Getting More out of Analogical Training in Negotiations:

Learning Core Principles for Creating Value

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Abstract

The present research adapts analogical training to teach negotiators broad thought processes for creating value. Recently, specific analogical training, wherein negotiators draw analogies between different cases involving the same strategy, was shown to be effective for learning and transferring specific value-creating strategies. The current results suggest that such specific learning may have limited generalizability to other value-creating processes. Diverse analogical training, wherein negotiators compare several different value-creating strategies, was shown to be more effective for learning underlying value-creating principles. This method facilitated transfer to a very distinctive task and improved performance on a variety of value-creating strategies, including some never previously encountered. The improved performance was also accompanied by a deeper understanding of the potential to create value.

Getting More out of Analogical Training in Negotiations:

Learning Core Principles for Creating 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, which reconcile both parties' interests and lead to higher joint benefit (Walton & McKersie, 1965; Pruitt, 1983). Even when people learn integrative negotiation skills, they have great difficulty transferring these skills to new tasks (e.g., Mannix, Northcraft, & Neale, 1991; Thompson, 1990b; Thompson, 1990c; Loewenstein, Thompson, & Gentner, 1999; Loewenstein & Thompson, 2000; Bereby-Meyer, Moran, & Unger-Aviram, 2004). The present research examines methods for training broad thought processes helpful in creating value in negotiation. We show that training about a specific form of value creation, such as logrolling, may have limited generalizability to other value-creating processes.

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 which particular strategies might be effective in different situations and why (Hammond & Grassia, 1985; Dawes & Corrigan, 1974; 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 & Perkins (1989) make a related distinction between "low-road" versus "high-road" transfer. 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. Salomon and Perkins suggest that the process of high-road transfer, which is more compatible with expertise than low-road transfer, almost always involves meta-cognition, i.e., awareness and regulation of one's cognitive processes.

Different strategies for creating value in negotiations have been suggested (Bazerman, 2001; Pruitt, 1983; Thompson, 2001). Some examples are: (a) compatibility, or identifying issues for which parties don't have a conflict of interest; (b) logrolling, or trading off concessions on low-priority issues for gains on higher priority issues; (c) 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; (d) adding issues, or adding to the agreement issues not inherent in the initial negotiation framework; and (e) contingent contracts, or bets based on different expectations regarding a future event. Research reveals that negotiators often fail to implement these strategies and to reach integrative agreements (e.g., Bazerman & Neale, 1992; Bazerman, Magliozzi, & Neale, 1985; Thompson, 1990a; Thompson & Hastie, 1990; Thompson et al., 2000).

While people often fail to reach mutually beneficial agreements that are readily available, several studies have shown that repeated experience can foster integrative performance (Pruitt & Rubin, 1986; 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, integrative agreements

can be reached by employing broader and more general principles (such as the

underlying principle that "value can be created" or that "it is important to understand

how parties' interests interrelate") and selecting a particular strategy accordingly

(Neale & Northcraft, 1990). In this article, we explore the potential of acquiring

broader principles that can be more easily applied to diverse negotiation situations.

Recently, interesting evidence has emerged demonstrating the ability of

negotiators to learn and transfer *specific* integrative skills by means of analogical

encoding (Loewenstein et al., 1999, 2003; Thompson et al., 2000; Gentner,

Loewenstein, & Thompson, 2003; Nadler, Thompson, & Van Boven, 2003). Drawing

analogies between different negotiation cases involving the same strategy (e.g.,

logrolling) 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 (e.g., Gentner, 1983; Gentner & Markman, 1997; Gick & Holyoak,

1983; Loewenstein & Thompson, 2000). The basic claim is that making a comparison triggers a focus on the similarities between the examples, making their common structure more transparent. Identifying the common structure – the principle shared by both examples – helps the learner form a schema that is less sensitive to the irrelevant surface or context features of the particular examples. Such an abstract principle is more likely to be transferred to new situations with different contexts than a principle that is not abstracted from its original context.

We are inspired by the success of analogical reasoning demonstrated in the negotiation literature, and see it as a fairly rare success story in the literature on learning in the negotiation context (Thompson, 2004). 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 simulation to maximize the learning that takes place. One important question for implementing this work concerns the level of specificity of the concepts used in the analogies. In this study, we explore whether it is possible to teach people more *general* negotiation principles (such as "value can be created" or "it is important to understand how parties' interests interrelate") that will enable successful transfer to a broader range of new negotiation tasks. We posit that learning such general principles will improve not only the ability to positively transfer specifically learned principles, but also the ability to discriminate their appropriateness – i.e., to determine when a principle should and should not be applied. As Chen & Daehler (1989) note, without such discrimination, a learner may blindly apply a solution even when it is inappropriate (i.e., negative transfer). Persistently seeking to create value by employing a specific learned strategy, such as logrolling, might hinder the ability 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 non-targeted ones (e.g., Staw and Boettger, 1990; Kerr, 1975). Resistance to negative transfer is an important feature of a successful learning process (e.g., Brown & Campione, 1983; Gentner & Toupin, 1986; Chen & Daehler, 1989; Novick & Holyoak, 1991).

For achieving this type of generalized learning, we emphasize the issue of *diversity* in our training. Several studies on structural mapping have shown that the detection of commonalities is accompanied by a parallel recognition of alignable differences – i.e., differences that are related to these commonalities. In other words, the alignment process also enhances the observation that *different* specific values or items appear in the common structure (e.g., Markman & Gentner, 1996, 2000, 2001). An additional view that places a particular emphasize on the importance of focusing on differences is the "near miss" view. 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 (Ross & Kilbane, 1997; Bransford, Franks, Vye, & Sherwood, 1989; Gick & Paterson, 1992; Vanderstoep & Seifert, 1993). Using contrasts or highlighting differences has 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, Chen Idson et al. (2003) showed that contrast training improves decision making in competitive environments as well.

Based on these views and findings, in our training 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. Moreover, we expect that the level of the common principle that learners abstract is likely to depend on the diversity between the analogical instances that they compare and contrast. It should be lower when they 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 experiments in which learners are actively guided to compare two negotiation cases. The two experiments differ from one another in the value-creating strategies that are trained, as well as in the degree of surface structure similarity that is employed during training.

In both experiments 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 (logrolling in Experiment 1; contingent contracts in Experiment 2). In the *diverse training condition*, they compare two cases that differ in the value-creating strategy that they illustrate (logrolling and compatibility in Experiment 1; logrolling and contingent contracts in Experiment 2). We also add a control condition in which participants receive no negotiation training at all. We then assess the effectiveness of these training conditions 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 and others which were not. Additionally, we assess participants' level of mindful abstraction and conscious understanding by examining their open-ended responses to a question regarding their general "win-lose" versus "win-win" perceptions of negotiations.

Our training is facilitated by *explicitly* asking participants to fill out a questionnaire which guides them to compare and contrast the two cases and their optimal solutions (i.e., to detect similarities and differences) and then to abstract a common principle. This facilitation is based on previous findings that show transfer to improve when learners are actively involved in the learning process. Learning was enhanced, for example, when learners were explicitly asked to draw comparisons between base analogues (Kourilsky & Wittrock, 1987; Loewenstein et al., 1999; Thompson et al., 2000), when they actively generated solutions to a base problem rather than simply heard the solution without ever attempting to reach it themselves (Needham & Begg, 1991), and when they were asked to explain in detail the exemplar problem (Ross, Perkins, & Tenpenny, 1990).

The specific-training condition is hypothesized to be effective for learning and transferring a specifically trained strategy such as logrolling. However, such specific training is expected to limit the 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, the diverse training condition is hypothesized to enhance learning of the more general principle of creating value, and not just learning of the specific strategies. It is expected to lead 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 the ability to realize other value-creating strategies that were not specifically learned before. Thus, our specific hypotheses to be examined in the two experiments 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: When engaging in a novel negotiation task, *specifically* trained negotiators will achieve lower joint gain than *non*-trained negotiators

H3: *Diversely* and *specifically* trained negotiators will perform better on strategies that they previously learned compared to negotiators that did not previously learn these strategies, i.e., positive transfer.

H4: Diversely trained negotiators will perform better on strategies they did not specifically learn before than will *specifically* and *non*-trained negotiators.

H5: Specifically trained negotiators will perform worse than *untrained* negotiators on strategies they did not specifically learn before, i.e., negative transfer.

H6: *Diversely* trained negotiators will have more profound value-creation perceptions and a broader understanding of the potential to create value than will specifically trained negotiators and non-trained negotiators.

H7: *Specifically* trained negotiators' value-creation perceptions and their insight regarding the potential for creating value will be narrower and more predominantly focused on the specific strategy they previously encountered than will those of *diversely* trained negotiators and *non-trained* negotiators.

Experiment 1

In this experiment we employ the conditions described above as follows. In the *specific training condition*, participants are actively guided to compare two cases that illustrate the logrolling strategy. In the *diverse training condition*, they actively

compare two cases that illustrate different value-creating strategies, logrolling and compatibilty. In the *control condition*, participants receive no negotiation training.

In both training conditions, we keep the surface aspects of the two cases to be compared as similar as possible, varying only the aspect that we intend to teach; i.e., the cases share the same cover story and negotiation issues and differ only in their particular profit schedules and optimal solutions. This technique is in line with the finding that a near-miss contrast, or a contrasting example that differs in one important aspect only, is most effective for teaching that changing the problem requires changing the appropriate solution to be applied (Winston, 1975; Gick & Paterson, 1992; Ross & Kilbane, 1997).

Method

One hundred forty-eight undergraduate university students voluntarily participated in the experiment for extra course credit. Participants were randomly assigned to one of three between-subject conditions: specific training (logrolling), diverse training (logrolling and compatibility), and control (no training). All conditions included two phases: an initial phase that differed between conditions and a test phase that was identical for all conditions. The design and procedure of the experiment are summarized in Table 1.

< Insert Table 1 >

Training manipulation. Two conditions began with an initial training phase. Participants were told that in this phase they could learn important negotiation skills that might assist them in future real-life negotiations. They were also told that the second phase of the experiment would involve engagement in a negotiation task.

Participants in both training conditions read two negotiation cases adapted from Bazerman, Magliozzi & Neale, 1985. (See Appendix 1a and 1b for the specific

condition and 1a and 1c for the diverse condition). The diversity between the two cases and the generality of the common principle underlying them varied by condition. As can be seen in the Appendix, the basic cover story and issues to be negotiated were identical in all cases. All described a negotiation between a company that manufactures computer screens and a retail store. In all cases, the negotiation involved the same three issues: delivery terms, discount level, and payment terms. The only difference between the cases was their profit schedules. These differences created corresponding differences in the optimal agreements for each case.

In the *specific training condition*, both cases included one distributive issue and a pair of logrolling issues. Hence, logrolling was the common principle for reaching an optimal agreement. The cases differed only with regard to which issues were distributive and which involved logrolling. In the first case, the logrolling issues were delivery and payment terms; in the second, they were delivery terms and discount level (see Appendix 1a and 1b).

In the *diverse training condition*, the first case had one distributive issue and two logrolling issues (identical to the first case in the specific condition – Appendix 1a), while the second case had two distributive issues and one compatible issue (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 (logrolling in the first case, compatibility 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 (see Appendix 2). After participants completed these assignments, the experimenter provided them with a written explanation of the correct answers (see Appendix 3a and 3b).

In the initial phase of the *control condition*, participants performed a task that was cognitively demanding, yet totally irrelevant to negotiations. 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. To motivate participants to take the 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/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, it was run separately from the two training conditions.

Test. The test phase 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 Appendix 4a and 4b). 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 as gains, while in the training cases outcomes were all positively framed. 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 compatible issue (residential/retail space ratio), 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 could be added to create more value (i.e., potential for adding an issue). Thus, it contained potential for using value-creating strategies taught during the training phase (logrolling in both training conditions and compatibility in the diverse training condition), as well as new strategies that were not previously taught in any of the conditions: time tradeoff and adding issues. Moreover, the logrolling strategy that was previously taught in both experimental conditions had less value-creating potential than the two new strategies. Hence, applying the logrolling strategy alone, while missing other strategies for creating value, would result in extremely suboptimal outcomes, with a large portion of the pie left on the bargaining table.

Upon 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). For each agreement, the integrative outcomes were measured by computing the overall joint agreement profits as the sum of the joint profits on all agreement issues. We also looked at the two parties' joint outcomes on each of the integrative issues: the logrolling issues (computed as joint costs associated with developing the park and the parking lot), the

compatible issue (computed as city council's expected income minus development company's costs from the residential/retail space ratio issue), the time preferences issue (computed as joint net incomes from the sports club), and the added issue (whether or not the parties included the external property in their agreement, thereby increasing their joint profits by a fixed amount of $400,000).

Finally, participants were asked to respond to an open-ended question intended to assess their general win-win versus win-lose perceptions about negotiations and 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."

(b) "Multi-issue negotiations contain potential for agreements in which both parties gain more than they would gain by settling for the middle range alternative on each issue."

The verbal responses of participants were coded according to a scheme prepared in advance. The full response of each participant was classified into one of the following six categories: (1) Miscellaneous: no or irrelevant response and explanation; (2) Distributive: perceiving negotiations as win-lose, i.e., as distributive; (3) Logrolling: referring to the potential for creating value by means of logrolling only; (4) Compatibility: referring to the potential for creating value by means of compatibility only; (5) Other Specific: referring to the potential for creating value by means of one of the specific value-creating strategies other than logrolling or compatibility, e.g., adding issue or time preferences; and (6) Profound Understanding: referring to the general potential for creating value. Responses were classified into this final category only if they referred to more than one value-creating strategy,

referred to the impact of the interrelations between interests, or referred to the general importance of trying to maximize joint gains. Examples of responses that were classified into each category are given in Appendix 8.

Results

      We begin by analyzing negotiation outcomes in the transfer task at the dyadic level. Of the 74 negotiating dyads, two – both in the specific training condition – did not reach an agreement. As advised by Tripp & Sondak (1992), we excluded these two dyads (i.e., treated as missing values) when further analyzing negotiation outcomes, resulting in 22, 23, and 27 agreements in the specific, diverse, and control conditions respectively.

      An Anova test of the duration of negotiations as a function of condition revealed no significant effect. Hence, there were no differences between the conditions in the time it took negotiators to reach an agreement.

      We next turn to the integrative quality (i.e., joint outcomes) of the negotiation agreement, for which we had several measures. In addition to measuring the total agreement pie, we also measured each of the specific components that compromise it – the logrolling issues, the compatible issue, the time tradeoff issue, and the added issue. In Table 2 we present the correlations between these various dependent measures. Not surprisingly, the total agreement pie is highly correlated with all of the specific value-creating components that compromise it.

< Insert Table 2 >

      Table 3 summarizes the mean outcomes of the different value-creating components of the negotiation agreement for each condition, as well as results of planned comparisons for testing our specific hypotheses.

< Insert Table 3 >

Joint Total Agreement Outcome (i.e., agreement pie). According to our first hypothsis (H1), when engaging in a novel negotiation, diversely trained negotiators will achieve higher total joint gain than specifically and non-trained negotiators. This hypothesis was supported by our data. As can be seen in Table 3, the mean joint total agreement outcome was highest in the diverse training condition. A planned comparison revealed that, as expected, the mean total outcome in the diverse condition was significantly higher than the mean total outcome in the specific and control conditions.[1]

However, the results did not support hypothesis H2, which predicted that specifically trained participants would achieve lower joint total agreement outcomes than non-trained participants. Although the mean total pie in the specific training condition was the lowest of all conditions, a planned comparison revealed that it was not significantly lower than the control condition.

To gain further insight into the degree to which performance on each value-creating component contributed to the superior overall outcome of the diversely trained negotiators, we next look at the combined outcomes for each of the specific value-creating components.

Logrolling. According to hypothesis H3, diversely and specifically trained negotiators will perform better on strategies that they previously learned compared to negotiators that did not previously learn these strategies, i.e., positive transfer. Since the logrolling strategy was taught in both training conditions, this hypothesis should manifest itself as: (a) participants in the specific training condition performing better

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[1] For all planned comparisons we report one-tail p-levels, since they all test pre-specified hypotheses.

than participants in the control condition, and (b) participants in the diverse training condition performing better than participants in the control condition.

As can be seen in Table 3, planned comparisons for testing these two predictions resulted in a significant difference between the diverse training and the control condition. However, the predicted difference between the specific training and control conditions was not significant. Hence, regarding the trained logrolling strategy, only diverse training that involved comparing two different strategies (logrolling and compatibility) was beneficial for transferring this strategy to a face-to-face negotiation in a very different setting. Differing from our expectations, specific training did not enhance positive transfer of the specifically trained logrolling strategy to a uniquely different task.

Compatible issue. The compatible strategy was taught in the diverse training condition only. Therefore, according to hypothesis H3, participants in this condition were predicted to perform better on the compatible component than were those in both other conditions. Moreover, according to hypothesis H5, specifically trained negotiators were predicted to perform worse than untrained negotiators on this strategy, which they had not specifically learned before, i.e., negative transfer. As shown in Table 3, the two planned comparisons for testing these predictions were not significant. Participants in the diverse condition did not perform significantly better than those in both other conditions, and those in the specific condition did not perform significantly worse than those in the control condition.

Time Preferences. This component contains potential for using a value-creating strategy that was not previously trained in any of the conditions. Negotiators who received diverse training beforehand (i.e., were taught several different strategies) were expected to learn more general strategies than were untrained or

specifically trained negotiators. Therefore, they were predicted to be better than other participants at realizing new value-creating strategies that were not specifically taught before (H4). Indeed, as can be seen in Table 3, mean joint outcomes for this issue were highest in the diverse training condition. A planned comparison revealed that, as expected, the diversely trained negotiators performed significantly better than the specifically and untrained ones on this newly introduced value-creating component.

Results do not provide support for hypothesis H5, which predicted that specifically trained negotiators would perform worse than untrained negotiators on strategies they were not specifically taught before. The mean outcome in the specific training condition was not significantly lower than that in the control condition.

Adding an issue. Like the time preferences component, this too was a new value-creating strategy not previously taught in any of the conditions. Hence, predictions for these two strategies are the same. Hypothesis H4 should manifest itself as diversely trained negotiators performing better than other participants on this new strategy. In addition, hypothesis H5 should manifest itself as specifically trained negotiators performing worse than untrained negotiators.

Unlike the other value-creating components that were part of our transfer task, this one had an all-or-none joint outcome; the external property could optionally be included in the agreement. Not adding it did not increase or decrease joint profits, while adding it increased them by a constant $400,000. Due to the dichotomous nature of its outcome, we analyzed this issue by comparing the proportion of agreements in which it was added in each condition (rather than by comparing the means). Eighty-three percent of the dyads in the diverse training condition included this issue in their agreement; only fifty-nine percent of the dyads in each of the other conditions did. A z-test for comparing these proportions revealed that the proportion

in the diverse training condition was significantly higher than the proportion in the two other conditions. This result provides additional support for hypothesis H4, which predicted that diversely trained participants would perform best on value-creating components that were not previously learned in any condition. Hypothesis H5, however, was not supported with this component. An additional z-test revealed that the proportions in the specific training condition were not smaller than in the control condition.

Open response analysis. As mentioned in the method section, at the end of the experiment, participants responded to a question intended to assess their win-win versus win-lose perceptions and 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 statements and to explain why: (a) "In every negotiation, when one side wins the other side loses," and (b) "Multi-issue negotiations contain potential for agreements in which both parties gain more than they would gain by settling for the middle range alternative on each issue."

Due to an error in one of the sessions of the training conditions, 20 participants did not receive this question, leaving us with data for 128 of the 148 participants (54 in the control condition and 37 in each of the training conditions). A sub-sample of twenty-five responses was randomly selected. Two coders, aware of the experimental hypotheses but blind to the condition that yielded the output, reviewed and coded these responses independently. Cramer's R was computed as an index for inter-rater reliability and equaled 0.88 ($\chi^2_{(25)}$=87.5, p<0.01). All 128 responses were then coded by one of these coders.

The number (percent) of responses classified into each category in each of the conditions is presented in Table 4. As expected, the most frequent category in the

diverse training condition responses was Profound Understanding (43 percent), while the most frequent category in the specific training condition was Logrolling (54 percent).

< Insert Table 4 >

Z-tests for comparing percentages in these two categories confirmed these observations. The percentage of participants classified into the Profound Understanding category was significantly larger in the diverse training condition than in both other conditions (z=4.08, p<.01). The percentage of participants classified to the Logrolling category was significantly larger in the specific training condition than in both of the other conditions (z=4.87, p<.01).

These results are in line with hypothesis H6, which predicted that participants in the diverse training condition would have more profound win-win perceptions about negotiations and a broader understanding of the potential to create value than would participants in both other conditions. The results also support hypothesis H7, which predicted that participants in the specific training condition would be specifically focused on the potential for logrolling.

Discussion

Results of the first experiment suggest that diverse training, wherein negotiators learn and compare several different strategies, is more effective for learning general strategies than specific training, wherein negotiators repeatedly learn and compare instances of one specific strategy. As predicted in hypothesis H1, in their final agreements, diversely trained negotiators reached significantly higher total joint outcomes than did specifically trained and untrained participants. Not only did these participants achieve the best total agreement outcomes, but they also performed

the 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 superior performance of the diversely trained participants on new components that they did not previously encounter suggests that their overall superior performance is probably based on learning 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 their better performance was accompanied by more profound win-win perceptions about negotiations and a deeper understanding of the potential to create value.

Contradicting our expectations (H3), however, the diversely trained group did not outperform the other groups on the compatible strategy that was distinctively taught in the diverse condition. The failure to observe a significant transfer effect on the learned compatible issue is not unique to the present study. Thompson (1990b, 1990c, 1992), for example, also found no positive learning effects on compatible issues. A significant number of negotiators failed to reach the optimal solution, even when training conditions were hypothesized to be superior. Hence, the compatible strategy seems particularly difficult to teach, and is therefore not re-used in our second study.

Moreover, although this study provides initial support for the key claim of our approach regarding the effectiveness of diverse training for learning broad negotiation principles, it fails to replicate a previously well established finding on the effectiveness of specific training for learning a specifically trained strategy. (Loewenstein et al., 1999, 2003; Thompson et al., 2000; Gentner, Loewenstein, &

Thompson, 2003; Nadler, Thompson, & Van Boven, 2003). Our specific training did not enhance negotiators' performance even on the specific logrolling strategy for which they were trained; on this issue they performed no better than untrained negotiators.

This failure may be due to the particular training manipulation employed in our study. While prior research on specific analogical encoding used comparisons between cases with *different* surface structures (changing contexts), in our training we kept the surface aspects of the two cases to be compared as similar as possible, varying only the aspect that we intended to teach. The training cases shared the same cover story and negotiation issues and differed only in their particular profit schedules and optimal solutions. This procedure was based on the finding that a near-miss contrast, which is a contrasting example that differs in one important aspect only, is most effective for teaching that changing the problem requires changing the appropriate solution to be applied (Winston, 1975; Gick & Paterson, 1992; Ross & Kilbane, 1997). Employing this technique seems to have been effective for diverse training that entailed two different strategies. However, in the specific training condition that involved one common strategy, not changing the surface structure may have limited the level of abstraction of the common strategy, thereby limiting the ability to appropriately transfer it to the new, very diverse situation, where transparency was low. In addition, giving two nearly identical cases that illustrate the same abstract principle may have caused the second case to seem redundant, which, according to data and literature on the redundancy effect (e.g., Leahy, Chandler, & Sweller, 2003; Chandler & Sweller, 1991, 1996; Mayer, Heiser, & Lonn, 2001), may have harmed learning. In Experiment 2, we modify the training so that participants compare and contrast cases with changing (rather than identical) surface structures.

Given the absence of positive transfer in the specific training condition, the failure to detect negative transfer in this condition (as predicted in H2) is understandable. Negative transfer results from inappropriate, blind, and automatic application of a *learned* principle to other tasks (e.g., Brown & Campione, 1983; Gentner & Toupin, 1986; Chen & Daehler, 1989; Novick & Holyoak, 1991; Kim, 1997). As limited learning and insufficient abstraction of a specific principle probably constrained the expected benefit of specific training (i.e., appropriate positive transfer), it also may have inhibited its shortcoming (i.e., inappropriate negative transfer).

Experiment 2

This experiment explores the inconsistency between our first experiment and the existing literature – namely, the absence of specific positive transfer in the specific training condition. We do this by modifying the training manipulation to allow participants to compare and contrast cases with changing (rather than identical) contexts and surface structures. Moreover, in order to extend the generality of our main findings in Experiment 1, we re-examine the same hypotheses with a different set of value-creating strategies and with monetary incentives. In particular, in the *specific training condition* we use a contingent contract (while in Experiment 1 we used logrolling), and in the *diverse training condition* we use a contingent contract and logrolling (while in Experiment 1 we used logrolling and compatibility). While logrolling and compatibility both require a focus on examining the payoff structures of both parties, the contingent agreement requires a focus on each party's expectations, and therefore exposes the learner to something quite different.

Regarding the monetary incentive, at the end of the entire experiment, four participants are randomly selected and paid based on their negotiation outcome in the test phase.

Method

One hundred and sixteen undergraduate university students voluntarily participated in the experiment for extra course credit. Participants were randomly assigned to one of the three between-subject conditions: specific training (contingent contract), diverse training (contingent contract and logrolling), and control (no training – identical to Experiment 1). As in Experiment 1, all conditions included two phases: an initial phase that differed between conditions and a test phase that was identical for all conditions. The design and procedure of the experiment are summarized in Table 5.

< Insert Table 5 >

Training manipulation. The basic procedure in the two training conditions was the same as in Experiment 1. Participants read two negotiation cases (see Appendix 5a and 5b for the specific condition and 5a and 1a for the diverse condition). However, as can be seen in the Appendix, in this experiment (unlike Experiment 1), the context and cover story varied between the cases.

Similar to the first experiment, 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 Appendix 5a and 5b, adapted from Loewenstein et al., 1998 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 – Appendix 5a), while the second case demonstrated logrolling (identical to the first case used in both conditions of Experiment 1- presented in Appendix 1a). 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).

As before, in each case, a hypothetical consultant proposed an optimal equitable agreement. After reading the two cases and their proposed optimal agreements, training was further activated using the same guiding questionnaire as in Experiment 1 (presented in Appendix 2). As before, after participants completed it, the experimenter provided them with a written explanation of the correct answers (see Appendix 6a and 6b).

Test. Aside from the addition of a monetary incentive, the procedure was identical to Experiment 1. It involved a slightly modified version of the multi-issue negotiation task (presented in Appendix 4a and 4b). The only difference in the materials was a change in issue "c" (which was a compatible issue in Experiment 1). This issue was supplemented in this experiment by a contingent contract issue (see Appendix 7a and 7b). Consequently, the test task 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 again 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: time tradeoff and adding issues.

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 NIS).

As in Experiment 1, 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). They were then asked to respond to the same open-ended question used in Experiment 1 for assessing their general win-win versus win-lose perceptions about negotiations and the depth of their understanding of the potential to create value (see Appendix 2).

Results

Of the fifty-eight negotiating dyads, eleven did not reach an agreement (two in the control condition, four in the specific training condition, and five in the diverse training condition) and were excluded from further analyses, resulting in 16, 14, and 17 agreements in the different conditions, respectively.

An Anova test of the duration of negotiations as a function of condition revealed no significant effect. Hence, as in Experiment 1, there were no differences between the conditions in the time it took negotiators to reach an agreement.

We next turn to our main interest: the integrative quality (i.e., joint outcomes) of the agreements as a function of condition. As in Experiment 1, in order to justify

separate analyses of the multiple value-creating measures, we first present the correlations among them (see Table 6) and show that the correlations among most components are not very high, although as expected they have quite high correlations with the total pie.

< Insert Table 6 >

Consequently, we again first analyze the total value created (computed as the sum of both parties' overall profits) and then continue to separately analyze the joint outcomes on each of the value-creating components – the contingent contract issue, the logrolling issues, the time tradeoff issue, and the added issue. Table 7 summarizes the mean outcomes on these different value-creating components for each condition, as well as results of planned comparisons for testing our specific hypotheses.

< Insert Table 7 >

Joint Total Agreement Outcome (i.e., agreement pie). Supporting our first hypothesis (H1), and replicating the finding in Experiment 1, diversely trained negotiators achieved higher total joint gain than specifically and non-trained negotiators. As can be seen in Table 7, a planned comparison revealed that the mean total outcome in the diverse condition was significantly higher that the mean total outcome in the specific and control conditions.

However, as in Experiment 1, results did not provide support for hypothesis H2, according to which specifically trained participants will achieve lower joint total agreement outcomes than non-trained participants. A planned comparison revealed that the mean total pie in the specific training condition was not significantly lower than in the control condition.

Contingent contract. This strategy was taught in both training conditions.

Therfore, our third hypothsesis (H3), which predicts that participants in both training conditions will perform better on strategies for which they are trained compared to untrained participants, should manifest itself here as: (a) participants in the specific training condition performing better than participants in the control condition, and (b) participants in the diverse training condition performing better than participants in the control condition.

The outcome on this component was dichotomous. All dyads that realized and implemented the potential contingent contract in their agreement increased their combined expected value by a constant $50,000. As a consequence, when performing the planned comparisons, we use Z tests to compare the proportion of agreements in which the contingent contract was implemented in the different conditions (rather than comparing the means).

As can be seen in Table 7, planned comparisons for testing the above-mentioned predictions were significant. Comparing proportions revealed a significant difference between the diverse training and the control condition. More importantly, in this experiment, unlike in the first one, the difference between the specific training and control conditions was also significant. Hence, regarding the trained contingent strategy, both of 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, in this experiment, specific training did effectively enhance positive transfer of the specifically trained strategy to a uniquely different task.

Logrolling issues. The logrolling strategy was taught in the diverse training condition only. Therefore, hypothesis H3 predicted that participants in this condition would perform better on this component than would those in both other conditions.

As shown in Table 7, 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.

Hypothesis H5 should manifest itself as specifically trained negotiators performing worse than untrained negotiators on this strategy that they did not specifically learn before. As shown in Table 7, the planned comparison for testing this prediction was not significant; participants in the specific condition did not perform significantly worse than those in the control condition.

Time Preferences. Creating value by means of this strategy was not previously trained in any of the conditions. Hence, according to hypothesis H4, negotiators who received diverse training were expected to be better than other participants at implementing this new strategy. Indeed, as can be seen in Table 7, 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.

However, results on this component do not provide support for hypothesis H5, according to which specifically trained negotiators will perform worse than untrained negotiators on strategies they were not specifically taught before. The mean outcome in the specific training condition was not significantly lower than that in the control condition.

Adding an issue. This too was a new value-creating strategy not previously taught in any of the conditions. Hence, once again, hypothesis H4 should manifest itself as diversely trained negotiators performing better on this new strategy than other participants. In addition, hypothesis H5 should manifest itself as specifically trained negotiators performing worse than untrained negotiators.

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 (rather than comparing means). As shown in Table 7, 71 percent of the dyads in the diverse training condition included this issue in their agreement, while only 50 percent of the dyads in each of the other conditions did. However, a Z test comparing these proportions revealed that the proportion in the diverse training condition was not significantly higher than the proportion in the two other conditions.

Moreover, as before, no support was found for hypothesis H5. Participants in the specific training condition were not worse than those in the control condition at implementing this strategy.

Open response analysis. As mentioned in the method section, as in Experiment 1, participants responded at the end of the experiment to a question intended to assess their win-win versus win-lose perceptions and the depth of their understanding of the potential to create value. Two participants did not hand in this questionnaire, leaving us with data for 114 of the 116 participants (35 in the control condition, 36 in the specific training condition, and 43 in the diverse training condition).

A sub-sample of 33 responses was randomly selected and independently coded by two coders who were aware of the experimental hypotheses but blind to the condition that yielded the output. Cramer's R was computed as an index for Inter-rater reliability and equaled 0.88 ($\chi^2_{(36)}$=154.2, p<0.01). All 114 responses were then coded by one of these coders.

The number (percent) of responses classified into each category in each of the conditions is presented in Table 8. The results replicate those found in Experiment 1.

< Insert table 8 >

Z tests for testing hypotheses H6 and H7 revealed the following results. First, the percentage of participants classified into the Profound Understanding category was significantly larger in the diverse training condition than in the specific and control conditions combined ($z=7.19$, $p<.01$). Second, the percentage of participants classified into the Contingent Contract category in the specific training condition was significantly larger than in both other conditions ($z=1.07$, $p<.05$).

These results adjoin the results of the first experiment and provide additional support for hypothesis H6, which predicts that participants in the diverse training condition will acquire more profound win-win perceptions about negotiations and a broader understanding of the potential to create value than will participants in both other conditions. They also extend the support for hypothesis H7 by showing once again that participants in the specific training condition tend to be specifically focused on the potential to create value by means of the specific strategy they previously encountered – i.e., contingent contracts.

Discussion

In this experiment, which uses monetary incentives and varies the training strategies employed, we replicate the basic finding in Experiment 1 that diverse training is more effective than specific training for realizing and implementing a broad range of strategies, including ones never encountered before by the negotiators. Hence, this experiment extends the generalizabilty of our basic claim that diverse training is more effective than specific training in teaching underlying principles for creating value and transferring these principles to a broad range of dinstinctive negotiation situations.

Moreover, the combination of the two studies provides clarity concerning the failure to replicate the positive learning effects of specific training in study 1. In study 2, we found positive transfer of the strategies trained in the first stage of the experiment. Thus, together, the two studies suggest that changing the context between the two tasks that contain the analogy may be important to maximize the specific learning that takes place. Our two studies are consistent in their failure to find the predicted negative transfer. Although specifically trained negotiators perform worse than diverse trained negotiators, they do not perform worse than untrained ones. These findings suggest that the effects of specific training may have limited generalizability; however, the findings do not support the notion of negative transfer. We hope that it has been worthwhile to eliminate one concern about analogical reasoning that, based on related literature, appeared viable.

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. Even when studies found improvement in learning, such improvement was usually limited to the specific task in which it was acquired. Perhaps the most encouraging new direction for developing a startegy that actually has the power to improve decision making and negotiation comes from the emerging literature on analogical reasoning (Thompson et al., 2000; Loewenstein et al., 1999, 2003; Gentner et al., 2003; Nadler et al., 2003). 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.

The key claim of our approach is that the learning of specific strategies may bring 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 "it is important to understand how parties' interests interrelate") facilitates successful transfer to a broader range of new negotiation situations and enhances the ability to implement diverse value-creating strategies, including ones never previously encountered.

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 suggest that such training may be less effective when the situation changes dramatically.

Our study examined the effectiveness of different analogical case training procedures for developing broad, underlying integrative negotiation principles rather than specific strategies. Results suggest that diverse analogical case training, wherein negotiators study and compare several different strategies, is more effective at promoting the learning of general strategies than is specific training, wherein negotiators repeatedly study and compare instances of one specific strategy. As hypothesis H1 predicted, in their final agreements, diversely trained negotiators reached significantly higher total joint outcomes than did specifically trained and untrained participants. Not only did these participants achieve the best total agreement outcomes, but they also performed the best on most secondary measures

(i.e., specific strategies). Their joint outcomes were better than those of specifically trained negotiators on some specific strategies that they previously had learned and also were better on some strategies that they had not previously learned.

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 compatible strategy in study 1 and the logrolling strategy in study 2). Clearly, this was not the case in either experiment. The superior performance of the diversely trained participants on new components that they had not previously encountered suggests that their overall superior performance is more likely to be based on a better schema of value creation. This argument is strengthened by the fact that, in both experiments, these participants' better performance was accompanied by more profound win-win perceptions about negotiations and a deeper understanding of the potential to create value.

Based on this pattern of results – the outcomes in the transfer task, as well as results of our understanding questionnaire – we conclude that diverse analogical training can indeed be effective for attaining a higher level of expertise, i.e., improved cognitive representation of the task domain, which enables an understanding of which particular strategies might be effective in different situations and why (Hammond & Grassia, 1985; Neale & Bazerman, 1991; Dawes & Corrigan, 1974; Neale & Northcraft, 1990).

These 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 extremely common. In addition to the obvious implications for classroom instruction, they may have broader implications for areas such as organizational behavior as well. The finding that inducing a specific focus may constrain broad thought processes is worth particular 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 are not the focus of reward may be neglected (Kerr, 1975; Staw & Boettger, 1990; Schweitzer et al., 2003, Bereby-Meyer et al., 2004). 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 give hope to the notion that negotiators can be trained to acquire broader negotiation strategies, several questions may be worth pursuing in future research. 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 creating value)? Future research might also broaden the scope of the instructional methods examined, including face-to-face negotiations in the training phase, for example, rather than just case studies. In this research, we demonstrate the value of applying ideas from the literatures of cognitive and educational psychology to the field of managerial education. We hope that researchers will continue these

efforts. Finally, we are inspired by the evolution of the work on analogical reasoning and hope that this paper expands its impact one step further.

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Table 1: <u>Design of Experiment 1</u>

Condition	Learning phase			Test phase
	Case 1	Case 2	Compare and identify common principle	
Specific training (N=48)	Logroll (a) two logroll issues, one distributive	Logroll (b) two logroll issues, one distributive	Create value by logrolling	Complex integrative negotiation task including: Logroll, Compatible, Time trade-off, Add issue, and Distributive *
Diverse training (N=46)	Logroll (a) two logroll issues, one distributive	Compatible one compat. issue, two distributive	Create value by different strategies: logroll, compatible	"
Control – no training (N=54)	**Irrelevant task - identifying "ing" in a text**			"

∗ In the specific training condition: Compatibility, Time trade-off, and Add issue were the integrative strategies not previously taught.

In the diverse training condition: Time trade-off, and Add issue were the integrative strategies not previously taught.

Table 2: <u>Experiment 1 - Correlations among the various value-creating measures</u>

	Total Pie	Logrolling	Compatible	Time pref.	Add issue
Total Pie	1.00				
Logrolling	0.47*	1.00			
Compatible	0.52*	0.27*	1.00		
Time pref.	0.65*	0.26*	-.05	1.00	
Add issue	0.80*	0.18	0.31*	0.24*	1.00

* = significant at $p < .05$

Table 3: Experiment 1- Mean (sd) joint outcomes in each condition

and results of planned comparisons

	Control: no training (N=27)	Specific Training (N=22)	Diverse Training (N=23)	Hypothesis & Comparison	Statistic	P	η^2
Total agreement pie	$4,871,667 (330,614)	$4,776,136 (337,914)	$5,072,174 (315,205)	*H1*: D - S&C ** *H2*: S – C	t_{69}=2.99 t_{69}=1.01	.01 .15	.11 .01
Logrolling issues *(previously taught in diverse & specific)*	$-298,148 (42,701)	$-297,727 (58,711)	$-254,348 (49,802)	*H3*: D – C ** *H3*: S – C	t_{69}=3.07 t_{69}=.03	.01 .5	.12 0
Compatible issue *(previously taught in diverse, not in specific)*	$294,444 (111,229)	$275,000 (136,931)	$310,870 (92,879)	*H3*: D - S&C *H5*: S – C	t_{69}=.90 t_{69}=.59	.2 .3	.01 0
Time preference issue *(not previously taught)*	$4,638,333 (148,512)	$4,562,500 (169,732)	$4,685,217 (176,013)	*H4*: D - S&C * *H5*: S – C	t_{69}=2.04 t_{69}=1.61	.05 .06	.06 .04
Adding issue Number (%) of agreements *(not previously taught)*	16 (59%)	13 (59%)	19 (83%)	*H4*: D - S&C * *H5*: S – C	z=2.01 z=0	.05 .5	.02 0

D= Diverse, S= Specific, C=control

* = p<0.05,   ** = p<0.01

Table 4: <u>Experiment 1 - Number (%) of responses in each category by condition</u>

	Miscella-neous (0)	Distribu-tive (1)	Logroll-ing (2)	Compati-bility (3)	Other Specific (4)	Profound (5)	Total
Control (row %)	22 (40.7%)	8 (14.8%)	5 (9.3%)	9 (16.7%)	1 (2%)	5 (9.3%)	54
Specific (row %)	5 (13.5%)	2 (5.4%)	**20* (54%)**	4 (10.8%)	0 (0%)	5 (13.5%)	37
Diverse (row %)	10 (27%)	4 (10.8%)	5 (13.5%)	1 (2.7%)	0 (0%)	**16* (43.2%)**	37
All conditions	37	14	30	14	1	26	128

* Percentage significantly larger than in both other conditions (p<.05).

Table 5: <u>Design of Experiment 2</u>

Condition	Learning phase			Test phase
	Case 1	Case 2	Compare and identify common principle	
Specific training (N=36)	Contingent (a)	Contingent (b)	Create value by contingent contracts	Complex integrative negotiation task including: Contingent, Logroll, Time trade-off, Add issue, and Distributive *
Diverse training (N=44)	Contingent (a)	Logroll two logroll issues, one distributive	Create value by different strategies: logroll, contingent	"
Control – no training (N=36)	**Irrelevant task - identifying "ing" in a text**			"

* 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.

Table 6: <u>Exp. 2 - Correlations among the various value-creating measures</u>

	Total Pie	**Logrolling**	**Contingent**	**Time pref.**	**Add issue**
Total Pie	1.00				
Logrolling	0.53*	1.00			
Contingent	0.32*	0.28	1.00		
Time pref.	0.70*	0.32*	0.39*	1.00	
Add issue	0.82*	0.30*	0.07	0.19	1.00

* = significant at p<.05

Table 7: <u>Experiment 2 - Mean (sd) joint outcomes or proportions in each condition and results of planned comparisons</u>

	Control: no training (N=16)	Specific Training (N=14)	Diverse Training (N=17)	Hypothesis & Comparison	Statistic	P	η^2
Total agreement pie	$4,108,244 (266,074)	$4,119,714 (319,293)	$4,402,353 (233,440)	*H1:* D - S&C **	$t_{44}=3.49$	.01	.22
				H2: S – C	$t_{44}=0.12$	.5	0
Contingent contract issue Number (%) of agreements *(previously taught in Diverse & Specific)*	2 (12.5%)	6 (43%)	15 (88%)	*H3:* D – C **	z=4.34	.01	.06
				H3: S – C *	z=1.88	.05	.05
Logrolling issues *(previously taught in Diverse, not in Specific)*	$-278,125 (40,697)	$-278,571 (54,470)	$-244,118 (42,875)	*H3:* D - S&C **	$t_{44}=2.45$	.01	.12
				H5: S – C	$t_{44}=0.03$	.5	0
Time preference issue *(not previously taught)*	$4,576,994 (136,777)	$4,584,000 (157,427)	$4,734,706 (112,368)	*H4:* D - S&C **	$t_{44}=3.75$	.01	.24
				H5: S – C	$t_{44}=0.14$	.5	0
Adding issue Number (%) of agreements *(not previously taught)*	8 (50%)	7 (50%)	12 (71%)	*H4:* D - S&C	z=1.40	.08	.03
				H5: S – C	z=0	.5	0

D= Diverse

S= Specific

C=control

* = p<0.05,   ** = p<0.01

Table 8: <u>Experiment 2 - Number (%) of responses in each category by condition</u>

	Miscella-neous (0)	Distribu-tive (1)	Contin-gent (2)	Logroll-ing (3)	Other Specific (4)	Profound (5)	Total
Control (row %)	14 (40%)	12 (34.3%)	0 (0%)	4 (11.4%)	3 (8.5%)	2 (5.7%)	35
Specific (row %)	14 (38.9%)	6 (16.7%)	**8*** **(22.2%)**	1 (2.8%)	1 (2.8%)	6 (16.7%)	36
Diverse (row %)	8 (18.6%)	1 (2.3%)	6 (13.9%)	2 (4.7%)	0 (0%)	**26*** **(60.5%)**	43
All conditions	36	19	14	7	4	34	114

* Percentage significantly larger than in both other conditions (p<.05).

Appendix 1a

Experiment 1: Training Case 1 - specific and diverse conditions
(logroll a)

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.

Dani the Retailer (buyer) Profits - "Millennium"

	Delivery Terms			Discount Level			Payment Terms	
Level	**Alternative**	**Profit**	**Level**	**Alternative**	**Profit**	**Level**	**Alternative**	**Profit**
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	$1000
D	45 days	$600	D	3%	$900	D	4 payments	$1500
E	40 days	$800	E	4%	$1200	E	5 payments	$2000
F	35 days	$1000	F	5%	$1500	F	6 payments	$2500
G	30 days	$1200	G	6%	$1800	G	7 payments	$3000
H	25 days	$1400	H	7%	$2100	H	8 payments	$3500
I	20 days	$1600	I	8%	$2400	I	9 payments	$4000

Yossi the Manufacturer (seller) Profits - "AA"

	Delivery Terms			Discount Level			Payment Terms	
Level	**Alternative**	**Profit**	**Level**	**Alternative**	**Profit**	**Level**	**Alternative**	**Profit**
A	60 days	$4000	A	0%	$2400	A	Cash	$1600
B	55 days	$3500	B	1%	$2100	B	2 payments	$1400
C	50 days	$3000	C	2%	$1800	C	3 payments	$1200
D	45 days	$2500	D	3%	$1500	D	4 payments	$1000
E	40 days	$2000	E	4%	$1200	E	5 payments	$800
F	35 days	$1500	F	5%	$900	F	6 payments	$600
G	30 days	$1000	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 1b

Experiment 1: Training Case 2 - specific condition
(logroll b)

Michal is the Marketing Manager of "Screens Ltd." - a company that manufactures computer screens. Osnat is the representative of "Super Computer" – 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 and 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 her 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.

Osnat the Retailer (buyer) Profits – "Super Computer"

	Delivery Terms			*Discount Level*			*Payment Terms*	
Level	**Alternative**	**Profit**	**Level**	**Alternative**	**Profit**	**Level**	**Alternative**	**Profit**
A	60 days	0$	A	0%	0$	A	Cash	$0
B	55 days	400$	B	1%	100$	B	2 payments	$200
C	50 days	800$	C	2%	200$	C	3 payments	$400
D	45 days	1200$	D	3%	300$	D	4 payments	$600
E	40 days	1600$	E	4%	400$	E	5 payments	$800
F	35 days	2000$	F	5%	500$	F	6 payments	$1000
G	30 days	2400$	G	6%	600$	G	7 payments	$1200
H	25 days	2800$	H	7%	700$	H	8 payments	$1400
I	20 days	3200$	I	8%	800$	I	9 payments	$1600

Michal the Manufacturer (seller) Profits - "Screens, Ltd."

	Delivery Terms			*Discount Level*			*Payment Terms*	
Level	**Alternative**	**Profit**	**Level**	**Alternative**	**Profit**	**Level**	**Alternative**	**Profit**
A	60 days	800$	A	0%	3200$	A	Cash	$1600
B	55 days	700$	B	1%	2800$	B	2 payments	$1400
C	50 days	600$	C	2%	2400$	C	3 payments	$1200
D	45 days	500$	D	3%	2000$	D	4 payments	$1000
E	40 days	400$	E	4%	1600$	E	5 payments	$800
F	35 days	300$	F	5%	1200$	F	6 payments	$600
G	30 days	200$	G	6%	800$	G	7 payments	$400
H	25 days	100$	H	7%	400$	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 I - 20 days
Discount level: Alternative A - 0%
Payment terms: Alternative E - 5 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 1c

Experiment 1: Training Case 2 - diverse condition
(compatibility)

Michal is the Marketing Manager of "Screens Ltd." - a company that manufactures computer screens. Osnat is the representative of "Super Computer" – 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 and 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 her 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.

Osnat the Retailer (buyer) Profits – "Super Computer"

	Delivery Terms			Discount Level			Payment Terms	
Level	Alternative	Profit	Level	Alternative	Profit	Level	Alternative	Profit
A	60 days	0$	A	0%	$0	A	Cash	0$
B	55 days	400$	B	1%	$200	B	2 payments	100$
C	50 days	800$	C	2%	$400	C	3 payments	200$
D	45 days	1200$	D	3%	$600	D	4 payments	300$
E	40 days	1600$	E	4%	$800	E	5 payments	400$
F	35 days	2000$	F	5%	$1000	F	6 payments	500$
G	30 days	2400$	G	6%	$1200	G	7 payments	600$
H	25 days	2800$	H	7%	$1400	H	8 payments	700$
I	20 days	3200$	I	8%	$1600	I	9 payments	800$

Michal the Manufacturer (seller) Profits - "Screens, Ltd."

	Delivery Terms			Discount Level			Payment Terms	
Level	Alternative	Profit	Level	Alternative	Profit	Level	Alternative	Profit
A	60 days	0$	A	0%	$1600	A	Cash	800$
B	55 days	400$	B	1%	$1400	B	2 payments	700$
C	50 days	800$	C	2%	$1200	C	3 payments	600$
D	45 days	1200$	D	3%	$1000	D	4 payments	500$
E	40 days	1600$	E	4%	$800	E	5 payments	400$
F	35 days	2000$	F	5%	$600	F	6 payments	300$
G	30 days	2400$	G	6%	$400	G	7 payments	200$
H	25 days	2800$	H	7%	$200	H	8 payments	100$
I	20 days	3200$	I	8%	$0	I	9 payments	0$

A consultant has suggested to the parties that they sign the following agreement:
Delivery terms: Alternative I - 20 days
Discount level: Alternative E - 4%
Payment terms: Alternative E - 5 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 2

Training conditions - Questionnaire

What are the key similarities between these two cases?

What are the key differences between these two cases? *

Please describe the solution suggested by the consultant in each case, say how successful you think it is, and explain why:

What are the key similarities between the suggestions made by the consultants in the two cases?

What are the key differences between the suggestions made by the consultants in the two cases?

Please identify a general principle that captures the essence of both the strategies suggested by the consultants

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*This question was included in the diverse training condition only.

Appendix 3a

Experiment 1: Specific Condition – Written Explanation

The key similarity between these two cases is that both are examples of a negotiation in which the preferences of the two negotiating parties make it possible to reach creative agreements that are more beneficial for both parties than simple compromise agreements that involve settling for the middle range alternative on each issue.

In both cases, the two negotiating parties have different issue priorities.

In the negotiation between Yossi (from"A.A".) and Dani (from"Millennium") , as can be seen in the profit schedules, the two negotiating parties have different issue priorities:

For Dani from "Millennium", payment terms are most important (they can increase his profit by up to $4,000) while delivery terms are least important (they can increase his profit by up to $1,600 only).

For Yossi from "AA", the opposite is true: delivery terms are most important (they can increase his profit by up to $4,000), while payment terms are least important (they can increase his profit by up to $1,600 only).

As the consultant suggests, a mutually beneficial agreement can be achieved by making a trade off, so that each party gets the maximum for the issue that is most important to him in return for entirely giving up on the issue that is least important to him, and by settling for the middle alternative on the remaining issue. Such an agreement increases the gains of both the parties: each of the parties will gain $5,200, whereas compromising on the middle alternative (Alternative"E") for all three issues, will result in each of them gaining $4,000 only.

In the negotiation between Michal (from "Screens Ltd.") and Osnat (from "Super Computer"), as can also be seen in the profit schedules, the two negotiating parties have the following issue priorities:

For Osnat from "Super Computer", delivery terms are most important (they can increase her profit by up to 3,200$), while discount level is least important (it can increase her profit by up to 800$ only).

For Michal from "Screens Ltd." the opposite is true: discount level is most important (it can increase her profit by up to 3,200$), while delivery terms are least important (they can increase her profit by up to 800$ only).

Again, as the consultant suggests, a mutually beneficial agreement can be achieved by making a trade off, so that each party gets the maximum for the issue that is most important to him, in return for entirely giving up on the issue that is least important to him, and by settling for the middle alternative on the remaining issue. Such an agreement increases the gains of both parties: each of the parties will gain $4,000, whereas compromising on the middle alternative for each issue, will result in each of them gaining $2,800 only.

To summarize, these two cases illustrate a situation where there is potential to increase the value of the agreement for both parties. In particular, in both cases, the negotiating parties have different priorities, and therefore trade-offs are beneficial: they lead to agreements that are better for both parties in comparison to agreements that involve a simple compromise on the middle alternative for each issue.

Appendix 3b

Experiment 1: Diverse Condition – Written Explanation

The key similarity between these two cases is that both are examples of a negotiation in which the preferences of the two negotiating parties make it possible to reach creative agreements that are more beneficial for both parties than simple compromise agreements that involve settling for the middle range alternative on each issue.

The key difference between the cases is in the way by which such beneficial agreements can be achieved:

In the negotiation between Yossi (from"A.A".) and Dani (from"Millennium") , as can be seen in the profit schedules, the two negotiating parties have different issue priorities:

For Dani from "Millennium", payment terms are most important (they can increase his profit by up to $4,000) while delivery terms are least important (they can increase his profit by up to $1,600 only).

For Yossi from "AA", the opposite is true: delivery terms are most important (they can increase his profit by up to $4,000), while payment terms are least important (they can increase his profit by up to $1,600 only).

As the consultant suggests, a mutually beneficial agreement can be achieved by making a trade off, so that each party gets the maximum for the issue that is most important to him in return for entirely giving up on the issue that is least important to him, and by settling for the middle alternative on the remaining issue. Such an agreement increases the gains of both the parties: each of the parties will gain $5,200, whereas compromising on the middle alternative (Alternative "E") for all three issues, will result in each of them gaining $4,000 only.

In the negotiation between Michal (from "Screens Ltd.") and Osnat (from "Super Computer"), as can be seen in the profit schedules, the two negotiating parties have the same issue priorities. However, for the issue of delivery terms the parties preferences are the same – i.e., not in conflict - both parties prefer the "20 days" alternative. Therefore, as the consultant suggests, a mutually beneficial agreement can be achieved by parties agreeing on alternative I for the delivery terms issue, which is the best for both of them, and on the middle alternative – alternative "E" - for the other two issues: "discount level" and "payment terms". Such an agreement increases the gains of both the parties: each of the parties will gain 4,400$, whereas compromising on the middle alternative (alternative E) for each issue, will result in each of them gaining 2,800$ only.

To summarize, the main similarity between these cases is that both are examples of a situation where there is potential for increasing the value of the agreement for both of the parties. The main difference is in the specific way that the party's preferences relate to each other and therefore in the way that such a mutually beneficial agreement can be achieved:
a)   When the parties have different priorities - by making trade-offs.
b)   When there is an issue for which the parties don't have a conflict of interests - by agreeing to the alternative that has the highest value for both parties on that issue.

Appendix 4a

Experiment 1: 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 non-negotiable. 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) Ratio of residential versus retail space
- 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

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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) Retail / residential space ratio
The project plan includes a shopping center. However, the current contract terms do not specify the size of space designated for residential and retail purposes. Therefore, you and Mr. Ronen from the city council need to negotiate this space ratio. It is known that residential building costs are higher than retail ones. Therefore, the larger the residential space, the higher your costs. The table below specifies the negotiable ratio alternatives, and an estimation of the additional building costs that Realty should expect for each alternative.

Retail/Residential ratio	Realty's costs
1:1	$0
1:1.5	$75,000
1:2	$150,000
1:2.5	$225,000
1:3	$300,000

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) <u>Dividing the income from a sports club</u>
The project also includes a sports club, which has been leased out in advance to a third party for a period of three years. The terms of the contract currently state that the income from leasing the sports club - $2million per year for three 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 since 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 three 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 4b

Experiment 1: 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 non-negotiable. 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)   Ratio of residential versus retail space
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) Retail / residential space ratio

The project plan includes a shopping center. However, the current contract terms do not specify the size of space designated for residential and retail purposes. Therefore, you and Mr. Tivon from the Realty need to negotiate this space ratio. Since the taxes raised by the city council for retail space are higher than from residential space, the larger the residential area, the lower the city council's extra income from the project. The table below specifies the negotiable ratio alternatives, and an estimation of the additional overall 3 year income the city council can expect for each alternative (three years is the customary planning period in the city council, therefore the numbers refer to the total tax expected to be gained over the three year period)

Retail/Residential ratio	City council's income
1:1	$350,000
1:1.5	$275,000
1:2	$200,000
1:2.5	$125,000
1:3	$50,000

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) <u>Dividing the income from a sports club</u>
The project also includes a sports club, which has been leased out in advance to a third party for a period of three years. The terms of the contract currently state that the income from leasing the sports club - $2million per year for three 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 5a

Experiment 2: 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 US 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 US 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 US. 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 5b

Experiment 2: 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 won't 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 doesn't 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.

Appedix 6a

Experiment 2: Specific Condition – Written Explanation

The key similarity between these two cases is that both are examples of a negotiation in which differences in the beliefs of the two negotiating parties make it possible to reach creative agreements that are more beneficial for both parties compared to simple compromise agreements that involve settling for a middle range alternative. The difference between the two cases is in the specific content and context: business versus friendship.

In both cases, the two negotiating parties have ***different beliefs about the future***.

In the negotiation between the Syd and the Asian merchant: the asian merchant believes the boat will arrive on time. Syd, on the other hand, believes the boat will arrive late.
As the consultant suggests, a mutually beneficial agreement can be achieved by forming a contingent agreement, where the final outcome of each party will depend on what happens in the future. In this agreement, each party is guaranteed to get the best deal if his beliefs turn out to be correct, in return for agreeing to get the worst deal if the other side's beliefs turn out to be correct. Such an agreement increases the expected gains of both parties: each thinks that he will not need to pay any extra airfreight expenses, whereas compromising, by splitting the extra airfreight costs, would mean each of them having to pay an additional $2,000.

In the negotiation between Gilad and Rami: Rami believes that the apartment will not be occupied by his parents. Gilad, on the other hand, believes that the apartment will be occupied by Rami's parents.
Again, as the consultant suggests, a mutually beneficial agreement can be achieved by making a contingent agreement, where the final outcome of each party will depend on what happens in the future. In this agreement, each party is guaranteed to get the best deal if his beliefs turn out to be correct, in return for agreeing to get the worst deal if the other side's beliefs turn out to be correct. Such an agreement increases the expected gains of both the parties: each thinks that he will not need to pay the hotel reservation cost, whereas compromising by splitting the reservation costs, would mean each of them having to pay $100.

To summarize, these two cases illustrate a situation where there is potential to increase the attractiveness of the agreement for both parties. In particular, in both cases, the negotiating parties have different beliefs about the future, and therefore contingent contracts are beneficial: they lead to agreements that are more attractive for both parties in comparison to agreements that involve a simple compromise on the middle alternative.

Appedix 6b

Experiment 2: Diverse Condition – Written Explanation

The key similarity between these two cases is that both are examples of a negotiation in which differences between the two negotiating parties make it possible to reach creative agreements that are more beneficial for both parties compared to simple compromise agreements that involve settling for a middle range alternative..

The key difference between the cases lies in type of differences that are apparent between the negotiating parties, and as a consequence in the way that such beneficial agreements can be achieved:

In the negotiation between Syd and the Asian merchant, the two parties have ***different beliefs about the future***: The asian merchant believes the boat would arrive on time. Syd, on the other hand, believes the boat will arrive late.
As the consultant suggests, a mutually beneficial agreement can be achieved by forming a contingent agreement, where the final outcome of each party will depend on what happens in the future. In this agreement, each party is guaranteed to get the best deal if his beliefs turn out to be correct, in return for agreeing to get the worst deal if the other side's beliefs turn out to be correct. Such an agreement increases the expected gains of both the parties: each thinks that he will not need to pay any extra airfreight expenses, whereas compromising, by splitting the extra airfreight costs, would mean each of them having to pay an additional $2,000.

In the negotiation between Yossi (from"A.A".) and Dani (from"Millennium") , as can be seen in the profit schedules, the two negotiating parties have ***different issue priorities***:
For Dani from "Millennium", payment terms are most important (they can increase his profit by up to $4,000) while delivery terms are least important (they can increase his profit by up to $1,600 only).
For Yossi from "AA", the opposite is true: delivery terms are most important (they can increase his profit by up to $4,000), while payment terms are least important (they can increase his profit by up to $1,600 only).
As the consultant suggests, a mutually beneficial agreement can be achieved by making a trade off, so that each party gets the maximum for the issue that is most important to him in return for entirely giving up on the issue that is least important to him, and by settling for the middle alternative on the remaining issue. Such an agreement increases the gains of both parties: each party gains $5,200, whereas compromising on the middle alternative (Alternative "5") for all three issues, will result in each of them gaining $4,000 only.

To summarize, the main similarity between these cases is that both are examples of a situation where there is potential for increasing the attractiveness of the agreement for both of the parties. The main difference is in the specific way that the parties' differ from each other and therefore in the way that such a mutually beneficial agreement can be achieved:
a) When the parties have different <u>beliefs</u> – by forming <u>contingent agreements</u>
b) When the parties have different <u>priorities</u> - by making <u>trade-offs</u>.

Appendix 7a

Experiment 2: Test Task – Issue c (contingent)

<u>City Council</u>

c) <u>Sewage Tank</u>

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)

Appendix 7b

Experiment 2: Test Task – Issue c (contingent)

Real Estate Developer

c) <u>Sewage Tank</u>

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 that 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)

Appendix 8

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

CATEGORY	EXAMPLES OF RESPONSES
(1) Miscellaneous	- "Not everything is monetary" - "I agree" or "I disagree" with one or both statements
(2) Distributive	- "It is difficult to create a situation where both sides gain" - "One thing is always at the expense of another. In a deal, the more money you earn the larger is your part of the pie"
(3) Logrolling	- "Each side has his priorities and by matching the agreement to these priorities, both sides can similarly gain"
(4) Compatibility	- "Sometimes, when one party gains the other does not lose, or both sides gain the same".
(5) Other Specific	- "In our negotiation since I paid no tax in the first year, I could gain more by getting more only in that year. My partner who paid the same each year did not gain less overall".
(6) Profound	- "It is possible to reach a situation where both sides gain more. The question is how much they are willing to listen to each other. I tried to be tough on points that were most critical to me, but also checked where both of us could gain". - "In some cases the costs of one sides compromises are not the same as the costs of the other, so if each side compromises on what costs him less, and is firm on things for which he gains most, it is possible that both gain more. Also, there are cases where both parties might have the same interests". - "In some parts of the negotiation I presented my "cards" to the other party and asked him to do so as well in order to try find an agreement that is beneficial for both of us. In some negotiations, there might be issues where the gains of one side are larger than the losses of the other so both sides can gain more. However, in cases where gains and losses are equal in all issues, such an increase in the gains of both parties is not possible".