When to Use Your Head and When to Use Your Heart : The Differential Value of Perspective-Taking Versus Empathy in Competitive Interactions

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Abstract

Four studies explored whether perspective-taking and empathy would be differentially effective in mixed-motive competitions depending on whether the critical skills for success were more cognitively or emotionally based. Study 1 demonstrated that individual differences in perspective-taking, but not empathy, predicted increased distributive and integrative performance in a multiple-round war game that required a clear understanding of an opponent's strategic intentions. Conversely, both measures and manipulations of empathy proved more advantageous than perspective-taking in a relationship-based coalition game that required identifying the strength of interpersonal connections (Studies 2-3). Study 4 established a key process: perspective-takers were more accurate in cognitive understanding of others, whereas empathy produced stronger accuracy in emotional understanding. Perspective-taking and empathy were each useful but in different types of competitive, mixed-motive situations—their success depended on the task–competency match. These results demonstrate when to use your head versus your heart to achieve the best outcomes for oneself.

Keywords

perspective-taking, empathy, accuracy, competition, conflict

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> If you know the enemy and know yourself, you need not fear the result of a hundred battles. If you know yourself but not the enemy, for every victory gained you will also suffer a defeat.
>
> Sun Tzu

Success in strategic social interactions often necessitates an understanding of the underlying motives, feelings, and likely behaviors of one's opponent. Indeed, Robert McNamara, former Secretary of Defense, declared that such an understanding was critical in allowing the United States to resolve the Cuban Missile Crisis with the Soviet Union in 1962. McNamara recommended dealing with opponents in conflicts by "[trying] to put ourselves in their skin, and look at us through their eyes, just to understand the thoughts that lie behind their decisions and their actions" (Williams, Ahlberg, & Morris, 2003). This sentiment was echoed by Robert Kennedy in his memoir about the crisis, *Thirteen Days*:

> [One important lesson] from the Cuban Missile crisis is the importance of placing ourselves in the other country's shoes . . . President Kennedy spent more time trying to determine the effect of a particular course of action on Khrushchev than on any other phase of what he was doing (Kennedy, 1971, p. 102).

However, what does it mean to put oneself in another's shoes or to imagine oneself in another's skin? Philosophers and psychologists have described at least two fundamentally different modes of imagining others' experience: perspective-taking, which is the cognitive capacity to spontaneously consider the world from another's viewpoint, and empathy, which is the affective capacity to emotionally connect with others and experience sympathy and concern for others (Davis, 1983). Perspective-taking and empathy are related

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constructs as there is a moderate intercorrelation between dispositional measures of perspective-taking and empathy (Davis, 1983). Both involve a genuine focus on others—each is correlated with behavioral tendencies and individual difference scales tapping into unselfish other-sensitivity (Davis, 1983). In addition, experimental work has found that both perspective-taking and empathy lead to less task and relationship conflict compared with those instructed to self-focus (Calnan & Gilin, 2012).

Yet the nature of that other-oriented focus—cognitive in the case of perspective-taking and affective in the case of empathy—is what distinguishes these two tendencies and accounts for their differential effects. Perspective-taking can be described as a prosocial way of highlighting one's distinction from others, by "mentalizing" about others' experiences (Shamay-Tsoory, 2011). Empathy operates by ramping up emotion (Davis, 1983; Eisenberg et al., 1994; Okun, Shepard, & Eisenberg, 2000) and the feeling of oneness with others (Davis, Conklin, Smith, & Luce, 1996; Cialdini, Brown, Lewis, Luce, & Neuberg, 1997; Shamay-Tsoory, 2011).

The present research makes an important contribution by predicting a dissociation between perspective-taking and empathy in competitive tasks based on whether a cognitive or an affective other-orientation is strategically useful. Our approach considers perspective-taking and empathy as core social competencies, but whose utility is dependent on a match with a specific competitive situation. When accurate understanding of an opponent's strategic intent is critical for success, then perspective-taking will be the more effective competency. But when a competitive, mixed-motive situation requires accurately recognizing the strength of interpersonal connections with others, then empathy should prevail.

Differential Benefits of Perspective-Taking and Empathy in Strategic Interactions

Despite the apparent utility of perspective-taking and empathy in competitive, mixed-motive interactions, a direct comparison of the utility of perspective-taking and empathy has as yet only been done looking at transactional negotiations (Galinsky, Maddux, Gilin, & White, 2008). That study found that perspective-taking produced more creative deals and produced better distributive gains for oneself and integrative gains for the dyad in negotiation tasks with integrative potential, whereas empathy was generally associated with more detrimental negotiation outcomes (Galinsky et al., 2008). This study united previous disjointed trends in the literature all pointing to the general finding that perspective-taking is typically a benefit to competitive performance, while empathy may be more detrimental (Batson et al., 2003; Batson et al., 1995). For example, in prisoner's dilemmas, empathizers tend to cooperate (Batson & Moran, 1999), even if they know that their opponent has chosen to defect and therefore cooperation is sure to produce a worse outcome for themselves (Batson & Ahmad, 2001).

However, these results are likely dependent on the strong cognitively-based nature of the bargaining tasks studied, such as prisoner's dilemmas, social dilemmas, and negotiations. The unfavorable nature of empathy portrayed by these findings defies both lay intuition that compassion can overcome disputes and indirect empirical evidence suggesting that in certain situations empathic emotions can help resolve interpersonal conflicts, even competitive ones (Betancourt, 2004; Greenhalgh & Gilkey, 1997). Indeed, laboratory bargaining studies lack many emotional and relational realities of real-life conflict, as participants play fictional roles in which they are not personally involved (Greenhalgh & Gilkey, 1993; Salacuse, 1998; Sheppard, 1999). Given the cognitive focus of previous studies, we believe there are likely important competitive situations in which empathizers will have a marked advantage: in those activities that involve the ability to recognize subtle emotional reactions that are diagnostic of others' emotional connections with oneself, such as coalition building in relationship-oriented contexts.

We therefore predicted that perspective-taking and empathy are likely to be differentially useful in competitive tasks based on the *task–competency match*. Specifically, because perspective-taking has been shown to de-bias and enhance cognitive processing in a variety of domains (Epley, Keysar, Van Boven, & Gilovich, 2004; Galinsky & Mussweiler, 2001; Moore, 2005; Thompson, 1995), we expected perspective takers to perform better at tasks requiring a more accurate understanding of strategic concerns and motivations. However, given their greater sensitivity to emotional expressions of others as well as their tendency to mirror (Shamay-Tsoory, 2011) and match (Cialdini et al., 1997; Davis et al., 1996) with the emotions of others, empathizers may have a better understanding of their connections with others, that they can leverage for their competitive advantage. Thus, we predicted that empathy, but not perspective-taking, would positively impact performance in competitive tasks that require *affective understanding* to succeed, such as coalition-building tasks. As the potential competitive advantages of empathic concern for oneself have not previously been postulated or demonstrated, such a finding would mark a novel and important contribution to the literature on empathic tendencies.

We tested these predictions using competitive tasks that were devised to reward cognitive versus affective understanding, respectively. In Study 1, we tested the extent to which individual differences in perspective-taking and empathy predicted performance in a multiple-round war game that required cognitive appreciation of the strategic intent of one's partner to succeed. Studies 2 and 3 used both correlational and experimental designs to test whether empathy is strategically beneficial compared with perspective-taking in a relationship-based social coalition task requiring affective understanding of social connections. Finally, Study

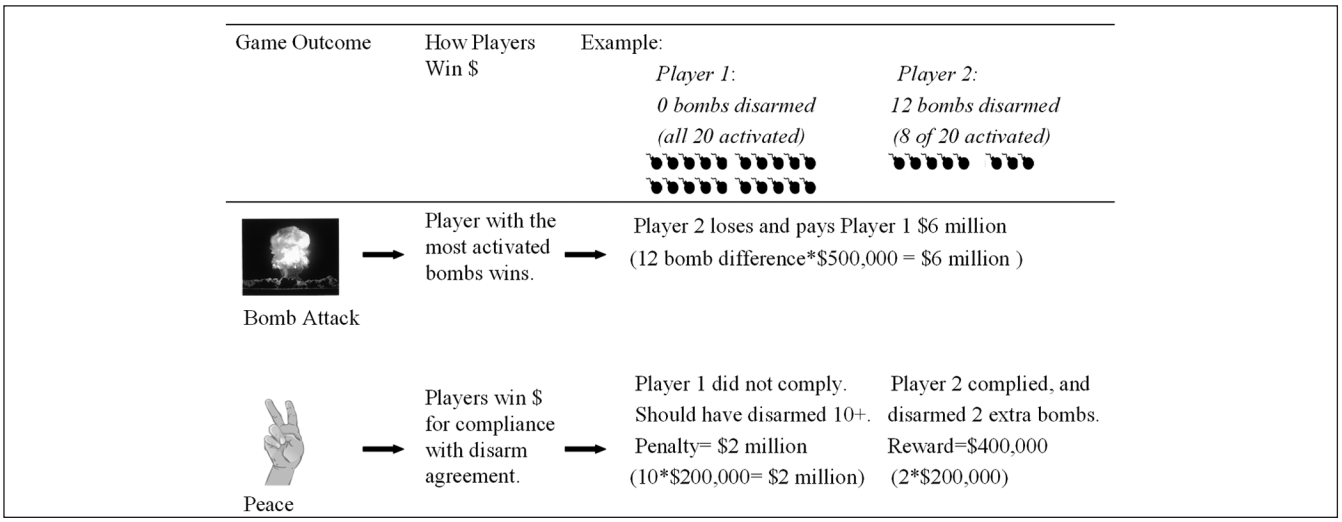

Figure 1. Illustration of war game payoffs, Study 1

4 directly tested the hypothesized underlying mechanism: We predicted that perspective-taking would generate greater accuracy in cognitive understanding of others, whereas empathy would lead to stronger accuracy in emotional understanding.

Study 1

In Study 1, our main goal was to test the effects of perspective-taking in a highly complex strategic interaction in which cognitive engagement would be crucial to success. Thus, we devised a simulated "war game" (modified from Harvey & Brown, 2001) involving multiple rounds of a potential arms race with an "enemy" country that required repeated decisions about whether to disarm or attack. Success at this task requires inferring the two winning strategies (one competitive and one cooperative) from the game payoffs and implementing them only at the moments when the opponent's strategy makes them viable. Based on the above review, we predicted that perspective-taking would be strategically beneficial, leading to better distributive gains, higher joint gains, and more enduring peace than empathy.

Method

Participants and design. Ninety undergraduate students (57% female) from business and psychology courses at a Canadian university completed the study for extra course credit. Dyads were randomly assigned to roles and partners.

Task. The task was a complex, multiple-round, computer-based "Disarmament Game" simulation programmed specifically for this research. Two players (in the role of two different "countries") played in a private office. The roles and payoffs were identical for both players, who were randomly designated as "Player 1" and "Player 2" during the session. At the beginning of the study, participants were told that at the current time, a third party (the World Bank) had intervened in an international conflict between the two countries and that it would be policing the actions of each country. Each dyad played as many games as possible in 1 hr (M = 8.5 games per dyad, SD = 3.8).

Participants were instructed to try and earn the maximum individual points possible, and that the player with the higher total at the end of all games would be announced as the winner. Two players sat at linked computer terminals visually separated by a screen.

Procedure. Each game involved a maximum of ten, 2-min decision periods or "rounds." During each round of a game, players simultaneously and privately decide (a) how many weapons to disarm (0, 1, or 2) and (b) whether or not to attack the opponent by bombing them. The instructions indicated that each country had 20 bombs in its arsenal and under a formal agreement (ostensibly made at a previous time), and the two countries were supposed to disarm at least 50% of their arsenal of bombs (10 out of 20) by the end of each game. However, participants were also told that as is typical in international political and military conflicts, countries were not strictly bound to this agreement, and had the option to "attack" the other country anytime if they chose. Games ended as soon as one of two outcomes occurred, either (a) Attack (one opponent bombed the other) or (b) Peace (10 bomb-free [peaceful] rounds were concluded). At the end of each game, the computer program totaled gains and losses according to the payoffs (described below and illustrated in Figure 1) and listed the results onscreen.

In order to increase experimental realism, face-to-face negotiations were mandatory after every third round of each game; participants were not allowed to communicate outside

of these negotiations. Negotiations could last up to 2 min, and players stood and negotiated over the computer screens.

Game incentives and payoffs. It is important to note that the game instructions specified only the payoffs for the game. In order to succeed, players needed to analyze these payoffs, understand their strategic implications, and implement successful game strategies from these payoffs. Both parties began with $20 million dollars, and won or lost money depending on their decisions in conjunction with those of their opponent. Both parties' overarching goal was to maximize their payoff and try to "win" the game according to the incentives in place. The incentive schemes of the game were different for the two main final outcomes of each game—bomb attack or peace (see Figure 1).

Two lucrative strategies could be deduced from these incentives, which we will refer to as "fail-to-disarm-then-attack" and "disarm-without-attack." The "fail-to-disarm-then-attack" strategy derives from the possible outcome of a bomb attack. If either player bombed the other side, the game automatically stopped and the number of remaining active bombs was assessed. Whichever party had the most bombs at that point was declared the winner of the game (with the rationale that the party with the most bombs at the start of the subsequent war would likely win). Participants were rewarded an additional $500,000 for each extra bomb they had kept active compared with their opponent, and this amount was taken directly from the other participant (country), for a net difference of $1 million per extra bomb. Thus, one potentially winning strategy is to disarm fewer weapons than one's adversary and then attack.

The "disarm-without-attack" strategy derives from the possible game outcome of no attack, or peace. If neither player attacked in the 10 rounds of a game, "peace" was declared and reward and punishment payments were paid out by the World Bank. Parties were then rewarded according to the extent to which they met or surpassed the goal of 50% disarmament: For every bomb over and above 10 they disarmed, they received $200,000. However, if the game ended in peace and the participant had disarmed fewer than 10 bombs, the World Bank took $200,000 for each bomb over 10 not disarmed as a punishment for not holding to the formal agreement. Thus, both parties could win a maximum of $2 million each per game if they disarmed all bombs and survived. Thus, overall the game rules make short-term defection lucrative, but only if the opponent cooperates at the same time; the individual payoffs were over twice as large per weapon for competing than for cooperating. As a result, players could earn more money, at least in the short term, by convincing their opponent to disarm and then attacking. However, the fact that players played multiple games with each game involving multiple rounds made such strategies relatively untenable in the long term, as opponents would be unlikely to fall for such machinations multiple times. Thus, success at either strategy is dependent on correctly analyzing the opponents' interests and imminent behavior over multiple rounds.

Independent variables. Immediately prior to the war game, participants first responded to all four subscales of the Interpersonal Reactivity Index (IRI; Davis, 1983), a multidimensional measure of other-focused traits (28 items). Two of the subscales measured perspective-taking and empathy. Examples of perspective-taking items included "I sometimes try to understand my friends better by imagining how things look from their perspective" and "I believe that there are two sides to every question and try to look at them both" ($\alpha = .73$). Examples of empathy items included "I often have tender, concerned feelings for people less fortunate than me" and "Sometimes I don't feel very sorry for other people when they are having problems" (reverse scored; $\alpha = .74$). In addition, we administered the other two scales from the IRI, personal distress when witnessing others' pain (e.g., "In emergency situations, I feel worried and uncomfortable," $\alpha = .82$), and fantasy perspective-taking which measures a propensity to get lost in one's subjective experience (e.g., "I really get involved with the feelings of the characters in a novel," $\alpha = .69$). All four scales served as our predictors in the study.

Dependent variables. The computer program added the total positive or negative deviation from a player's starting endowment ($20 million each) after completing as many games as possible in 1 hr. Thus, this value totals the individual's monetary gains and losses from the entire set of games, including the results of all bomb attacks and all peaceful games. In order to gain insight into the strategies players used to arrive at their overall profit level, we also totaled the points gained specifically from the two winning strategies they could have deduced from the payoffs: the competitive "fail-to-disarm-then-attack" strategy and the cooperative "disarm-without-attack" strategy.

First, for competitive ("fail-to-disarm-then-attack") gains, we summed the points players earned specifically from bombing partners; in other words, points taken directly from the opponent's coffers by employing the "fail-to-disarm-then-attack" strategy. We also summed competitive ("fail-to-disarm-then-attack") losses, the points the player's *partner* took from the player using the same strategy. Finally, as a measure of net distributive gains, we calculated the value of competitive gains versus competitive losses. This latter metric is positive if, over all games, players took more from their partners competitively than their partners took from them.

Second, for cooperative ("disarm-without-attack") gains, we totaled two indicators of the successful use of this tactic. Unlike competitive gains, cooperative gain variables are dyadic in nature. We measured (a) the total integrative or joint gains the dyad received from the World Bank for peaceful games, which reflects the *extent* of collective "disarm-without-attack" and (b) the percentage of total games in which the dyad achieved peace (both parties cooperated through all 10 rounds without attack).

Table 1. Variable Intercorrelations, Study 1 (War Game)

Individual variables (n = 84)	1	2	3	4	5	6	7
Perspective-taking		.47**	.01	–.02	.22*	.11	–.23*
Empathy			.31**	.35**	.05	–.06	–.13
Personal distress				.30**	–.06	–.15	–.05
Fantasy					–.13	–.20	.01
Net distributive gains						.79***	–.79***
Competitive gains							–.24*
Competitive losses							
Dyadic variables (n = 42)	**1**	**2**	**3**	**4**	**5**		
Dyad perspective-taking		.37*	–.07	.01	.16		
Dyad empathy			.31*	.41**	–.19		
Dyad personal distress				.45**	.14		
Dyad fantasy					.10		
Peaceful rounds							

*$p \leq .05$. **$p < .01$. ***$p < .001$.

Results and Discussion

Data analysis. We analyzed the outcomes individually or dyadically in order to match the predictor and criterion units of measurement. Individual profit and competitive gain variables were predicted from each player's level of perspective-taking and empathy, with their level of personal distress and fantasy as covariates in the equation. Because dyad members are not independent from one another, we conducted the individual-level regressions with the *Hierarchical Linear Modeling (HLM)* multilevel modeling program that allowed us to control for dyad membership (Raudenbush, Bryk, Cheong, Congdon, & du Toit, 2004). This analytic approach avoids distorting or inflating estimates of treatment effects due to the intercorrelation of outcomes between partners (Raudenbush & Bryk, 2002). Effect sizes were calculated as the percentage of variance accounted for by the multilevel regression models, as compared with "null" models without the fixed effects entered, according to Snijders and Bosker's (1999) method using pooled variances. The two dyadic cooperative outcomes, integrative gains and peaceful games, were instead analyzed at the dyad level. We used the sum of the dyad members' scores on perspective-taking, empathy, and so on, to provide a continuous measure of the total presence of each tendency in the dyad.

Summary statistics. Table 1 shows correlations among outcome variables.

Competitive gains. To make the scale of the war game outcomes simpler to report, we modified the scale to indicate gains or losses in millions of dollars, such that a value of positive 1 indicates $1 million won in the game, a value of –.5 indicates a half million dollar loss in the game, and so on. Table 2 shows the summary results for the competitive gains variables derived from games in which players utilized the "fail-to-disarm-then-attack" strategy.

As expected, only perspective-taking was related to players achieving greater net distributive gains *G0* (HLM unstandardized regression coefficient = .38, $p = .04$). Empathy was not related to distributive gains ($G0 = –.20$, $p = .43$). In addition, none of the IRI scale variables, including perspective-taking, were related to greater self-competitive gains using the "fail-to-disarm-then-attack" strategy. Instead, the higher net distributive gains of those higher on perspective-taking came from blocking or persuading their opponent not to use this strategy against them. Competitive losses due to the partner succeeding at "fail-to-disarm-then-attack" were significantly lower when players were higher on perspective-taking ($G0 = –.33$, $p < .001$), and competitive losses were higher the greater the player's empathy ($G0 = .32$, $p = .02$).

Cooperative gains. Also as predicted, the amount of integrative or joint gains (reward money from the World Bank after using the "disarm-without-attack" strategy), indicating the extent of cooperation in peaceful games, was positively and significantly related to dyadic perspective-taking ($\beta = .48$, $p = .03$), whereas dyadic empathy was negatively predictive of integrative gains ($\beta = –.45$, $p = .05$). Similarly, dyadic-level perspective-taking was associated with dyads reaching peace more frequently (i.e., more of their games ended without a "bomb attack"; $\beta = .34$, $p = .046$), whereas dyadic empathy actually predicted a significantly lower percentage of peaceful solutions (more games ending with a "bomb attack"; $\beta = –.41$, $p = .02$). This pattern of results suggests that there was more retaliation when the collective empathy among the adversaries was high (see Table 3 for summary of cooperative outcome results). Neither personal distress nor fantasy was a significant predictor of any of the above outcomes.

Table 2. Competitive Outcomes Using the "Fail-to-Disarm-Then-Attack" Strategy in the War Game as Predicted From Dispositional Perspective-Taking, Empathy, and Covariates (n = 84), Study 1

	Net distributive gains (competitive gains – competitive losses)			Competitive gains			Competitive losses		
Variable	*G0*	*t*	*p*	*G0*	*t*	*p*	*G0*	*t*	*p*
Perspective-taking	.38	2.09	.04	.05	0.43	.67	–.33	–3.87	<.001
Empathy	–.20	–0.80	.43	.11	0.70	.48	.32	2.39	.02
Personal distress	–.04	–0.24	.82	–.14	–1.16	.25	–.09	–0.74	.46
Fantasy	–.20	0.92	.36	–.24	–1.80	.08	–.05	–0.31	.76
	U0	$\chi^2(41)$	*p*	*U0*	$\chi^2(41)$	*p*	*U0*	$\chi^2(41)$	*p*
Dyad variance component (null model)	.026	3.22	>.5	.038	31.16	>.5	.047	32.51	>.5
% variance at dyad level (null model)		0.04			0.17			0.21	
% variance accounted for (full model)		3.6			3.2			5.3	

Note: HLM = hierarchical linear modeling. *G0*s are the unique unstandardized regression coefficients from HLM (controlling for dyad membership). *t*-values refer to these coefficients divided by their robust standard errors. *U0*s are the tau (Level 2 or dyad level) variances from HLM. Scale of measurement of the three dependent variables is such that 1 = $1 million dollars in the scenario.

Table 3. Cooperative Gains in the War Game as Predicted From Dyad Dispositional Perspective-Taking, Empathy, and Covariates (n = 42 Dyads), Study 1 (War Game)

	Joint gains (extent of "disarm-without-attack" strategy)			Peaceful rounds (%)		
Variable	β	*t*	*p*	β	*t*	*p*
Dyad perspective-taking (sum)	.48	2.49	.02	.34	2.07	.046
Dyad empathy (sum)	–.45	–2.20	.03	–.41	–2.37	.02
Dyad personal distress (sum)	.24	1.48	.15	.22	1.33	.19
Dyad fantasy (sum)	.11	0.69	.49	.15	0.94	.36
R		.422			.405	
R^2		.178			.164	

Note: β are standardized beta coefficients.

Thus, the results of Study 1 demonstrate the benefits of perspective-taking in a highly competitive task that required cognitive analysis and discernment of an opponent's strategy to be successful. Perspective-taking predicted greater performance overall, and analyses of the strategies utilized clarified that perspective takers were more skilled at deriving and implementing *both* competitive and cooperative strategies. An intriguing pattern was the apparent ability of perspective takers to comprehend the more aggressive, competitive strategies available to them and yet apply this understanding primarily as a strong defense. Their overall stronger performance in the war game task derived from avoiding vulnerability to opponent attacks, combined with frequently succeeding at mutual cooperation with their partner.

In contrast, the tendency to empathize, as measured by Davis's (1983) empathic concern measure, was associated with less success at both the competitive and cooperative strategies available in the war game. Empathic concern was doubly unhelpful: It did not protect players from competitive losses *and* it led to fewer rounds that ended in successful cooperation. These results highlight the fact that one must understand the successful competitive and cooperative strategies in the war game and apply them accurately and at the right time, based on correctly deducing the opponents' moves. Individuals higher in empathy either did not correctly deduce successful strategies from the game incentives, or did not manage to implement them successfully, indicating lower effectiveness in a task that required cognitive analysis to be successful.

Study 2

The strategic, mixed-motive incentive structure in Study 1 rewarded the ability to appreciate the strategy and likely

behavior of an opponent, abilities that are more cognitive rather than affective in nature. For Study 2, in contrast, we designed a competitive game in which empathic tendencies would likely confer an advantage because success in this competitive interaction required affective connection with and understanding of the other players. In line with research showing that empathy leads to a stronger emotional connection with interaction partners (Galinsky et al., 2008, Study 2), we hypothesized that empathy would predict successful coalition-building to a greater extent than perspective-taking.

Table 4. Variable Intercorrelations (n = 135), Study 2 (Social Coalition)

Variable	1	2	3	4	5
Matching		.23**	.28**	−.12	.09
Perspective-taking			.38***	−.12	.15
Empathy				.06	.18*
Personal distress					.15
Fantasy					

Note. *$p \leq .05$. **$p < .01$. ***$p < .001$.

Method

Participants and design. One hundred and thirty-five Canadian undergraduate students enrolled in psychology courses participated for extra course credit and a chance to earn a small cash prize (up to $3). The mean age of the participants was 21 years (SD = 3.34) and 52% were female.

Task and procedure. Participants played a social coalition game that involved a decision to choose to enter into a social coalition with one of two possible partners following an introductory get-to-know-you session with the two other participants. The game was therefore not primarily a rational, cognitive task, but rather a more intuitive and affective task in which participants needed to assess their social connections with others after an interaction with them.

Participants played in randomly assigned groups of three participants (n = 45 triads). Teams of three met briefly before knowing what game would be played. In order to allow participants to develop an impression of each partner beforehand, they were asked to prepare for a group conversation in which four topics would be discussed: (a) their hometown, (b) their favorite weekend activity, (c) typical characteristics in friends, and (d) volunteer activities. Groups met face-to-face and gave their answers to the group. A research assistant then separated the three individuals in visually isolated workstations along three separate sides of a large room immediately after they finished the getting-to-know-you session.

Participants were then given instructions for the social coalition game (called "Match"). Instructions indicated that each participant had the chance to be paired with one of the other two participants to go on to the next round, where they would have a chance to win a cash prize. However, in order to be able to continue, participants were told the two people had to both choose each other; in other words, a "match" was necessary to have a chance at the cash prize. If any person was not chosen by another, or if there was no "match" among the triad, participants would do an alternative task alone without an opportunity to win a cash prize. Participants then proposed to enter a coalition ("match") with one other participant on a secret ballot. We tallied the ballots and announced who won and who lost.

Independent variables. Participants self-reported their tendencies on the Perspective-Taking (α = .73), Empathy (α = .74), Personal Distress (α = .82), and Fantasy (α = .69) subscales of the IRI (Davis, 1983).

Dependent measures. Our dependent variable was whether a "match" was achieved.

Results and Discussion

Data analysis. Game outcomes were regressed on the dispositional measures of perspective-taking, empathy, and the covariates personal distress and fantasy within multilevel regression models (using HLM; Raudenbush et al., 2004), in order to account for the interdependence among triad members. See Table 4 for variable intercorrelations.

Game outcomes. Of 45 three-player groups, 34 (75.6%) groups had a successful "match" between 2 players choosing to enter a coalition with one another, for a total of 67 players who "won" (49.6%) and 68 players who "lost" (50.4%) out of 135 participants. As expected, matching (winning by successfully forming a coalition) in the game was significantly and positively associated only with level of empathy ($G0$ = .13, odds ratio = 1.14, p = .02). Perspective-taking was positively but not significantly predictive of matching ($G0$ = .06, odds ratio = 1.06, p = .16; see Tables 5). Although a contrast hypothesis test in *HLM* indicates the two effects are not significantly different from each other, $\chi^2(1) = 0.85$, $p > .50$, the overall analyses suggest that empathy is a more reliable predictor of game success than perspective-taking, consistent with our hypotheses.

Thus, when presented with a competitive social coalition game that was dependent on correctly identifying if there was an emotional connection, we found that empathy was more beneficial to competitive success than perspective-taking. High-empathy individuals correctly gauged the connection between themselves and their fellow coalition players, whereas perspective-taking was less successful at creating successful matches. Perspective-taking was not associated with success in this less cognitive task. In this task, we found that in contrast to the results of Study 1 and the existing research literature on empathy and competition, it was empathic tendencies and not perspective-taking tendencies that predicted success. However, because empathy and perspective-taking were not significantly different from each other, it was important to provide additional, stronger evidence for the utility of empathy in the coalition matching game.

Table 5. Logistic Regression Predicting in the Social Coalition Game From Dispositional Perspective-Taking, Empathy, and Covariates (n = 135), Study 2

	Matching (winning) logistic *(HLM)*		
Variable	*G0*	*t*	*p*
Perspective-taking	.06	1.40	.16
Empathy	.13	2.31	.02
Personal distress	–.07	–1.80	.07
Fantasy	.02	0.58	.56
	U0	$\chi^2(44)$	*p*
Dyad variance component (null model)	.002	44.26	.46
Percent variance at triad level (null model)		0.6%	
Percent variance accounted for (full model)		8.1%	

Note. G0 are the unique unstandardized regression coefficients from HLM (controlling for triad membership). *T* values refer to these coefficients divided by their robust standard errors. *UO* are the tau (level 2 or triad level) variances from HLM. .

Study 3

Study 2 provided novel evidence that empathy can be useful in competitive tasks in which affective understanding of one's interaction with others is a key to success. In Study 3, we sought to make two further contributions: First, in order to allow inferences of causality, we experimentally manipulated perspective-taking and empathy. By enforcing a direct competition of both competencies within triads for coalition members, this next experiment provided a particularly strong test of our hypothesis about the fit of social competency to the task. Second, our hypotheses assume that task–social competency match has competitive benefits because the salient information processing mode, affective versus cognitive, allows people to decipher the most relevant information in the competitive task. We directly tested this assumption in Study 3 by having participants complete an indirect measure of emotional responsiveness (Shamay-Tsoory, 2011), which we expected would be higher for empathizers than for perspective takers. This design allows us to more directly compare the effects of perspective-taking and empathy.

Method

Participants and design. Eighty-four Canadian undergraduate students enrolled in psychology courses participated for show-up compensation (either extra course credit or $10 cash) and a chance to earn a cash prize (up to $20 per triad). Participants averaged 21 years old (SD = 4.34) and 52% were female.

Manipulations. Participants arrived at the lab and were randomly assigned to a triad. Within this triad, they were then randomly assigned to one of three primed mind-set conditions. One person in each group received perspective-taking, empathy, or neutral instructions, which were framed as one of several "performance tips" that would maximize performance in the games in the study. The instructions followed those previously used to manipulate perspective-taking and empathy (Galinsky et al., 2008). In the perspective-taking condition, participants were asked to "try to imagine what [the others in the triad] must be thinking, what their interests and purposes are. Try to imagine what you would be thinking if you were them." In the empathy condition, participants were told to "try to feel concern for what [the others in the triad] are feeling, what emotions and sensations they may be experiencing. Try to imagine how you would be feeling if you were them." We reinforced these mind-set manipulations by asking participants to write the underlined portion of their "performance tip" verbatim and to look at a picture of an individual and imagine the thoughts or feelings of an individual in a photo who is reaching for a coffee mug (perspective-taking) versus crying (empathy). In the neutral condition, the "performance tip" simply told them to decide on their own approach and to write down things they planned to do and to not do.

Task and procedure. The procedure was identical to that of Study 2 except for the experimental manipulations prior to the coalition game and an assumption check (described below). The prize was also increased from $3 to $20 to ensure adequate competitive motivation.

Dependent measures. As in Study 2, we measured matching (i.e., winning) in the game.

Emotional Stroop task. After the dependent measures, participants completed a computer-administered emotional Stroop task using DirectRT software to test our assumption that empathy invokes greater emotional activation compared with perspective-taking. Emotional Stroop tasks involve indicating the color of words that are either neutral or emotion-related. The emotional Stroop effect refers to a longer average reaction time for naming the color of the emotional versus neutral words (Cothran & Larsen, 2008); the interference of the emotion words indicates emotional activation. The task presented 20 neutral words in randomized order, followed by 20 state emotions words in randomized order, after a practice trial including 4 neutral words and 4 emotion words. The emotion words were 20 state emotions chosen from the Affective Norms for English Words lists (Bradley & Lang, 1999), such that 10 were positive with an average pleasure rating of at least 7 (on a 9-point scale), and 10 were negative with an average pleasure rating of 2.5 or lower (on a 9-point scale). We matched each emotion word with an object word with a neutral pleasure rating (4-6 on a 9-point scale) which had a similar length and similar frequency in English (per the Kučera & Francis, 1967, norms). The average reaction time on neutral trials was deviated from the average reaction time on emotion word trials to provide the measure of emotional activation (excluding the practice round). Positive scores

Table 6. Logistic and Linear Regression Predicting Outcomes and Process Variables in the Social Coalition Game From Manipulated Mind-Set Conditions (n = 84), Study 3

	Matching (winning) logistic *(HLM)*			Emotional processing linear *(HLM)*		
Orthogonal contrast	*G0*	*t*	*p*	*G0*	*t*	*p*
Empathy vs. perspective-taking	1.53	2.63	.01	68.90	2.01	.047
Neutral vs. perspective-taking	1.02	1.85	.07	34.73	1.16	.25
	U0	$\chi^2(27)$	*p*	*U0*	$\chi^2(27)$	*p*
Dyad variance component (null model)	.00004	14.65	>.5	413.8	29.16	.35
Percent variance at triad level (null model)		0.02			0.88	
Percent variance accounted for (full model)		7.1			3	

Note. G0 are the unique unstandardized regression coefficients from *HLM* (controlling for triad membership). *t* values refer to these coefficients divided by their robust standard errors. *UO* are the tau (level 2 or triad level) variances from *HLM*.

indicate relatively slower responses to emotion words than to matched neutral words, indicating that seeing the emotionally laden word was more distracting to the participant and thereby showing emotional activation or responsivity (Cothran & Larsen, 2008).

Manipulation check. After the assumption check, but prior to learning the results of their social coalition game, participants answered two questions on a 7-point scale (1 = *strongly disagree* to 7 = *strongly agree*) indicating how much they had been able to imagine group members' feelings so far. The items correlated .67 and were combined. The empathy condition resulted in higher scores (M = 4.98, SD = 1.17) than the perspective-taking condition (M = 4.32, SD = 1.44, $G0$ = .66, p = .04).

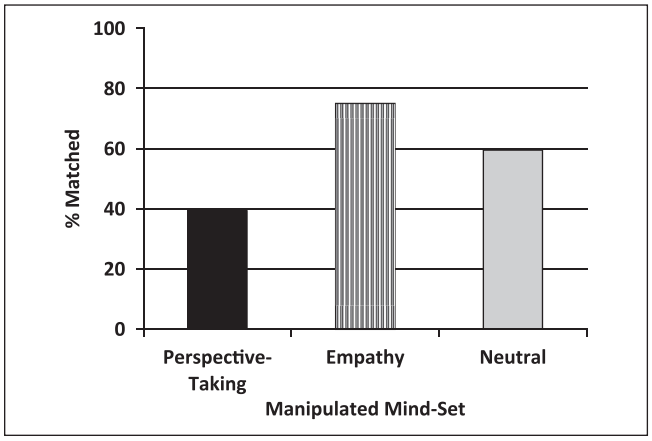

Figure 2. Effects of empathy versus perspective-taking (and neutral) manipulations on matching (successfully forming a social coalition) in Study 3, n = 84

Results and Discussion

Overview. To test for mean differences in HLM, we broke the mind-set factor into two orthogonal comparisons between (a) perspective takers and empathizers and (b) perspective takers and people with the neutral mind-set induction. To estimate percentage of variance accounted for (for ordinal and continuous measures), we compare variance components of the full model with the null model (without any predictors; Snijders & Bosker, 1999). Detailed results are presented in Table 6.

Game outcomes. The main analyses provide confirmatory causal evidence that empathy provides a competitive advantage over perspective-taking in affectively oriented tasks: Empathizers matched about twice as frequently (75%) as perspective takers (39%) in the social coalition game ($G0$ = 1.53, odds ratio = 1.53, p = .02; see Figure 2). Of the 28 triads, 25 had a successful match (89.3%). A majority of matches involved the empathizer and the individual given the neutral instruction joining forces, excluding the perspective taker from the coalition: Fifty-six percent (14/25) were empathy–neutral matches, 28% (7/25) were empathy–perspective-taking matches, and only 16% (4/25) were perspective-taking–neutral matches which excluded the empathizer.

Emotional activation. Analysis of our emotional Stroop task confirmed that empathizers had greater emotional activation than perspective takers ($G0$ = 1.53, p = .02). In fact, while empathizers experienced the expected slowed reaction time in responding to emotion words compared with neutral words (M deviation of emotion – neutral = 30 ms, SD = 151 ms), perspective takers were actually faster at responding to emotion words (M deviation of emotion – neutral = –39 ms, SD = 113 ms). This indicates that the empathy manipulation induced more affectively responsive information processing, and that the perspective-taking manipulation aided the control or suppression of emotions (neutral M deviation = –4.13 ms, SD = 89.25 ms).

Overall then, in Study 3, we found corroborating experimental evidence that empathy provides a competitive

advantage over perspective-taking in affective tasks such as social coalition formation. By forcing perspective takers and empathizers to directly compete for "votes" in the social coalition task, this study clarified that perspective-taking was a disadvantage in this affectively oriented competitive task, contrary to its broad-based social benefits generally (Davis, 1983; Galinsky et al., 2008). Furthermore, we confirmed that empathy generated a more affective mode of information processing than perspective-taking. Overall, empathy improved one's identification of potential coalition partners.

Study 4

To this point, our studies have provided strong evidence of a dissociation in the efficacy of perspective-taking and empathy in competitive, mixed-motive interactions based on whether the task structure rewards cognitive versus emotional engagement and discernment. Study 4 sought to provide a direct test of our hypothesis that perspective-taking and empathy are differentially effective because both can increase *accurate social perceptions of others* depending on whether the task is more cognitive or affective in nature. Thus, we designed Study 4 to induce participants to explicitly focus on accuracy. We asked them to choose between appeals of potential partners prerated as good (i.e., indicating a beneficial partnership) and appeals prerated as bad (i.e., illustrating a damaging or unhelpful partnership). In addition, we further divided each type of good or bad appeal into cognitive or affective information-based appeals. If adopting perspective-taking versus empathic mind-sets increases social accuracy to a greater extent for cognitive versus affective information, respectively, this will offer strong evidence of accuracy as a key process that drives the differential utility of perspective-taking and empathy.

In addition, it is important to note that Studies 1 to 3 demonstrated benefits of empathy or perspective-taking in competitive games with real partners, which were by their very nature partly dependent on participants' and their partners' own actions. Subsequently, Study 4 involved a more controlled lab environment in which scenarios were prerated to carry either cognitively oriented or affectively oriented information about another person. This level of control would allow us to have increased confidence that the previous effects were the result of the specific psychological processes and not other aspects of the war games or coalition building situations that were correlated with perspective-taking and empathy.

Finally, and as an additional means of isolating the proposed mechanism, whereas Studies 1 to 3 tested participants in situations where reading partners' cognitive or affective signals was relevant to success, Study 4 tested participants' awareness of both types of information within the same situation. Thus, if perspective-taking and empathy truly have differential benefits by giving people access to either strategic or emotional information, then each mind-set should be helpful when focused toward appropriate information, even with the task itself held constant.

Method

Participants and design. Seventy-five American university students (60% female) participated for $8. Participants imagined that they were going to play a one-round Ultimatum Game in the role of the responding party—that is, the other party had offered them part of a $20 prize and they would need to either accept the division or reject it. They were told that they would make 10 decisions choosing between 10 pairs of possible "sender" partners for the hypothetical one-round game based on the written appeals of the ostensible senders. The cover story stated that the appeals were from actual previous Ultimatum Game study participants. We manipulated two factors: task type (cognitive- vs. affect-related appeals) and mind-set instruction (perspective-taking vs. empathy).

Manipulations. Task type was manipulated by presenting 10 consecutive pairs of appeals. Each pair of appeals included one "good" appeal (meaning the appeal signaled a likely good partner for the game) and one "bad" appeal (meaning the appeal signaled disadvantageous characteristics of the partner) that were chosen based on pretesting.[1] Thus, in each pair there was an objectively preferable choice of partner. Of the 10 pairs of good–bad appeals, each participant received 5 cognitively-based appeal pairs and 5 affectively-based appeal pairs (randomized within two blocks of items and counterbalanced within perspective-taking and empathy conditions).

Cognitive appeals. Cognitive appeals provided cognitively oriented signals that the potential offering party would be a good or a bad choice, in particular because of their likely Ultimatum game strategy as a sender. For example, a *good* cognitive appeal was one that signaled strategic trustworthiness: "I am the one you should pick. I am a journalism major, and I have to think about things from other people's point of view a lot. If you choose me, I promise to share half with you so we both win. OK?" An example of a *bad* cognitive appeal indicated someone who strategically would likely keep most of the money for himself or herself: "I'm really smart and good at puzzles and I hate to lose. I've already got some ideas about how to work this so that I can win. You should pick me because I know what to do already."

Affect appeals. Affect appeals provided more emotionally-based signals. For example, a *good* affect appeal signaled trustworthiness but did so with affective, interpersonal information: "I think you should pick me because this idea is really intriguing. It's important to me to always consider others and be generous. I really like to play intramural sports so I'm good at teamwork." An example of a *bad* affect appeal used more emotionally oriented information to signal a lesser likelihood of being cooperative as a sender: "Hi, I'm Daniel, you should choose me because I'm smart. I work at the

library and I'm good at following instructions and solving problems. I kind of hate having to deal with people but I'm sure I'd be good at this." Pairs of appeals were always presented within task type, that is, cognitive-bad/cognitive-good, or affective-bad/affective-good.

Perspective-taking and empathy mind-set were manipulated with instructions very similar to those used in Study 3, but they were manipulated within-person such that each participant enacted both mind-sets in a counterbalanced order. Participants were randomly assigned to adopt a perspective-taking or empathy mind-set for the first five decisions; then the other mind-set for the second set of five decisions.

Dependent measure. Our outcome was social accuracy, measured as the proportion of items for which the participant correctly picked the "good" over the "bad" appeal.[2] We hypothesized that accuracy will be greater when there is a task–mind-set match than when the task and competency are mismatched. That is, we expected competitors would better discern cognitive cues about their opponents' strategy while perspective-taking but better discern affective cues about their opponents while empathizing.

Results and discussion

In order to highlight our hypothesis about task–mind-set match, we conducted a repeated-measures ANOVA with two within-participants factors, task type (cognitive vs. affect appeals) and task–mind-set match (matched vs. not matched), with order (empathy first vs. perspective-taking first) as a between-participant factor. As predicted, there was a significant main effect of task–mind-set match, $F(1, 70) = 5.27$, $p = .025$, such that participants discerned the better ultimatum partner more accurately when there was a match between the task and their mind-set ($M = 0.83$, $SD = 0.19$) than when the task and mind-set did not match ($M = 0.76$, $SD = 0.21$). Interestingly, there was also a main effect of task, $F(1, 70) = 5.347$, $p = .024$, such that accuracy was greater for affect appeals ($M = 0.83$, $SD = 0.18$) overall than for cognitive appeals ($M = 0.76$, $SD = 0.24$), perhaps because affective cues may simply be perceived as stronger or more noticeable than cognitive cues (Zajonc, 1980). However, the pattern of results was nevertheless consistent with our predictions, and consistent with the results from the first 3 studies. Neither the order effect nor any higher order interactions were significant.

Therefore, even within the same competitive situation (discerning a good partner with whom to compete in an ultimatum game) and within-person (taking on each mind-set in turn), people were more attuned to cognitive signals of positive and negative competitive game partners when perspective-taking and more attuned to affective signals when they were empathizing. This indicates not only a different sort of information processing, as evidenced in Study 3's emotional Stroop task, but differential levels of social accuracy. Participants switched between perspective-taking and empathizing, and their social accuracy fluctuated with the mind-set. This provides strong evidence that when perspective-taking, individuals are more responsive to cognitive cues, while they are more responsive to affective cues when empathizing. When the social competency of perspective-taking or empathy was matched with the type of information provided in the competitive context, competitors were more socially accurate and chose the ultimatum partner most likely to act in line in a way that would have led to success for the participants.

General Discussion

In four studies, we tested the proposition that two important social competencies related to standing in another's shoes—perspective-taking and empathy—are differentially valuable traits in strategic interactions that require greater cognitive versus affective understanding. We found strong support for the idea that perspective-taking and empathy can each promote understanding that can lead to individual and joint competitive gains, but only when the underlying structure or content of the task requires that particular social competency.

In the present research, we considered the underlying nature of many strategic situations to be primarily cognitive versus affective problems. In many mixed-motive interactions, such as a negotiation or prisoner's dilemma game, the best approach is to understand the likely strategic moves of one's opponent. Perspective-taking tendencies seem to facilitate this mode of thinking and promote success at such tasks, while empathy does not—in fact, empathy can actually be a detriment to both peace and profit. In other strategic interactions, such as coalition building, success is defined by developing and understanding one's interpersonal connection with another person. Empathic tendencies seem to facilitate this approach and promote success at such tasks, whereas perspective-taking does not and may even be a detriment under some circumstances.

Perspective-Taking and Empathy Promote Different Competitive Advantages

An important contribution of this research is that we have directly measured and manipulated perspective-taking and empathy as different routes to successful resolution of strategic interactions to the benefit of both self and other. These oft-confused facets, although interrelated as shown by past research (Davis, 1983) and in the studies reported here, are nonetheless conceptually distinct and differentially useful in competitive tasks. Although previous work established that perspective takers create more individual and joint outcomes in mixed-motive bargaining tasks (Bazerman & Neale, 1982; Galinsky et al., 2008; Neale & Bazerman, 1983), our studies shed light on how this is the case. Perspective-taking fosters cognitive analysis of interpersonal interactions, allowing individuals to develop successful competitive and cooperative strategies and to understand when to implement

them.[3] The current studies give a more fine-grained understanding of how perspective takers succeed in complex competitive and mixed-motive tasks: They understand the available competitive stakes and aggressive strategies, and yet promote mutual cooperation for joint gain. This blending of realistic cognitive assessment with what appears to be prosocial motivation explains why perspective-taking has broad social benefits (Davis, 1983; Galinsky et al., 2008; Richardson, Green, & Lago, 1998).

This research is also the first to show a competitive advantage of empathy *for the self*. Our social coalition task provided novel, direct evidence that empathy has competitive value in tasks such as social coalition building that require development and accurate reading of social connections. This provides an important and balancing counterpoint in our understanding of the adaptive social function of empathy in competition, given empathy has been shown to be a liability for self-interest in cognitively structured, mixed-motive bargaining tasks (Batson & Ahmad, 2001; Batson et al., 2003; Galinsky et al., 2008).

Furthermore, although research on empathy has shown that measuring or manipulating empathy results in feelings of closeness to others (Davis, 1983), a willingness to help others (Batson, 1991; Batson & Oleson, 1991), and a merging of self and other identities (Cialdini et al., 1997; Davis et al., 1996), it has remained an open question whether empathy fosters greater interpersonal *accuracy*. Recent research has clarified that dispositional empathy can indeed facilitate accurate person perception, but only if the target person is transparent or expressive (Thomas & Maio, 2008; Zaki, Bolger, & Ochsner, 2008). Importantly, our studies found a strong relationship between dispositional empathy and accurate assessments of one's connection with group members and between situationally manipulated empathy and accurately discriminating affective interpersonal cues. Given the meta-analytic finding that greater emotion recognition accuracy correlates with individual success in organizational settings (Elfenbein, Foo, White, Tan, & Aik, 2007), our results build further evidence that higher empathy individuals—under certain circumstances—can compete through their ability to understand their connections with others.

Limitations and Future Directions

Although the current study presented several experimental tasks with real partners, the amount of interaction was limited and partners were strangers. Our results may not generalize to how understanding is achieved and resolutions are devised in ongoing business and personal relationships (Greenhalgh & Gilkey, 1993; Salacuse, 1998), and future research should investigate how the current results might change in this different dynamic. For example, we speculate that empathy might add competitive value in negotiations in ongoing relationships, in which insight about personal connection could be leveraged.

Another potential limitation is that our outcome variables focused on "winning" monetary rewards. Yet because greater competitive success in the war and social coalition games indicated establishing more stable and positive working relationships and the ability to reach instrumental outcomes, our results are meaningful for a broad spectrum of social and organizational situations. Furthermore, Study 4 directly demonstrated the effects of perspective-taking and empathy on accurate discernment of social cues, which should be beneficial generally. It would be interesting in future research to measure a broader range of possible subjective utilities that might be satisfied by different game outcomes,[4] such as competitor's perceptions of success and gains, their satisfaction with the result, or their subjective experience of success.

Implications

We believe our results have implications for a variety of contexts. In building a network of contacts and alliances in organizational life, for example, empathy may promote recognizing, developing, and leveraging the best "fit" with other individuals and organizations. In relational disputes at home or at work, the aggrieved individual often wants to be heard, understood, and empathized with more than they want a rational analysis of the presenting problem. Conversely, individuals who are high in empathic tendencies may, in certain situations, have difficulty seeing conflict and competition from a strategic perspective or one removed from their emotional experience, leading to a failure to protect themselves in risky political situations with multiple stakeholders, or to unrestrained retaliation to provocation. By understanding the differential value and effects of perspective-taking versus empathy in competitive interactions, the savvy negotiator will know when to use his or her head and when to use his or her heart to achieve lasting and replicable success.

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Notes

1. Participants in the online pretest ($n = 78$) were asked to hypothetically adopt the role of the responder in the Ultimatum and to rate their likelihood of choosing the writer of each appeal as their offering partner. Participants were significantly more likely to choose the "good" versus "bad" affect-related appeals ($t = 10.89$, $p < .01$) and strategy-related appeals ($t = 9.00$, $p < .01$). Strategy appeals were also rated to be more relevant to the writers' intentions than their emotions, compared with the affect appeals ($t = 7.83$, $p < .01$).
2. Of the 10 total pairs of appeals, 5 were strategy pairs and 5 were affect pairs, such that participants saw a randomized selection of either 2 or 3 of each type while they were perspective-taking versus empathizing. Originally we devised 12 items, but 2 of them did not function properly according to the pretest and were not used.
3. We note that greater cognitive interpersonal accuracy does not necessarily imply greater general intelligence: Davis (1983) presented data showing a nearly zero, nonsignificant correlation between intelligence and perspective-taking.
4. We thank an anonymous reviewer for this suggestion.

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