, & Korper, 1988; Harinck & De Dreu, 2004). Specifically, our theoretical framework suggests that the resolution of conflict over things (minor issues, specific interests) that tend to be more concrete and accompanied by local consequences should be hindered when individuals adopt a lower level construal. When conflicts do in fact revolve around differences on such issues, solutions to such conflicts are likely to be facilitated by having a more abstract construal during the resolution process. Conversely, the resolution of conflict over things (major issues, values, and ideological differences) that tend to be relatively more abstract and accompanied by global consequences should be hindered when individuals adopt a higher level construal. Solutions to these types of conflict are likely to be facilitated by having a less abstract construal during the resolution process. We look forward to future research that directly examines these possibilities.

CONCLUSION

The present research demonstrates the consequences of abstraction in negotiation. The findings show that abstraction facilitates integrative agreements. That is, participants who thought about negotiation issues in a more abstract manner made more multi-issue offers and achieved higher joint gain from the negotiation. These findings highlight the importance of continued research on mental representation processes in general, and the abstraction process in particular, for understanding the dynamics of social conflict and conflict resolution.

APPENDIX A

Point Values Assigned to Options for Each Issue	
Negotiator 1	Negotiator 2
MODE OF TRAVEL	MODE OF TRAVEL
Option A: Air (0)	Option A: Air (60)
Option B: Train (5)	Option B: Train (30)
Option C: Bus (10)	Option C: Bus (10)
Option D: Shuttle Van (30)	Option D: Shuttle Van (5)
Option E: Car (60)	Option E: Car (0)
LENGTH OF STAY	LENGTH OF STAY
Option A: 3 days (120)	Option A: 3 days (0)
Option B: 4 days (80)	Option B: 4 days (10)
Option C: 5 days (60)	Option C: 5 days (20)
Option D: 6 days (40)	Option D: 6 days (30)
Option E: 7 days (0)	Option E: 7 days (40)
TYPE OF CONFERENCE	TYPE OF CONFERENCE
Option A: Society for Business Decision-Making (80)	Option A: Society for Business Decision-Making (0)
Option B: Academy of Business Entrepreneurs (60)	Option B: Academy of Business Entrepreneurs (30)
Option C: Association of Business Partners (40)	Option C: Association of Business Partners (40)
Option D: Workers United Affiliation (30)	Option D: Workers United Affiliation (60)
Option E: Employees and Investors Association (0)	Option E: Employees and Investors Association (80)
TYPE OF HOTEL	TYPE OF HOTEL
Option A: 5-star (0)	Option A: 5-star (120)
Option B: 4-star (10)	Option B: 4-star (80)
Option C: 3-star (20)	Option C: 3-star (60)
Option D: 2-star (30)	Option D: 2-star (40)
Option E: 1-star (40)	Option E: 1-star (0)

APPENDIX B

To help you with the exercise, the boxes show how our example, spoons, forks, and knives, can be thought about in more **concrete** ways.

Spoons, Forks, Knives

Be More Concrete! ▼

Soup Spoon, Teaspoon, Salad Fork, Dinner Fork, Serving Fork, Carving Knife, Butter Knife

Be Even More Concrete! ▼

Chinese Soup Spoon, British Teaspoon, Italian Salad Fork, U.S. Colonial Dinner Fork, Peruvian Serving Fork, Japanese Carving Knife, German Butter Knife

Be Even More Concrete! ▼

Porcelain Chinese Soup Spoon, Silver British Teaspoon, Stainless Steel Italian Salad Fork, Copper US Colonial Dinner Fork, Bamboo Peruvian Serving Fork, Titanium Japanese Carving Knife, Zirconium German Butter Knife

Be Even More Concrete! ▼

Black Porcelain Chinese Soup Spoon, White Silver British Teaspoon, Grey Stainless Steel Italian Salad Fork, Orange Copper US Colonial Dinner Fork, Brown Bamboo Peruvian Serving Fork, Charcoal Titanium Japanese Carving Knife, Yellow Zirconium German Butter Knife

Be Even More Concrete! ▼

140 years old Black Porcelain Chinese Soup Spoon, 200 years old White Silver British Teaspoon, 20 years old Grey Stainless Steel Italian Salad Fork, 216 years old Orange Copper US Colonial Dinner Fork, 100 years old Brown Bamboo Peruvian Serving Fork, 5 years old Charcoal Titanium Japanese Carving Knife, 2 years old Yellow Zirconium German Butter Knife

APPENDIX C

To help you with the exercise, the boxes show how our example, spoons, forks, and knives, can be thought about in more **abstract** ways.

Human Made Objects

Be Even More Abstract! ▲

Products a Person Owns

Be Even More Abstract ▲

Household Items

Be Even More Abstract! ▲

Dining Accessories

Be Even More Abstract! ▲

Flatware

Be More Abstract! ▲

Spoons, Knives, Forks

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