

Implicit Negotiation Beliefs and Performance: Experimental and Longitudinal Evidence

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The authors argue that implicit negotiation beliefs, which speak to the expected malleability of negotiating ability, affect performance in dyadic negotiations. They expected negotiators who believe negotiating attributes are malleable (incremental theorists) to outperform negotiators who believe negotiating attributes are fixed (entity theorists). In Study 1, they gathered evidence of convergent and discriminant validity for the implicit negotiation belief construct. In Study 2, they examined the impact of implicit beliefs on the achievement goals that negotiators pursue. In Study 3, they explored the causal role of implicit beliefs on negotiation performance by manipulating negotiators' implicit beliefs within dyads. They also identified perceived ability as a moderator of the link between implicit negotiation beliefs and performance. In Study 4, they measured negotiators' beliefs in a classroom setting and examined how these beliefs affected negotiation performance and overall performance in the course 15 weeks later. Across all performance measures, incremental theorists outperformed entity theorists. Consistent with the authors' hypotheses, incremental theorists captured more of the bargaining surplus and were more integrative than their entity theorist counterparts, suggesting implicit theories are important determinants of how negotiators perform. Implications and future directions are discussed.

Keywords: negotiation, achievement motivation, implicit theories

One of the most pervasive myths of bargaining is that good negotiators are born that way (Thompson, 2005). Like naive assumptions regarding the stability of human nature (Ross, 1977), conventional wisdom suggests that people either have the ability to negotiate effectively or do not. Skilled negotiators are imagined to be highly persuasive, rational beings who intuitively understand the negotiation "game" and thereby effortlessly succeed at maximizing their economic gains. Implicit in this belief is the assumption that no amount of effort or training will transform a frog of a negotiator into a prince. Yet over 20 years of research has made clear that, more so than innate personality characteristics, the behavior and outcomes of negotiators are profoundly influenced by a host of contextual factors. Indeed, a growth industry has emerged in identifying contextually based biases that plague negotiators (Neale & Bazerman, 1991).

Negotiation performance is now widely recognized to be a skill that can be developed. Evidence supporting this observation comes from both research and teaching. Negotiations scholars have identified a range of factors that increase the transfer of knowledge

from one negotiation experience to another (Loewenstein & Thompson, 2000; Moran, Bereby-Meyer, & Bazerman, 2004; Thompson, Gentner, & Loewenstein, 2000). Likewise, the past decade has seen a surge in negotiation course offerings in business and other professional schools. Arguably, by providing students with a framework for approaching negotiations, their confidence and concomitant performance improve. Students learn how to set and pursue aggressive goals that enable them to capture a larger slice of the ever-expanding proverbial pie.

Regardless of whether negotiating ability can objectively be developed, in the current article, we explore the impact of negotiators' subjective beliefs regarding the development of negotiation skill. We assume that negotiators' implicit beliefs regarding the malleability of negotiation performance vary.¹ Building on Dweck and Leggett's (1988) social-cognitive approach to personality, we distinguish between individuals who endorse the belief that negotiating ability is fixed (*entity theorists*) and individuals who predominantly endorse the belief that negotiating ability is malleable (*incremental theorists*). We argue that negotiators' implicit beliefs affect their performance by altering how they respond to the challenges that inevitably occur at the bargaining table, with incremental theorists being more persistent in the face of obstacles than entity theorists. Because most negotiations are mixed motive, they require a balance of the tensions inherent in creating value (i.e., making mutually beneficial trade-offs to expand the pie) and claiming value (i.e., securing resources for oneself). We expected incremental theorists' greater persistence to serve them well at the

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¹ Consistent with Dweck and Leggett (1988), we refer to these beliefs as *implicit* because they are rarely explicitly articulated and discussed. Nonetheless, they exert a powerful influence on how obstacles are met.

bargaining table, in terms of both value claiming and value creating.

In exploring the relationship between negotiators' implicit beliefs and performance, we extend theory and research in a number of important ways. For the first time, we demonstrate the robust effects of implicit negotiation beliefs about the malleability of performance by exploring both their situational and their dispositional facets, as well as their impact on negotiation performance and overall learning in a negotiations course. In addition, to our knowledge, this research is the first to explore the cumulative effect of individuals' implicit beliefs on dyadic-level phenomena. Whereas earlier research has examined the impact of individual beliefs about the fixedness of the negotiating pie on negotiation outcomes (cf. Thompson & Hastie, 1990), we explore the effect of negotiators' beliefs about the ability of negotiators themselves to become better negotiators on the construction of integrative agreements. Negotiations with integrative potential allow parties to create value by conceding on low-priority issues in exchange for concessions by their partner on high-priority issues. We also examine negotiating dyads' division of resources as a function of individual negotiators' beliefs about the malleability of performance. Overall, the set of studies presented here demonstrates that negotiators' beliefs about the malleability of performance have powerful and predictable effects on how resources are claimed and created at the bargaining table.

The Relationship Between Implicit Beliefs and Performance

Implicit theories have a powerful impact on the cognitions, feelings, and behaviors of individuals (Dweck & Leggett, 1988; see Dweck, 1996, for a review). One reason why implicit theories are so influential is that they affect what individuals are trying to achieve on a given task. Performance goals emphasize favorable judgments of competence by others and are favored by entity theorists. Learning goals emphasize increasing competence and understanding and are favored by incremental theorists. Whereas the former type of goal focuses attention on the outcome of looking competent, the latter type of goal focuses attention on the process of gaining competence.

Given the different goals that incremental and entity theorists tend to adopt, it is perhaps not surprising that they result in different reactions to challenges and obstacles (Diener & Dweck, 1978; Elliott & Dweck, 1988).² In general, entity theorists are more likely to view effort as an indicator of a lack of inherent ability than are incremental theorists (Hong, Chiu, Dweck, Lin, & Wan, 1999). In addition, the entity theorist's willingness to expend effort is more sensitive than that of incremental theorists to their expectations about success. Elliott and Dweck (1988) demonstrated that as long as entity theorists expect to achieve their goal of appearing competent, they will persist in the face of challenges. However, in the face of seemingly insurmountable obstacles, their adoption of performance goals promotes a *helpless* response characterized by avoidance and a deterioration of performance. When the goal of looking good appears out of reach, the defeatist response is to withdraw from the task at hand. Incremental theorists, however, tend to persist in the face of challenges even when the perceived chances for success are small. The adoption of learning goals by the incremental theorist promotes a *mastery-*

oriented response to challenges that involves the pursuit of challenging tasks and persistent striving in the face of failure. Even when it becomes apparent that one might not look good, mastery-oriented individuals continue to persevere if the opportunity to learn is still present.

The relationship between implicit theories and the willingness to expend effort to overcome challenges is relevant to the mixed-motive negotiation arena because, fundamentally, negotiations are characterized by a tension between creating and claiming value (Lax & Sebenius, 1986). Value creation involves sharing information and making mutually beneficial concessions, whereas value claiming involves concealing information and holding firm to one's demands. This tension implies that negotiators must confront challenges to construct agreements that are suitable to both parties. In a typical buyer-seller negotiation, the buyer seeks to pay as little as possible and the seller seeks to sell for the highest price possible. Reaching a favorable agreement that captures the majority of the bargaining pie requires negotiators to set challenging target values and hold firm in the face of requests for concessions. In part, this type of success derives from effort and perseverance (Bazerman, Magliozzi, & Neale, 1985; Huber & Neale, 1987; Neale & Bazerman, 1985a). Likewise, ensuring that no money is left on the table requires negotiators to be vigilant in their pursuit of agreements that satisfy both parties' underlying interests. When faced with opposition by their bargaining partner or the constraints of the situation, the incremental theorist should continue to expend effort to overcome the barriers standing in the way of agreement, whereas the entity theorist should retreat from the interaction and thereby perform poorly. In the end, the incremental theorist's search for a challenge and persistence in the face of obstacles should promote both value creation and value claiming.

To test our hypotheses, we examined the relationship between negotiators' implicit negotiation beliefs and their subsequent performance. In Study 1, we explored the relationship between implicit negotiation beliefs and other beliefs pertinent to negotiations, such as the fixed-pie bias, conflict handling styles, and beliefs about predictors of negotiation success. In so doing, we sought to clarify the nature of the implicit negotiation belief construct. After establishing implicit negotiation beliefs as a unique construct, we then examined the relationship between implicit negotiation beliefs and the achievement goals of negotiators (Study 2). This was followed by an examination of participants' negotiation performance (Study 3). Finally, in Study 4, we explored the real-world implications of implicit negotiation beliefs by examining negotiators' implicit beliefs on the first day of a master of business administration (MBA) negotiations course. We then tracked the relationship between negotiators' implicit beliefs and three performance measures: value claiming, value creating, and ultimate course grade determined 15 weeks later. In combination, these studies provide evidence that implicit negotiation beliefs are a

² It is important to note that the adoption of either a learning or a performance goal at the outset of a task does not reflect a priori ability differences. Rather than it being the case that individuals who adopt learning goals are inherently more skilled than individuals who adopt performance goals, differences between these two groups emerge as obstacles to success arise (Elliott & Dweck, 1988).

unique construct that impacts negotiation performance, whether induced situationally or measured dispositionally.

Study 1

The first step in our research agenda was to determine whether incremental and entity negotiation theories relate to other implicit beliefs about negotiation and conflict in general, as well as whether they predict general styles of bargaining. Our purpose in doing so was to better understand the degree of overlap between the implicit negotiation belief construct and other measures of negotiator motivation and beliefs. In so doing, we hoped to obtain evidence of convergent and discriminant validity for our construct.

Method

To conduct our first study, we measured implicit negotiation beliefs and examined their relationship with various individual difference variables that are described below. Because of issues of timing and convenience, we used three separate samples for this study. Regardless of sample, all participants completed the identical implicit negotiation beliefs measure described below. Our first sample of 119 undergraduate and MBA students also completed our fixed-pie bias measure and our measure of naive beliefs about predictors of negotiation success. A separate sample of 54 MBA students completed a conflict handling style assessment. A third sample of 78 participants completed a social value orientation measure.

Implicit Negotiation Beliefs Scale

To measure implicit negotiation beliefs, we created a 7-item scale adapted from Chiu, Hong, and Dweck (1997). All items were rated on 7-point scales (see the Appendix for the entire scale). Three items on the scale were reverse scored so that higher scores indicated a stronger endorsement of an incremental theory.

Fixed-Pie Bias

Previous research has identified a robust bias in negotiators' implicit beliefs regarding the size of the bargaining pie (Bazerman & Neale, 1983; Thompson & Hastie, 1990). The fixed-pie bias is characterized by a tendency to see the interests of the negotiating parties as opposed and to see the resources in zero-sum terms (Pinkley, Griffith, & Northcraft, 1995). Although on the surface, this bias's focus on fixed beliefs bears some resemblance to the entity theorist's belief that negotiating ability is fixed, these beliefs are logically distinguishable by the fact that the former bias refers to the resources being negotiated and the latter belief refers to the negotiators' ability to improve performance over time. Despite this conceptual distinction, we thought it important to determine the extent of overlap between the two constructs. Three items were constructed to measure the fixed-pie bias: "Conflict almost always ends with a winner and a loser"; "If negotiators have conflicting beliefs, cooperation is nearly impossible"; and "Negotiations are inherently adversarial situations." Each item was rated on a 7-point scale with 1 = *very strongly disagree* and 7 = *very strongly agree*.

Naive Beliefs About Predictors of Negotiation Success

We were also interested in determining the relationship between implicit negotiation beliefs and naive beliefs about the factors that contribute to negotiation success. We created a 6-item scale designed to tap students' naive theories about how best to approach negotiations and resolve conflict. Each item was rated on a 7-point scale with 1 = *very strongly disagree* and 7 = *very strongly agree*. The items were "Creativity is the key to resolving conflict"; "With enough hard work, all conflict can be resolved"; "How people handle conflict says a lot about their character"; "Negotiations are opportunities for building relationships"; "Most people lie at least a little bit when making deals"; and "Self-interest is the driving force behind negotiation success." Because incremental theorists tend to believe that hard work leads to success and entity theorists tend to believe that hard work signals a lack of ability (Hong et al., 1999), we expected that beliefs about the role of effort in negotiations would distinguish entity versus incremental theorists.

Conflict Handling Style and Social Value Orientation

Conflict handling style characterizes the manner in which negotiators are motivated to structure deals along two dimensions: concern for their own interests and concern for the interests of their negotiating partner. Five conflict handling styles have been identified in the literature (Blake & Mouton, 1964). An *avoiding* style is characterized by a low degree of concern for both the self and the other; an *accommodating* style is characterized by a low degree of concern for the self and a high degree of concern for the other; a *competitive* style is characterized by a high degree of concern for the self and a low degree of concern for the other; a *cooperative* style is characterized by a moderate degree of concern for both the self and the other; a *collaborating* style is characterized by a high degree of concern for both the self and the other. Conflict handling styles were measured with the widely used Thomas-Kilmann Conflict Mode Instrument (Kilmann & Thomas, 1977). This survey includes 30 pairs of items in which participants are forced to choose between two statements that each describe a different bargaining style. In total, each bargaining style was paired with every other bargaining style three times. Sample items include "There are times when I let others take responsibility for solving the problem" (avoiding); "Rather than negotiate the things on which we disagree, I try to stress those things upon which we both agree" (accommodating); "I try to find a compromise solution" (compromising); "I attempt to deal with all of my own and the other party's concerns" (collaborating); and "I am usually firm in pursuing my goals" (competing).

To be comprehensive in our measurement of conflict handling styles, we also measured the relationship between implicit negotiation beliefs and social value orientations. Social value orientation refers to the degree of concern that negotiators have for their own outcomes and the outcomes of their negotiating partner (Messick & McClintock, 1968). However, the measurement of social value orientations is simpler than the conflict handling styles described above. We adapted a five-item measure used by Beerma and De Dreu (2002) to measure social value orientation. Two items measured participants' prosocial motivation ("In negotiations, I am supposed to try to achieve beneficial outcomes for myself and my negotiating partner" and "I try to achieve beneficial

outcomes for myself and my negotiating partner"); three items measured participants' proself motivation ("I am supposed to try to achieve the best possible outcome for myself regardless of what others would receive"; "In negotiations, I particularly try to win resources from my negotiating partner"; and "I particularly try to achieve beneficial outcomes for myself in a negotiation"). Each item was rated on a 7-point scale with 1 = *very strongly disagree* and 7 = *very strongly agree*.

Results and Discussion

Implicit Negotiation Beliefs

The scale was adequately reliable ($\alpha = .87$), so we created an implicit negotiation belief score for each participant. Higher scores represent stronger belief in the malleability of negotiation aptitude.

Fixed-Pie Bias

Because the three items did not form a coherent scale ($\alpha = .42$), we examined them individually. As shown in Table 1, implicit negotiation beliefs were significantly correlated with two fixed-pie bias items. Specifically, the more individuals endorsed an incremental viewpoint, the less likely they were to endorse the beliefs that conflict almost always ends with a winner and a loser and that cooperation is nearly impossible when negotiators have conflicting beliefs.

Naive Beliefs About Predictors of Negotiation Success

We first examined whether the six items formed a coherent scale, but because the reliability was low ($\alpha = .47$), we examined each of the items individually. As shown in Table 1, beliefs about the malleability of negotiations skill predicted beliefs about the predictors of negotiation success. Consistent with the hypothesized relationship between implicit negotiation beliefs and effort, a positive correlation was observed between the endorsement of incremental views and the belief that hard work leads to conflict resolution. Two other unanticipated effects emerged. First, entity theorists endorsed the belief that most people lie when making

deals more strongly than did incremental theorists. Second, entity theorists endorsed the belief that self-interest is the driving force behind negotiation success more strongly than did incremental theorists. No other effects were statistically significant.

Conflict Handling Style and Social Value Orientation

To analyze the conflict handling style questionnaire, we conducted the analysis recommended by Kilmann and Thomas (1977) and created a score for each participant for each conflict handling style. As shown in Table 2, implicit negotiation beliefs were not significantly correlated with any of the five bargaining styles or with social value orientations. Implicit negotiation beliefs did not predict negotiators' motivations about their own outcomes and the outcomes of their negotiating counterparts.

The results of this first study suggest that implicit negotiation beliefs have the potential to predict and explain negotiation performance. A key finding to emerge from this initial study is the differential role attributed to effort in negotiation success by incremental and entity theorists. Consistent with our hypothesis, endorsement of an incremental theory was positively related to the belief that effort is a key contributor to conflict resolution. In contrast, entity theorists were more likely to believe that negotiations are driven by self-interest and that lying is a common tactic used in bargaining.

Although entity theorists' belief in the role of self-interest and deception in negotiation success might suggest they would adopt a competitive orientation to negotiations, our assessment of their conflict handling styles and social value orientations revealed no such association with their implicit negotiation beliefs. Although null results are never conclusive, the size of the reported effects suggests that a lack of power was not an issue in our failure to detect a relationship. Instead, it appears that the cognitive beliefs about what drives negotiation success operate independently of negotiators' motivations to structure a deal that meets their own and their bargaining partner's needs.

In contrast to the lack of evidence linking implicit negotiation beliefs with motivational styles, we observed a significant correlation between a belief in the fixedness of an individual negotia-

Table 1
Study 1: Means and Correlations Between Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. INBs	36.00	5.47	—									
2. Fixed Pie 1	3.23	1.41	-.20	—								
3. Fixed Pie 2	3.20	1.41	-.23	.26	—							
4. Fixed Pie 3	3.44	1.33	-.15	.20	.13	—						
5. Predictor 1	5.34	1.10	-.01	-.02	-.02	.11	—					
6. Predictor 2	4.17	1.55	.27	-.07	-.06	.07	.42	—				
7. Predictor 3	5.73	1.18	-.05	.06	-.04	-.04	.22	.11	—			
8. Predictor 4	5.58	0.86	.16	.14	.09	-.05	.11	.10	.21	—		
9. Predictor 5	4.85	1.21	-.21	.22	.28	.29	.13	.11	.01	.06	—	
10. Predictor 6	4.51	1.47	-.27	.03	-.05	.20	.07	-.03	-.06	-.10	.32	—

Note. Significant correlations ($p < .05$) are in boldface; correlations for which $p < .10$ are in italics. INB = implicit negotiation belief. The fixed-pie bias statements are as follows: 1 = conflict almost always ends with a winner and a loser; 2 = negotiators have conflicting beliefs, cooperation is nearly impossible; 3 = negotiations are inherently adversarial situations. The predictor of negotiation success statements are as follows: 1 = Creativity is the key to resolving conflict; 2 = with enough hard work, all conflict can be resolved; 3 = how people handle conflict says a lot about their character; 4 = negotiations are opportunities for building relationships; 5 = most people lie at least a little bit when making deals; 6 = self-interest is the driving force behind negotiation success.

Table 2
Study 1: Correlations Between Variables

Variable	1	2	3	4	5	6
Implicit beliefs and conflict handling styles						
1. INBs	—					
2. Competing	-.01	—				
3. Collaborating	.12	-.22	—			
4. Compromising	-.13	-.18	.01	—		
5. Avoiding	-.12	-.47	-.47	-.23	—	
6. Accommodating	.13	-.45	-.31	-.30	.21	—
Implicit beliefs and social value orientations						
1. INBs	—					
2. Prosocial orientation	.04	—				
3. Proself orientation	.05	-.43	—			

Note. Significant correlations ($p < .05$) are in boldface; correlations for which $p < .10$ are in italics. INB = implicit negotiation belief.

tor’s performance and a belief in the fixedness of the bargaining pie. Despite this significant relationship, it is important to point out that the vast majority of the variance in the Implicit Negotiation Beliefs Scale was unaccounted for by fixed-pie beliefs, suggesting they are overlapping but distinct constructs. In the studies that follow, we explore distributive performance and moderating processes that will enable us to further distinguish between these two constructs.

Study 2

The next step in elucidating the relationship between implicit negotiation beliefs and negotiation performance was to examine whether implicit theories impact negotiators’ achievement goals. Establishing that this linkage exists with negotiation-specific beliefs is important because it sheds light on negotiators’ willingness to persevere in the face of obstacles and expose themselves to the risk of failure. Because we were concerned that highlighting different achievement goals prior to actually negotiating would create demand effects that could impact performance, we examined the effect of implicit negotiation beliefs on achievement goal selection and negotiation performance in two separate studies.

In the current study, we simply manipulated implicit negotiation beliefs and then looked at how they affected achievement goals. To manipulate negotiators’ implicit beliefs, we exposed participants to an excerpt from a bogus text that advanced either an incremental or an entity perspective. Borrowing the procedure developed by Elliott and Dweck (1988) to measure goals, we then asked participants to indicate which type of negotiation task—either a performance-based or a learning-based task—they would prefer to complete. On the basis of previous research linking implicit theories to achievement goals (Dweck & Leggett, 1988), we expected individuals exposed to an incremental perspective to prefer tasks that would allow them to achieve their goal of learning. In contrast, we expected individuals exposed to an entity perspective to prefer tasks that would allow them to achieve their goal of demonstrating their ability. Because these two types of goals are so intricately linked to the effort that individuals exert in the face of challenges, demonstrating this difference is a first step toward establishing the causal role that implicit negotiation beliefs play in determining performance at the bargaining table.

Method

Participants

Participants were 46 undergraduate students at a large West Coast university. Twenty-six participants were women. Five participants were removed from the sample for voicing suspicion about the veracity of the essay, and an additional 5 participants were removed from the sample for failing to follow directions, resulting in a final sample of 36 students. Participants were each paid \$10 for their participation.

Materials and Procedure

This experiment was part of a larger set of unrelated studies that were conducted consecutively. For this portion of the experimental session, participants were told that the purpose of the study was to explore the impact of reading an article about negotiating on their frame of mind.³ Participants were instructed to read the essay and answer some questions about it, and, once finished, they were debriefed, thanked, and dismissed.

Implicit theory manipulation. Following Bergen’s (1992) paradigm developed to manipulate theories of intelligence, we gave participants one of two short articles intended to manipulate their theories of negotiations. Participants in the incremental theory condition read an article titled “Negotiation Ability Is Changeable and Can Be Developed.” The article stated, “While it used to be believed that negotiating was a fixed skill that people were either born with or not, experts in the field now believe that negotiating is a dynamic skill that can be cultivated and developed over a lifetime,” and “No one’s negotiation character is hard like a rock that cannot be changed.” These statements were supported by results from several fictional studies that concluded negotiation ability is malleable and can easily be changed. Participants in the entity theory condition read an article titled “Negotiation Ability, Like Plaster, Is Pretty Stable Over Time.” This article stated, “While it used to be believed that negotiating ability was a bundle of potentialities, each of which could be developed, experts in the field now believe that people possess a finite set of rather fixed negotiating skills,” and “In most of us, by the age of ten, our negotiation ability has set like plaster and will never soften again.” These statements were supported by results from several fictional studies that concluded negotiation ability is fixed and is very difficult to change.

Implicit Negotiation Beliefs Scale. To determine whether the essay impacted implicit beliefs as intended, we measured implicit beliefs with the identical 7-item scale used in Study 1. Participants completed this scale immediately after reading the implicit theory essay.

Achievement goal selection. After completing the Implicit Negotiation Beliefs Scale, participants read the following: “Different negotiation tasks emphasize different types of goals. Based on your negotiation frame of mind, which type of task would you prefer to complete?” Participants were then given the following descriptions (adapted from Elliott & Dweck, 1988) and asked to choose between them:

³ Concerned that this instruction may have created experimenter demand to select the type of task consistent with the content of the article, we replicated this study without this cover story and obtained similar results.

Performance negotiation task. This type of task involves problems of different levels. Some are hard, some are easier. If you pick this type of task, although you won't learn new negotiation skills, it will really demonstrate to the experimenter what you can do as a negotiator.

Learning negotiation task. This type of task involves learning several new negotiation skills. Although you'll probably make a bunch of mistakes, get a little confused, and maybe feel a little dumb at times, eventually you'll learn some useful negotiation skills.

The two task descriptions were designed to emphasize the distinction between performance and learning goals. Whereas the performance task was characterized by an absence of learning and a focus on demonstrating competence, the learning task was characterized by the considerable risk of looking bad while potentially acquiring new competencies. We hypothesized the entity theorists' belief that ability is fixed would steer them away from a task with the potential to make them look bad, whereas incremental theorists were expected to focus more on the learning task's potential for upside ability gains.

Results

Implicit Negotiation Beliefs

Consistent with our expectations, participants in the incremental theory condition ($M = 37.18$, $SD = 4.30$) endorsed more of an incremental viewpoint than did participants in the entity theory condition ($M = 28.53$, $SD = 7.58$), $F(1, 34) = 17.15$, $p < .001$.

Achievement Goal Selection

We hypothesized that incremental theorists would prefer the challenge inherent in a learning task to a greater degree than entity theorists. Consistent with this hypothesis, participants in the incremental theory condition ($M = 88\%$) were more likely to select the learning task than were participants in the entity theory condition ($M = 53\%$), $\chi^2(1, N = 36) = 5.36$, $p = .02$.

Relationship Between Implicit Negotiation Beliefs and Goals

To better understand the relationship between implicit negotiation beliefs and the adoption of achievement goals, we conducted a mediation analysis involving the procedure prescribed by Baron and Kenny (1986). For the purposes of these analyses, the implicit theory manipulation and achievement goal selection variables were dummy coded (0 = entity essay, 1 = incremental essay, and 0 = performance goal, 1 = learning goal, respectively). First, as reported above, we determined that the implicit theory manipulation had a significant effect on implicit negotiation beliefs ($\beta = 0.545$), $t(36) = 3.85$, $p < .001$, and, using logistic regression, on achievement goal selection ($\beta = 1.81$), Wald $\chi^2(1, N = 37) = 4.28$, $p = .04$. Finally, regressing achievement goal selection on both the implicit theory manipulation and the implicit negotiation beliefs rendered the effect of the implicit theory manipulation nonsignificant ($\beta = 0.766$), Wald $\chi^2(1, N = 37) = 0.548$, $p = .46$, and revealed a significant effect of implicit negotiation beliefs ($\beta = 0.14$), Wald $\chi^2(1, N = 37) = 3.92$, $p = .048$. The results of this analysis confirm that the effect of reading an essay that espoused an incremental versus entity perspective on negotiation

task selection was mediated by participants' implicit negotiation beliefs.

The current experiment makes two contributions. First, it shows that implicit negotiation beliefs can be manipulated by simply exposing naive negotiators to an essay espousing an incremental versus entity point of view. Second, and most important, this experiment demonstrates that negotiators' implicit theories affect their achievement goals at the bargaining table. More specifically, incremental theorists were more likely than entity theorists to select a negotiation task that provided an opportunity to learn, despite its concomitant risk of failure. Implicit negotiation beliefs were shown to mediate the relationship between our implicit theory manipulation and achievement goal selection. By demonstrating a link between negotiators' implicit beliefs and their achievement goals, we have gained a better understanding of the process by which performance differences are likely to emerge between entity and incremental theorists. Because the motivations of negotiators drive behavior at the bargaining table (De Dreu & Van Lange, 1995; De Dreu, Weingart, & Kwon, 2000), implicit negotiation beliefs' impact on achievement goals are likely to translate into powerful performance effects.

Study 3

Our main purpose in this study was to determine whether implicit negotiation beliefs have a causal impact on negotiation effectiveness. To do so, we manipulated implicit negotiation beliefs using the same essay induction as Study 2 and then explored its impact on performance in a multi-issue negotiation task. We hypothesized that negotiators who were led to believe that negotiating ability is malleable would outperform negotiating counterparts who were led to believe that negotiating ability is fixed.

Our second goal in this experiment was to explore the process through which implicit theories of negotiations impact performance at the bargaining table. Previous research has demonstrated that perceived ability is an important moderator of the relationship between achievement goals and performance on intellectual tasks (Elliott & Dweck, 1988). In particular, perceived ability has been shown to be a key determinant of whether individuals with performance goals exhibit mastery-oriented behavior (i.e., persistence in the face of challenges) versus helpless behavior (i.e., withdrawal in the face of challenges). However, perceived ability has not been shown to predict behaviors of individuals with learning goals, as these individuals tend to persist in the face of challenges regardless of their perceived ability. Having established in Study 2 that entity theorists are more prone to adopt performance goals than are incremental theorists, we expected perceived ability to predict performance for entity theorists but not incremental theorists. By demonstrating that the link between implicit negotiation beliefs and performance is moderated by perceived ability, we hope to shed light on the underlying process.

Although we expected perceived ability to distinguish how entity and incremental theorists respond to negotiation challenges, we considered alternative accounts of the underlying process as well. First, the possibility that incremental theorists simply have higher aspirations than entity theorists must be addressed. Second, the possibility that incremental theorists expect to have a competitive advantage compared with their negotiating partner must also be entertained. Although these differences would be expected to

produce an advantage for incremental theorists, they are not consistent with our conceptualization in which perceived ability and the willingness to persist to overcome barriers to success distinguishes the two implicit theorists. To disentangle these alternate accounts, we measured aspirations and expected relative performance, in addition to perceived ability.

Method

Overview

The experiment included two conditions. Implicit negotiation theory (incremental, entity) was a within-dyad factor. Although the negotiation task involved multiple issues with integrative potential, the fact that our implicit negotiation theory manipulation was a within-dyad factor rendered any analysis of integrativeness meaningless. Instead, this experiment was designed to examine whether incremental theorists enjoy a relative advantage in terms of individual negotiation performance.

Participants

Our sample included 40 participants for a total of 20 dyads. Participants were undergraduate students enrolled in an introductory business course. Each dyad comprised 1 male and 1 female negotiator. Role assignments (candidate, recruiter) were counter-balanced across gender and implicit theory condition. One dyad was removed from the analyses for failing to come to an agreement, resulting in a final sample of 19 dyads.

Procedure

Premanipulation measures. Prior to receiving the negotiation materials, participants completed a questionnaire designed to determine whether any a priori differences existed between the groups in terms of how they assessed their negotiation skill. Because this measure occurred prior to the manipulation, we did not expect any differences to emerge between conditions. Participants evaluated themselves in terms of rationality, emotionality, self-interest, negotiation experience, assertiveness, and perceived effectiveness. Each item was rated on a 7-point scale, with 1 = *not at all* and 7 = *extremely*.

Implicit theory manipulation. Participants in all conditions were told that we were interested in how novices negotiate and how training materials can compensate for their lack of experience. They were informed that researchers disagreed as to whether novices actually learn from an article on the topic versus simply entering into a “negotiation frame of mind.” Participants were then given one of the two articles described in Study 2 to read.

After reading the essay, participants were asked to provide a short summary of the main points of the article. To ensure that the manipulation had the desired effect, we had participants also answer the question “To what degree is negotiating a skill that can be developed?” We also asked participants to indicate how important they believed negotiating effectiveness to be. Finally, we asked participants to evaluate the essay in terms of interest, clarity, and usefulness. All items were rated on 7-point scales with endpoints of 1 = *not at all* and 7 = *extremely*.

Prenegotiation performance expectations. To determine if the manipulation of implicit theories impacted negotiators’ aspiration,

we asked participants to indicate their target for the negotiation (i.e., how many points they were aiming to achieve out of a possible 13,200 points). We gauged relative performance expectations by asking what percentage of the negotiating pie they expected to earn. Finally, we assessed perceived ability by gauging negotiators’ confidence in their success with the question “How confident are you that you will do well on this task?” which they rated on a 7-point scale (1 = *not at all* and 7 = *extremely*).

Negotiation task. We used the *New Recruit* (Neale, 1997) negotiation task, which concerned an employment negotiation between a job candidate and a recruiter. The negotiation involved eight issues relevant to both parties, for example, salary, vacation time, and benefits. Preferences were induced in negotiators by assigning points to issues (a greater number of points indicated the issue was more preferred). The maximum number of points a negotiator could earn was 13,200; the minimum amount was –8,400. Two issues were purely distributive, meaning that the parties’ preferences were in complete opposition. Two issues were compatible, meaning that the parties’ preferences were identical. The four remaining issues had integrative potential, meaning that one party cared more about Issue A and the other party cared more about Issue B. If both parties conceded on the issue they cared less about, then both parties could benefit in terms of the number of points they earned. The main dependent variable for the negotiation task was the number of points earned by each negotiator.

To ensure that participants were motivated to maximize their own points, we informed negotiators that all participants would be entered in a lottery for several \$50 prizes at the end of the semester, with the number of entries per person proportional to the amount of points that they had earned. After completing the negotiation exercise, participants reported any suspicions or guesses about the purpose of the study. Finally, they were fully debriefed and excused.

Results and Discussion

Manipulation Checks

As expected, individuals who read the entity theory essay ($M = 3.79$, $SD = 1.68$) rated negotiation ability as significantly less malleable than did individuals who read the incremental theory essay ($M = 5.84$, $SD = 0.76$), $F(1, 36) = 21.23$, $p < .001$. Thus, the manipulation of implicit negotiation theories was successful.

Differences in how clear or interesting the article was rated to be were not statistically significant, both $F_s(1, 36) < 0.60$, both $p_s > .45$. However, the incremental article was rated as being significantly more useful than the entity article was ($M_s = 2.95$ vs. 1.84, $SD_s = 0.90$ and 1.65), $F(1, 36) = 6.58$, $p = .02$.

Prenegotiation Self-Assessments

Differences in how entity and incremental theorists evaluated themselves were not statistically significant for any of the self-assessment measures, all $F_s(1, 36) < 2.03$, all $p_s > .16$. See Table 3 for the correlations between all study variables.

Prenegotiation Performance Expectations

Because targets, expectations regarding the division of the pie, and perceived ability were measured before any interaction with

Table 3
Study 3: Correlations Between Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Negotiation points	—													
2. Self effective	.01	—												
3. Self experienced	.12	.73	—											
4. Self rational	<i>.31</i>	.43	.34	—										
5. Self assertive	.24	.55	<i>.29</i>	.37	—									
6. Self emotional	.41	-.19	-.03	-.05	-.05	—								
7. Essay interesting	.27	-.06	<i>.25</i>	<i>.17</i>	-.17	<i>.14</i>	—							
8. Essay usefuf	.21	<i>.15</i>	.33	-.06	-.07	<i>.15</i>	<i>.27</i>	—						
9. Essay clear	.26	-.24	-.05	-.04	<i>.07</i>	.54	.37	<i>.29</i>	—					
10. Important skill	<i>.04</i>	.34	.33	<i>.30</i>	.51	<i>.13</i>	<i>.17</i>	-.23	<i>.07</i>	—				
11. Developable skill	.44	<i>.15</i>	<i>.14</i>	<i>.24</i>	-.02	<i>.14</i>	-.06	<i>.22</i>	-.26	-.19	—			
12. Pre-relative	.40	.50	.44	<i>.26</i>	.60	<i>.10</i>	-.01	<i>.21</i>	<i>.14</i>	<i>.31</i>	<i>.19</i>	—		
13. Pre-aspiration	.22	<i>.31</i>	<i>.14</i>	<i>.25</i>	.33	<i>.09</i>	-.01	<i>.04</i>	-.02	<i>.10</i>	<i>.15</i>	.60	—	
14. Pre-confidence	<i>.32</i>	.56	.62	.46	.52	<i>.01</i>	<i>.11</i>	<i>.17</i>	-.02	<i>.25</i>	<i>.24</i>	.73	.45	—

Note. Significant correlations ($p < .05$) are in boldface; correlations for which $p < .10$ are in italics.

negotiating partners, we analyzed them at the individual level with an ANOVA. The difference in aspiration levels set by entity ($M = 8,290.00$, $SD = 3,795.14$) and incremental theorists ($M = 7,521.05$, $SD = 2,453.47$) was not statistically significant, $F(1, 37) = 0.57$, $p = .46$. Likewise, the difference in the entity theorists' ($M = 55.50$, $SD = 16.38$) and incremental theorists' ($M = 60.75$, $SD = 13.40$) expectations regarding the percentage of the pie they would claim was not statistically significant, $F(1, 38) = 1.23$, $p = .27$. These data suggest it is not the case that the incremental essay simply leads to higher aspirations than the entity essay does. Finally, the difference in perceived ability between incremental ($M = 4.72$, $SD = 1.18$) and entity ($M = 4.05$, $SD = 1.22$) theorists was marginally significant, $F(1, 35) = 2.85$, $p = .10$. We report an analysis below that allowed us to test for a moderating role of perceived ability on performance.

Negotiation Performance

All analyses of the results of the negotiation were conducted at the dyadic level. To test our hypothesis that incremental negotiators would outperform entity negotiators, we conducted an ANOVA with implicit negotiation theory as a within-dyad factor. In support of our first hypothesis, the negotiator with an incremental theory ($M = 6,300.00$, $SD = 2,582.20$) earned significantly more points in the negotiation than the negotiator with the entity theory ($M = 3,331.58$, $SD = 2,809.52$), $F(1, 18) = 6.37$, $p < .03$.⁴

Relationship Between Perceived Ability, Implicit Theory, and Performance

We proposed that negotiation performance is positively related to the effort and perseverance put forth by a negotiator in the face of challenges. We predicted that because effort carries a negative connotation to entity theorists (Hong et al., 1999), they will only persist when they believe they have the ability to succeed. In contrast, we expected the tendency of incrementalists to persevere in the negotiation to be unrelated to their perceived ability to succeed.

To test this hypothesis, we conducted a series of regression analyses examining the relationship between implicit theories,

perceived ability, and performance. First, the main effects were entered into the model and then a mean centered interaction term was entered in the second stage. Those who read the entity essay were coded as 0 and those who read the incremental essay were coded as 1. Consistent with the analyses described above, there was a significant main effect of implicit theory, $t(34) = 2.91$, $p = .006$, reflecting the fact that incremental theorists outperformed entity theorists. However, this main effect was qualified by the higher order Implicit Theory \times Perceived Ability interaction, $t(33) = -2.57$, $p = .015$. Using standard procedures (Aiken & West, 1991), simple slope analyses confirmed that there was a significant effect of perceived ability for entity theorists, $b = .53$, $p = .009$, but not for incremental theorists, $b = -.19$, $p = .36$. Entity theorists with higher perceived ability scored better in the negotiation than did those with lower perceived ability. These findings, using predicted values, are graphically represented in Figure 1. Whereas perceived ability was an important predictor of whether entity theorists exhibited mastery-oriented versus helpless responses to the challenges they inevitably faced in dividing the pie, incremental theorists appear to have exhibited a mastery-oriented response regardless of their perceived ability.

The results of this experiment suggest that incremental theorists enjoy a tremendous performance advantage at the bargaining table relative to entity theorists. On average, incremental theorists captured 65% of the bargaining pie. By manipulating implicit theories through our essay induction, we can be confident that implicit negotiation beliefs had a direct causal effect on negotiators' ability to capture their share of the bargaining pie.

The pattern of perceived ability data sheds light on the process by which incremental theorists gained their advantage. Whereas entity theorists only showed endurance in overcoming challenges at the bargaining table when their perceived ability to succeed was high, the incremental theorists appeared willing to persevere even

⁴ Although we did not include a control condition in which neither negotiator read an implicit theory essay, archival data from a similar participant population using the identical exercise yielded virtually identical joint gain ($M = 9,640.00$, $SD = 1,485.93$). In neither the current sample nor this control sample did a main effect for role emerge.

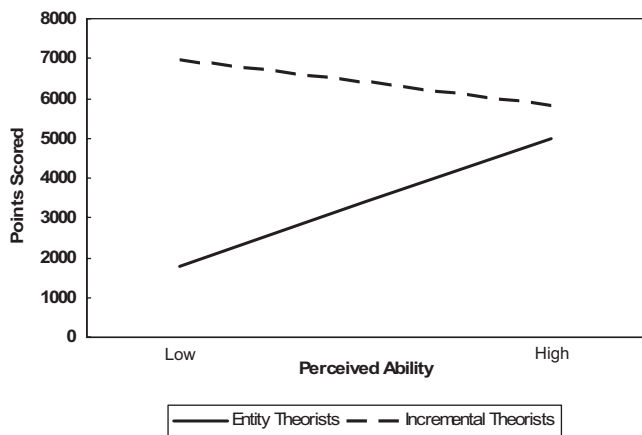


Figure 1. Points scored by incremental and entity theorists as a function of perceived ability.

when their perceived ability level was relatively low. As Study 2 demonstrated, the greater willingness of incremental theorists compared with entity theorists to adopt learning goals, despite their increased risk of failure, is entirely consistent with this relationship between implicit theories, perceived ability, and performance. Related to this point is the observation that our sample consisted of students from a highly competitive undergraduate course whose overall perceived ability was likely higher than might be expected in a more diverse subject population. As such, the relationship between implicit beliefs and perceived ability might be even stronger in a less restricted sample.

In addition to elucidating the process through which implicit negotiation beliefs impact performance, the perceived ability data also enabled us to further distinguish implicit negotiation beliefs from other negotiation beliefs in the literature. For example, we know of no evidence to suggest that the fixed-pie bias or social value orientations are influenced by perceived ability. On a conceptual level, it would be very difficult to construct a compelling argument connecting perceived ability to these cognitive and motivational drivers of negotiation performance.

Important for ruling out the possibility that incremental theorists are simply more competitive than entity theorists is the observed weak relationship between implicit theories and aspiration levels. Despite the trend for entity theorists to set higher aspirations than incremental theorists, we observed an ironic pattern of performance data whereby the entity theorists fell further short of their aspirations than the incremental theorists did. Given that the total size of the negotiating pie was 13,200 points and the average dyad attained less than 75% of that pie, we can be confident that the failure of entity theorists to reach their aspirations was not simply a product of a zero-sum fixed pie. Instead, the more likely explanation for their failure to meet their aspirations is that they disengaged from the task once they encountered resistance from their bargaining partner.

Study 4

Having provided compelling evidence that implicit negotiation beliefs can be manipulated and that these beliefs impact negotiation performance in the laboratory, we now turn to the question of

whether naturally occurring implicit negotiation beliefs have similarly potent effects on negotiation performance. Although the essay manipulation used in Studies 2 and 3 helped establish the causal relationship between implicit negotiation beliefs and performance, we are also interested in the impact of naturally evolving implicit beliefs on negotiation performance. If dispositionally based implicit negotiation beliefs operate similarly to the situationally induced beliefs examined thus far, then it would suggest the construct is highly robust.

To examine the dispositional side of implicit negotiation beliefs, we examined how the implicit theories of MBA students enrolled in a course in negotiations impacted three distinct measures of negotiation performance.⁵ Consistent with the mixed-motive nature of negotiations (Lax & Sebenius, 1986), we distinguished between value claiming and value creating. To explore value claiming, in Study 4A, we explored the impact of implicit negotiation beliefs on the identical multi-issue negotiation examined in Study 3. In Study 4B, we explored the relationship between negotiators' implicit theories and their ability to create value by structuring a deal that addressed negotiators' underlying interests. In Study 4C, we examined the relationship between individual students' implicit belief scores from the first day of class with their final course grade. In combination, these three studies explore several key aspects of performance in the mixed-motive negotiation context, ranging from value claiming to value creation to comprehension of negotiation theory and involvement in the course.

Exploring implicit negotiation beliefs in a classroom environment had several advantages. First and foremost, it was a convenient context for examining the consequences of implicit negotiation theories. Because negotiator reputations are quickly formulated in this environment and the focus is on learning, both the motivation to perform and the motivation to learn are high. An added benefit of selecting a participant population comprising students enrolled in a negotiations course is that it provided a conservative test of our hypothesis. Presumably, MBA students who have a host of elective courses to choose from would only enroll in a negotiations course if they believed it was possible for them to improve their ability in this practical domain. As such, among the spectrum of beliefs in the population of MBA students, we likely only sampled from individuals who at least moderately endorsed a belief that negotiating ability is malleable. Thus, finding differences with this limited sample would lend strong support for the proposition that implicit theories are powerful determinants of behavior in more general populations characterized by even more variability in beliefs.

An additional reason for exploring implicit theories within the classroom environment is that it allowed us to look at their real-life consequences beyond traditional gauges of negotiation performance. That is, it allowed us to examine whether the implicit theories students held on the first day of class impacted their overall course grade, which was determined by written and oral assignments independent of their performance on negotiation ex-

⁵ All 72 students from the class were eligible as participants but 9 were excluded because they failed to complete the Implicit Negotiation Beliefs Scale. Of the final sample of 63 participants, 83% are included in Study 4A's sample and 79% are included in Study 4B's sample.

ercises. Apart from the practical skills involved in negotiating effectively, the course grade reflects comprehension of negotiation theory, engagement in class discussions, and reflection on key lessons associated with in-class negotiation exercises. Finally, examining implicit negotiation beliefs in an adult population of graduate students with several years of work experience also extends our understanding of implicit theories in general, which in the past have largely been examined with children and undergraduate students.

Grant and Dweck (2003) demonstrated that students who embraced learning goals in an intensive undergraduate general chemistry course achieved higher course grades than did students who embraced performance goals. Given the relationship established between implicit negotiation beliefs and achievement goals in Study 2, we expected students' implicit negotiation theories would predict their willingness to face challenges to overcome performance obstacles in the course, thereby impacting their overall negotiation course grade. If our hypothesis is confirmed and implicit negotiation beliefs are able to predict course grades 15 weeks later, then it would suggest implicit negotiation beliefs are remarkably robust given the vast amount of course material that students are exposed to that could easily override their existing beliefs reported on the first day of class. By examining the impact of implicit beliefs longitudinally, we are able to get a sense of their stability over time in a context in which one might easily imagine them changing.

Study 4A

Our purpose in this experiment was to determine whether negotiators' dispositional implicit theories affect performance in a manner analogous to the effects of implicit beliefs induced through the essay manipulation in Study 3. We hypothesized that negotiators' implicit beliefs reported on the first day of class would predict their negotiation performance, with incremental theorists enjoying a relative advantage over entity theorists.

Method

Overview

Participants completed the identical Implicit Negotiation Beliefs Scale described in Study 1 and the current negotiation task 2 weeks later. Participants were randomly assigned to dyads, and roles within each dyad were also randomly assigned.

Participants

Our initial sample included 72 MBA students enrolled in a negotiations course at a large West Coast university. Because 9 students did not complete the Implicit Negotiation Beliefs Scale, their data were excluded from all analyses. Each dyad that involved one of the excluded participants was excluded from dyadic-level analyses. In addition, students who were absent from class on the day on which the exercise occurred were excluded. The final sample included 52 participants, making up 26 dyads.

Materials and Procedure

Implicit Negotiation Beliefs Scale. On the first day of class, participants completed the 7-item scale described in Study 1. To

test our hypothesis, we computed the proportional difference in implicit negotiation beliefs within each dyad.

Negotiation task. Two weeks into the class, we had participants take part in the negotiation task described in Study 3. To test our hypothesis, we computed the proportional difference in the number of points earned by negotiators within each dyad.

Results and Discussion

All analyses of negotiation performance were conducted at the dyadic level. Table 4 provides a correlation matrix for all variables included in the study. To test the hypothesis that incremental theorists would outperform entity theorists, we first computed the sum total of negotiators' implicit beliefs from their responses to the Implicit Negotiation Beliefs Scale items and then determined the proportion of this belief score that was attributable to the candidate role. We then determined the proportion of the joint gain that was claimed by the candidate. These two proportions were then correlated. Consistent with the hypothesis that incrementalists would outperform entity theorists, the relative strength of incremental beliefs within the dyad was positively associated with the relative division of resources, $r(26) = .40, p = .045$. Within the context of this quantified multi-issue negotiation, the difference in the extent to which the 2 negotiators endorsed an incremental versus entity view predicted relative performance. More specifically, the negotiator with a stronger endorsement of an incremental view tended to capture a larger share of the bargaining surplus.

In the previous study, each dyad had the identical implicit theory composition, which rendered an analysis of joint gain meaningless. In contrast, the current study provided natural variability in the implicit theory composition of each dyad, which enabled us to examine the impact of joint beliefs on joint gain. However, the relationship between dyadic level implicit beliefs and joint gain was not statistically significant, $r(26) = .05, ns$. One conclusion to draw from this null relationship is that incremental theories improve performance by leading negotiators to persist solely in value claiming, which operates in tension with value creating (Lax & Sebenius, 1986). Another possible reason why we failed to observe a relationship between dyadic-level implicit beliefs and joint gain is that we suffered from a ceiling effect on the joint gain measure. Dyads achieved an average of 12,000 points (out of 13,200 possible points), meaning that almost 91% of the joint gain was achieved by the average dyad. In addition, the fact that every dyad succeeded in reaching an agreement may be suggestive of a floor effect for the risk of failure on this task. Study 3 demonstrated that perceived ability to succeed is a key factor distinguishing entity and incremental theorists. As such, we might observe more sensitivity to the role of implicit negotiation beliefs on integrative outcomes in tasks in which failure is a real possibility and wherein negotiators can avoid failure by integrating their underlying interests. To address this possibility, in the next study, we used a negotiation exercise that frequently ends in impasse and thus was likely to be perceived as more challenging for negotiators.

Study 4B

The purpose of this experiment was to extend our exploration of the impact of implicit negotiation beliefs on a rather challenging integrative bargaining task that often ends in failure. Although it is

Table 4
Study 4A: Correlations Between Variables

Variable	1	2	3	4	5	6	7	8
1. Recruiter belief	—							
2. Candidate belief	.28	—						
3. Joint beliefs (C + R)	.78	.82	—					
4. Belief proportion (C/J)	<i>-.56</i>	<i>.63</i>	.07	—				
5. Recruiter points	.32	-.25	.03	-.42	—			
6. Candidate points	-.19	.20	.01	.33	-.71	—		
7. Joint points (C + R)	.14	-.05	.05	-.08	.30	.46	—	
8. Points proportion (C/J)	-.27	.24	-.01	.40	-.93	.91	.06	—

Note. Significant correlations ($p < .05$) are in boldface; correlations for which $p < .10$ are in italics. C = candidate role; R = recruiter role; J = joint sum of candidate and recruiter roles.

rational and justifiable to walk away from a potential deal that fails to exceed the other alternatives available to a negotiator, in reality, negotiators often interpret an impasse as a failure (O'Connor & Arnold, 2001; O'Connor, Arnold, & Burris, 2004). Given the importance of anticipated failure in predicting differences between endorsers of incremental versus entity theories, this context was particularly appropriate for testing our hypothesis that dyadic-level implicit negotiation beliefs predict the ability to create value at the bargaining table.

The task used in the current study was inherently challenging because it is characterized by a *negative bargaining zone*, or one in which the most the buyer is willing to pay is less than the least the seller is willing to accept (Thompson, 2005). To overcome this negative bargaining zone and reach an agreement acceptable to both parties, negotiators must focus on the interests underlying negotiators' stated positions. However, to realize that the negotiation has integrative potential and that a deal is possible at all, negotiators must persevere beyond the initial stage in which their positions are revealed and explore creative ways of expanding the pie. In selecting a difficult negotiation exercise, we aimed to test the hypothesis that the degree to which negotiating dyads endorse incremental theories would be positively associated with their effectiveness at crafting deals in the face of challenges.

Method

Overview

Participants were drawn from the same classroom sample as in Study 4A. Participants were randomly assigned to dyads, and roles within each dyad were also randomly assigned. Participants were assigned to a different partner from the partner they negotiated with in Study 4A. Because of absences and new enrollments, the overlap in samples was 80%.

Participants

The participant sample was the same as that reported in Study 4A. For this study, the final sample included 54 participants, making up 27 dyads.

Procedure

Participants engaged in the *Texoil* negotiation exercise (Goldberg, 1997), which concerned the negotiation of the sale of a

gasoline service station between the current station owner and a representative of a large petroleum company. In addition to receiving general information regarding the topic of the negotiation, each negotiator was given private role information that identified the parameters of the negotiation. Negotiators were informed that they could choose to reveal any information that was contained in their role instructions but that they could not physically exchange materials.

The negotiation was structured such that the highest price the petroleum company representative could pay for the station was \$500,000, which was determined by what the company leadership had authorized as part of a plan to purchase 100 service stations in a 5-year period. The lowest price that the station owner was willing to accept for the station was \$580,000, which was determined in part by the estimated value of the station but also by taking into account the owner's needs. Specifically, the owner intended to sell the station to take an extended trip around the world. The owner's role instructions contained information regarding the cost of the trip and the need to have money saved so that on the owner's return from the trip, he or she would have money to live on before employment was secured. Sellers were informed that these considerations were factored into the seller's minimum price.

Because the buyer's maximum (reservation) price was lower than the seller's minimum (reservation) price, creating an agreement was quite challenging. At first glance, then, there is a negative bargaining zone with regard to finances. However, the negotiation has a positive bargaining zone if negotiators consider their underlying interests. To reach an agreement, one of three types of concessions could be made: (a) The seller could modify his or her reservation price to accept an agreement worth no more than \$500,000 (but this would prevent the seller from taking the desired trip); (b) the buyer could modify his or her reservation price to pay more than \$500,000, which is strictly prohibited by their role instructions; or (c) the buyer could offer additional forms of compensation to the seller that would satisfy both parties' underlying interests. Because the first two options focus on the zero-sum nature of the agreement, they are purely distributive. In contrast, the third type of agreement is integrative because it creates value for both negotiators by introducing additional terms into the agreement that help satisfy the negotiators' underlying interests.

Negotiators who structured an agreement by offering additional forms of compensation to the seller could do so in a wide variety

of ways. A relatively common method for expanding the pie involved guaranteeing the service station owner a job as a manager on returning from his or her travels. This type of agreement allayed the concerns of the station owner regarding the need to have a nest egg of savings available after the trip and also benefited the petroleum company's quest for expansion by hiring successful management. Another method of expanding the pie included offering stock options to the seller, which meant that the ultimate value of the service station would depend on how the future unfolded. In each of these examples, sellers must reveal their reasoning for selling the station and both parties must collaborate to expand the pie.

The main dependent variable for the negotiation task was a dichotomous measure assessing whether negotiators were integrative in their agreements. Specifically, we coded whether negotiators included additional terms in their agreement that satisfied the interests of at least one of the parties and thereby expanded the pie.

Results and Discussion

Preliminary Analysis

All analyses of negotiation performance were conducted at the dyadic level. Eleven dyads, or 41% of the sample, failed to reach agreement. Correlations between all variables are presented in Table 5.

Negotiation Performance

We first computed a variable that represented the sum total of negotiators' implicit beliefs within dyads. To test the hypothesis that malleable beliefs would promote perseverance in the face of challenge and result in more integrative solutions, we gauged negotiation performance by examining whether negotiators who reached a deal did so by including additional terms that enabled them to expand the pie.⁶ By turning a single-issue distributive negotiation into one involving multiple issues, negotiators realized their integrative potential. Consistent with our hypothesis, the correlation between dyadic-level implicit theories and integrativeness was statistically significant, $r(16) = .51, p = .04$. The more negotiators collectively endorsed the belief that negotiation performance is a skill that can be developed, the more likely they were to go beyond negotiators' stated positions and construct a deal that addressed their underlying interests.

A stronger test of our hypothesis involves whether negotiators pushed past initial failures in structuring a viable deal to reach an acceptable solution in the end. Out of the 16 dyads who reached an agreement, 6 dyads agreed to a solution that was not allowed by their role materials. That is, either the station owner accepted an agreement that would not allow him or her to sail around the world or the petroleum company representative offered to pay an amount greater than what he or she was authorized to pay. When the dyads who reached untenable agreements were combined with the dyads who failed to reach any agreement at all, 63% of the sample failed to reach an acceptable agreement. We compared the dyadic-level implicit beliefs of negotiators who did not reach an acceptable agreement with those of negotiators who did reach an acceptable agreement. As predicted, the correlation was positive, $r(27) = .35, p = .07$. The more negotiators collectively endorsed an incremen-

tal view, the more likely they were to overcome initial failures and construct an agreement that led to an acceptable solution for both parties.

Another interesting question to consider is whether the beliefs of the negotiator playing a particular role were especially critical for structuring an integrative deal. Because the station owner role possessed the information necessary to construct an integrative deal (i.e., the intention to take a 2-year trip around the world and then return to seek employment), we expected that the beliefs of the negotiator playing the station owner would be central to the construction of an integrative agreement. By revealing this information to their bargaining partner, negotiators playing station owners would provide the negotiating dyads with the information needed to structure an integrative deal. In comparison to the station owner role, the Texoil representative's role contained less critical information and, therefore, might not be predictive of integrativeness. Consistent with this hypothesis, the beliefs of the negotiator playing the service station owner, $r(16) = .49, p = .05$, predicted whether an integrative agreement was reached, but not the beliefs of the negotiator playing the Texoil representative, $r(16) = .39, p = .13$. Although dyadic-level beliefs predicted integrativeness, the implicit beliefs of the negotiator who had relevant underlying interests to reveal were particularly critical.

This exercise was challenging for novice negotiators, as evidenced by the fact that nearly half of our sample failed to reach a deal at all. Dyads who did manage to reach a deal could do so by foregoing future plans and structuring a deal simply around sale price or by engaging in a more effortful process of structuring a deal that took into account each party's underlying interests. By engaging in the latter process, negotiators could integrate their differing priorities and thereby create more value in the deal. The results clearly support the hypothesis that an incremental viewpoint promotes integrative agreements. Presumably, the motivations and cognitions associated with the belief that negotiating ability is malleable contributed to the incremental theorists' success in uncovering opportunities for expanding the pie. By revealing the interests underlying their stated positions, they were able to turn a negative bargaining zone into a positive one and realize its integrative potential.

Study 4C

All of the studies we have presented thus far clearly indicate that incremental theorists have an advantage at the bargaining table. Endorsement of an incremental theory led to more creative solutions at the dyadic level and more lucrative agreements at the individual level, both when induced situationally or measured dispositionally. The question we turn to now concerns the long-term ramifications of these beliefs on an entirely different gauge of performance: course grade. Performance in a negotiations course represents skill improvement and learning of negotiation theory and practice.

Although this measure of performance was completely independent of performance on the negotiation tasks that took place as part of the course, we expected implicit beliefs to have similar effects

⁶ The inclusion of nonmonetary terms in the negotiation rendered meaningless an analysis of the agreement's financial value.

Table 5
Study 4B: Correlations Between Variables

Variable	1	2	3	4	5	6	7	8
1. Buyer belief	—							
2. Seller belief	.44	—						
3. Joint beliefs	.86	.84	—					
4. Agreement	.00	.16	.09	—				
5. Price	.00	-.38	-.22		—			
6. Integration vs. distributive	.39	.49	.51		-.20	—		
7. Integration vs. all others	.22	.39	.35	.64	-.20		—	
8. Integration vs. impasse	.14	.39	.30					—

Note. Significant correlations ($p < .05$) are in boldface; correlations for which $p < .10$ are in italics.

on both performance measures for two reasons. First, to the extent that incremental theories drive persistence and the adoption of learning goals, they should improve course performance. Second, the framework that students develop by participating in negotiation simulations is the same framework on which student comprehension is measured. Given the conceptual overlap, we expected incremental theorists to have a similar advantage in coursework.

Method

Course Grade

Because participants were enrolled in a negotiations course, we could gauge their performance on the basis of their final course grade at the end of the semester. This grade was not affected by performance in the negotiation exercise, as in-class exercises were not graded. Students could earn 200 possible points in the course ($M = 179, SD = 6.43$). The final course grade was impacted by individual and group written assignments, participation in class discussions, and an individual presentation.

Implicit Beliefs and Performance

To determine what longitudinal effect students’ professed beliefs about negotiating ability had on their performance in the course, we correlated belief scores with final course grades. The analysis was conducted at the individual level.

Results and Discussion

Consistent with the hypothesis that malleable beliefs promote better negotiation performance, the correlation between belief scores and final grade was statistically significant, $r(63) = .28, p = .03$. The more malleable students believed negotiating ability to be on the first day of class, the higher their final course grade 15 weeks later. Embracing an incremental theory was associated with better performance on course assignments aimed at gauging student comprehension of negotiation theory and practice. The observation that implicit negotiation beliefs remained stable over time and predicted performance on course assignments not directly related to negotiating ability is quite remarkable when one takes into consideration the amount of material that students in a graduate program are exposed to over the course of a semester.

As with all correlational research, alternative explanations must be entertained to account for the pattern of findings. One post hoc

explanation for the superior course performance of incremental theorists is that they are simply better students than entity theorists. Although we did not record entering grade point average (GPA) for the sample described above, we were able to explore this possibility with an independent sample. In particular, we collected implicit belief scores from 52 upper division undergraduate students on the first day of a negotiations class and then asked them to report their current GPA. We then correlated implicit beliefs with GPAs and found that the relationship was not statistically significant, $r(51) = .07, p = .64$. So it appears it is not the case that incremental theorists are simply better students in general than entity theorists. Instead, the impact of implicit negotiation beliefs appears to be restricted to how students respond to the obstacles preventing success in their negotiation studies. By triangulating these dispositional findings with the manipulated variable findings of Study 3, we gain confidence that implicit negotiation beliefs’ effect on negotiation performance is quite robust.

Another alternative interpretation of our grade findings is that incremental theorists’ higher grades may simply be a reflection of their alignment with the course instructor’s ideological bent on this issue. In an unrelated investigation that speaks to this point, van Laar, Sidanius, Rabinowitz, and Sinclair (1999) observed that students whose beliefs regarding egalitarianism were congruent with the degree to which their major was hierarchy enhancing were rewarded with higher grades compared with students whose beliefs were incongruent. Extending this line of reasoning suggests that congruency in implicit negotiation beliefs between teacher and student led incrementalists to have higher grades than entity theorists. To address the possibility that incremental theorists only do better than entity theorists in courses in which instructors endorse the belief that negotiating ability is learnable, we would have to identify and include in our sample instructors who endorse both incremental and entity beliefs themselves. We speculate that the latter type of instructor is in rather short supply. Although grades are indeed subjective, implicit negotiation beliefs’ effects on negotiation performance occurred regardless of instructor because the exercises used in Studies 3 and 4B were quantified on the basis of a numerical scoring system that participants used to negotiate. Each issue in the negotiation was worth a certain number of points, and participants were explicitly told that their objective was to earn as many points as possible. The objective nature of this exercise provides assurance that the experimenters’ implicit beliefs did not bias the results.

Examining the impact of implicit negotiation beliefs in the classroom afforded us many benefits. The consequences, in terms of both reputation effects among fellow students and course performance, created a context in which both learning and performance goals were likely to be at play and opposing implicit theories would be in tension. The self-selection of students into the course created a conservative test of our hypotheses because the greatest endorsers of entity theories were likely absent from our sample. Finally, the introduction of course material that surely provided students with ample tools for improving their negotiation performance would seem to speak against the enduring influence of implicit beliefs measured at the start of the course. Despite all of these obstacles, incremental theorists were repeatedly shown to outperform their entity theorist peers. Although the results were quite robust, we do note that the degree of overlap between samples in the three classroom studies points to the need for future research using completely independent samples. In so doing, assurance will be provided that the documented results are not a product of the idiosyncrasies of these particular students and instructor.

General Discussion

Overall, the studies presented here demonstrate that negotiators' beliefs about the malleability of negotiation ability have powerful and predictable effects on how resources are claimed and created at the bargaining table. In particular, the extent to which negotiators endorse the view that negotiating is a skill that can be developed appears to have a facilitative effect on how they perform. This observation is true for both situationally induced and dispositional beliefs. The impact of implicit beliefs extends to two independent gauges of negotiating prowess—value claiming and value creating—and two very different performance domains—both one-shot negotiations and overall learning in a negotiations course. By affecting negotiators' achievement goals and willingness to exert effort to overcome obstacles, implicit beliefs have a wide-ranging impact on negotiation performance.

We also sought to understand the process through which incremental and entity theories produced different negotiation results. To do so, we identified perceived ability as a moderating variable in Study 3. Building on Dweck and Leggett's (1988) framework, we have argued throughout the article that incremental theorists derived their advantage from a willingness to expend effort in the face of challenges, even when the chances for success appear small. Armed with a goal to learn and master the negotiation domain, incremental theorists are willing to stare potential failure in the face and plow through it with continued perseverance. In contrast, entity theorists appear much more selective in their willingness to exert effort. If they believe they will ultimately succeed, then they appear not to resist hard work, but if they have doubts about their ability to succeed, then they fall into the predicted helpless pattern characterized by withdrawal of effort. These results suggest entity beliefs coupled with low perceived ability lead to a particularly pernicious effect at the bargaining table.

This research has important theoretical implications for negotiation research. Broadly speaking, these experiments suggest that negotiation performance is a function of the negotiators' motivations and cognitions. Past research has demonstrated the powerful effects of cognitions, such as the fixed-pie bias, on negotiation

performance. Although the two constructs were shown to be related in Study 1, with individuals endorsing fixed beliefs about the size of the pie tending to also endorse fixed beliefs about their own ability to improve as a negotiator, we have demonstrated the unique ability of implicit negotiation beliefs to predict negotiation performance. We showed that entity theorists' distributive performance was worse than the performance of incremental theorists, whose beliefs in the fixed-pie bias were relatively weak. In addition, by showing that perceived ability moderated the relationship between implicit theories and performance, we were able to more clearly distinguish the two constructs. We are also confident that our results are not the product of motivations already documented in the literature, such as social value orientations. In addition to failing to show a relationship between implicit negotiation beliefs and social values in Study 1, incremental theorists' superior performance throughout our studies would seem to speak against this explanation, because the direction of conceptual overlap would predict the opposite pattern of results. By distinguishing implicit negotiation beliefs from these other highly influential effects in the negotiations literature, we clarify the unique conceptual contribution of the current research. That being said, future research that directly measures the influence of these constructs simultaneously on negotiation performance would offer further assurance that they operate independently.

Another important theoretical contribution of this research is the demonstration of the cumulative effect of individuals' implicit beliefs on dyadic-level phenomena. Although individual-level beliefs impacted the division of resources within dyads, negotiators' collective implicit beliefs predicted their ability to overcome a negative bargaining zone and to expand the pie in Study 4B. The fact that the implicit beliefs of the negotiator in the role with the more critical information for crafting an integrative deal also uniquely predicted whether integrative outcomes were achieved suggests that individual negotiators have considerable control over their outcomes, provided they adopt incremental beliefs. This finding is consistent with Thompson's (1991) demonstration that information sharing by a single negotiating partner was sufficient to improve joint outcomes. We add to this observation the possibility that implicit negotiation beliefs predict whether negotiators choose to share the information required to construct integrative outcomes.

In addition to its relevance to the negotiations literature, this research also contributes to the literature on implicit theories. Across a range of contexts, Dweck and colleagues have consistently demonstrated the predictive power of implicit theories. Specifically, researchers have explored implicit theories of intelligence (Dweck & Leggett, 1988), human traits and personality (Chiu, Hong, & Dweck, 1997; Plaks, Grant, & Dweck, 2005; Plaks, Stroessner, Dweck, & Sherman, 2001), and morality (Chiu, Dweck, Tong, & Fu, 1997). The current research adds to this literature by demonstrating that implicit theories of negotiation, a behavioral skill pertaining to the management of conflict, have similarly powerful effects on performance. The fact that we observed dyadic-level effects for implicit theories is a unique contribution of this research to the implicit theories literature.

Another contribution of the current research is the demonstration that implicit negotiation beliefs operate both situationally and dispositionally. By demonstrating that implicit beliefs about the malleability of negotiation skill affect performance and that these

beliefs can be manipulated, we are, in fact, demonstrating that negotiating skill is malleable. Yet the powerful effect of implicit beliefs at the outset of a negotiations course on grades determined 15 weeks later suggests they are relatively stable—despite all of the course material designed to teach students effective strategies for improving their negotiation performance, these initial beliefs had an enduring impact. Taken together, these findings suggest a relatively robust phenomenon that can nonetheless be modified through interventions. Future research that explores the duration of impact of manipulated implicit negotiation beliefs will help to clarify whether dispositions or situations are more powerful drivers of performance at the bargaining table.

Although the moderation data in Study 3 shed light on the underlying process driving the observed effects, future research that explores mediating mechanisms would also be worthwhile. The findings of Study 2 clearly show that the goals negotiators set were affected by their implicit beliefs. However, our concern that asking negotiators about their goals prior to negotiating would create a demand effect prevented us from linking these goals directly to negotiated agreements. Future research that explores the behavioral impact of achievement goals would enable us to determine the behavioral characteristics of negotiators who adopt learning goals. For example, determining whether negotiators perform well because they anchor the negotiation with an aggressive opening offer or simply because they exhibit patience and a willingness to endure silence would be worthwhile. Whereas the former technique involves actively pursuing one's goals, the latter technique involves more passivity and may evoke active concession making by one's counterpart. Likewise, if learning goals promote persistence in the face of challenges, perhaps incremental theorists make more offers than entity theorists in an attempt to find a deal that meets both parties' needs. A better understanding of the underlying process through which implicit beliefs have their effect will emerge once the behavioral differences between incremental and entity theorists are identified.

Another direction for future research concerns whether beliefs about the malleability of negotiation performance are sensitive to the negotiator in question. The questions included in our Implicit Negotiation Beliefs Scale were very general in that they did not distinguish between the respondent's own abilities and those of their negotiating counterparts. Because participants completed the scale prior to preparing for any particular exercise or knowing who their negotiating partner would be, the question of whether these beliefs are sensitive to a particular negotiation context is still open. One question worth pursuing is whether negotiators exhibit an egocentrism tendency whereby they tend to believe that their own ability can improve through effort but that the abilities of their adversaries are relatively fixed. This asymmetry in implicit negotiation beliefs across actors might be one contributor to the well-documented tendency of negotiators to exhibit overconfidence (Neale & Bazerman, 1985b). Relating back to the question of how our research is connected to the fixed-pie bias, we speculate that beliefs about a dyad's ability to expand the pie (i.e. the fixed-pie bias) would likely be influenced by who one's negotiating partner is believed to be but that beliefs about one's own skill as a negotiator are likely more stable across contexts. However, the veracity of this hypothesis is an empirical question.

We began by highlighting a widespread belief in the existence of born negotiators. Yet the findings from a set of experimental,

naturalistic, and longitudinal investigations contradict this belief and, thereby, suggest this pervasive belief is, in fact, a myth (Thompson, 2005). Instead of supporting the view that negotiating prowess is an elusive skill akin to charisma and genius, the current findings suggest a more mundane but manageable view of what it takes to succeed at the bargaining table: a belief that negotiating skill is malleable like clay, rather than fixed like plaster.

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Appendix

Implicit Negotiation Beliefs Scale

Indicate your extent of agreement with each statement below by writing the appropriate number next to each statement.

- 1 = very strongly agree
- 2 = agree
- 3 = mostly agree
- 4 = neither agree nor disagree
- 5 = mostly disagree
- 6 = disagree
- 7 = very strongly disagree

___ The kind of negotiator someone is is very basic and it can’t be changed very much.

___ All people can change even their most basic negotiation qualities. (R)

___ Good negotiators are born that way.

___ People can approach negotiations differently, but the important part of how they handle conflict can’t really be changed.

___ Everyone is a certain kind of negotiator and there is not much that can be done to really change that.

___ Everyone, no matter who they are, can significantly change their basic negotiation characteristics. (R)

___ In negotiations, experience is a great teacher. (R)

Note. R indicates items that are reverse scored.

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