The Effects of Achievement Motivational Goals and of Debriefing on the Transfer of Skills in Integrative Negotiations

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Abstract

In this study, we examine the effects of achievement motivational goals (Learning vs. Performance) and of debriefing on the ability of trainees to acquire integrative (i.e., value-creating) negotiation skills and to effectively transfer these skills across situations. Participants in four between-subject conditions: 2 motivational goal conditions (learning/performance goals) × 2 debriefing conditions (with/without debriefing) first gained experience by engaging in repeated negotiations within an unchanging market simulation, and then proceeded to negotiate a more complex integrative negotiation task. A fifth control condition in which participants performed the second task only was also included. Experience accompanied by subsequent debriefing was found to be more effective for learning than experience without debriefing; it enhanced both integrative performance in the transfer task as well as conceptual understanding. Contrary to our expectations, participants who were assigned learning goals did not show an advantage over participants who were assigned performance goals.

Given today's rapidly changing environment, an increasingly important goal for managerial education is to enhance managers' ability to transfer the knowledge they acquire through experience and training to new situations, in order to achieve better long-term performance. In the current research, we focus on developing generalizable skills for integrative negotiation—a complex task and a key area in which managers need to improve their expertise (e.g., Bazerman, 2002; Lax & Sebenius, 1986; Loewenstein & Thompson, 2000; Thompson, 2005). Specifically, we examine the effects of achievement motivational goals and of debriefing on the ability of trainees to acquire integrative (i.e., value-creating) negotiation skills and to effectively transfer them to a novel negotiation task.

Transferring Integrative Negotiation Skills

An important topic in negotiation research is the development of integrative agreements, also termed value-creating agreements, which are agreements that reconcile both parties' interests and lead to higher joint benefit (Pruitt, 1983; Walton & McKersie, 1965). Numerous strategies for creating value and achieving integrative outcomes have been suggested. Some examples are as follows: (a) logrolling, a strategy that is appropriate when parties have different priorities and which involves trading concessions on low-priority issues for gains on higher priority issues; (b) compatibility, or identifying issues that do not involve a conflict of interest; (c) adding issues, or adding to the agreement issues not inherent in the initial negotiation framework; and (d) contingent contracts, or bets based on different expectations regarding a future event.

Although negotiators often fail to implement these strategies, and can miss achieving readily-available, desirable integrative agreements (see Bazerman & Neale, 1992; Bazerman, Magliozzi, & Neale, 1985; Thompson, 1990a; Thompson, Gentner, & Loewenstein, 2000; Thompson & Hastie, 1990), previous research has shown that repeated experience can improve integrative negotiation performance (e.g., Bazerman et al., 1985; Neale, Huber, & Northcraft, 1987; Neale & Northcraft, 1986; Thompson, 1990b). However, improved integrative performance with a repeated constant task does not guarantee that this improvement will transfer to novel negotiation tasks.

Many previous studies have documented the difficulty to transfer what one has learned in one task to novel tasks embodying similar underlying characteristics (e.g., Gick & Holyoak, 1980, Gick & Holyoak, 1983; Reeves & Weisberg, 1994; Price & Driscoll, 1997). A vast amount of prior work suggests that successful transfer can be facilitated by abstracting the schemata—i.e., the solution principle of the problem (Reeves & Weisberg, 1994). The abstract schemata, rather than individual problem exemplars, has been shown to mediate transfer (e.g., Holyoak, 1984a,b). Accordingly, Bazerman and Neale (1992) suggest that developing a schematic principle that involves understanding what one has experienced as well as awareness of the decision process that led to failure or success, enhances the transferability of strategies across situations.

However, it is important to note that there are circumstances in which knowledge can be acquired and implemented in novel circumstances without conscious acknowledgment of the rules themselves (e.g., Reber, 1989; Broadbent, FitzGerald, & Broadbent, 1986). Salomon and Perkins (1989) refer to this issue and propose a distinction between two types of transfer: "low-road transfer" 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 an explicit, conscious abstraction of knowledge and its translation to the demands of the new situation.

Many studies empirically evaluate learning by examining the transferability of skills to new contexts (e.g., Day, Arthur, & Gettman, 2001; Ford, Smith, Weissbein, Gully, & Salas, 1998; Singley & Anderson, 1989). This tendency can also be seen in the literature on negotiations (e.g., Bereby-Meyer, Moran, & Unger-Aviram, 2004; Loewenstein, Thompson, & Gentner, 1999; Mannix, Northcraft, & Neale, 1991; Thompson, 1990b). These studies have typically shown that although transferring learned negotiation skills

is possible, it is not easily achieved. Among the effective mechanisms and training schemes that have been proposed are analogical encoding (Gentner, Loewenstein, & Thompson, 2003; Loewenstein et al., 1999; Loewenstein, Thompson, & Gentner, 2003; Nadler, Thompson, & Van Boven, 2003; Thompson et al., 2000) and motivating learning by providing a learning environment (Bereby-Meyer et al., 2004). In the present study, we explore additional means that may influence trainees' ability to learn and transfer integrative negotiation principles. Specifically, we focus on two means—achievement motivational goals (learning vs. performance) and debriefing. In addition, we attempt to assess the type of transfer that has been achieved (high/low road), by measuring not only performance on a novel task (transfer), but also conceptual understanding.

In the next sections we review the literature regarding the two learning mechanisms that are the focus of our research—motivational goals (learning vs. performance) and debriefing. In general, these two mechanisms differ with respect to the time in which they are evoked. While achievement motivational goals are activated prior to the experiential session, and thus expected to enact *during* the experiential activity, debriefing takes place *after* the experiential activity, and is thus expected to affect retrospective analysis of the experience. These two mechanisms also differ with respect to the active role of the trainer. While debriefing typically requires active involvement of the trainer in the learning process—i.e., providing the trainee with guidelines for elaborating the training materials, the effect of motivational goals is not directly dependent on trainers' guidance.

Achievement-Motivation Goals

The literature on achievement motivation goals refers to the question of what people strive for in an achievement situation. Achievement motivation involves a particular class of goals: those involving competence, or ability (Dweck, 1986). These goals are typically divided into two main categories: performance goals and learning goals (Ames, 1992; Dweck, 1986; Elliot & McGregor, 2001). Performance goals direct individuals toward *demonstrating their competence relative to others*; i.e., demonstrating that they perform better (or do not perform worse) than others. Learning goals, on the other hand, direct individuals toward *developing and increasing* their ability. People concerned with demonstrating their relative level of ability are likely to view performance as a measure of their ability and failure as an indication of insufficient ability. This in turn leads to avoidance of challenges. In contrast, people concerned with increasing their level of ability are more likely to view failure as a natural part of learning—as feedback about their effort or strategy, and therefore as an incentive for increasing effort. Indeed, several studies conducted in educational settings have found performance goals to foster defensive, maladaptive patterns of behavior, characterized by avoidance of challenges and a ''helpless'' response to failure. Alternatively, learning goals were found to foster adaptive patterns of achievement, characterized by challenge-seeking and effective persistence in the face of obstacles (Dweck, 1986; Dweck & Elliot, 1983; Dweck & Leggett, 1988; Molden & Dweck, 2000; Nicholls, 1984). Furthermore, learning goals were associated

with active cognitive engagement (Meece, Blumenfeld, & Hoyle, 1988), and with valuing and using adaptive cognitive strategies such as planning, organizing, elaborating, and integrating (Kaplan & Midgley, 1997; Nolen, 1988; Nolen & Haladyna, 1990; Pintrich & Garcia, 1991). Similar relations were found between learning goals and meta-cognitive strategies such as awareness, monitoring, and regulation of the learning process (Meece et al., 1988; Miller, Behrens, Greene, & Newman, 1993; Pintrich & Garcia, 1991).

Relatively few studies have examined the relationship between achievement motivation goals and transfer of specific problem-solving strategies. Bereby-Meyer and Kaplan (2005) found that children who were primed with learning goals performed better on a transfer problem-solving task than children who were primed with performance goals. In a more complex decision-making task with adults, Ford et al. (1998) found individual differences in learning goals to be positively correlated with the meta-cognitive activity of the learner—i.e., self-monitoring of the learning process. This meta-cognitive, or self-monitoring activity was then found to be positively related to knowledge acquisition, to skilled performance at the end of the training session and, finally, to performance on a transfer task. In the domain of negotiations, a recent study on learning negotiation strategies found that teams in high-learning environments that included learning goals, high-learning values and team discussions, performed better in a transfer task than teams in low-learning environments that included performance goals, low-learning values and no team discussions (Bereby-Meyer et al., 2004).

Based on the theoretical background reviewed above, our first hypothesis is:

H1: Learning goals will facilitate participants' ability to transfer trained integrative negotiation skills more than Performance goals.

Debriefing

Debriefing is characterized as a post-experiential process whereby learners engage in systematic processing of their learning experience. This process is intended to facilitate learners' ability to draw the lessons they are intended to learn. (Lederman, 1984, 1992). In line with that, many researchers have suggested debriefing as a key element in the effectiveness of experiential learning (e.g., Petranek, 2000; Knotts & Keys, 1997; Kolb, 1984).

In educational settings, debriefing is typically conducted after an experiential activity such as a simulation or game, and primarily attempts to use the information generated during the experiential activity in order to facilitate learning. By leading trainees through a recollection of their experience, debriefing enables them to reconstruct and reflect on that experience (Thatcher, 1990; Lederman, 1984, 1992). The process of reflection is thus an important element of debriefing, providing detail, order and meaning to the learners' experience (Miller, 1991). Each of these elements has been found to be related to comprehension and transfer (Mayer, 1987).

Empirical support for the advantage of debriefing has been demonstrated in various contexts. Debriefing was found to play a critical role in computer simulation-based interactive learning environments. It improved task performance by helping participants to learn about the decision-making domain, to develop heuristics, and to expend less

cognitive effort in decision-making processes (Qudrat-Ulah, 2004). A study on children's learning of economic concepts found experienced participants who engaged in debriefing sessions to perform better in a subsequent task, and to score higher in a questionnaire on the learned concepts, than experienced participants who did not engage in debriefing sessions (Laney, 1993).

Taken together, these findings suggest that learning may be significantly enhanced by debriefing learners after their experience. Indeed, in many business schools that teach negotiations, it is quite customary to engage students in a debriefing process after they read cases or engage in role play simulations. It is widely accepted that debriefing is instrumental for facilitating learning with such experiential tasks (e.g., Susskind & Coburn, 2000; MacAndrew & Phillips, 2005). Yet, to the best of our knowledge, the effectiveness of the debriefing process for acquiring negotiation concepts and skills that can be effectively transferred across situations has not been systematically studied. Following the above literature review, we hypothesize that:

H2: Debriefing will facilitate participants' ability to transfer trained integrative negotiation skills.

In addition, since learning goals are expected to enhance meta-cognitive processes and active cognitive engagement, they might lead participants to reflect on their experience, even if not specifically guided to do so by means of debriefing. In line with this notion, our third hypothesis is:

H3: There will be an interaction between debriefing and the type of motivational goal; the benefit of debriefing is likely to be more pronounced for participants who are assigned performance goals than for participants who are assigned learning goals.

Current Research Overview

The present study examines the effect of learning goals and of debriefing on the transfer of logrolling, one of the central integrative negotiation strategies, to a novel and more complex negotiation task. With respect to the effect of motivation goals, this study differs from the Bereby-Meyer et al. (2004) study by examining individuals rather than teams. Moreover, the learning versus performance manipulation in the study by Bereby-Meyer et al. (2004) involved manipulating the overall learning environment (i.e., simultaneously manipulating motivational goals, values, and appropriate supporting structures), hence disabling an assessment of the distinct role of goals. In the present study, we exclusively manipulate motivational goals, thereby enabling an examination of their unique effect.

Participants in this study first engaged in multiple repeated negotiations within an unchanging negotiation market, and then engaged in a second single negotiation task that significantly differed from the first task on a number of dimensions. Before performing the first repeated negotiations stage, half of the participants were primed with Learning goals and half with Performance goals. After the first stage, half of the participants from each goal condition engaged in post-experiential debriefing and the other half did not.

The first task involved repeated negotiations in a free-market simulation (adapted from Bazerman et al., 1985) that consisted of a three-issue negotiation in which integrative agreements (i.e., higher joint outcomes) could be achieved through logrolling.

The second task was a notably different and more complex negotiation (adapted from Thompson, Peterson, & Brodt, 1996), in which integrative agreements could be achieved by two integrative components: logrolling (as in the first task) and compatibility (a new component, not included in the first task).

Finally, to test the extent to which our learning manipulations led to high conceptual understanding of integrative (or value-creating) negotiation, at the end of the second phase, we collected participants' responses to a set of questions regarding their general "win-lose" versus "win-win" perceptions of negotiations.

Method

Participants

One hundred and fifty-six students participated in the study as part of the requirements for a psychology course. The students had never before participated in a laboratory negotiation task.

Materials and Procedures

The experiment was conducted in a 2 achievement motivational goal (learning/performance goal) × 2 debriefing (with/without post-experiential debriefing) between-subject design, with an additional control condition in which participants performed the second task only. Each of the 156 individuals was randomly assigned to one of these five conditions. Numbers of participants in the various conditions were as follows: 32 in the Performance-Debrief condition, 36 in the Performance-No debrief condition, 34 in the Learning-Debrief condition, 32 in the Learning-No-debrief condition, and 22 in the Control condition.

Importantly, the different conditions were always run separately from each other, so that negotiating dyads were never mixed between conditions. In other words, both negotiating parties always belonged to the same condition.

The experiment consisted of two stages. The first stage was a training stage that involved participating in a free-market negotiation simulation with logrolling potential, adapted from Bazerman et al. (1985). Prior to beginning this stage, participants in the *Learning Goal* conditions ($n = 66$) were told that their goal was to learn how to negotiate effectively, and that at the end of the market, a lottery would be conducted in which one of the participants would be randomly selected and rewarded as a function of his or her learning of the negotiation process. This learning was defined by their performance in the second task. However, they were not informed in advance about the exact measure to be used.[1]

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[1]We did not want participants to know in advance that they would later be required to implement their learning in another task. This would have confounded the learning manipulation with expectations for a second task.

Participants in the *Performance Goal* conditions ($n = 68$) were told that their goal was to gain as many points as they could, and that at the end of the experiment a lottery would be conducted in which one of the participants would be randomly selected and rewarded as a function of the number of points he or she gained throughout the market. In order to implement the relative competence component of the performance goal orientation (i.e., the focus on performing better or not worse than others), participants were also told that after the experiment, a report of the overall points that each participant gained throughout the market would be published on their department notice board.[2]

At the beginning of the negotiation period, each participant received a set of instructions describing the experiment as a simulation of a free market negotiation between buyers (participants representing retail stores) and sellers (participants representing manufacturers of computer screens). In each condition, half of the participants were randomly assigned to the role of buyer and half to the role of seller.

Participants were told that they (as seller/buyer) would be participating in a market in which they should complete as many transactions as possible (with other buyers/sellers in the market) during the fixed market period (30 min). However, each buyer (seller) could complete only one transaction with each seller (buyer). Thus, upon completing a transaction, participants proceeded to engage in another negotiation with a different partner with whom they had not previously negotiated.

Participants were told that there were no product quality differences between manufacturers, and that their profits were affected by only three factors: delivery terms, discount level and payment terms. They were also told that an agreement is a transaction between a buyer and a seller that consists of the three factors, which must be negotiated. In order to reach an agreement, both sides have to agree on all three factors.

The information package also included a profit schedule, shown in Appendix A. As in Bazerman et al. (1985), for each of the factors there were nine ranked options labeled ''A'' through ''I'', and for each option, the corresponding profit was specified. Participants had incomplete information: they saw their own profit schedule, but did not receive information concerning their opponents' profit schedules. Among the three factors to be negotiated, delivery terms and payment terms were ''logrolling issues,'' and discount level was a distributive issue. An optimal, equitable agreement could be reached when parties ''logrolled'' and agreed on transaction terms of A-E-I (60 days for delivery, a 4% discount level, and 9 payments). This agreement would afford the parties a gain of $5,200 each.

In order to identify the participants, each participant was given a number, and the numbered tag was either green or red, depending on the participant's role (buyer or seller). Participants were randomly matched for their first negotiation and proceeded to engage in a 30-min simulation of the market. At the end of each negotiation, each participant filled out a ''transaction form'' that was handed to the experimenter. The transaction form included identification of the participant and of his or her current negotiating partner, the sequential number of the negotiation (first, second, etc.), the

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[2]Since participation was anonymous, subject number was used for identification.

duration of the transaction (participants reported the time of the opening and closing of each negotiation), whether an agreement was achieved, and the delivery, discount, and financing terms agreed upon (if agreement was achieved). After turning in the form, participants were re-matched by experimenters with a partner with whom they had not previously negotiated.

At the end of the market, all participants were given a goal manipulation check questionnaire that consisted of six questions—three for measuring a learning orientation and three for measuring a performance orientation (see Appendix B). After handing in this questionnaire, participants in the *Debriefing* conditions ($n = 66$) were given a questionnaire that consisted of five open questions that triggered them to profoundly process their Stage 1 integrative negotiation experience (see Appendix C). In the *No Debriefing* conditions, participants ($n = 68$) continued directly to the second stage.

In the second stage, participants engaged in a two-party, multi-issue negotiation about a real-estate development project (adapted from Thompson et al., 1996). This task differed from the first one on several dimensions, including context, number of issues, number of alternatives for each issue, and distinctive ways to reach integrative negotiation outcomes (by means of compatible issues in addition to unique patterns of logrolling). The previous buyers and sellers were now assigned to be either representatives of a real-estate development company or representatives of a city council, who needed to negotiate eight factors concerning a residential community development project. The factors were: city financing, retail space, local subcontractors, open space, condominium: apartment ratio, terms of payment, height (number of floors), and building inspectors.

Prior to the negotiation, each participant received a set of instructions that included a profit schedule showing five ranked options, labeled "A" through "E," for each of the factors. For each option, the corresponding value was specified (see Appendix D). Again, participants saw only their own profit schedule.

Among the eight factors to be negotiated, four were logrolling issues (city financing, local subcontractors, condo: apartment ratio, and terms of payment), two were distributive issues (open space and height), and two were compatible issues (retail space and building inspectors). For the first pair of logrolling issues, City Financing and Local Subcontractors, the optimal integrative solution was to agree on Levels E and A respectively, affording a joint payoff of 8,000 points. For the second pair of logrolling issues, Condo: Apartment Ratio and Terms of Payment, the optimal solution was to agree on levels E and A respectively, leading to a joint payoff of 6,400 points. For the two compatible issues; Retail Space and Building Inspectors, agreeing on level A was the optimal integrative solution, affording the two parties a joint payoff of 2,400 points. Overall, each negotiator could gain a maximum of 13,200 points and could lose up to 8,400 points.

In the second task, only one transaction could take place. Participants were randomly matched for negotiation by the experimenter. As in the first task, each party filled out a "transaction form." The form for this stage included identifying the participant and the negotiating partner, the time at the end of the transaction, and the eight terms agreed upon (if agreement was achieved).

Finally, participants were asked to respond to an open-ended questionnaire 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," 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." The verbal responses were coded according to a scheme prepared in advance. The full response of each participant was classified into one of the following five categories: (a) Miscellaneous: no or irrelevant response and explanation; (b) Distributive: perceiving negotiations as win-lose, i.e., as distributive; (c) Logrolling: referring to the potential for creating value by means of logrolling only; (d) Compatibility: referring to the potential for creating value by means of compatibility only; (e) High value-creating understanding: responses were classified into this category only if they referred to the impact of the interrelations between interests, referred to the general importance of trying to maximize joint gains, or indicated understanding of the essence of both value-creating strategies apparent in the test task (logrolling and compatibility).

Examples of responses classified according to the various categories are presented in Appendix E. A sub-sample of 25 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 0.83 ($\chi^2_{(16)} = 65.43$, $p < 0.0001$). All responses were then coded by one of these coders. We created a dichotomous index of value-creating understanding by recoding categories one through four as low value-creating understanding and category five as high value-creating understanding.[3] Due to the interdependent nature of negotiations, we then formed a dyadic level measure of high and low understanding. Namely, we classified dyads in which at least one party was categorized as acquiring high value-creating understanding as high understanding dyads.

Results

Manipulation Check

Motivation Goal Manipulation
A factor analysis confirmed that the motivation goal manipulation items loaded as expected on two separate factors: learning and performance. Inspection of the item loadings, however, revealed that the loading of one of the items (question #6) on the learning factor was low. Consequently, we excluded this item when continuing to

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[3]Because the original five understanding categories do not form an order scale, we use a dichotomous (rather than continuous) measure. Moreover, since we are primarily interested in whether participants have acquired broad and profound understanding of the underlying principle of creating value (i.e., classified as category 5), which is assumed to be necessary for effective transfer, we group participants according to whether or not they reach such understanding.

compute scores. For each participant we computed a learning and a performance score by averaging the two remaining items that measured learning orientation and the three items that measured performance orientation. *T* tests comparing the two motivational goal groups (Learning/Performance) with regard to their self-reported *learning orientation* and *performance orientation* scores revealed that the manipulation was effective. Participants in the learning goals condition reported higher learning orientations than did participants in the performance goals condition ($M = 4.64$, $SD = 1.39$ and $M = 4.04$, $SD = 1.56$, respectively, $t_{132} = 2.34$, $p < 0.02$). Similarly, participants in the performance goals condition reported higher performance orientations than did participants in the learning goals condition ($M = 3.91$, $SD = 1.08$ and $M = 3.44$, $SD = 1.21$, respectively, $t_{132} = 2.38$, $p < 0.02$).

Debriefing Manipulation

We analyzed the debriefing questionnaires and found that (a) all participants except one answered the entire debrief questionnaire, and (b) the average response length to each question was 3.2 lines. Taken together, these two measures suggest that participants complied and actively engaged in post-experiential debriefing.[4]

Analysis of Performance

Since both negotiating parties documented each transaction, analyzing the forms of all of the participants would duplicate the data. Therefore, we analyzed the forms of only one party in each negotiation. Specifically, we analyzed the forms of sellers.

We began by analyzing performance in the free-market negotiation simulation (first task). Since the number of negotiations completed varied among participants, we analyzed the change in outcomes over time by looking at the first and the last agreement of each participant. Table 1 presents the mean number of negotiations as well as the means and standard deviations of the total joint profit in the first and last agreements in the different motivation goals conditions.

We ran a repeated-measures ANOVA with the joint profit in the first and the last agreement (i.e., the last negotiation that resulted in an agreement) as the within-subject

Table 1

Mean (SD) Number of Negotiations and Mean (SD) Joint Profits in the First and Last Agreements as a Function of the Experimental Condition

	Learning (*n* = 33)		Performance (*n* = 34)	
	M	*SD*	*M*	*SD*
Number of negotiations	4.9	0.7	5.3	1.0
First agreement	8,100	778	8,724	1,180
Last agreement	9,018	1,181	9,676	920

[4]A package with 16 of the debriefing forms was mistakenly discarded. Therefore, only 50 out of the total 66 forms were available and included in this analysis.

dependent variable, and with the type of motivational goal (Performance vs. Learning) as the independent variables. We report the results of this analysis in Table 2. The analysis revealed a significant effect of experience, $F_{1,65} = 38.05$, $p < 0.0001$. Across conditions, the joint profit in the last negotiation was significantly higher than the joint profit in the first negotiation. This result replicates the well-documented finding of improvement in achieving integrative outcomes as a function of repeated experience with a particular negotiation task (Bazerman et al., 1985; Neale et al., 1987). There was also a significant effect for the type of motivational goal, $F_{1,65} = 10.19$ $p < 0.01$. Participants who were assigned performance goals performed better overall during the first stage of the experiment than participants who were assigned learning goals. However, the interaction between the type of motivational goal and experience (the difference between first/last negotiation) was not significant, indicating that participants who were assigned performance goals did not improve their performance more than participants who were assigned learning goals.

We next analyzed performance in the second task. Three dyads did not reach agreement in this task: one in the control condition, one in the Performance-with debrief condition, and one in the Performance-without debrief condition. As advised by Tripp and Sondak (1992), we excluded these dyads (i.e., we treated them as missing values) when further analyzing negotiation outcomes. As a result, 15 dyadic agreements were analyzed in the Performance-Debrief condition, 17 in the Performance-No debrief condition, 17 in the Learning-Debrief condition, 16 in the Learning-No debrief condition, and 10 in the Control condition.

The Means (SDs) of the joint profits (i.e., the total pie) in this task as a function of motivation goals and of debriefing are presented in Table 3. We tested hypotheses H1 through H3 by means of a two-way ANCOVA with total joint profit as the dependent variable and with type of motivational goal (learning/performance) and debriefing (with/without) as the independent variables. In order to enable us to assess the exclusive effect of the independent variables (motivation goals and debriefing) on performance in the transfer task—independent of the learning that may have been acquired by means of experience in Stage 1—we included the total joint outcome in the last negotiation of the first stage as a covariate.

Table 2
Results of a Repeated-Measures Analysis for Predicting the Joint Profit in the First and Last Negotiation Agreement (as Repeated-Dependent Measure) From Achievement Motivation

Source	SS	df	F	p	Partial eta- squared
Between subjects analysis					
Intercept	1.056305E + 10	1	7822.30	0.0001	0.99
Motivation	1.375754E + 07	1	10.19	0.002	0.13
Error	8.777455E + 07	65			
Within subjects analysis					
Negotiation (first/last)	2.931519E + 07	1	38.05	0.0001	0.36
Negotiation*motivation	1.011653E + 04	1	0.01	0.9	0.0002
Error	5.007690E + 07	65			

Table 3

Mean (SD) *Joint Profits in Second Task as a Function of Motivation Goals and Debriefing*

	Learning goal			Performance goal			Overall		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Without debrief	16	9,750	2,207	17	11,118	1,875	33	10,455	2,127
With debrief	17	11,435	1,446	15	11,520	1,508	32	11,475	1,452
Overall	33	10,618	2,015	32	11,306	1,698	65	10,957	1,883

The analysis revealed a significant effect of debriefing, $F_{1,60} = 4.09$, $p < 0.05$. Supporting H2, participants who were guided to reflect on their performance performed better ($M = 11,475$, $SD = 1452$) than participants who were not guided to reflect on their performance ($M = 10,455$, $SD = 2127$). Contrary to our hypotheses H1 and H3, no difference was found as a function of motivational goals; both main and interaction terms were not significant.

In order to assess more specifically the source of the improved overall pie in the debriefing condition, we next analyzed the performance on the different components of the joint total profit (logrolling issues and compatible issues) as a function of debriefing. Since logrolling was the strategy that was encountered in the training stage, we expected the benefit to be apparent primarily for this strategy.

Logroll

A t test comparing the joint profit of the two debriefing type groups (with/without) on the logrolling component revealed a marginally significant effect, $t_{63} = -1.78$, $p = 0.08$. Participants who were asked to reflect on their performance reached higher joint profit on the logrolling issues ($M = 12,919$, $SD = 1430$) than participants who were not asked to reflect on their performance ($M = 12,182$, $SD = 1876$).

Compatible

A t test comparing the joint profit of the two debriefing groups (with/without) on the compatible component revealed a nonsignificant effect. Hence, the increased total pie in the debriefing condition seems mainly to be a result of improvement in implementing the logrolling strategy, which was previously encountered in the first stage.

Taken together, these results show that post-experiential debriefing enhances performance in a complex novel transfer task, whereas the type of motivational goal that participants endorse during their experience does not affect performance in a transfer task.

In order to further assess the extent to which debriefing contributes to performance on the transfer task beyond the effect of mere experience, we additionally compared second task performance of the two debriefing groups (with and without) to that of the control group. Since participants in the control condition performed the transfer task

only, without initially experiencing any previous negotiations, their performance on the transfer task served as a baseline.

An ANOVA with the total joint profit as the dependent variable and with the experimental condition (with debriefing, without debriefing, control) as the independent variable, revealed a significant effect of condition, $F_{2,72} = 8.39$, $p < 0.001$. LSD *post-hoc* comparisons revealed significant differences between all conditions: a significant difference between the debriefing and control conditions ($p < 0.001$), between the debriefing and no debriefing conditions ($p < 0.05$), and between the no-debriefing and control conditions ($p < 0.05$). The same pattern of results was found for the joint profits on the logrolling issues. The significant difference between the control and no debrief conditions indicates that some learning occurs as a function of experience. The significant difference between the without and with debriefing conditions, however, implies that debriefing plays a significant role, beyond the role of experience.

Analyses of Understanding Questionnaire

As mentioned in the Method section, at the end of the experiment, participants responded to a questionnaire intended to assess their win–win versus win–lose perceptions and the depth of their conceptual value-creating understanding. We explored the verbal measure of understanding as a function of the experimental conditions by conducting a logistic regression with high dyadic value-creating understanding as the dependent variable and with debriefing and motivation goals as the independent variables. As shown in Table 4, this analysis revealed a significant effect of debriefing only ($p < 0.05$). There was a significantly larger proportion of dyads with at least one party demonstrating high value-creating understanding in the debriefing condition compared with the nondebriefing one (11/33 = 33.3% vs. 4/34 = 11.8%). As can be seen in Table 4, debriefing increased the odds of acquiring superior win–win perceptions and a broader understanding of the potential to create value by a factor of 3.76.

Next, in order to assess whether mere experience in itself, without debriefing, improves conceptual understanding, we compared the proportion of participants who fell into the category of ''high value-creating understanding'' in the nondebrief group (with previous experience) to that in the control group (without experience at all). A Fisher exact test revealed no significant difference between the proportions in these two

Table 4
Results of a Logistic Regression Testing High Value-Creating Understanding as a Function of Motivation Goals and Debriefing

Explanatory variables	Coefficients	SE	Wald	Odds Ratio	p
Intercept	−2.53	0.68	14.04	0.08	0.004
Motivation goals	0.93	0.64	2.14	2.54	0.15
Debriefing	1.326	0.66	4.06	3.76	0.05

$n = 67$, $\chi^2(2) = 6.86$, $p = 0.03$.

groups, implying that the higher level of value-creating understanding in the debriefing condition is primarily due to debriefing rather than experience alone.

Discussion

The rapidly changing environment that organizations face today makes the ability of managers to learn and transfer knowledge across situations a crucial asset (Thompson et al., 2000). In this research, we address a key managerial task—negotiations—and show that learning and transferring complex negotiation skills is possible, provided an appropriate training method is used.

Negotiation skills are essential for successful management. Yet, the behavioral research on negotiation and conflict resolution reveals that negotiators often fail to reach beneficial agreements; they settle for sub-optimal outcomes and leave large amounts of money on the bargaining table (Thompson et al., 2000). Previous studies on learning integrative negotiation strategies reveal that although experience can enhance achieving integrative agreements (Bazerman et al., 1985; Neale et al., 1987; Neale & Northcraft, 1986; Thompson, 1990b), it does not guarantee the transferability of strategies to new contexts (e.g., Bereby-Meyer et al., 2004; Nadler et al., 2003). In the present study, building on ideas from cognitive and educational psychology, we explored ways of teaching negotiators to improve their skills for integrative negotiation and particularly to enhance their ability to negotiate effectively in diverse situations. Specifically, we examined the effects of achievement motivational goals and of debriefing on the transfer of integrative negotiation strategies.

As predicted, we found that debriefing, or guiding trainees to reflect on their repeated experience with an integrative negotiation task, improved the transferability of the learned integrative strategy to a distinctive, more complex negotiation task. Importantly, the significant contribution of debriefing was apparent beyond the contribution of mere experience. This conclusion is based on the following findings. First, the benefit of debriefing was apparent in the transfer task, even when performance at the end of the experiential phase was held constant. Second, in addition to the finding that participants in the experience without debriefing condition performed better on the transfer task than participants without experience, there was also a significant difference between the two experienced conditions, with an advantage of participants in the debrief condition compared to those in the no-debrief one.

Since the second transfer task was significantly different from the experiential stage task (in terms of context, type and number of issues, number of alternatives for each issue, etc.), the performance advantage of participants in the debriefing condition on this task implies that they learned more than a task-specific script. Indeed, it seems as though they extracted a more abstract and generalizable value-creating principle. This notion is also supported by the results of the verbal responses. Taken together, the pattern of our results—the outcomes in the transfer task, as well as the results of the understanding questionnaire—leads us to conclude that experience followed by guided debriefing is effective for high road transfer—it advances generalizable learning and acquiring expertise.

Contrary to our expectations, we did not find a significant effect of achievement motivational goals nor an interaction between these goals and the debriefing process.

These results are inconsistent with previous research, where priming participants with learning goals was found to enhance transfer of a problem-solving strategy to a new task (Bereby-Meyer & Kaplan, 2005). One possible explanation may be that the learning task used by Bereby-Meyer and Kaplan (2005) was simpler. Consequently, motivating participants to learn and improve their knowledge without more precise guidance might have been sufficient. The integrative negotiation task we used in the present study is far more complex; it involves inter-dependence, and many more variables need to be taken into consideration. Our findings suggest that in such complex tasks, more guidance may be needed in order to prime the necessary meta-cognitive process.

In line with this notion, in a recent study on team negotiations that examined learning in a complex negotiation task, Bereby-Meyer et al. (2004) found that teams with learning goals, high learning values and team discussion during repeated integrative negotiation experience performed better on a transfer task than teams with performance goals, low-learning values and no team discussions. The value manipulation that accompanied the learning goals included, for example, telling participants that continuous learning should be maintained by conforming to values such as paying special attention to providing and obtaining information, holding oneself open to criticism, and emphasizing errors rather than the person who errs. Specifying these values may have helped by providing some guidance for the learning process.

In addition, adding the instruction to ''complete as many transactions as possible'' as part of our learning goal manipulation may, to some extent, have weakened this manipulation. Thus, although our goal manipulation check confirmed that the manipulation was effective, a stronger learning manipulation may have yielded better results.

While the present study has implications for classroom instruction, several questions remain unanswered and should be explored in future research. In the current study, the debriefing process manipulation included numerous features: it was structured and guided by a questionnaire, it was conducted individually, and it followed repeated experience. Thus, it is difficult to determine the unique contribution of each component. Future research should further disentangle and distinctly examine each of these factors. For example, future research might examine the effectiveness of debriefing using group rather than individual debriefing processes. It might also explore the effect of debriefing when engaging in a single rather than repeated experience or when reading cases. Since such procedures are often practiced in business schools, additional empirical work testing their value would probably be worthwhile for teaching more than task-specific strategies, i.e., for teaching strategies and skills that will help trainees succeed in the diverse world that exists outside the classroom.

To conclude, in this research, we demonstrate the value of applying ideas from cognitive and educational psychology to the field of managerial education. Focusing on negotiation, a core managerial activity, and an essential component of management training (Loewenstein & Thompson, 2000), this study reveals encouraging results regarding the possibility of effectively training people to create value in negotiations—i.e., to facilitate their acquisition of complex integrative negotiation strategies, and their ability to transfer these skills across situations.

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Appendix A

Payoff Schedules for the First Negotiation Task (adapted from Bazerman et al., 1985)

Buyers' payoff schedule

Level	Alternative (days)	Profit	Level	Alternative (%)	Profit	Level	Alternative	Profit
	Delivery terms (No. of days for delivery)			Discount level			Payment terms	
A	60	$0	A	0	$0	A	1 Cash	$0
B	55	$200	B	1	$300	B	2 payments	$500
C	50	$400	C	2	$600	C	3 payments	$1,000
D	45	$600	D	3	$900	D	4 payments	$1,500
E	40	$800	E	4	$1,200	E	5 payments	$2,000
F	35	$1,000	F	5	$1,500	F	6 payments	$2,500
G	30	$1,200	G	6	$1,800	G	7 payments	$3,000
H	25	$1,400	H	7	$2,100	H	8 payments	$3,500
I	20	$1,600	I	8	$2,400	I	9 payments	$4,000

Sellers' payoff schedule

Level	Alternative (days)	Profit	Level	Alternative (%)	Profit	Level	Alternative	Profit
	Delivery terms (No. of days for delivery)			Discount level			Payment terms	
A	60	$4,000	A	0	$2,400	A	1 Cash	$1,600
B	55	$3,500	B	1	$2,100	B	2 payments	$1,400
C	50	$3,000	C	2	$1,800	C	3 payments	$1,200
D	45	$2,500	D	3	$1,500	D	4 payments	$1,000
E	40	$2,000	E	4	$1,200	E	5 payments	$800
F	35	$1,500	F	5	$900	F	6 payments	$600
G	30	$1,000	G	6	$600	G	7 payments	$400
H	25	$500	H	7	$300	H	8 payments	$200
I	20	$0	I	8	$0	I	9 payments	$0

Appendix B

Goal manipulation check questionnaire

For each item, please rank your agreement on a scale between 1 (not at all) and 7 (very much).

1. It is important to me that everyone will know that I succeeded in my negotiations and that I gained much more money than other students.
2. During the negotiations, it was important for me to learn skills that will help me in everyday life.

3. During the negotiations that I conducted, the only thing that was important to me was the amount of money that I made.
4. During the negotiations, I was afraid of making errors that would result in me gaining less money than the other students.
5. During the negotiations, it was important for me to learn new things and to develop skills that will help me negotiate better in the future.
6. During the negotiations, I felt that it would not be a problem if I were to make mistakes.

Appendix C

Debriefing questionnaire

You have just experienced negotiating with manufacturers/buyers. Please answer the following questions while referring to the negotiations that you have just conducted.

1. Examine your offers in the first negotiation that you conducted. How did you determine your offers?
2. Examine the rest of the negotiations that you conducted. Did you change the criteria upon which you determined your offers?
3. Were the different issues of equal importance to you?
4. Do you think that the different issues were of equal importance to your opponents?
5. Do you think that your priorities were the same as your opponents'?
6. If you were asked to advise a friend on how to negotiate effectively, what suggestions would you make?

Appendix D

Payoff schedules for the second negotiation task (revised from Thompson et al., 1996)

Real-estate developer's payoff schedule

City financing			Retail space			Local subcontractors		
Level	Alternative	Points	Level	Alternative	Points	Level	Alternative	Points
A	$500,000	0	A	6,000 sq ft	0	A	4	0
B	$625,000	1,000	B	4,500 sq ft	−600	B	3	400
C	$750,000	2,000	C	3,000 sq ft	−1,200	C	2	800
D	$875,000	3,000	D	1,500 sq ft	−1,800	D	1	1,200
E	$1,000,000	4,000	E	0 sq ft	−2,400	E	0	1,600
Open space			Condo:apt ratio			Terms of payment		
A	30%	0	A	3:1	0	A	3 payments	0
B	25%	600	B	2:1	800	B	4 payments	200
C	20%	1,200	C	1:1	1,600	C	5 payments	400
D	15%	1,800	D	1:2	2,400	D	6 payments	600
E	10%	2,400	E	1:3	3,200	E	7 payments	800

Appendix D
Continued

Height (no. of flights)			Building inspector		
A	2	−6,000	A	Golan	1,200
B	3	−4,500	B	Jacoby	900
C	4	−3,000	C	Grossman	600
D	5	−1,500	D	Galili	300
E	6	0	E	Cohen	0

City Council's payoff schedule

City financing			Retail space			Local subcontractors		
Level	Alternative	Points	Level	Alternative	Points	Level	Alternative	Points
A	$500,000	1,600	A	6,000 sq ft	0	A	4	4,000
B	$625,000	1,200	B	4,500 sq ft	−600	B	3	3,000
C	$750,000	800	C	3,000 sq ft	−1,200	C	2	2,000
D	$875,000	400	D	1,500 sq ft	−1,800	D	1	1,000
E	$1,000,000	0	E	0 sq ft	−2,400	E	0	0
Open space			Condo:apt ratio			Terms of payment		
A	30%	2,400	A	3:1	800	A	3 payments	3,200
B	25%	1,800	B	2:1	600	B	4 payments	2,400
C	20%	1,200	C	1:1	400	C	5 payments	1,600
D	15%	600	D	1:2	200	D	6 payments	800
E	10%	0	E	1:3	0	E	7 payments	0
Height			Building inspector					
A	2	0	A	Golan	1,200			
B	3	−1,500	B	Jacoby	900			
C	4	−3,000	C	Grossman	600			
D	5	−4,500	D	Galili	300			
E	6	−6,000	E	Cohen	0			

Appendix E

Examples of responses classified according to each understanding category

Category		Examples of responses (free translation from Hebrew)
Low value-creating understanding	Miscellaneous	''I agree'' or ''I disagree,'' without additional explanations'' It depends on who you are negotiating with''
	Distributive	''One side's gains are at the expense the other side's gains'' ''When negotiating I try to compromise, but I know that it costs me, because when he gains, I lose'' ''An equal split is the best solution''
	Logrolling	''An equal split is not always the best because there are sometimes issues with very high gains in comparison to others'' ''Both sides can gain from unequal splits because an issue that is important to one party is not necessarily critical to the other''
	Compatible issues	''Sometimes both parties can gain more from the same option''''There are sometimes options that both sides should prefer, because both of them will similarly gain from them''
High value-creating understanding		''There may be situations where both sides have the same interests and can gain more from realizing that. Also, sometimes, issues do not have the same importance for both sides—what is important to party A may be less important to party B, and what is important to party B may not be important to party A. So both parties can gain more if each of them is persistent about the issue that is more important to him.'' ''When negotiating we should try figure out what the other party's preferences are. For example, we can try find out what is most important to him and make compromises on that in exchange for getting something that is more important to us. There may also be issues with options that are profitable for both'' ''The gain depends on the interests. If the interests are compatible, then whenever one side gains from the negotiation, the other side gains as well. If the interests are opposed, whenever one side gains the other side loses, unless both sides compromise on their less important issues and do not compromise on their more important issues'' ''Negotiators should adopt a strategy that attempts to enable both sides to gain more. Figure out where they should compromise and where they can gain most, what is most important to themselves and what is most important to the other side''

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