
In Theory

Value Creation: A Coordination Game

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Strategy in negotiation is often modeled as an activity involving the interplay of creating and claiming behaviors. Theorists have advanced differing perspectives on what game best describes the consequences of choosing one approach over the other: David Lax and James Sebenius offer the prisoner's dilemma game as a model, whereas Richard Walton and Robert McKersie's analysis is consistent with a version of a classic coordination game — namely, the game of “chicken.” This article revisits these two perspectives and shows that the Walton-McKersie view is applicable to a broad range of contexts. In particular, it demonstrates how what is commonly called the tension between creating value and claiming is better understood as the simple tension between a high-risk and a low-risk choice.

Key words: negotiation, creating and claiming, negotiator's dilemma, coordination failure, prisoner's dilemma, game theory.

Introduction

In a negotiation, the courses of action available to each participant are virtually limitless. This leaves a negotiator with a daunting task when answering the seemingly simple question of what to do. In the end, the negotiator has no

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comprehensive way to evaluate the relative merit of different actions if he or she cannot even describe all the possibilities. In addressing this challenge, an important branch of the negotiation literature has focused on two broad categories of strategic behavior: distributive (value-claiming) behavior and integrative (value-creating) behavior. Starting with Richard Walton and Robert McKersie (1965), if not before, the tension between creating and claiming behavior has been viewed as fundamental to negotiation analysis.

But what is the nature of this tension? Two schools of thought dominate. The first is that claiming behavior is always better for a negotiator — at least in theory — no matter what the other party chooses to do. This is a bleak view of negotiation: the incentive to do as well as possible for oneself will always stifle value creation.

Of course, daily experience tells us that this view is overly pessimistic. Negotiators often find it in their interest to engage in creating behavior, and value creation sometimes is maximized. Indeed, the other main school of thought allows for situations in which creating behavior is optimal for a negotiator. It implicitly posits the creating-claiming choice as a decision under uncertainty with a standard risk/reward trade-off. Creating behavior is the low-risk choice: it leads to a sure, but small, gain for the negotiator. Claiming behavior is the high-risk choice: there is the potential for a much greater gain than creating behavior, but also the potential for no gain. Under this model, wise strategic choice depends on the degree of perceived risk and the magnitude of possible rewards.

This article uses a game-theoretic approach to further explore the supposed tension between creating and claiming behavior. Game theory models strategic interdependence by reducing the virtually limitless actions available to each player into just a few manageable options for each player. Much of the art of game theory lies in deciding just what these essential strategies should be. For the sake of conceptual clarity, in this article, we will boil things down to the bare minimum. Specifically, we will suppose that there are but two players, that is, negotiators, and that each has a choice of only two strategies: *create* or *claim*. Thus, all the possible actions that one might call creating behaviors are reduced to a single action of *create*. Similarly, all the possible actions that one might call claiming behaviors are reduced to a single action of *claim*.

Given these simplifications, the final step in defining the game is to determine the consequences of each possible pair of actions. In other words, how does each player fare if one creates while the other claims, if they both claim, or if they both create? As we will see, understanding the tension between creating and claiming behavior relies critically on the relative ranking of these consequences. Quite simply, the difference in the two schools of thought on the tension between creating and claiming reduces to a difference in opinion about the ranking of these consequences.

Figure One
Negotiator's Dilemma Matrix

		Player B's choice	
		Create	Claim
Player A's choice	Create	Good	Great
	Claim	Terrible	Mediocre
		Great	Mediocre

Specific examples of games described in this article show that each view of the tension may be appropriate, depending on what outcomes are stipulated and what assumptions are made about possible interim agreements. On closer look, it becomes apparent that the bleak view that claiming behavior is always more profitable than creating behavior depends on two assumptions that warrant scrutiny. These assumptions can be called a “something-to-lose” assumption and a “something-will-be-lost” assumption. Significantly, for these two assumptions to hold, one needs a multi-issue negotiation in which interim agreements are not sustainable. Unless both of these obtain, the tension between choosing to claim or create is most likely the tension of a risky decision. In short, to paraphrase Mark Twain, rumors of the theoretical futility of value-creating behavior have been greatly exaggerated.

To explain how we arrive at that conclusion, we first need to revisit the form of analysis that has led some people to that conclusion. It is most crisply represented in a four-cell matrix in *The Manager as Negotiator* (Lax and Sebenius 1986: 38–40), in which the authors proposed the negotiator's dilemma, modeled after the classic prisoner's dilemma, as recreated in Figure One.

For our purposes here, we need not worry about precise definitions for creating or claiming behavior. The former might involve honest disclosure of priorities, if you like, while the latter might entail bluffing or ultimatums. What is essential to understand, however, is how these stipulated outcomes drive each party's strategic choices. In this matrix, Player A chooses between the upper and lower rows. Player B chooses between the left and right columns. The outcome is the intersection of their choices. Thus, if A chooses claim while B chooses create, the outcome is represented by the lower-left cell. Within each cell, the first word signals A's

payoff and the second, B's. Thus, claiming would be "great" for A and "terrible" for B if he or she chooses to create.

This constitutes a prisoner's dilemma because it meets two defining characteristics: each player has a dominant strategy and the consequence of these dominant strategies is a Pareto-inferior outcome. To see why claim is the dominant strategy here, consider the possible outcomes from A's point of view. If B chooses to create (the left column), then A will be better off claiming, because "great" is better than "good." And if B chooses to claim (the right column), A should still claim, because "mediocre" tops "terrible." Thus, no matter what B does, A is better off claiming. The same kind of reasoning reveals that claiming is likewise the better choice for B, no matter what A does. Poignantly, however, this puts them in the lower-right cell, yielding a "mediocre" outcome for both. Although both players would be better off with a "good" outcome, the dominant strategy choices leave each with a "mediocre" result.

The text of *The Manager as Negotiator* presents a more nuanced view of negotiation strategy, but in some readers' minds (and in some theorists'), the logic seems to compel the conclusion that claiming behavior will always trump creating behavior. This rests on the premise that negotiation is literally a prisoner's dilemma, so that there is no uncertainty about what the players should do: each has a dominant strategy to claim rather than to create.

The prisoner's dilemma, however, is not the only way to represent intersecting choices about creating and claiming behavior. An alternative, the game of "chicken," illuminates the creating-claiming tension as a risk/reward trade-off. In a chicken game, there is no dominant strategy, as each player's choice depends on his beliefs about how others will act. This dependence on beliefs about another's actions introduces strategic risk into the game: a player faces the risk that he might choose a suboptimal strategy because his beliefs about the other's actions might be incorrect. Thus, the creating-claiming tension is really the tension associated with strategic risk, namely, the tension a decision maker feels when choosing under uncertainty (in negotiation, the uncertainty about the other's likely actions).

This alternative view of the creating-claiming tension is amply illustrated in many of the negotiation-specific examples provided by Walton and McKersie (1965). For this reason, I will call such interactions "WM games." Indeed, David Lax and James Sebenius (1986) provide verbal descriptions of the creating-claiming tension that are better captured by a WM game rather than a prisoner's dilemma. For example, Lax and Sebenius (1986: 41) write, "we do not take the matrix representation [of the prisoner's dilemma] literally."¹

I will describe the structure of a WM game and its implications shortly, but I will begin by looking more closely at the prisoner's dilemma in the

next section of the article. Because negotiations with a prisoner's dilemma structure require the two assumptions mentioned earlier, I will analyze an example with these assumptions and then transform the example into a WM game by relaxing the "something-to-lose" assumption.

Then I will expose a tacit assumption of the prisoner's dilemma view that often squares poorly with negotiation. Specifically, I will show that a true prisoner's dilemma can exist in a negotiation only if interim agreements are not permitted. Using insights from the pre-/postsettlement settlement literature (Raiffa 1985; Sebenius and Wheeler 1994; Gillespie and Bazerman 1998), I show how an interim agreement can be used to relax the "something-will-be-lost" assumption. If interim agreements are binding, either explicitly or implicitly, a prisoner's dilemma structure is once again transformed into a WM game structure.

My arguments assume a context in which the key uncertainty concerns the possibility of *incremental* value creation. The players believe that some basic deal — and with it some value creation — is possible. But the players are not sure that the "pie" can be further expanded. This is the classic context in which the tension between creating and claiming behavior is often discussed. With that as a basis, I then consider two additional contextual variables: agreement uncertainty and deal uncertainty. These are not the same thing. Agreement uncertainty describes situations in which the parties know that a deal is possible, but they are unsure if they actually will reach agreement on the division of value. By contrast, deal uncertainty covers situations in which the parties initially are unsure if any deal is even possible. I show that these latter two contexts are naturally interpreted as WM games. Taken as a whole, this suggests that situations with incremental value uncertainty (and hence multiple issues) are the only ones in which there is a possibility of a prisoner's dilemma structure.

Given that many negotiation situations are WM games, either initially or through the introduction of sustainable interim agreements, how should a WM game be played? In fact, this question has been answered in the literature almost from the beginning. For example, Thomas Schelling (1960) and Walton and McKersie (1965) discuss at length both commitment and coordination, two routes to managing the strategic risk in chicken-style coordination games. Perhaps ironically, the formal game theory literature has lagged behind the negotiation literature in providing insight into how to play this game. Recent advances in epistemic game theory have corrected for this. Epistemic game theory studies games as interactive decision problems. In other words, a game is analyzed by considering what each player might do, given what each thinks others might do, given what each thinks others might think they might do, and so on. In the specific case of the WM game, epistemic results imply that any choice of action can be justified without relaxing any assumptions about the rationality of the players.²

This fact has two consequences for understanding how to play the WM game. First, the choice between creating and claiming behavior reduces to a choice between a safe, low-return option and a risky option yielding either a high payoff or no payoff. Second, because any choice of action is justifiable, any outcome is possible. In particular, the “coordination failure,” in which each player chooses creating behavior, is entirely consistent with “common belief of rationality.” It is considered a “failure” technically, because each player would have preferred to claim, given that the other was choosing to create. This coordination failure is actually fortuitous, however: with each player choosing creating behavior, the maximum *aggregate* value is created. Moreover, in this scenario, each player receives his second most preferred outcome. Because this outcome is consistent with rationality — in fact, common belief of rationality (see above) — there is a formal justification for the presence of the fortuitous coordination failures that appear experimentally. (See, for example, Valley et al. 2002.)

In the stylized view of negotiation in which strategies are assigned to claiming and creating categories, the WM game view of the resultant game suggests two broad conclusions. First, the strategic tension between creating and claiming value is, in essence, the tension between a low-risk and a high-risk choice. Second, to the extent that value creation in an economy is based on negotiated outcomes (e.g., consider business-to-business transactions), fortuitous coordination “failure” can be viewed as one of the sources of value creation.

A Prisoner’s Dilemma in Negotiation

Referring to a negotiator named “Party” and another named “Opponent,” Walton and McKersie (1965: 168–169) asked, “How does Party realize the potential of integrative bargaining without being exploited by Opponent’s self-interest orientations?” This question implies that some tension between creating and claiming behavior should be expected.

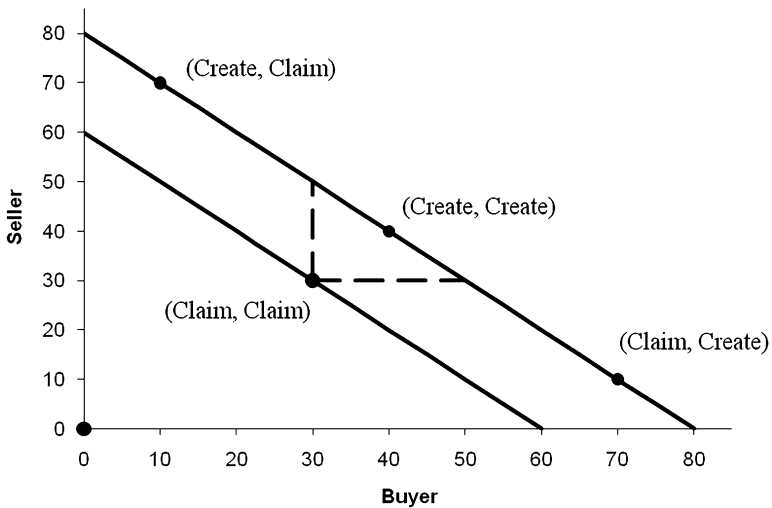
By contrast, we have already seen how a literal prisoner’s dilemma analysis implies no such tension: claiming behavior will dominate creative approaches. A simple negotiation example elaborates this latter argument.

Example One

Consider a simple buyer-seller negotiation. The buyer is willing to pay up to \$80 for a product that the seller owns. The seller’s opportunity cost of parting with this good is \$20. These two facts are common belief between the buyer and seller, so each party knows that a deal is possible. Additionally, the seller has the ability to improve the quality of his product at a cost of \$10, but the buyer does not know this. The buyer’s willingness to pay for the improved product would be \$110, but the seller does not know this.

In this example, claiming behavior would involve negotiating over the price of the unimproved product. Creating behavior for the seller would

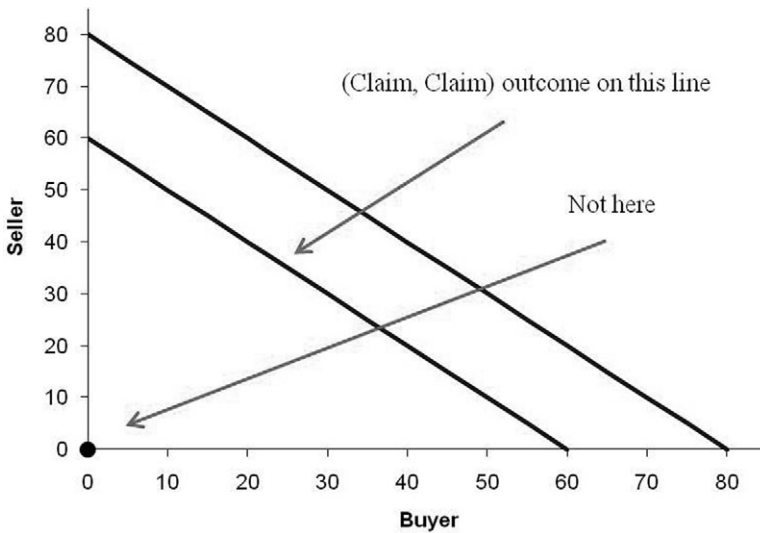
Figure Two
Example One, Buyer-Seller Negotiation



involve revealing information about the possibility and cost of improving the product. Creating behavior for the buyer would involve revealing his incremental willingness to pay for an improved product and the possibility of paying more. Figure Two depicts a possible scenario consistent with a prisoner's dilemma. The bargaining range for the unimproved product is the line between 60 and 60 on the respective axes. At one extreme, the buyer could purchase the item at the seller's cost and thus capture the value of \$60. At the other extreme, the seller could extract full value from the buyer and realize a profit of \$60. As each player knows the other's walk-away (or reservation) price, any number between those two points is feasible. For our purposes here, however, we do not have to worry about the particular point on which they settle, as long as it is not one of the two extreme points. The diagram depicts a situation in which they have split the difference, but wherever they end up, there will be potential solutions on the improved product line that would leave the parties better off for all practical purposes. (The bargaining range for the improved product is the line between 80 and 80 on the respective axes.)

In Figure Two, each point is labeled according to the choices of the players, where the first word records the buyer's choice and the second word records the seller's choice. For example, the claim-create point represents what happens when the buyer claims and the seller creates. In this example, claim-create leaves the buyer with \$70 and the seller with \$10.

Figure Three
Example One, Assumption One



For the analysis that will follow, the exact positions of the four outcomes are not critical, but their relative positions are. These relative positions are dictated by the following two assumptions.

Assumption One

If both players choose claiming behavior, the parties will still reach agreement on the unimproved product. This assumption is represented by the claim-claim outcome being positioned on the line representing some division of the \$60 of value (the buyer's willingness to pay for the unimproved product minus the cost of the unimproved product). It does not matter what the actual division of the \$60 is, as long as the division is not an extreme one (i.e., all the \$60 to one or the other player). In a picture, Assumption One can be expressed as seen in Figure Three.

Assumption Two

Against a claiming player, creating must provide a lower payoff than claiming. For the buyer, this assumption implies that the create-claim outcome is to the left of the claim-claim outcome. For the seller, the claim-create outcome must be lower than the claim-claim outcome. A typical rationale for these outcomes is as follows: if just one player — say, the buyer — reveals his preference for the improved product, the seller will be able to use this information to achieve a better outcome, represented by the

Figure Four
Example One, Assumption Two

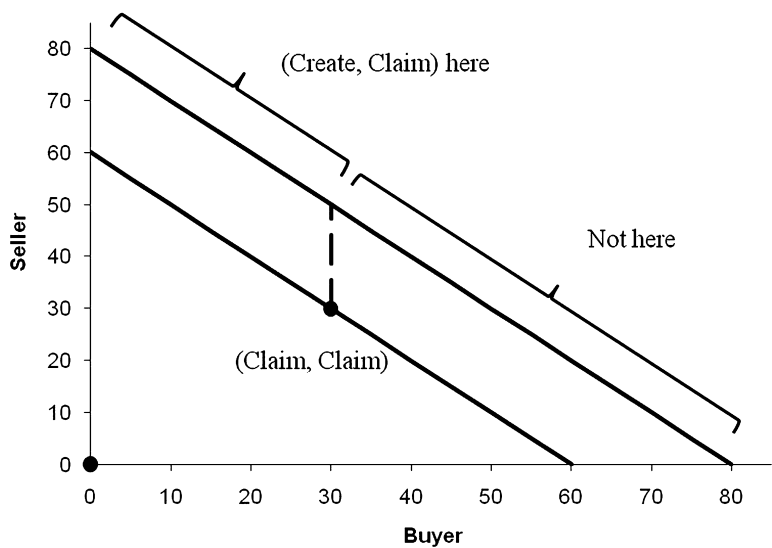


Figure Five
Example One Game Matrix

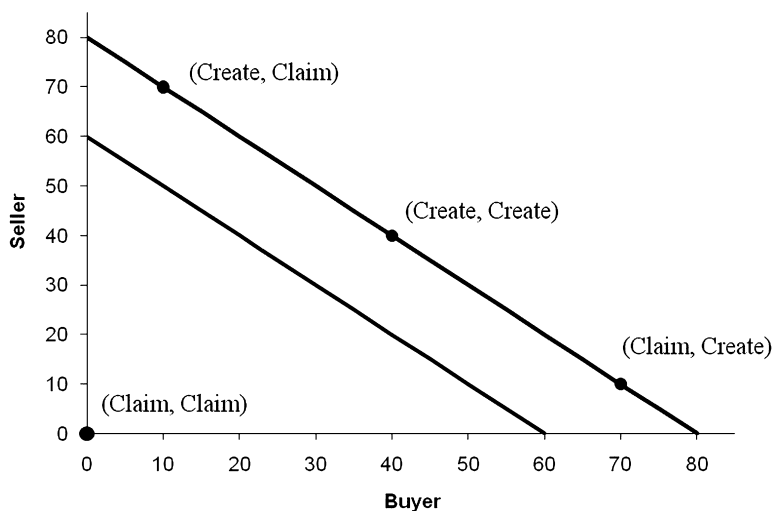
		Seller	
		Create	Claim
Buyer	Create	40, 40	10, 70
	Claim	70, 10	30, 30

create-claim point. A similar story can be told for the seller and the claim-create point. In both cases, Assumption Two requires that the revealing of information makes the revealing player worse off.

In a picture, Assumption Two can be expressed for the buyer as seen in Figure Four.

To verify that Example One is a prisoner's dilemma, it is useful to construct the game matrix. This is done in Figure Five. The buyer must choose between the upper and lower rows, while the seller must choose

Figure Six
Example One, Assumption One Relaxed



between the left and right columns. (In the labeling of the four possible outcomes, the buyer's choice is listed first.)

In the game shown in Figure Five, note that both players will choose to claim, regardless of what the other player chooses. Consequently, the worst of the four outcomes will occur, and there will be no incremental value creation.

To recap, we have just given the prisoner's dilemma model its due by granting two assumptions. Now let us see what happens if we dispense with the first one. Assumption One stated that if both players chose claiming behavior, some value would still be created. Earlier I noted that the prisoner's dilemma structure relied on a creating negotiator having "something to lose" when confronted with claiming behavior. This "something" is a portion of the value that a player would obtain in the claim-claim outcome. In Figure Five, the something is \$30 and in our example, we show that some of this — \$20, in fact — is lost if a player shifts to creating behavior in the face of a claiming opponent.

If we relax this something-to-lose assumption, it has a significant impact because it now becomes possible for joint claiming behavior to yield no agreement. Figures Six and Seven depict what that game would look like. Compared to the game in Figure Five, only the claim-claim outcome has changed. But what a change that is! You may have to look twice at the diagram in Figure Six to see the claim-claim outcome at the (0,0) point. It

Figure Seven
Game Matrix, Assumption One, Relaxed

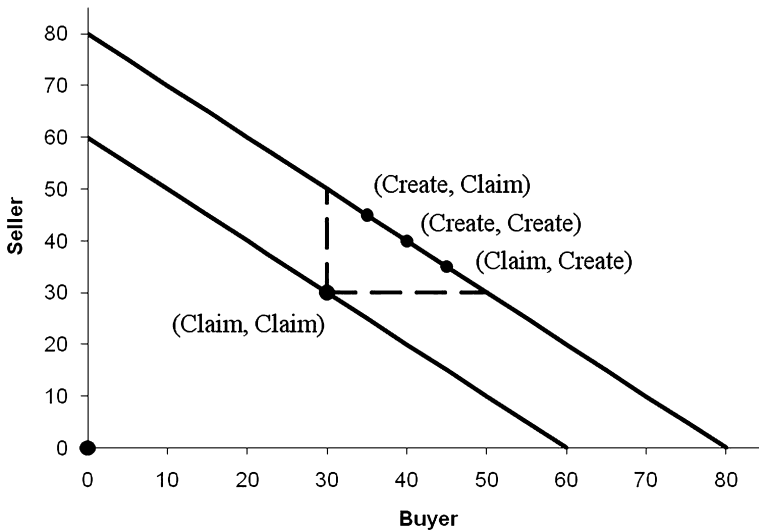
		<i>Seller</i>	
		Create	Claim
<i>Buyer</i>	Create	40, 40	10, 70
	Claim	70, 10	0, 0

represents the fact that joint claiming behavior will lead to no agreement. With this one change, the game is no longer a prisoner's dilemma: the decision to create is no longer dominated. In fact, it is now the best choice of action against claiming behavior. And the decision to claim is no longer a dominant strategy. It is the best choice of action against creating behavior, but it is an inferior choice of action against claiming behavior. We can see this in both graphic (Figure Six) and matrix (Figure Seven) form.

The game in Figure Seven has become a version of a coordination game called "chicken." The game of chicken itself has two distinguishing characteristics. First, each player has a preferred, coordinated outcome: each player wants to choose to claim while the other chooses to create. The other two outcomes in this game — both players choosing claim and both choosing create — are considered coordination failures in a technical sense. These outcomes are termed "failures" because given that one player chose claim, the other would have preferred to choose create. Similarly, given that one player chose create, the other would have preferred to choose claim.

The second distinguishing characteristic of chicken is the nature of these coordination failures: one of them is the worst outcome for both players (and thus is a true failure in the common meaning of that word), while the other is the second-best outcome for both players. The coordination games in this article are games of chicken with the following extra property: the value creation in the fortuitous coordination failure — that is, the create-create outcome — will be the same as the value creation in the coordinated outcomes. This is a reasonable stipulation, because given our example, joint value will be maximized whether both parties know about the incremental advantage of improving the product or only one party has that knowledge. Because this property holds true for the coordination games in Walton and McKersie (1965), we describe such games as WM games. As I explain in the next section, the creating-claiming interaction also ceases to be a prisoner's dilemma if Assumption Two is relaxed.

Figure Eight
Example One, Assumption Two Relaxed



Avoiding the Prisoner's Dilemma

If we go back to the prisoner's dilemma for a moment, it rests on two assumptions, the first of which states that value will be created even if both players choose claiming behavior. Thus, it follows that each player is guaranteed some value capture even when both choose claiming behavior, and we will take as given that some value can be lost for a player choosing to create rather than claim. The second foundational assumption states that this guaranteed value capture is at risk if a player chooses creating behavior. In other words, the assumption states that there are situations in which "something will be lost." But if this second assumption is now relaxed, it then follows that the value guaranteed to a player when claiming cannot be lost by choosing to create. Figures Eight and Nine depict how this relaxation would affect Example One.

Compared to the original game in Figure Five, the claim-create and create-claim outcomes have been changed. Both players are now better off if at least one player chooses to create. In particular, the creating player's payoff is at least as high as it would be in the claim-claim outcome, thus violating Assumption Two. Note that this game is, once again, a WM game. There are the two coordinated outcomes (claim-create, create-claim); the fortuitous, value-maximizing coordination failure (create-create); and the Pareto-inferior coordination failure (claim-claim).

Figure Nine
Game Matrix, Assumption Two Relaxed

		<i>Seller</i>	
		Create	Claim
<i>Buyer</i>	Create	40, 40	35, 45
	Claim	45, 35	30, 30

Comparing the games in Figures Five and Nine, the difference between the prisoner's dilemma and Walton-McKersie perspectives can be viewed as resting on the applicability of Assumption Two. If Assumption Two does not seem applicable, then the maximum value creation will rely on either coordination or fortuitous coordination failure. Of course, if Assumption Two does apply — that is, if there is something to lose by creating against a claiming opponent — then the players do face a prisoner's dilemma in that latter case. Maximizing value creation will require a change in the game.

A natural question is to ask how the game should be changed or, given the above analysis, is there a way to relax Assumption Two? The pre-/postsettlement settlement literature suggests a way. When an agreement has already been negotiated, Howard Raiffa argued for the use of an "intervenor" to help parties improve upon the negotiated outcome. Raiffa (1985: 12) summarized the reason for why this might be an effective approach. "A shift of attitude," he wrote, "from belligerent positional bargaining to constructive collaboration with an intervenor, might very well take place after each side has gained the security of some negotiated settlement."

But the "security of some negotiated settlement" does more than allow for a shift in attitude. It changes the structure of the interaction. This can be seen by returning to Figure Two and treating the claim-claim outcome as the "negotiated settlement." Then, any postsettlement settlement would have to lie northeast of the claim-claim outcome between the two dotted lines. But with this restriction, we have effectively recreated the situation of Figure Seven, namely, a WM game. This suggests the following practical advice: during the negotiation process, establish a credible interim agreement before exploring additional value creation.

James Gillespie and Max Bazerman (1998) were the first to give this advice. They noted that the logic behind Raiffa's postsettlement settlement didn't require a negotiated agreement. Instead, all that was needed was some sort of initial agreement to provide a "floor" for the continuing negotiations. Gillespie and Bazerman (1998: 150) label this initial agreement

a presettlement settlement: “Pre-settlement settlement is a technique wherein parties initiate complex negotiations by first reaching a binding settlement on some subset of issues.”

From a game-theoretic perspective, the key to either a pre- (or post-) settlement settlement is that the initial agreement be binding. With a binding initial agreement, the decision to create rather than claim is less risky since the “something to lose” from choosing creating behavior against a claiming opponent is eliminated because of the initial agreement. Consequently, the prisoner’s dilemma structure of the negotiation is eliminated, and a WM game remains. In pictures, the game in Figure Two becomes the game in Figure Eight, with the claim–claim outcome being interpreted as the presettlement settlement.

To summarize, in a negotiation context with a prisoner’s dilemma structure, the postsettlement settlement and presettlement settlement literatures suggest the following advice: find a way to make interim agreements or tentative deals credible minimums as the negotiations proceed.³ If this can be done, then the prisoner’s dilemma can be transformed into a WM coordination game.

Coordination in Negotiation

In the examples of the previous two sections, the main uncertainty was whether or not incremental value creation was possible. The players believed that some deal and, hence, some value creation was possible. But the players were not sure if the “pie” could be expanded, that is, if there could be incremental value creation. This is the classic context in which the tension between creating and claiming behavior is often discussed. And, in this context, the postsettlement settlement and presettlement settlement literatures suggest a way to transform prisoner’s dilemma negotiations into WM games. We now consider two additional contexts: agreement uncertainty and deal uncertainty. As we will see, both of these contexts can be viewed as WM games.

Agreement Uncertainty

This is a context in which the parties know that a deal is possible, but they are unsure if they will reach agreement on the division of value. For example, in a buyer–seller context, both parties would know that the buyer’s willingness to pay exceeded the seller’s opportunity cost, though they might not know by how much. In these negotiations, there is a risk that the parties will not reach agreement because each is trying to aggressively claim a share of the pie. Walton and McKersie (1965) describe the strategic interaction in this context as a “moment of truth.” Figure Ten depicts an example in which the gains from trade would be \$10.⁴

In this game, “concede” would be the creating strategy and “stand pat” would be the claiming strategy. This game is a WM game. Moreover, to see

Figure Ten
Moment of Truth Game Matrix

	Concede	Stand Pat
Concede	5, 5	2, 8
Stand Pat	8, 2	0, 0

Figure Eleven
Uncertain Deal

	Reveal	Quiet
Reveal	5, 5	2, 8
Quiet	8, 2	0, 0

why it cannot be modeled as a prisoner's dilemma, note that a prisoner's dilemma would require that stand pat be a better choice than concede against a player choosing stand pat. But this requires that the "no deal" (stand pat, stand pat) payoff be better than the payoff in any deal. For this to happen, a player would have to agree to a deal that is worse than its no-agreement alternative. Assuming that a player is free to walk away from an unfavorable deal, this cannot happen.

Deal Uncertainty

With deal uncertainty, it is not clear to the parties whether or not a deal is possible. In these contexts, creating behavior will have an element of information revelation. As buyers lower their bids, or as sellers increase their offers, information is being revealed. In this context, information revealing can be interpreted as creating behavior and being quiet as claiming behavior. As before, this leads to a WM game. If both players are quiet, no deal will occur. If one player is revealing and the other quiet, there will be a lopsided agreement in favor of the quiet player. And if both players are revealing, there should be a reasonably balanced split of the pie. Figure Eleven depicts an example in which the gains from trade are again \$10.

As with agreement uncertainty, note that this game cannot be a prisoner's dilemma. The "no deal" payoff cannot be made better than a payoff in a deal.

Figure Twelve
Mixed Context Matrix

		Opponent Sum strategies			
		<i>D</i> Fixed sum		<i>I</i> Increase sum	
		Share strategies		Share strategies	
		Soft	Hard	Soft	Hard
Party Sum strategies	<i>D</i> Fixed sum	2, 2	1, 3	$2\frac{1}{2}, 2\frac{1}{2}$	1, 4
	<i>I</i> Increase sum	3, 1	-6, -6	4, 1	-6, -6
	<i>D</i> Fixed sum	$2\frac{1}{2}, 2\frac{1}{2}$	1, 4	3, 3	1, 5
	<i>I</i> Increase sum	4, 1	-6, -6	5, 1	-6, -6

Source: Walton and McKersie (1965: 163).

In the two previous examples, the nature of the creating and the claiming behavior is arguably different. With deal uncertainty, creating behavior includes information revelation about a player's attributes, that is, his or her reservation values and trade-offs. With agreement uncertainty, creating behavior includes information revelation about what a player will actually do. This distinction is arguable because the definitions are easily blurred. For example, why can't what a player will actually do be viewed as an attribute of the player?

Interestingly, if a distinction is made between these two types of creating behavior, a WM game can still emerge. Figure Twelve is from Walton and McKersie (1965: 163). The labels "hard" and "soft" refer to hard and soft bargaining. Hard bargaining is like stand pat in the moment-of-truth game, and soft bargaining is like concede in that game. The labels *I* and *D* refer to integrative and distributive bargaining. These behaviors are like the creating and claiming choices in our original Example One. Figure Twelve depicts Walton and McKersie's assessment of the consequences from different combinations of these behaviors. For instance, if Party (the player choosing rows) were both integrative and soft, and if Opponent (the player choosing columns) were both distributive and hard, Party would receive 1 and Opponent would receive 4.

At first glance, this looks like a complicated game. But for each player, two of the strategies are weakly dominated: neither player has an incentive to ever choose a *D* strategy. For instance, if you look at the row corresponding to Party choosing *D* and Soft (the first row), every value in that row is less than or equal to the corresponding value in the row for choosing *I* and

Figure Thirteen
Mixed Context, Simplified

		<i>Opponent</i>	
		I, Soft	I, Hard
<i>Party</i>	I, Soft	3, 3	1, 5
	I, Hard	5, 1	-6, -6

Figure Fourteen
A Basic WM Game

	Create	Claim
Create	5, 5	2, 8
Claim	8, 2	0, 0

Soft (the third row). Thus, Party would never choose *D* and Soft. By doing similar comparisons, one can see that Party would also never choose the second row, and Opponent would never choose the first or second column. Thus, we can delete these rows and columns from consideration. This leaves us with the game depicted in Figure Thirteen.

Note that this game is just a WM game with potential value creation of 18 (= (3 + 3) – [(–6) + (–6)]).

The above examples demonstrate the broad applicability of a WM game as a model for investigating the strategic choice between claiming and creating behavior. We now consider how to play this game.

Strategic Risk in a WM Game

Assuming that a negotiation can be modeled as a WM game with choices between creating and claiming behavior, how should it be played? For concreteness, consider the game in Figure Fourteen.

The first point to note is that any choice of action can be justified. If a player believes her opponent will claim, she should create. If she thinks her opponent will create, she should claim.⁵ There is no way to deduce what a player might do from the structure of the game itself. A player’s choice of

strategy will ultimately depend upon what she believes the other player will do. Recent results in epistemic game theory imply that any beliefs about what the other player will do in this game are consistent with common belief of rationality.⁶ Loosely, because there is a plausible reason for both strategic choices, a rational player might choose either. Thus, any belief about what the other player might do is reasonable: the game itself imposes no restrictions on what a player should believe in this game. As a result, any outcome is possible.

Given that any outcome is possible, a player faces a choice between a safe, low-return option and a risky, potentially high-return option. Perhaps surprisingly, creating behavior is the safer choice. In the game in Figure-Fourteen, the player is guaranteed at least 2, but no more than 5. Claiming behavior is the high-risk option: a potential payoff of 8 coupled with a chance of receiving nothing. Thus, the strategic tension in the choice between creating and claiming reduces to a standard tension between a low-risk and a high-risk option.

From this analysis, note an interesting property of the WM game: the low-risk decision guarantees that the maximum value will be created no matter what the other player does. Again, value creation is always a risk-free, though marginally profitable, possibility. This is another way to understand why one of the coordination failures in this game is fortuitous. The maximum value will be squandered only if both players choose the high-risk strategy.

Conclusion

If negotiation is modeled as a game of creating and claiming, the consequences can be described by at least two classic games: the prisoner's dilemma and a chicken-style coordination game. Consistent with much of the analyses in Walton and McKersie's (1965) seminal book, *A Behavioral Theory of Labor Negotiations*, this article has argued that a coordination game is a suitable model for a broad range of negotiation contexts. Additionally, for those contexts best modeled by a prisoner's dilemma, the article shows that interim agreements can transform the prisoner's dilemma into a coordination game.

The coordination game perspective of negotiation has two by-products. First, the tension between choosing creating versus claiming behavior can be understood as the simple tension between a high-risk and a low-risk choice. At first glance, this result might seem counterintuitive. Creating behavior is usually viewed as the high-risk choice, not the low-risk choice. There are at least two explanations for this seeming contradiction of intuition. One might be that the intuition is correct, implying that many negotiations do have a prisoner's dilemma structure, that is, that the two assumptions described earlier (the something-to-lose assumption and the something-will-be-lost assumption) often do hold. The other is that there is

often a behavioral phenomenon at work. Economically, a player has captured value if he does better than his alternative. But if, after a negotiation, a player worries that he could have done better than he did, this might *feel* like a loss, despite being an economic gain. Thus, a perception that a coordination game context feels like a prisoner's dilemma might signal the presence of a behavioral phenomenon.

The second by-product of taking a coordination game perspective on negotiation is that doing so suggests an additional explanation for the occurrence of value creation. Not only does value creation result from coordinated behavior, it can also be created as a result of fortuitous coordination failure.

This article has used a game-theoretic analysis, in part because this very type of analysis is also an important source of the theory — which I argue is erroneous — that claiming must dominate creating. We have seen that is not the case inevitably. I have made the case by abstracting away much of the complexity of the real world, for instance, the myriad of choices, uncertain outcomes, and asymmetrical information. Further, creating and claiming behaviors are often a matter of degree and often not mutually exclusive. And through their words and actions, parties typically jointly create the game that they are playing, though it may be ever-changing and poorly understood.

The challenge of linking theory and practice is obviously not trivial, but it remains a question whether our stylized results hold up in practice. But my argument is one of possibility, not necessity. Does claiming behavior drive out creating behavior? In other words, is creating behavior possible? Intuition and experience argue yes, and I have provided a formal, theoretical argument for yes. And because creating behavior is justifiable in this specific world, it must be justifiable in a larger world.

NOTES

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1. More explicitly, David Lax (2010: 361) describes two scenarios. The "reach impasse" scenario corresponds to the WM game in Figures Six and Seven in the current article. The "fail to find value-creating trades" scenario correspond to the prisoner's dilemma of Example One.

2. For a survey of recent epistemic results, see, for example, Brandenburger (2007).

3. It is important to note that not all presettlement agreements are settlements. Sebenius and Michael Wheeler (1994) and Lax and Sebenius (1997) suggest a form of presettlement agreement ("no-fist") that protects the value creation, but postpones the division of value. Because an initial division of value is not specified, it is entirely possible that the parties could still be facing a prisoner's dilemma. Although the no-fist approach is designed to postpone the difficult question of division of value, the preceding analysis does suggest that even partial determination of this division — say, minimums for each side — could facilitate the negotiations. To the extent that each party is guaranteed some share of the "pie," the decision to choose creating behavior becomes less risky.

4. This is Figure 2-22a of Walton and McKersie (1965: 55), with the no-agreement outcome normalized to zero.

5. More precisely, if a player believes that there is a greater than 40 percent chance that the other player will create, she will claim. Otherwise, she will choose to create. This probability assumes that the player is neither risk averse nor risk seeking.

6. A traditional game-theoretic analysis would assume equilibrium behavior, but this assumption is not, in general, implied by common belief of rationality. See Brandenburger (2007).

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