Stretching the Effectiveness of Analogical Training in Negotiations: Teaching Diverse Principles for Creating Value

Simone Moran,[1] Yoella Bereby-Meyer,[2] and Max Bazerman[3]

1 School of Management, Ben-Gurion University of the Negev, Beer Sheva, Israel
2 Department of Psychology, Ben Gurion University of the Negev, Beer Sheva, Israel
3 Harvard Business School, Harvard University, Boston, MA, U.S.A.

Keywords
Integrative negotiation, training, learning, transfer, analogical reasoning.

Correspondence
Simone Moran, Department of Management, School of Management, Ben-Gurion University of the Negev, PO Box 653, Beer Sheva 84105, Israel; e-mail: simone@bgu.ac.il.

Abstract

The present research adapts analogical training to teach negotiators broad concepts of creating value. Recent research has shown specific analogical training, wherein negotiators draw analogies between different cases involving the same strategy, to be effective for learning and transferring specific value-creating strategies. The current results endorse the approach that analogical training can be a valuable tool for teaching negotiation, but argue that it can be enhanced by considering the breadth of the negotiation concepts that are learned. Diverse analogical training, wherein negotiators compare several different value-creating strategies, was shown to be more effective for learning broad underlying value-creating principles. This method facilitated transfer to a distinctive task and improved performance on a variety of value-creating strategies, including some that were not previously trained. The improved performance was also accompanied by enhanced understanding of the potential to create value.

As a central managerial skill for dealing with a widely divergent and increasingly changing environment, negotiation is a key area in which managers need to improve their expertise (Lax & Sebenius, 1986; Loewenstein & Thompson, 2000). An important topic in negotiation research is the development of integrative agreements, or value-creating agreements, that lead to higher joint benefit (Pruitt, 1983; Thompson, 2005; Walton & McKersie, 1965). In the present research we focus on training value creations skills in integrative negotiation. The study of learning in the domain of integrative negotiation is advantageous due to the complexity of the principles needed for effective integrative

Volume 1, Number 2, Pages 99–134

performance. Moreover, attempting to improve training for creating value is important due to the fact that negotiators often fail to reach integrative negotiation agreements, despite the high costs that this entails (Thompson, 2005).

Even when people learn integrative negotiation skills, they have great difficulty transferring these skills to new tasks (e.g., Bereby-Meyer, Moran, & Unger-Aviram, 2004; Loewenstein & Thompson, 2000; Loewenstein, Thompson, & Gentner, 1999; Mannix, Northcraft, & Neale, 1991; Thompson, 1990b, 1990c). Loewenstein et al. (1999) have argued for the training of negotiators through the development of analogical reasoning by comparing multiple cases on some core cognitive structure. We argue that the level of specificity of the concept (i.e., the extent to which the concept is generalizable) is crucial for developing the full power of analogical reasoning in negotiation training for value creation.

Fiske (1961) argued that the ability to be adaptive—to effectively adjust skills in the face of changes in situational demands—is a central feature of expertise. Expertise implies the possession of more than situationally specific skills; it requires strategies that are sufficiently abstract or general to be transferred across situations. Expertise is gained by developing a cognitive representation of the task domain that enables understanding of which particular strategies might be effective in different situations and why (Dawes & Corrigan, 1974; Hammond & Grassia, 1985; Neale & Northcraft, 1990). While superior performance can, in some cases, be attributed to relatively mindless learning obtained from experience, expertise is based on awareness and conscious monitoring of the learning process. Salomon and Perkins (1989) make a related distinction between "low-road" versus "high-road" transfer of learning. While low-road transfer involves an automatic transfer of highly practiced skills with little need for reflective thinking, high-road transfer depends on a mindful abstraction of knowledge and its conscious translation to the demands of the new situation.

In negotiation training for value creation, concepts can be taught at different levels of specificity. At a general level, individuals are taught the concept of creating value in negotiations, also referred to as the integrative dimension of negotiation. At a more specific level, researchers have identified very different strategies for creating value (Bazerman, 2005; Pruitt, 1983; Thompson, 2005). Some examples are: (a) logrolling, or trading off concessions on low-priority issues for gains on higher priority issues; (b) trading differential time preferences, or allocating more initial outcomes to the more impatient party and greater profits over a longer period to the more patient party; (c) compatibility, or identifying issues for which parties do not have a conflict of interest; (d) adding issues, or supplementing the agreement with issues not inherent in the initial negotiation framework; and (e) contingent contracts, or bets based on different expectations regarding a future event.

As Pruitt (1983), Lax and Sebenius (1986), Bazerman (2005), and Thompson (2005) highlight, these different strategies rely on very different processes to create value in negotiations. And, we will show in this article that training on one does not necessarily provide useful guidance on using other strategies. We will refer to the training of any specific strategy as "specific training" in value creation, and will refer to training across these different strategies to create value as "diverse training."

Although negotiators often fail to implement these strategies and to reach mutually beneficial agreements that are readily available (e.g., Bazerman, Magliozzi, & Neale, 1985; Bazerman & Neale, 1992; Thompson, 1990a; Thompson, Gentner, & Loewenstein, 2000; Thompson & Hastie, 1990), several studies have shown that repeated experience can foster integrative performance (Bazerman et al., 1985; Thompson et al., 2000). However, improved integrative performance on a particular task does not necessarily imply that negotiators have attained high levels of abstraction and understanding (Moran & Ritov, 2002; Neale & Bazerman, 1991; Neale & Northcraft, 1990), nor that they will be able to transfer their integrative skills to new tasks.

Integrative negotiation outcomes can be accomplished by applying different levels of understanding and abstraction. At the lowest level, the negotiator can obtain integrative outcomes by randomly applying an effective task-specific solution without any knowledge of what she or he has done correctly. At a higher level, the negotiator might learn from past experience or training to employ an effective value-creating strategy (such as logrolling or compatibility), but have little understanding of why this particular strategy works in this particular situation. Lastly, the negotiator can reach integrative agreements by employing broader and more general principles (such as the underlying principle that "the pie is not necessarily fixed" or "value can be created") and selecting a particular strategy accordingly (Neale & Northcraft, 1990). In this article, we explore the potential of acquiring such broader principles that can be more easily transferred across diverse situations.

Recently, interesting evidence has emerged demonstrating the ability of negotiators to learn and transfer *specific* integrative skills by means of analogical encoding (Gentner, Loewenstein, & Thompson, 2003; Loewenstein, Thompson, & Gentner, 2003; Loewenstein et al., 1999; Nadler, Thompson, & Van Boven, 2003; Thompson et al., 2000). Drawing analogies between different negotiation cases involving the same strategy was found to be effective for learning and transferring the specific learned strategy to new situations. This training method is based on structure-mapping theory, which states that analogical comparisons are effective because they involve a structural alignment and mapping process that highlights structural similarities between instances and makes their common structure more transparent. Identifying the common structure—the principle shared by both examples—helps a learner form a schema that is less sensitive to the irrelevant surface or context features of the particular examples. Our inspiration for focusing on the level of abstraction is based on the finding that a learner is more likely to transfer an abstract principle to new situations with different contexts than a principle that is not abstracted from its original context (e.g., Gentner, 1983; Gentner & Markman, 1997; Gick & Holyoak, 1983).

Several studies on structural mapping have shown that the detection of commonalities is accompanied by a parallel recognition of alignable differences—i.e., differences related to these commonalities. In other words, the alignment process also facilitates the observation that *different* specific values or items appear in the common structure (e.g., Markman & Gentner, 1996, 2000, 2001). To illustrate, when comparing the following two stimuli: (a) a blue square that appears above a red circle, and (b) a yellow square that appears above a green circle, the commonalities are the geometric figures (a square

and a circle) and their relative positioning (square above circle), while the alignable differences are the figures' colors. Previous work on analogical training in negotiations primarily focused on facilitating detection of *commonalities* between comparison cases, without addressing the aspect of difference detection (e.g., Gentner et al., 2003; Loewenstein et al., 2003; Nadler et al., 2003; Thompson et al., 2000). As we explain below, focusing on detection of differences is a key aspect of our present research.

The success of analogical reasoning demonstrated in the negotiation literature is a fairly rare success story of learning and debiasing in the negotiation context. We believe this line of research has important applied implications for negotiator training, especially training that uses cases or simulations. Loewenstein et al. (1999, 2003) offer very interesting ideas concerning the need to couple cases and simulations to maximize the learning that takes place. However, one important question for implementing this work concerns the level of specificity of the concepts learned via analogies. Previous studies on integrative negotiation training, and particularly on the use of analogical comparisons for such training (e.g., Gentner et al., 2003; Loewenstein et al., 2003; Nadler et al., 2003; Thompson et al., 2000), focused on teaching negotiator-specific value-creating strategies (e.g., logrolling, contingent contracts, or compatible issues). It is possible, however, that employing a specific learned strategy, such as logrolling, may have limited effectiveness in helping a learner to detect the potential for creating value by other means and strategies not specifically learned before. As previous work has suggested, an increase in a targeted behavior may come at the expense of other nontargeted ones (e.g., Kerr, 1975; Staw & Boettger, 1990).

In the present study, we aim to teach people more *general* negotiation principles (such as ''value can be created'' or ''the pie is not necessarily fixed and might be extended in various ways,'' or ''value can be gained by utilizing the particular existing interrelations between parties' interests''). Learning such general underlying principles should enable successful transfer to a broader range of new negotiation tasks. Thus we specifically examine the effectiveness of different training methods for successful transfer across diverse negotiation situations and for acquiring broad integrative negotiation principles.

We attempt to achieve this type of generalized learning by implementing the analogical comparison method, while emphasizing the issue of *diversity*. As noted above, the literature on structural mapping suggests that the process of abstraction also involves a parallel recognition of alignable differences (e.g., Markman & Gentner, 1996, 2000, 2001). However, previous negotiation studies on analogical training did not attend to the role of this difference detection. Our motivation to address this issue was primarily stimulated by the ''near miss'' view which emphasizes the importance of focusing on differences. According to this view, highlighting *differences* rather than similarities effectively directs people to learn what is important about the problem and how a change in the problem changes the appropriate solution (Bransford, Franks, Vye, & Sherwood, 1989; Gick & Paterson, 1992; Ross & Kilbane, 1997; VanderStoep & Seifert, 1993). The literature on skill acquisition has also stressed the importance of introducing variability or diversity during training. Such variability is suggested to prevent individuals from relying on specific response sets that are likely to reduce their chances for generalization

and transfer of skills (e.g., Holladay & Quinones, 2003; Kadzin, 1975; Shute & Gawlick, 1995). Using contrasts or highlighting differences has additionally been shown to facilitate perceptual learning (Bransford et al., 1989), the learning of problem-solving principles (VanderStoep & Seifert, 1993), and concept acquisition (Tennyson, 1973). Recently, Idson et al. (2004) showed that contrast training improves decision making in competitive environments as well.

Based on these views and findings, we assume that focusing on differences in addition to similarities is an effective method for learning. Therefore, in all our training conditions, we focus participants on differences as well as similarities between two analogical cases. This strategy should help learners abstract a common principle, as well as focus their attention on how salient differences between the cases require a change of solution or strategy. We expect the learned level of abstraction to be affected by the diversity between the analogical instances that individuals compare and contrast. Specifically, we expect the abstraction and thus the generalizability of the learning to be lower when people compare instances of the same value-creating strategy and higher when they compare instances of different value-creating strategies. We test this notion in two empirical experiments in which learners are actively guided to compare and contrast two negotiation cases that are simultaneously presented.

Experiment 1

In the first experiment, we employ two training conditions: a *specific* training condition and a *diverse* training condition. In the *specific training condition*, participants compare two cases that illustrate the same specific strategy (namely, contingent contracts). In the *diverse training condition*, they compare two cases that differ in the value-creating strategy that they illustrate (contingent contracts and logrolling). To assess baseline performance, we also add a control condition in which participants receive no negotiation training at all.

Based on previous work (Loewenstein et al., 1999, 2003; Thompson et al., 2000) which has demonstrated that training through explicit comparisons of cases presented simultaneously is more effective than training through separate cases presented one at a time, in our training we consistently use the former method—i.e., simultaneous comparisons. Moreover, given previous findings that show knowledge transfer to improve when learners are actively involved in the learning process (e.g., Kourilsky & Wittrock, 1987; Loewenstein et al., 1999; Needham & Begg, 1991; Ross, Perkins, & Tenpenny, 1990; Thompson et al., 2000), we facilitate our training by *explicitly* asking participants to fill out a questionnaire that guides them to *actively* compare and contrast the two cases and their optimal solutions (i.e., to detect similarities and differences) and then to abstract a common principle. Lastly, we adopt one of the common instructional methods described in the analogical training literature, termed "the abstract principle method." In this method, in addition to providing trainees with illustrative examples to be worked out by a guided workbook-like format, the relevant principles are explained both abstractly and by providing solutions to the study problems (Loewenstein et al., 1999; Reed & Bolstad, 1991; Reed, Dempster, & Ettinger, 1985; Ross & Kilbane, 1997). Importantly, as noted by Ross and Kilbane (1997), the findings regarding this method

are not very different from findings with a method where no abstract principle explanations are given.

We assess the effectiveness of the various training conditions (specific, diverse, or none—i.e., control) by looking at performance and outcomes in a transfer task that contains potential for using various value-creating strategies, some of which were previously taught to participants and others which were not. This task is designed so that participants can create more value by implementing the strategies not previously taught in any condition than by implementing the ones that were taught. Additionally, we assess participants' level of mindful abstraction by examining their open-ended responses to a question regarding their general ''win-lose'' versus ''win-win'' perceptions of negotiation.

We hypothesize the specific-training condition to be effective for learning and transferring a specifically trained strategy. However, we expect such specific training to limit the learner's ability to identify and implement other strategies that were not specifically learned before (e.g., identifying differences in time preferences, adding issues, etc.). Thus, the gains achieved from specific training may create blinders to broader opportunities to create value. On the other hand, we hypothesize the diverse training condition to enhance learning of the more general principle of creating value, and not just learning of the specific strategies. We expect the diverse training condition to lead learners to a better understanding that value can be created and that changes in the situation (i.e., in the inter-relations between the parties' preferences) lead to changes in the appropriate strategy. Consequently, such training should improve learners' ability to realize other value-creating strategies not specifically learned before. Thus, the specific hypotheses that we will examine are as follows:

H1: When engaging in a novel negotiation task, *diversely* trained negotiators will achieve higher total joint gain than *specifically* and *non*trained negotiators.

H2: *Diversely* and *specifically* trained negotiators will perform better on strategies that they previously learned compared to negotiators who did not previously learn these strategies; i.e., positive transfer will occur.

H3: *Diversely* trained negotiators will perform better on strategies they did not specifically learn before than will *specifically* and *non*trained negotiators.

H4: *Diversely* trained negotiators will have more profound value-creation perceptions—i.e., a broader understanding of the potential to create value—than will specifically trained negotiators and nontrained negotiators.

Method

Participants

One hundred sixteen undergraduate university students voluntarily participated in the experiment for extra course credit and a chance to be randomly selected and paid according to outcomes in the experiment.

Design and Procedure

The experiment was conducted in several sessions. Participants were randomly assigned to one of the three between-subject conditions: specific training, diverse training, and

Table 1
Design of Experiment 1

	Learning phase			
Condition	Case 1	Case 2	Compare and identify common principle	Test phase
Specific training (N = 36)	Contingent contract (a)	Contingent contract (b)	Create value by contingent contract	Complex integrative negotiation task including contingent contract, logrolling, time trade-off, add issue, and distributive
Diverse training (N = 44)	Contingent contract (a)	Logrolling	Create value by different strategies: logrolling, contingent contract	Same as above
Control—no training (N = 36)	Irrelevant task—identifying ''ing'' in a text			Same as above

Note. In the specific training condition, logrolling, time trade-off, and add issue were the strategies not previously taught. In the diverse training condition, time trade-off and add issue were the strategies not previously taught.

control (no training). All conditions included two phases: an initial phase that differed between conditions, which was immediately followed by a test phase that was identical for all conditions. The design and procedure of the experiment are summarized in Table 1.

Training Manipulation

The two training conditions began with an initial training phase. To motivate participants to take the training task seriously, we informed them that the initial training phase was relevant for the negotiation task to follow, in which they would have a chance to be randomly selected and win a sum of money based on their level of performance.

Participants read two negotiation cases. The diversity between the two cases and the generality of the common principle underlying them varied by condition. In the *specific training condition*, both cases demonstrated a contingent contract. Hence, a contingent contract was the common principle for reaching an optimal agreement (see Appendices 1a and 1b, adapted from Loewenstein et al., 1999, and Gentner et al., 2003, respectively). In the *diverse training condition*, the first case demonstrated a contingent contract (identical to the first case in the specific condition; see Appendix 1a), while the second case demonstrated logrolling (see Appendix 1c). Hence, the common underlying principle for reaching an optimal integrative agreement was creating value, but the appropriate strategy in each case was different (contingent contract in the first case and logrolling in the second).

In each case, a hypothetical consultant proposed an optimal equitable agreement. After participants read the two cases and their proposed optimal agreements, training was further activated as follows. Participants were given a guiding questionnaire in which they were asked to: (a) compare the cases; (b) evaluate, compare, and contrast the proposed optimal agreements; and (c) identify a general principle that captures the essence of both strategies suggested by the consultants. After participants completed these assignments, the experimenter provided them with a written explanation of the correct answers.

In the initial phase of the *control condition*, participants performed a task that was cognitively demanding, yet totally irrelevant to negotiation. They were given an article written in English on organizational culture and asked while reading it to count the number of words that ended with "ing." They were also told to expect to be asked a question on the content of the text. This task was introduced to control for the possible effects of initial engagement in a cognitively demanding task that could affect the participants' performance in the succeeding test task. As in the training conditions, we informed participants in the control condition that they would later perform a negotiation task in which they would have a chance to win money according to the level of their negotiation performance. However, given the irrelevance of the initial task to negotiation, this information was not expected to motivate this group for this task. Consequently, to motivate these participants to take the initial task seriously, the experimenter told them that, at the end of the task, one of the participants would be randomly selected and paid according to his or her performance: 20 Israeli Shekels (about $4) if the question was answered correctly and an additional 0.5 shekels for each correct "ing" detection. Due to this difference in the procedure for the control condition, we ran it in parallel, but separately from the training conditions.

Test

The test phase, which followed immediately, was identical in all three conditions: the experimenter randomly matched each participant with another participant from the same condition. The matched pair then engaged in a multi-issue negotiation between a real estate development company and a city council regarding a residential community development project (presented in Appendices 2a and 2b). This negotiation case was very different from the training cases both in content and structure. First, it included more than three issues, and the number of alternatives for each issue differed (some issues were even continuous). Second, unlike the training cases, in which alternatives and potential outcomes for all issues were presented together, in the test case they were presented separately for each issue. Moreover, some outcomes were framed as expenses rather than gains, while in the training cases all outcomes were gains. Lastly, regarding value-creating potential, the test task was much richer than the training cases. It included one distributive issue (amount of city council financing), a pair of logrolling issues (developing the park and developing the parking lot), one contingent contract issue (sewage tank), one issue for which parties had different time preferences (dividing incomes from a sports club), and one issue (an external property owned by the city council) that was not part of the negotiation agenda but that could be added to create

more value (i.e., potential for adding an issue). Thus, the test task contained potential for using value-creating strategies that were taught during the training phase (a contingent contract in both training conditions and logrolling in the diverse training condition), as well as new strategies that were not previously taught in any of the conditions: adding issues and time trade-off. By design, in this test task, the value-creation potential of the latter two strategies, which were not previously taught (adding issues and time trade-off), was higher than the value-creation potential of the two former strategies (logrolling and contingent contract).

Before beginning their negotiation, participants were informed that at the end of the entire experiment four of them would be randomly selected and paid based on their outcome in the negotiation. Specifically, the amount to be paid was computed as the dollar amount they gained in their negotiation agreement divided by 100,000 (they were paid the equivalent of this dollar amount in Israeli Shekels).

On conclusion of each negotiation, participants filled out an agreement form that specified the duration of the negotiation, whether or not an agreement was achieved, and the specific terms of the agreement (if achieved). Finally, participants were asked to respond to an open-ended question intended to assess their general win-win versus win-lose assumptions about negotiations—i.e., the depth of their understanding of the potential to create value. Specifically, they were asked to indicate whether or not they agreed with the following two statements and to explain why: (a) ''In every negotiation, when one side wins the other side loses'' and (b) ''Multi-issue negotiations frequently contain potential for agreements in which both parties gain more than they would gain by settling for the middle range alternative on each issue.'' One participant did not hand in this questionnaire, leaving us with data for 115 participants (35 in the control condition, 36 in the specific training condition, and 44 in the diverse training condition).

We first coded the agree/disagree responses of participants for accuracy (accurate answers were ''disagree'' for Statement a and ''agree'' for Statement b). We then classified the full verbal explanations into one of the following two categories: (1) not profound explanation or (2) profound explanation. Responses were classified as ''not profound'' if (a) there was no explanation or an irrelevant explanation; (b) the response indicated that the participant perceived negotiations as win-lose, i.e., as distributive; or (c) the response referred to the potential for creating value by means of only one particular strategy. Responses were classified into the ''profound'' category only if they (a) referred to broad value creating concepts, or referred to the general importance of trying to maximize joint gains; or (b) referred to more than one value-creating strategy. Examples of responses that were classified into each category are given in Appendix 3. A subsample of 35 questionnaires was randomly selected and the full verbal responses were independently coded (according to the above-described pre-prepared scheme) by two coders who were aware of the experimental hypotheses but blind to the condition that yielded the output. Kappa coefficient was computed as an index for inter-rater reliability and equaled .7, $\chi^2(1, N = 35) = 16.5$, $p < .0001$. All 115 full responses were then coded by one of these coders.

Finally, for each participant, we computed an ''individual understanding'' score. This understanding score was based not only on the full response classification (profound or

Table 2
Experiment 1—Correlations among the Various Value-Creating Measures

	Total pie	Logrolling	Contingent	Time pref.	Add issue
Total pie	1.00				
Logrolling	.55*	1.00			
Contingent	.24	.28	1.00		
Time pref.	.70*	.32*	.22	1.00	
Add issue	.80*	.30*	−.03	.19	1.00

*Significant at $p < .05$.

not profound explanation), but also on the number of accurate agree or disagree answers to the two questions. The score ranged between 0 and 3 as follows: 0 = both answers incorrect, 1 = one answer correct, 2 = both answers correct and full response coded as not profound, 3 = both answers correct and full response coded as profound. Thus the maximum score could be obtained only by participants who provided correct agree/disagree answers to both questions and also gave explanations that were classified as profound.

Results

Of the 58 negotiating dyads, 11 did not reach an agreement: two (11%) in the control condition, four (22%) in the specific training condition, and five (23%) in the diverse training one. These proportions were not significantly different from each other ($p > .2$). As advised by Tripp and Sondak (1992), we excluded these dyads (i.e., we treated them as missing values) when further analyzing negotiation outcomes, resulting in 16, 14, and 17 dyads in the different conditions, respectively. An ANOVA test revealed no significant differences between the conditions in the time it took negotiators to reach an agreement.

In terms of negotiation outcomes, in addition to measuring the total agreement pie, we also measured each of the specific components that comprise it—the contingent contract issue, the logrolling issues, the time trade-off issue, and the added issue. We first present the correlations among these measures (see Table 2) and show that the correlations among most components are not very high, although, as expected, they have quite high correlations with the total pie.

Table 3 summarizes the mean outcomes on each component for each condition, as well as the results of planned comparisons for testing our specific hypotheses.[1] For each component (i.e., dependent variable), the planned comparisons were conducted using the general error term from the general ANOVA, testing the overall effect of all experimental conditions.

[1]For all planned comparisons we report one-tailed *p*-levels, since they all test prespecified hypotheses.

Table 3
Mean (SD) Joint Outcomes or Proportions in Each Condition and Results of Planned Comparisons (Experiment 1)

Overall (N = 47)	Control: no train (N = 16)	Specific training (N = 14)	Diverse training (N = 17)	Hypothesis and comparison	Statistic	p
Total agreement pie M = $4,225,221 ($SD$ = 301,183)	$4,103,556 (268,507)	$4,135,786 (314,577)	$4,413,382 (231,045)	*H1*: D – S&C**	t_{44} = 3.57	.001
				H2: S – C	t_{44} = .33	.8
Contingent contract issue (*taught in Div. & Spec.*) M = $–374,734 ($SD$ = 30,001)	$–395,313 (13,598)	$–369,643 (41,808)	$–359,559 (17,416)	*H3*: D – C**	t_{44} = 3.91	.001
				H3: S – C*	t_{44} = 2.67	.01
Logrolling issues (*taught in Div., not in Spec.*) M = $–265,957 ($SD$ = 47,898)	$–278,125 (40,697)	$–278,571 (54,470)	$–244,118 (42,875)	*H3*: D – S&C*	t_{44} = 2.45	.02
				H5: S – C	t_{44} = –.03	.9
Time preference issue (*not taught*) M = $4,636,126 ($SD$ = 152,088)	$4,576,994 (136,777)	$4,584,000 (157,427)	$4,734,706 (112,368)	*H4*: D – S&C**	t_{44} = 3.75	.001
				H5: S – C	t_{44} = .14	.9
Adding issue, number (%) of agreements (*not taught*) N = 27 (57%)	8 (50)	7 (50)	12 (71)	*H4*: D – S&C	z = 1.40	.08
				H5: S – C	z = 0	.5

Note. D, diverse; S, specific; C, control.
*p < .05, **p < .01.

Joint Total Agreement Outcome (i.e., Agreement Pie)

Supporting our first hypothesis (H1), diversely trained negotiators achieved higher total joint gain than specifically and nontrained negotiators. As shown in Table 3, a planned comparison revealed that the mean total outcome in the diverse condition was significantly higher than the mean total outcome in the specific and control conditions.

Contingent Contract

This strategy was taught in both training conditions. Therefore, according to our second hypothesis (H2), participants in both the specific and the diverse training conditions should perform better on this strategy compared to untrained participants. As can be seen in Table 3, planned comparisons for testing these predictions were significant. The outcomes in both the diverse and the specific training conditions were significantly higher than those in the control condition. Hence, regarding the trained contingent contract strategy, our predictions were supported. As expected, diverse training was beneficial for transferring the trained contingent contract strategy. Moreover, in line with our prediction and supporting previous research on specific training, specific training effectively enhanced positive transfer of the specifically trained strategy.

Although not part of our initial hypotheses, we also conducted a *t*-test to compare the outcomes of the specific and diverse groups on this component, which revealed an insignificant difference; $t(29) < 1$, $p = .37$.

Logrolling Issues

The logrolling strategy was taught in the diverse training condition only. Therefore, Hypothesis H2 predicted that participants in this condition would perform better on this component than would those in both other conditions. As shown in Table 3, this prediction was supported by our data. As expected, participants in the diverse condition performed significantly better than those in both of the other conditions.

Time Preferences

Creating value by means of this strategy was not previously trained in any of the conditions. Hence, according to Hypothesis H3, negotiators who received diverse training were expected to implement this new strategy better than other participants. Indeed, as shown in Table 3, a planned comparison revealed that the diversely trained negotiators performed significantly better than the specifically and untrained negotiators on this newly introduced value-creating component.

Adding an Issue

This was another new value-creating strategy not previously taught in any of the conditions. Hence, once again, according to Hypothesis H3, diversely trained negotiators should perform better than other participants on this new strategy. Due to the

dichotomous nature of this outcome measure, we analyzed it by comparing the proportion of agreements in which it was added in each condition (rather than by comparing means). As shown in Table 3, 71% of the dyads in the diverse training condition included this issue in their agreement, while only 50% of the dyads in each of the other conditions did. A z-test comparing the proportion in the diverse training condition to the proportion in the two other conditions approached significance.

Understanding Questionnaire Analyses

Our postexperimental questionnaire assessed win-win versus win-lose perceptions—i.e., the depth of their understanding of the potential to create value.

An ANOVA revealed a significant effect of condition on individual understanding, $F(2, 112) = 13.34$, $p < .0001$. The mean individual understanding scores were $M = 1.54$, $SD = .7$; $M = 1.56$, $SD = .9$; and $M = 2.34$, $SD = .8$, in the control, specific, and diverse training conditions, respectively. As predicted in Hypothesis H4, the understanding score was significantly higher in the diverse training condition than in the specific and control conditions combined, $t(112) = 5.17$, $p < .0001$. Moreover, the proportion of participants in the various categories differed as a function of condition; $\chi^2(6, N = 115) = 31.44$, $p < .001$. Follow-up comparisons of these proportions revealed that for the highest individual understanding category only (i.e., where responses to both questions were correct and full explanations were classified as profound), the proportion of participants in the diverse training condition was significantly larger than the proportion of participants in the specific training one (52% vs. 14%, respectively, $p < .001$). These results suggest that participants in the diverse training condition acquired more profound win-win perceptions about negotiation—i.e., they had a broader understanding of the potential to create value—than did participants in both other conditions.

According to our argument, the variance in integrative performance stems from the different levels of conceptualization and understanding that are acquired. If this is so, then including the understanding scores as a covariate in the ANOVA that tests the effect of condition on final negotiation pie should decrease the effect of condition. As negotiation performance is dyadic, we conducted this analysis at the dyadic level. We computed an aggregate understanding score for each negotiating dyad by summing the individual understanding scores of both parties. This resulted in a 6-point scale score ranging from 0 to 6. The significant role of understanding was then confirmed in an ANCOVA with ''agreement pie'' as the dependent variable, ''experimental condition'' as the independent variable, and ''dyadic understanding'' as a covariate. In this analysis, when holding dyadic understanding constant, the effect of condition became insignificant, $F(2, 42) = 1.5$, $p = .3$, while the effect of dyadic understanding (i.e., the covariate) was significant, $F(1, 42) = 5.6$, $p < .05$.

Discussion

Results of the first experiment suggest that diverse analogical case training, wherein negotiators simultaneously study and compare several different strategies, is more

effective at promoting the learning of general strategies than is specific training, wherein negotiators simultaneously study and compare instances of one specific strategy. As Hypothesis H1 predicted, in their final agreements, diversely trained participants reached significantly higher total joint outcomes than did specifically trained and untrained participants. Not only did diversely trained participants achieve the best total agreement outcomes, but they also performed best on most secondary measures (i.e., specific strategies). Their joint outcomes were best on a specific strategy that they were previously taught (namely, logrolling) as well as on strategies that they had not previously encountered (e.g., adding issues and detecting different time preferences). The latter finding is an important extension of previous work, which focused on the effectiveness of analogical training for performing specifically trained strategies only (Gentner et al., 2003; Loewenstein et al., 1999, 2003; Thompson et al., 2000).

The superior performance of the diversely trained participants on new components not previously encountered suggests that their overall superior performance is probably based on the learning of underlying integrative negotiation principles such as ''value can be created'' or ''it is important to understand how parties' interests interrelate.'' This notion is strengthened by the fact that these participants' better performance was significantly accounted for by their more profound win-win perceptions about negotiation and the potential to create value.

An additional finding in this experiment was that diversely trained participants who were exposed to only one example of a particular strategy did not perform worse on that strategy than specifically trained participants who were exposed to more than one example of the same strategy. The fact that trainees who were exposed to two examples of a specific strategy did not outperform diverse trained ones who were exposed to only one such example indicates that the general learning benefits of diverse training do not necessarily come at the expense of specific learning. This conforms with our main argument that diverse training leads to learning of the underlying principle of creating value, and consequently enhances performance on multiple strategies, regardless of the degree of previous exposure to these strategies.

Overall, this pattern of results supports our notion that the effects of specific training may have limited generalizability. As predicted we find that diverse analogical training is superior to specific analogical training and can indeed promote a higher level of expertise and an understanding of underlying value-creation principles.

Experiment 2

In Experiment 2, we continue to examine the advantages of diverse compared to specific analogical training. In our first experiment we found an advantage of diverse training (training contingent contracts and logrolling) over specific training (training contingent contracts strategy only). In the second experiment we seek to replicate the advantage of such diverse training (contingent contracts and logrolling) when comparing it to a specific training condition that includes the logrolling strategy only, i.e., the other strategy that was part of the diverse training condition.

We assess the effectiveness of these training conditions by looking at performance and outcomes in the same transfer task used in Experiment 1, as well as by assessing participants' postnegotiation level of mindful abstraction, or understanding using the same materials and methodology employed in the first experiment. However, we extend our examination of the level of conceptualization by additionally analyzing the level of understanding that participants acquire during the training stage, before they receive the solution to the compare and contrast questionnaire. Although previous research found results when providing the abstract principles to be similar to results when not providing them (e.g., Loewenstein et al., 1999; Ross & Kilbane, 1997), examining the level of understanding before the solution is given enables us to assure that the enhanced learning of participants in the diverse condition is not solely due to the solution they receive.

In the present experiment, we propose to test the following specific hypotheses:

H1: When engaging in a novel negotiation task, *diversely* trained negotiators will achieve higher total joint gain than *specifically* trained negotiators.

H2: *Diversely* trained negotiators will perform better on the contingent contract strategy that only they previously learned than will *specifically* trained negotiators who did not previously learn this strategy.

H3: *Diversely* trained negotiators will perform better than *specifically* trained negotiators on strategies they did not specifically learn before (namely, adding issues and time trade-off).

H4: *Diversely* trained negotiators will have more profound value-creation perceptions—i.e., a broader understanding of the potential to create value than will specifically trained negotiators.

Method

Participants

One hundred two undergraduate university students voluntarily participated in the experiment for extra course credit and for a chance to be randomly selected and paid according to performance.

Design and Procedure

Participants were randomly assigned to one of the two between-subject conditions: specific training (logrolling) and diverse training (contingent contract and logrolling). As in Experiment 1, both conditions included two phases: an initial phase that differed between conditions and a test phase that was identical for both conditions. The design and procedure of the experiment are summarized in Table 4.

Training Manipulation

The basic procedure in the two training conditions was the same as in Experiment 1. In the *specific training condition*, both cases demonstrated logrolling. In the *diverse training condition*, one case demonstrated a contingent contract, while the other case demonstrated logrolling.

Table 4
Design of Experiment 2

	Learning phase			
Condition	Case 1	Case 2	Compare and identify common principle	Test phase
Specific training (N = 52)	Logrolling (a)	Logrolling (b)	Create value by logrolling	Complex integrative negotiation task including contingent contract, logrolling, time trade-off, add issue, and distributive
Diverse training (N = 50)	Logrolling (a)	Contingent contract	Create value by different strategies: logrolling, contingent contract	Same as above

Note. In the specific training condition, contingent contracts, time trade-off, and add issue were the strategies not previously taught. In the diverse training condition, time trade-off and add issue were the strategies not previously taught.

After participants read the two cases and their proposed optimal agreements, we further activated training using the same guiding questionnaire as in Experiment 1. As in Study 1, after completing the questionnaire, participants received a written explanation of the correct answers. However, in this experiment, unlike Experiment 1, the responses to the guiding questionnaire that preceded the written explanation were collected and analyzed to assess the training stage level of understanding. We scored participants' written answers to the guiding questionnaire on a 3-point scale (ranging from 0 to 2) according to a previously prepared coding scheme that reflected the degree of understanding, or creating value conceptualization, and particularly the level of the underlying common principle that participants identified.

Responses were coded as 0 if participants identified no common principle or an irrelevant common principle (e.g., "there is no common principle"; "in both cases there is a consultant") or if the common principle referred to claiming value with no indication of understanding about creating value and a nonfixed pie (e.g., "in both cases the two negotiators had to give up on something"). Responses were coded as 1 if participants identified a common principle that referred to specific value-creating strategies without a more general conceptualization (e.g., "mutually considering priorities enables reaching better outcomes from the negotiation"; "negotiators can do better if instead of simply compromising on everything, each of them gives up completely on something less important and gets more on something more important"; "the consultant in both cases proposed a better way to solve the conflict, and showed that sometimes compromising on specific issues and taking risks is not so harmful and can lead to better outcomes"). Responses were coded as 2 only if they referred to a deeper level of understanding and identifying a broader principle of value creation (e.g., "carefully considering both sides' subjective perceptions, needs and interests, can help in finding a solution that is good

for both sides''; ''the general principle is to try get to a better agreement than a simple compromise, to look for common grounds or a creative solution that benefits both sides and no one ends up losing'').

A subsample of 40 questionnaires was randomly selected, and two coders blind to the experimental condition independently coded the responses (according to the previously prepared scheme). Kappa coefficient was computed as an index for inter-rater reliability and equaled .75, $\chi^2(4, N = 40) = 43.3$, $p < .0001$. One of the coders then coded all of the responses.

Test

The negotiation task and procedure were identical to that in Experiment 1 (see Appendices 2a and 2b). Thus, the test task again contained potential for using value-creating strategies taught during the training phase (logrolling in both training conditions and a contingent contract in the diverse training condition), as well as new strategies not previously taught in any of the conditions (time trade-off and adding issues).

Before beginning their negotiation, participants were informed that at the end of the entire experiment, two of them would be randomly selected and paid based on their outcome in the negotiation. The amount to be paid was computed as in Experiment 1.

Upon conclusion of each negotiation, participants filled out the same agreement form as in Experiment 1. They were then asked to respond to the same questionnaire used in Experiment 1 to assess their general win-win versus win-lose perceptions about negotiation and the depth of their understanding of the potential to create value. A subsample of 20 questionnaires was randomly selected, and two coders blind to the experimental condition independently coded the full verbal responses (according to the pre-prepared scheme). Kappa coefficient was computed as an index for inter-rater reliability and equaled .7, $\chi^2(1, N = 20) = 9.9$, $p < .01$.

One of the coders then coded all 102 full responses, and we computed an overall individual understanding score for each participant as in Experiment 1.

Results

Five of the 26 negotiating dyads in the specific training condition did not reach an agreement, while all dyads in the diverse training condition did reach agreement. A z-test used to compare these proportions revealed that they were significantly different, $z = 2.29$, $p < .02$. Thus, deadlocks in this experiment were more likely in the specific training condition compared to the diverse training condition. As in Experiment 1, impasses were excluded from further analyses of negotiation outcomes, resulting in 21 dyads in the specific training condition and 25 dyads in the diverse condition. No significant differences were found between the conditions in the time it took negotiators to reach an agreement.

Importantly, before testing our specific hypotheses regarding the present experiment, we assessed whether any *a priori* differences existed between the samples in our two experiments. We did so by comparing the negotiation outcomes of the diversely trained group in the present experiment to those of the group that received the same treatment in the first experiment. As expected, no significant differences were found between these

Table 5
Experiment 2—Correlations among the Various Value-Creating Measures

	Total pie	Logrolling	Contingent	Time pref.	Add issue
Total pie	1.00				
Logrolling	.38*	1.00			
Contingent	.19	.12	1.00		
Time pref.	.63*	.06	–.14	1.00	
Add issue	.81*	.18	.18	.11	1.00

*Significant at $p < .05$.

two groups for any of the negotiation outcome measures—not for the total pie measure, nor for any of the specific components: logrolling, contingent contracts, time preferences, or adding issues. Hence, there did not seem to be *a priori* differences between our samples, and we continued to test our hypotheses by analyzing and comparing the data of the diversely and specifically trained groups in the present experiment.

In Table 5, we present the correlations among the multiple outcome measures: the total agreement pie and the outcomes on the specific value-creating components. As in Experiment 1, we analyzed the total agreement pie followed by separately analyzing the joint outcomes on each of the value-creating components. Table 6 summarizes the mean

Table 6
Mean (SD) Joint Outcomes or Proportions in Each Condition and Results of Comparison Tests (Experiment 2)

Overall ($N = 46$)	Specific training ($N = 21$)	Diverse training ($N = 25$)	Hypothesis	Statistic	*p*
Total agreement pie M = \$4,352,826 (SD = 266,568)	\$4,275,000 (327,597)	\$4,418,200 (184,526)	*H1**	$t_{44} = 1.86$	.05
Contingent contract issue (*taught in Div., not in Spec.*) M = \$–379,891 (SD = 30,102)	\$–391,667 (18,257)	\$–370,000 (34,611)	*H2***	$t_{44} = 2.58$	.01
Time preference issue (*not taught*) M = \$4,699,022 (SD = 147,842	\$4,702,381 (149,463)	\$4,696,200 (149,494)	*H3*	$t_{44} = .14$	.89
Adding issue, number (%) of agreements (*not taught*) N = 33 (72%)	11 (52)	22 (88)	*H3***	$z = 2.70$	.01
Logrolling issues (*taught in Div. & Spec.*) M = \$–253,261 (SD = 56,177)	\$–245,238 (56,800)	\$–260,000 (55,902)	None	$t_{44} = .89$	.2

D, diverse; S, specific.
*$p < .05$, **$p < .01$.

outcomes on each component for each condition, as well as the results of tests of our specific hypotheses.

Joint Total Agreement Outcome (i.e., Agreement Pie)

Supporting H1, and as in the first experiment, diversely trained negotiators achieved higher total joint gain than specifically trained negotiators. As shown in Table 6, the mean total outcome in the diverse condition was higher than the mean total outcome in the specific condition.

Contingent Contract

The contingent contract strategy was taught in the diverse training condition only. As predicted in H2, participants in the diverse condition performed better on this component than did those in the specific training condition.

Time Preferences

We did not previously train value creation by means of this particular strategy in any of the conditions. Hence, according to Hypothesis H3, negotiators who received diverse training should implement this new strategy better than negotiators who received specific training. As shown in Table 6, however, this was not the case. The difference between the mean outcomes in the two conditions on this component was not significant.

Adding an Issue

This too was a value-creating strategy not previously taught in any of the conditions. Hence, according to Hypothesis H3, diversely trained negotiators should perform better on this new strategy than participants in the specific training condition. As in Experiment 1, due to the dichotomous nature of this outcome measure, we analyzed it by comparing the proportion of agreements in which it was added in each condition. As shown in Table 6, results on this component support Hypothesis 3. As expected, the proportion of dyads that included this issue in their agreement was significantly higher in the diverse training condition than in the specific training condition.

Logrolling

This strategy was taught in both conditions. Although not part of our formulated hypotheses, we conducted a *t*-test to compare the outcomes of the specific and diverse groups on this component, which revealed an insignificant difference; $t(29) < 1$, $p = .37$.

Understanding Questionnaire Analyses

As mentioned in the *Method* section, in this experiment we also examined the level of understanding by analyzing participants' responses to the guided training questionnaire that was part of the training manipulation, and preceded the provision of the explanation. Table 7 presents the number and proportion of participants in each conceptualization level category in the two different training conditions. As expected, the proportion

Table 7
Number (%) of Responses in Each Conceptualization Category by Condition

Condition	(0) Miscellaneous/no understanding	(1) Specific concepts/limited understanding	(2) Broad concepts/deep understanding	Total
Specific	21 (40)	29 (56)	2 (4)	52
Diverse	14 (28)	25 (50)	11 (22)	50
Overall	35 (34)	54 (53)	13 (13)	102

of participants in the various categories differed as a function of condition; $\chi^2(2,\ N = 102) = 7.89,\ p < .05$. Follow-up within-category comparisons revealed that this difference was mainly due to the different proportions in the broad concept category. In this category, the proportion of participants was significantly higher in the diverse training condition than in the specific training condition ($p < .01$). The differences in both other categories were not significant. These results support Hypothesis 4 and confirm our notion that diverse training leads to the acquisition of broader concepts and deeper understanding.

We found additional support for Hypothesis 4 when we analyzed the postnegotiation questionnaires. We replicated findings in Experiment 1; the mean individual understanding in the postnegotiation questionnaire was significantly higher in the diverse training condition ($M = 2.14,\ SD = .8$) than in the specific training condition ($M = 1.79,\ SD = .7$), $t(100) = 2.4,\ p < .05$. Moreover, the proportion of participants in the various categories again differed as a function of condition; $\chi^2(3,\ N = 102) = 8.80,\ p < .05$. Follow-up comparisons revealed that this difference was mainly due to the different proportions in the highest individual understanding category (where responses to both questions were correct and full explanations were classified as profound). Only in this category was the proportion of participants in the diverse training condition significantly higher than in the specific training condition (38% vs. 13%, respectively, $p < .05$). Thus as in Experiment 1, participants in the diverse training condition acquired more profound win-win perceptions about negotiation—i.e., a broader understanding of the potential to create value—than did participants in the specific training condition.

As in Experiment 1, we continued to explore the role of understanding in the relationship between the training condition and performance at the dyadic level. We conducted an ANCOVA with "agreement pie" as the dependent variable, "experimental condition" as the independent variable, and "postnegotiation dyadic understanding" as a covariate. The analysis revealed that when holding understanding constant, the effect of condition became insignificant, $F(1,\ 43) = 1.98,\ p = .2$, and the effect of dyadic understanding (i.e., the covariate) was significant, $F(1, 43) = 4.71,\ p < .05$, implying that understanding plays a significant role in the link between condition and performance.

A similar pattern of results emerged in a parallel ANCOVA in which, instead of covariating the postnegotiation dyadic understanding score, we covariated the training stage

dyadic conceptualization score (computed as the sum of the two parties' individual scores on the training questionnaire). As in the previous ANCOVA, when holding conceptualization constant, the effect of condition was insignificant, $F(1, 43) = 1.61$, $p = .2$. The effect of training-stage dyadic conceptualization (i.e., the covariate) approached significance, $F(1, 43) = 2.73$, $p = .1$.

Discussion

In this experiment, which differs from the first experiment with regard to the particular training strategy employed in the specific training condition, we have replicated the basic finding that diverse training is more effective than specific training for implementing a broad range of strategies, including ones that negotiators have never before encountered. We also show that the superior performance of diversely trained negotiators is significantly accounted for by their advanced understanding of the broad concept of creating value. Moreover, the fact that the diverse training condition showed a higher level of understanding during the training session, before any written explanation was given, suggests that the advantage of participants in this condition is not due to the solution they received.

As in Experiment 1, diversely trained negotiators (namely, contingent contracts and logrolling) reached significantly higher total joint outcomes than did specifically trained negotiators (namely, logrolling only). The joint outcomes of diversely trained negotiators were better not only on a specific strategy that they were previously taught (namely, contingent contracts) but also on a strategy they had not previously encountered (namely, adding issues). Yet, contrary to our prediction, performance on the time trade-off strategy, which was also not previously trained in any condition, did not differ between conditions. A possible explanation for this result is that time trade-off is, to some extent, similar to logrolling. As logrolling was trained in both conditions, it may be that time trade-off was not a purely novel strategy in any of them, and that consequently, all participants performed well.

These results imply that the benefits of specific analogical training depend largely on the degree to which the transfer task entails strategies similar to the strategy that was specifically trained. Regarding the diverse condition, however, results sustain our main argument that as it promotes learning of underlying integrative negotiation principles that are more abstract and general, its benefits are less dependent on the degree of overlap between the specific strategies that construct the training and transfer tasks. This notion is supported by the superior overall agreement outcomes of participants in this condition, their superior performance on the novel added-issue component, and their profound value-creating perceptions that accounted for their better performance.

Moreover, as in Experiment 1, the general learning benefits of diverse training did not come at the expense of specific learning. Diversely trained participants who were exposed to only one example of a particular strategy (namely, logrolling) did not perform worse on that strategy than specifically trained participants who were exposed to more than one example of that strategy.

General Discussion

While behavioral decision-making research has flourished in the last three decades, its implications for training and improving decision making have been disappointing (Thompson, 2005). Even when studies found improvement in learning, such improvement was usually limited to the specific task in which it was acquired. Perhaps the most promising new direction for developing a strategy that actually has the power to improve decision making and negotiation comes from the emerging literature on analogical reasoning (Gentner et al., 2003; Loewenstein et al., 1999, 2003; Nadler et al., 2003; Thompson et al., 2000). The current study builds on this work and provides additional indication that comparative and analogical training processes may be a promising direction for teaching decision-making skills that can be transferred across situations. Focusing on negotiations, a core managerial activity, we show that it is possible to teach people the general principle of creating value in negotiation and thereby to improve their ability to deal with divergent negotiation situations.

In recent studies on integrative negotiation training (Loewenstein et al., 1999; Thompson et al., 2000), specific analogical case training, wherein trainees draw analogies between different cases involving the same strategy (e.g., logrolling), was shown to be effective for learning and transferring the specifically learned strategy to new situations. The current results imply that such training may be less effective when the situation changes dramatically. Our results suggest that diverse analogical case training, wherein negotiators simultaneously study and compare several different strategies, is more effective at promoting the learning of general strategies. As predicted, in their final agreements, diversely trained negotiators reached significantly higher total joint outcomes than did specifically trained and untrained participants.

Our key claim and main extension of previous work in this area (e.g., Loewenstein et al., 1999; Thompson et al., 2000) is that the learning of specific strategies brings about limited performance improvement in new situations that contain a broad range of potential value-creating strategies. We propose that learning more *general* negotiation principles (such as ''value can be created'' or ''the pie is not always fixed'') facilitates successful transfer to a broader range of new negotiation situations and thus enhances the ability to implement diverse value-creating strategies, including ones never previously encountered. Congruent with this notion we found that the joint outcomes of the diversely trained negotiators were superior not only on specific strategies that they previously had learned, but also on some strategies they had not previously learned. In addition, we found that diversely trained participants had more profound value-creating perceptions than specifically trained ones.

Our results indicate that with regard to specific analogical training, the degree of overlap between strategies that appear in the training and transfer tasks is an important predictor of successful transfer. However, regarding diverse training, the combined performance and understanding results of both experiments imply that the overall advantage of this condition is not dependent on the overlap between the strategies that are used in the training and transfer tasks.

An alternative reason for the superior total pie outcome of the diverse group could be the simple fact that this group received training on two (rather than just one or none) of the value-creating strategies that were appropriate for succeeding in the consequent transfer task. If, however, this was the key contributing source, the better performance should have primarily been apparent for those strategies that were distinctively taught in the diverse condition (i.e., the logrolling strategy in Experiment 1 and the contingent contracts strategy in Experiment 2). Clearly, this was not the case. The superior performance of the diversely trained participants on new components not previously encountered suggests that their overall superior performance is more likely to be based on a better schema of value creation. The notion that deeper understanding is indeed what facilitated diverse trainees' superior performance is further supported by the fact that these participants' better performance was accounted for by their more profound win-win perceptions about negotiation and their deeper understanding of the potential to create value.

Importantly, the benefits of diverse training with regard to broad learning do not seem to come at the expense of specific learning. Diversely trained negotiators who were exposed to only one instance of each specific strategy during training were not outperformed on these strategies by specifically trained negotiators who were exposed to two instances of the same strategies. This finding confirms our main argument that diverse training leads to learning of the underlying principle of creating value. Once such broad concepts have been acquired, they are indeed expected to enhance performance on multiple value-creating strategies, regardless of the degree of previous exposure to them.

The present research findings have direct implications for improving management education. They are especially relevant for the design of classroom instruction by means of the case method, which is an extremely common technique.

In addition to the obvious implications for classroom instruction, our findings may have broader implications for areas such as organizational behavior. The finding that inducing a specific focus may constrain broad thought processes is worthy of attention, given the extensive emphasis on specific performance goals in the organizational behavior literature and predominantly in the goal-setting literature (Locke & Latham, 1990). Reward and promotion systems in many organizations emphasize and motivate the implementation of specific goals and outcomes. Consequently, other important behaviors that are not the focus of reward may be neglected (Bereby-Meyer et al., 2004; Kerr, 1975; Schweitzer, Ordonez, & Douma, 2004; Staw & Boettger, 1990). In line with this notion, the current study suggests that prompting specific skills may come at the expense of learning more general strategies that are not directly encouraged or rewarded, although they may be important for performance in the long run.

While the results of this study foster hope that negotiators can be trained to acquire broad underlying negotiation constructs, several questions may be worth pursuing in future research. This research suggests that high levels of specificity have limitations for acquiring knowledge and underlying principles. Prior work, on the other hand, implies that abstract principles, on their own, are also limited in their advantage; they are likely

to be misunderstood, forgotten, or misapplied (e.g., Gentner et al., 2003; Ross & Kilbane, 1997). Hence, future research is needed to explore the optimal levels of specificity. In particular, it may be worthy to explore the boundary conditions of diversity training; under certain circumstances, too much diversity might also be limited and constrain the ability to abstract a common principle. In addition, in the present study, all of the training cases and the transfer task were examples of integrative strategies. Consequently, an important question is: How does learning through instances of value-creating strategies influence performance on consequent tasks that are purely distributive (i.e., those with no potential for value creation)?

In the present study we employed a method that includes providing participants with the abstract principles that underlie the illustrative cases that they compare (Loewenstein et al., 1999; Reed & Bolstad, 1991; Reed et al., 1985; Ross & Kilbane, 1997). Although previous research found that results obtained when providing the abstract principles are not very different from results obtained when not providing them (e.g., Loewenstein et al., 1999; Ross & Kilbane, 1997), and although our findings in Experiment 2 suggest that the learning advantages observed for the diversely trained participants cannot be solely attributed to the solutions that they received, we acknowledge that we should be cautious when generalizing our findings beyond the method that we used. In the present research our primary goal was to explore the effects of the materials—*specific* versus *diverse*—that are used for the comparisons, and not to compare the effectiveness of various analogical instructional methods. Future research, however, might focus on comparing and broadening the scope of the instructional methods that are examined. These include, for example, ''the embedded principle method'' in which no abstract principles or explanations are given, or the use of face-to-face negotiations in the training phase rather than just case studies.

Finally, we are inspired by the evolution of the work on analogical reasoning and hope that this article expands its impact one step further. Together, our results lead us to conclude that the effects of specific training may have limited generalizability. They support the notion that diverse analogical training can be effective for attaining a higher level of expertise and for understanding of underlying value-creation principles.

References

Bazerman, M. H. (2005). *Judgment in managerial decision making* (6th ed.). New York: John Wiley & Sons.

Bazerman, M. H., Magliozzi, T., & Neale, M. A. (1985). Integrative bargaining in a competitive market. *Organizational Behavior and Human Decision Processes*, *35*(3), 294–313.

Bazerman, M. H., & Neale, M. A. (1992). *Negotiating rationally*. New York: The Free Press.

Bereby-Meyer, Y., Moran, S., & Unger-Aviram, E. (2004). When performance goals deter performance: Transfer of skills in integrative negotiations. *Journal of Organizational Behavior and Human Decision Processes*, *93*(2), 142–154.

Bransford, J. D., Franks, J. J., Vye, N. J., & Sherwood, R. D. (1989). New approaches to instruction: Because wisdom can't be told. In S. Vosniadou, & A. Ortony (Eds.), *Similarity and analogical reasoning* (pp. 470–497). Cambridge, UK: Cambridge University Press.

Dawes, R. M., & Corrigan, B. (1974). Linear models in decision making. *Psychological Bulletin*, *81*(2), 95–106.

Fiske, D. (1961). The inherent variability of behavior. In D. W. Fiske & S. R. Maddi (Eds.), *Functions of varied experience* (pp. 326–354). Homewood, IL: Dorsey Press.

Gentner, D. (1983). Structure-mapping: A theoretical framework for analogy. *Cognitive Science*, *7*(2), 155–170.

Gentner, D., Loewenstein, J., & Thompson, L. (2003). Learning and transfer: A general role for analogical encoding. *Journal of Educational Psychology*, *95*(2), 393–408.

Gentner, D., & Markman, A. B. (1997). Structure mapping in analogy and similarity. *American Psychologist*, *52*(1), 45–56.

Gick, M. L., & Holyoak, K. J. (1983). Schema induction and analogical transfer. *Cognitive Psychology*, *15*(1), 1–38.

Gick, M. L., & Paterson, K. J. (1992). Do contrasting examples facilitate schema acquisition and analogical transfer? *Canadian Journal of Psychology*, *46*(4), 539–550.

Hammond, K., & Grassia, J. (1985). The cognitive side of conflict: From theory to resolution of policy disputes. In S. Oskamp (Ed.), *Applied social psychology annual* (Vol. 6, pp. 233–254). Beverly Hills, CA: Sage.

Holladay, C. L., & Quinones, M. A. (2003). Practice variability and transfer of training: The role of self-efficacy generality. *Journal of Applied Psychology*, *88*(6), 1094–1103.

Idson, L. C., Chugh, D., Bereby-Meyer, Y., Moran, S., Grosskopf, B., & Bazerman, M. (2004). Overcoming focusing failures in competitive environments. *Journal of Behavioral Decision Making*, *17*(3), 159–172.

Kadzin, A. E. (1975). *Behavior modification in applied settings*. Homewood, IL: Dorsey Press.

Kerr, S. (1975). On the folly of rewarding A, while hoping for B. *Academy of Management Journal*, *18*(4), 769–783.

Kourilsky, M., & Wittrock, M. C. (1987). Verbal and graphical strategies in the teaching of economics. *Teaching & Teacher Education*, *3*(1), 1–12.

Lax, D. A., & Sebenius, J. K. (1986). *The manager as negotiator*. New York: The Free Press.

Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice Hall.

Loewenstein, J., & Thompson, L. (2000). The challenge of learning. *Negotiation Journal*, *16*(4), 399–408.

Loewenstein, J., Thompson, L., & Gentner, D. (1999). Analogical encoding facilitates knowledge transfer in negotiation. *Psychonomic Bulletin and Review*, *6*(4), 586–597.

Loewenstein, J., Thompson, L., & Gentner, D. (2003). Analogical learning in negotiation teams: Comparing cases promotes learning and transfer. *Academy of Management: Learning and Education*, *June*, 119–127.

Mannix, E. A., Northcraft, G. B., & Neale, M. A. (1991). *Integrative and distributive negotiation training and experience: A competitive advantage?* Working Paper, Northwestern University.

Markman, A. B., & Gentner, D. (1996). Commonalities and differences in similarity comparisons. *Memory and Cognition*, *24*(2), 235–249.

Markman, A. B., & Gentner, D. (2000). Structure mapping in the comparison process. *American Journal of Psychology*, *113*(4), 501–538.

Markman, A. B., & Gentner, D. (2001). Thinking. *Annual Review of Psychology*, *52*, 223–247.

Moran, S., & Ritov, I. (2002). Initial perceptions in negotiations: Evaluation and response to "logrolling" offers. *Journal of Behavioral Decision Making*, *15*(2), 101–124.

Nadler, J., Thompson, L., & Van Boven, L. (2003). Learning negotiation skills: Four models of knowledge creation and transfer. *Management Science*, *49*(4), 529–540.

Neale, M. A., & Bazerman, M. H. (1991). *Cognition and rationality in negotiation*. New York: The Free Press.

Neale, M. A., & Northcraft, G. B. (1990). Experience, expertise and decision bias in negotiation: The role of strategic conceptualization. In B. Shepard, M. Bazerman, & R. Lewicki (Eds.), *Research in negotiations in organizations* (Vol. 2, pp. 55–75). Greenwich, CT: JAI Press.

Needham, D. R., & Begg, I. M. (1991). Problem-oriented training promotes spontaneous analogical transfer: Memory-oriented training promotes memory for training. *Memory and Cognition*, *19*(6), 543–557.

Pruitt, D. G. (1983). Achieving integrative agreements. In M. H. Bazerman & R. J. Lewicki (Eds.), *Negotiating in organizations* (pp. 35–50). Beverly Hills, CA: Sage.

Reed, S. K., & Bolstad, C. H. (1991). Use of examples and procedures in problem solving. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *17*(4), 753–766.

Reed, S. K., Dempster, A., & Ettinger, M. (1985). Usefulness of analogous solutions for solving algebra word problems. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *11*(1), 106–125.

Ross, B. H., & Kilbane, M. C. (1997). Effects of principle explanation and superficial similarity on analogical mapping in problem solving. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *23*(2), 427–440.

Ross, B. H., Perkins, S., & Tenpenny, P. (1990). Reminding-based category learning. *Cognitive Psychology*, *22*(4), 460–492.

Salomon, G., & Perkins, D. N. (1989). Rocky roads to transfer: Rethinking mechanisms of a neglected phenomenon. *Educational Psychologist*, *24*(2), 113–142.

Schweitzer, M. E., Ordonez, L., & Douma, B. (2004). Goal setting as a motivator of unethical behavior. *Academy of Management Journal*, *47*(3), 422–432.

Shute, V. J., & Gawlick, L. A. (1995). Practice effects on skill acquisition, learning outcome, retention, and sensitivity to relearning. *Human Factors*, *37*, 781–803.

Staw, B. M., & Boettger, R. D. (1990). Task revision: A neglected form of work performance. *Academy of Management Journal*, *33*(3), 534–559.

Tennyson, R. D. (1973). Effect of negative instances in concept acquisition using a verbal learning task. *Journal of Educational Psychology*, *64*(2), 247–260.

Thompson, L. (1990a). Negotiation behavior and outcomes: Empirical evidence and theoretical issues. *Psychological Bulletin*, *108*(3), 515–532.

Thompson, L. (1990b). An examination of naive and experienced negotiators. *Journal of Personality and Social Psychology*, *59*(1), 82–90.

Thompson, L. (1990c). The influence of experience on negotiation performance. *Journal of Experimental Social Psychology*, *26*(6), 528–544.

Thompson, L. (2005). *The mind and heart of the negotiator* (3rd ed.). Englewood Cliffs, NJ: Prentice-Hall, Inc.

Thompson, L., Gentner, D., & Loewenstein, J. (2000). Avoiding missed opportunities in managerial life: Analogical training more powerful than individual case training. *Organizational Behavior and Human Decision Processes*, *82*(1), 60–75.

Thompson, L., & Hastie, R. (1990). Social perception in negotiation. *Organizational Behavior and Human Decision Processes*, *47*(1), 98–123.

Tripp, T. M., & Sondak, H. (1992). An evaluation of dependent variables in experimental negotiation studies: Impasse rates and pareto efficiency. *Organizational Behavior and Human Decision Processes*, *51*(2), 273–295.

VanderStoep, S. W., & Seifert, C. M. (1993). Learning "how" versus learning "when": Improving transfer of problem-solving principles. *Journal of the Learning Sciences*, *3*(1), 93–111.

Walton, R. E., & McKersie, R. B. (1965). *Behavioral theory of labor negotiations: An analysis of a social interaction system*. New York: McGraw-Hill.

Appendix 1a

Experiment 1: Training Case 1—Specific and Diverse Conditions (Contingent a)

Syd, a recently-promoted head buyer of a major retail store, has bought some wholesale goods from an Asian merchant. All aspects of the deal have been successfully negotiated except the transfer of the goods. The merchant tells Syd that he will pay to ship the goods by boat, which costs $8,000. Syd is concerned because the U.S. has announced that a trade embargo is likely to be placed on all goods from that country in the near future. The *Asian merchant* tells Syd not to worry because the *boat will arrive at the U.S. dock before the embargo occurs. Syd*, however, believes the *boat will be late* and therefore wants the merchant to pay to ship the goods by air freight, which is substantially more expensive—it costs $12,000. The merchant refuses because of the higher cost. They argue about when the boat will arrive.

Syd and the merchant consider sending the goods by airmail and splitting the extra costs—$4000—between the two of them. They realize, however, that this is a poor solution because it satisfies neither company's needs: the merchant will have to pay more to send the goods, and Syd will have to pay for something that he is not supposed to pay for (as mentioned above, the merchant told Syd that he will pay to ship the goods).

A consultant suggests that they form a contingent agreement. The Asian merchant will send the goods by air freight. However, they will leave it open as to who will pay the additional cost. They will both observe the boat in order to see when it actually arrives in the U.S. If the boat arrives on time (as the Asian merchant believes it will), Syd will pay the added cost of air freight. However, if the boat arrives late (as Syd believes it will), the Asian merchant will pay the additional cost of air freight. This way, each side will not need to pay any extra costs if his expectations are fulfilled.

Appendix 1b

Experiment 1: Training Case 2—Specific Condition (Contingent b)

Rami and Gilad are planning where to stay during their future summer vacation in Eilat. They are going on vacation at the peak travel time, so they know that figuring out where to stay in advance is important. Rami's parents own a condo in Eilat, where Rami

and Gilad could stay. Alternatively, they could also reserve a hotel room. The condo would be an ideal place to stay, but Rami's parents might be staying at the condo at the same time. Neither of them wants to spend his vacation sleeping on the floor, which will be the case if Rami's parents do end up coming. *Rami* says that he is *certain that his parents will not come to Eilat* at the same time. *Gilad*, however, believes it is *highly likely that Rami's parents will come*, and therefore he wants to make a reservation at a hotel just in case. They argue about whether or not to reserve a room at a nice hotel. Such a reservation would entail a deposit of $200 which will not be refunded in case of cancellation. Gilad thinks they should reserve the room, but Rami disagrees because he does not think they will need the room.

They consider paying a lower deposit at a cheap hotel, but realize this is not a good solution because they do not want to spend their vacation at some "fleabag." They consult with a friend who suggests that they form a contingent agreement—they should go ahead and pay the $200 deposit to reserve a room at the nice hotel. However, they should leave it open as to who will eventually pay for this deposit. If Rami's parents do not come (like Rami believes), Gilad will pay the full deposit, but if the parents do come (like Gilad believes), Rami will pay the full deposit.

Appendix 1c

Experiment 1: Training Case 2—Diverse Condition (Logroll)

Yossi is the Marketing Manager of "AA"—a company that manufactures computer screens. Dani is the representative of "millennium"—a retail store that is interested in buying such screens. The two meet in order to negotiate the final terms of a possible deal. Most terms (including the base price, quantities, etc.) have already been agreed upon and are not further negotiable. However, three issues remain to be negotiated: delivery terms, discount level and payment terms. The value of the deal for each of the negotiating parties is influenced only by these three issues. When negotiating, only these three issues are to be considered and for a deal to be accomplished, both sides need to agree on all three of them.

For each of these issues there are nine ranked alternatives labeled "A" through "I." The accountants of each company have calculated the company's profit schedule—how the company's profits will be affected by settling for the different alternatives on each of the issues. Before negotiating, each representative receives this assessment from his accountant.

The profit schedules of both companies are attached. The total profit each company gains from a deal is the sum of the profits it gains in all three issues. The goal of each negotiator is to reach an agreement that maximizes his company's profit.

Delivery terms			Discount level			Payment terms		
Level	Alternative	Profit	Level	Alternative	Profit	Level	Alternative	Profit
Dani the Retailer (buyer) Profits—''Millennium''								
A	60 days	$0	A	0%	$0	A	Cash	$0
B	55 days	$200	B	1%	$300	B	2 payments	$500
C	50 days	$400	C	2%	$600	C	3 payments	$1,000
D	45 days	$600	D	3%	$900	D	4 payments	$1,500
E	40 days	$800	E	4%	$1,200	E	5 payments	$2,000
F	35 days	$1,000	F	5%	$1,500	F	6 payments	$2,500
G	30 days	$1,200	G	6%	$1,800	G	7 payments	$3,000
H	25 days	$1,400	H	7%	$2,100	H	8 payments	$3,500
I	20 days	$1,600	I	8%	$2,400	I	9 payments	$4,000
Yossi the Manufacturer (seller) Profits—''AA''								
A	60 days	$4,000	A	0%	$2,400	A	Cash	$1,600
B	55 days	$3,500	B	1%	$2,100	B	2 payments	$1,400
C	50 days	$3,000	C	2%	$1,800	C	3 payments	$1,200
D	45 days	$2,500	D	3%	$1,500	D	4 payments	$1,000
E	40 days	$2,000	E	4%	$1,200	E	5 payments	$800
F	35 days	$1,500	F	5%	$900	F	6 payments	$600
G	30 days	$1,000	G	6%	$600	G	7 payments	$400
H	25 days	$500	H	7%	$300	H	8 payments	$200
I	20 days	$0	I	8%	$0	I	9 payments	$0

A consultant has suggested to the parties that they sign the following agreement:
Delivery terms: Alternative A—60 days
Discount level: Alternative E—4%
Payment terms: Alternative I—9 payments
The consultant claims that such an agreement would be better than simply compromising on the middle alternative (alternative E) for each of the issues:
Delivery terms: Alternative E—40 days
Discount level: Alternative E—4%
Payment terms: Alternative E—5 payments

Appendix 2a

Test Task—Real Estate Developer

You are Mr. Tivon, the vice president of ''Realty,'' a real estate development company that has won an auction for a residential community development project. Most of the terms of the bidding agreement are nonnegotiable. However, there are five issues that must still be negotiated and mutually agreed upon by Realty and the city council:

(**a**) Amount of city financing for the project
(**b**) Developing a park
(**c**) Sewage tank

(**d**) A parking lot
(**e**) Dividing the income from a sports club

You will soon be representing Realty in negotiating these five issues with Mr. Ronen, who is the chief city planner. The agreement you reach regarding these issues will influence Realty's gains and costs and, therefore, its final profit for the project. When negotiating on behalf of Realty, please keep in mind that your goal is to achieve an agreement that minimizes your costs and maximizes your gains, so as to get the most out of the project for Realty.

Below is some information regarding each of the five issues you must negotiate:

(a) City Council Financing for the Project

According to the terms of the auction, the city council is not committed to providing financial aid for the project. However, it is not unusual for the city council to provide support for such community development projects. Specifically, there are two types of possible grants that the city council can consider giving you for the project: one is a small grant of $250,000 and the other is a large grant of $500,000. Realty's president has already contacted the city council regarding this grant and they agreed that this issue will be discussed as part of the negotiations between you and Mr. Ronen. The table below summarizes the three alternatives that will be negotiated, and your (Realty's) expected gains from each of them.

City financing	Realty's gain
None	$0
Small grant	$250,000
Large grant	$500,000

(b) Developing a Park

The project plan includes a park with a children's playground. However, the terms of the contract currently do not specify whether this park will be developed by the city council or by the real estate development company. Therefore, this is another issue that you must negotiate with the chief city planner. The table below specifies the negotiable alternatives for this issue and an estimation of Realty's costs for each alternative.

Park is developed by	Realty's costs
Realty	$100,000
Realty and city council	$50,000
City council	$0

(c) Sewage Tank

The terms of the contract currently state that the city council and the real estate development company are mutually responsible and should split the costs of installing a central sewage tank which should be connected to the city's central sewage

system. Currently there is only one company that distributes suitable tanks that comply with the required state standards and have approval from the appropriate regulatory authority. The price of a tank for those consuming during the coming month is $400,000. As of next month, however, the price rises to $450,000. You have received reliable information that a new company is about to enter the market and sell a different brand of sewage tanks. These are presumed to be identical in quality to the currently available tanks, and will also comply with required standards. The price of these tanks will be only $350,000. According to information you received and evaluate as reliable, the new company will obtain all the necessary approvals, and will begin distributing the tanks at the time you will need them for the project. You have made extensive inquiries (including conversations with some of your good friends who hold senior positions within the regulatory authorities), and are sure that the new, less expensive tanks, will be available on time. Therefore, you do not want to buy the currently available tank now, at the price of $400,000. You prefer to wait and buy the tank from the new company for $350,000. You see no reason to pay an unnecessary extra $50,000. You have contacted the city council regarding this issue. However, they are afraid of taking a risk and want to buy the tank now for the price of $400,000. During your negotiations, you and Mr. Ronen from the city council need to reach an agreement on this issue and decide whether to buy now or to wait.

Options	Cost of tank
Buy now	$400,000
Wait	$350,000 (if new tank available) OR $450,000 (if new tank not available)

(d) Parking Lot

The project plan also includes a parking lot. However, the terms of the contract do not specify whether this parking lot will be built by the city council or by the real estate development company. Therefore, this is another issue that you must negotiate with the chief city planner. The table below specifies the negotiable alternatives for this issue and an estimation of Realty's costs for each alternative.

Parking lot is developed by	Realty's costs
Realty	$200,000
Realty and city council	$100,000
City	$0

(e) Dividing the Income from a Sports Club

The project also includes a sports club, which has been leased out in advance to a third party for a period of 3 years. The terms of the contract currently state that

the income from leasing the sports club—$2 million per year for 3 years—is to be divided between you and the city council. However, it has not yet been specified how this income should be divided between the two parties. Therefore, during the negotiation, you and the chief city planner must jointly decide on how to divide this income.

Realty's accountant has informed you that as in the first year Realty will have high expenses and relatively low incomes, any extra incomes will be tax-free. However, in the years to follow, the tax rate is expected to be 30%. Hence, the tax that you expect to pay on the money you receive from the sports club in each of the 3 years is: 0% in Year 1, 30% in Year 2, and 30% in Year 3.

You are now about to meet with Mr. Ronen, the chief city planner, to discuss the terms of the agreement for the project. For a final agreement to be signed, *you must negotiate and reach an agreement regarding all five issues described above.*

You have further plans for developing another real estate project besides this one. Specifically, you are interested in acquiring an additional property nearby. You have been offered a suitable property from a private owner at the price of $3,000,000. By your estimations, the property is definitely worth this price and you have therefore decided to buy it unless you find a better alternative in the near future. You know that the city council also owns a suitable property, which is very similar to the one you have been offered. Therefore, during your current negotiations with them, you should be open to creative options that might emerge concerning this issue.

Please note that when negotiating, only information given in this package may be considered. You may not add any information that you do not know to be factual.

Appendix 2b

Test Task—City Council

You are Mr. Ronen, the chief city council planner, who recently auctioned a residential community development project, won by a real estate development company named Realty. Most of the terms of the bidding agreement are nonnegotiable. However, there are five issues that must still be negotiated and mutually agreed upon by Realty and the city council:

(a) Amount of city financing for the project
(b) Developing a park
(c) Sewage tank
(d) A parking lot
(e) Dividing the income from a sports club

You will soon be representing the city council in negotiating these five issues with Mr. Tivon, who is the vice president of Realty. The agreement you reach regarding these issues will influence the city council's gains and costs and therefore, its final profit for the project. When negotiating on behalf of the city council, please keep in mind that your goal is to achieve an agreement that minimizes your costs and maximizes your gains, so as to get the most out of the project for the council.

Below is some information regarding each of the five issues you must negotiate.

(a) City Council Financing for the Project

According to the terms of the auction, you are not committed to provide financial aid for the project. However, it is not unusual for the city council to provide support for such community development projects. Specifically, there are two types of possible grants you can consider giving the developer for the project: one is a small grant of $250,000 and the other is a large grant of $500,000. Realty's president has already contacted the city council regarding this grant and you agreed that this issue will be discussed as part of the negotiations between you and Mr. Tivon. The table below summarizes the three alternatives that will be negotiated, and your (the city council's) expected costs for each of them:

City financing	City council's costs
None	$0
Small grant	$250,000
Large grant	$500,000

(b) Developing a Park

The project plan includes a park with a children's playground. However, the terms of the contract do not specify whether this park will be developed by the city council or by the real estate development company. Therefore, this is another issue you must negotiate with the vice president of Realty. The table below specifies the negotiable alternatives for this issue and an estimation of the city council's costs for each alternative.

Park is developed by	City council's costs
Realty	$0
Realty and city council	$100,000
City	$200,000

(c) Sewage tank

The terms of the contract currently state that the city council and the real estate development company are mutually responsible and should split the costs of installing a central sewage tank which should be connected to the city's central sewage system. Currently there is only one company that distributes suitable tanks that comply with the required state standards and have approval from the appropriate regulatory authority. The price of a tank for those consuming during the coming month is $400,000. As of next month, however, the price rises to $450,000. You are aware that a new company is planning to enter the market and sell a different brand of sewage tanks. These are presumed to be identical in quality to the currently available tanks, and will also comply with required standards. You

also know that when distribution begins, the price of these tanks will be only $350,000. However, according to information you received and evaluate as reliable, the new company will not obtain the necessary approvals, and will therefore not be able to begin distributing the tanks at the time you will need them for the project. The city council's urban planning department has made extensive inquiries (including conversations with several senior people within the relevant regulatory authority), and are sure that the new, less expensive tanks will not be available on time. Therefore, you want to buy the currently available tank now, at the price of $400,000. You see no reason to wait and then pay an unnecessary extra $50,000 due to the price raise. Mr. Tivon from Realty has contacted the city council regarding this issue. He wants to delay, and not buy now at the price of $400,000. During your negotiations, you and Mr. Tivon need to reach an agreement on this issue and decide whether to buy now or to wait.

Options	Cost of tank
Buy now	$400,000
Wait	$350,000 (if new tank available) OR $450,000 (if new tank not available)

(d) Parking Lot

The project plan also includes a parking lot. However, the terms of the contract do not specify whether this parking lot will be built by the city council or by the real estate development company. Therefore, this is another issue you will be negotiating with Realty's vice president. The table below specifies the negotiable alternatives for this issue and an estimation of the city council's costs for each alternative.

Parking lot is developed by	City council's costs
Realty	$0
Realty and city council	$50,000
City	$100,000

(e) Dividing the Income from a Sports Club

The project also includes a sports club, which has been leased out in advance to a third party for a period of 3 years. The terms of the contract currently state that the income from leasing the sports club—$2 million per year for 3 years—is to be divided between you and Realty. However, it has not yet been specified how this income should be divided between the two parties. Therefore, during the negotiation, you and the vice president of Realty must jointly decide on how to divide this income.

The city council's accountant has informed you that the tax that you expect to pay on the money you receive each year from the sports club is 30%.

You are now about to meet with Mr. Tivon, the vice president of Realty, to discuss the terms of the agreement for the project. For a final agreement to be signed, *you must negotiate and reach an agreement regarding all five issues described above*.

The city owns another small property nearby, which it is interested in selling. This property is not very valuable and has been on the market for quite a while. The city council has authorized you to sell this property by the end of the year. At present, the best offer you have is from a real estate company, named ''G.G. Ltd.'' for $2,600,000. You will definitely sell the property to ''G.G. Ltd.,'' unless you receive a better offer in the near future. Therefore, during your current negotiations with Realty, you should be open to creative options that might emerge regarding this issue.

Please note that when negotiating, only information given in this package may be considered. You may not add any information that you do not know to be factual.

Appendix 3

Examples of responses classified to each category in the open response analysis

Category	Examples of responses (free translation from Hebrew)
Not profound	''I agree'' or ''I disagree'' with one or both statements, without additional explanations ''Sometimes both sides gain'' ''Always, in every negotiation, there will be losers and winners'' ''The gains of one are at the expense of the other gaining less. If the split is unequal, there will always be one that pays more or gains more than he would have with an even split''
Profound	''There are situations where negotiation agreements are more beneficial to both sides than equal splits, which might be unsatisfactory. In negotiations the parties should listen to each other, find out what is important to each, and try to get the most for both out of the agreement. The strategy should be cooperating in a way that does not lead to me losing, but increases my own gains together with increasing those of the other party'' ''It is a not a zero sum game. For example in this simulation, I realized monetary potential in buying the property which I did not initially intend to do. Also there may be things with different costs to each party (such as building the parking lot and developing the park), so that if each party takes on the less costly one, both can gain''

Max Bazerman is the Jesse Isidor Straus Professor of Business Administration at the Harvard Business School, and is also formally affiliated with the Kennedy School of Government, the Psychology Department, the Institute for Quantitative Social Sciences, the Harvard University Center on the Environment, and the Program on Negotiation. In 2006, Max received an honorary doctorate from the University of London (London Business School) and the Life Achievement Award from the Aspen Institute's Business and Society Program.

Yoella Bereby-Meyer is a senior lecturer at the Department of Psychology at the Ben-Gurion University of the Negev. She is also a member of the Ben-Gurion University Decision Making & Economic Psychology Center. Her areas of research include decision-making, learning, and negotiation.

Simone Moran is a lecturer at the School of Management at the Ben-Gurion University of the Negev. She is also a member of the Ben-Gurion University Decision Making & Economic Psychology Center, and of the Ben-Gurion University Center for Studies of Populations in Conflict. Her research interests include decision-making, negotiations, organizational behavior, and consumer behavior.