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Economic Interdependence, Opportunity Costs, and Peace

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The study of the relationship between economic interdependence and international conflict constitutes one of the most vibrant research programs in the international relations field today. It has been propelled by the success of democratic peace theory; by liberals' hopes of finding comparably strong patterns linking economic interdependence to peace and thereby expanding the foundations of the liberal peace; by the realist counterattack; and by the fact that the trade-promotes-peace hypothesis reinforces the current American foreign policy agenda.

Much of the literature on economic interdependence and conflict has focused on the question of the net effect of economic interdependence, and of trade in particular, on international conflict. Are high levels of economic interdependence between states associated with a decrease in the probability of militarized interstate disputes (MIDs) or wars, and, if so, is this relationship a causal one? While there are extensive debates over the proper research designs for investigating this question, and while some empirical studies find that trade is associated with international conflict (Barbieri 1996, 2002), most studies conclude that trade is associated with peace, both at the dyadic and systemic levels (Polachek 1980; Mansfield 1994; Oneal and Russett 1997, 1999; Russett and Oneal 2001).¹ There is less agreement, however, about the strength of this empirical association, whether it represents a causal relationship, the underlying causal mechanisms driving the relationship, or the conditions under which it holds.

I have two aims in this chapter. One is to argue that some important causal mechanisms posited to lead from economic interdependence to peace are logically incomplete, and another is to go beyond the current focus on the net

interdependence has a negligible impact on international conflict (Gilpin 1987; Ripsman and Blanchard 1996–97). Some realists (and Marxists as well) go beyond this to argue that under certain conditions economic interdependence, particularly if it is asymmetrical interdependence, may actually increase the probability of militarized disputes or war—by creating new issues of conflict between states, by tempting the stronger state to exploit its advantages for coercive purposes (which can lead to conflict spirals), or by other means (Hirschman [1945] 1980; Barbieri 1996). Historically, close trade ties have sometimes led to trade rivalries and trade wars, which sometimes escalate to war (Conybeare 1987; Levy and Ali 1998).

The relative impact of economic and other variables on international conflict is in part an empirical question, of course, and one that after years of neglect became the focus of an intensive inquiry by the mid-1990s. While the majority of empirical studies find that economic interdependence tends to reduce the impact of international conflict, the empirical debate is far from resolved.⁴ Different studies use different indicators of both interdependence and international conflict, different spatial and temporal domains, different control variables, and different statistical techniques.⁵

While there has been a lot of attention to the different indicators scholars use to measure trade interdependence, there has been less attention to the conceptualization and operationalization of the dependent variable (but see Mansfield and Pollins this volume). Many proponents of the trade-promotes-peace hypothesis argue that economic interdependence reduces the frequency of war, whereas others make the more sweeping claim that interdependence reduces the frequency not only of war but also of militarized disputes and other forms of militarized competition between states.

Cosmopolitans like Thomas Paine, for example, argued that commerce promotes a general harmony of interests that reduces low-level as well as higher-level conflicts between states. Immanuel Kant, on the other hand, spoke in more limited terms about the dampening effects of interdependence on war. He emphasized the role of self-interested business leaders in using their influence to prevent economically costly wars but argued that business leaders would have fewer incentives to try to stop lower-level disputes with fewer direct and immediate costs to their own interests (Walker 2000).⁶ With Kant generally taken as the spokesman for liberal international theory, it is perhaps not surprising that most theoretical arguments about the pacifying effects of economic interdependence are framed in terms of reducing war, not reducing lesser forms of disputes between states.

The important question is not which formulation of the trade-promotes-

effects of interdependence on militarized conflict and to identify some of the additional testable implications deriving from the trade-promotes-peace hypothesis. Although it is important to assess the net effects of economic interdependence on international conflict, the preoccupation with this question has inhibited theoretical progress. Research programs often advance through the generation and testing of additional “novel facts” (Lakatos 1970) or observable implications of their central hypotheses (King, Keohane, and Verba 1994), and we can gain leverage on our theories of economic interdependence and conflict by identifying and testing their additional implications.⁷

Some of these additional testable implications of the theory involve the relative frequencies of occurrence of various outcomes and are best tested through large-*N* quantitative methods. Other predictions concern the perceptions, expectations, and calculations of political leaders, and these hypotheses are often best explored through qualitative methods. Given the predominance of quantitative approaches in the literature and in this volume, I give special emphasis in this chapter to the potential contributions of case-study analyses, but the key point is that the study of economic interdependence and international conflict is best served by the use of multiple methodological approaches.

The Economic-Opportunity-Cost Hypothesis

Proponents of the trade-promotes-peace proposition identify several interrelated theoretical arguments in support of their hypothesis but give greatest emphasis to the economic-opportunity-cost argument based on the benefits of specialization and efficiency.⁸ Because trade exploits comparative advantages and generates economic benefits for both parties, the anticipation that war will disrupt trade and lead to a loss or reduction of the gains from trade creates incentives for political leaders to avoid taking actions that are likely to lead to war against key trading partners (Polachek 1980; Doyle 1997; Russett and Oneal 2001). This opportunity-cost mechanism is reinforced at the domestic level. Trade increases the influence of economic groups who benefit most from trade and who have incentives to pressure the government to maintain a peaceful environment for trade (Rogowski 1989; Solingen 1998). Lower levels of trade reduce the economic opportunity costs of war and reduce economic incentives for political leaders to avoid war.

Realists and mercantilists question the liberal economic theory of peace. They argue that any pacifying effects of economic interdependence are always small relative to the effects of the distribution of military power and related strategic considerations at the dyadic and systemic levels, so that economic

peace hypothesis is more common, but whether the operational indicator used to test the hypothesis is congruent with its theoretical formulation, and here we often find a gap between theoretical arguments and the research designs constructed to test them. Most of the empirical literature uses indicators of conflict that include militarized interstate disputes and other uses of force short of war without giving adequate attention to the question of whether the trade-promotes-peace hypothesis makes predictions about low-intensity conflicts of the kind that make up much of the militarized interstate dispute data set.⁷ Most MIDs are quite mild: a third last less than a week; over two-thirds involve no battle-related deaths; and only 4 percent escalate to war (Jones, Bremer, and Singer 1996). These are not the kinds of events that Kant imagined might be suppressed by extensive economic ties between societies. Those who operationalize the dependent variables in terms of MIDs need to be much more explicit about the theoretical justification of that choice and the causal mechanisms driving their theoretical propositions.

We cannot simply assume that the same causal linkages work for MIDs and for wars, that if trade suppresses wars it will also suppress less costly disputes.⁸ The question of when disputes escalate to war also raises the possibility of some interesting strategic dynamics. If high levels of economic interdependence reduce the probability that a dispute will escalate to war because of the economic opportunity costs of war, and if political leaders understand this, it is conceivable that political authorities will be less inhibited in initiating disputes for coercive purposes, knowing that the risks of escalation are lower.⁹ Concerns about inadvertent escalation, on the other hand, might suppress low-level disputes as well. What we need is a more complete specification of the causal linkages between economic interdependence and disputes, interdependence and war, and the separate linkages between disputes and war.

We should also note that the empirical strength of the relationship between trade and conflict, and particularly between trade and war, appears to be fairly modest and leaves much of the variance in the presence or absence of conflict to be explained by other variables. While Oneal and Russett (1999) find that democratic dyads and economic interdependence each have significant dampening effects on international conflict, they also find that capability ratios, territorial contiguity, and major power status have statistically significant impacts on the presence or absence of militarized conflict. These findings suggest that interdependence, democracy, and other variables associated with liberal international theory cannot alone explain variations in international conflict and that such variables need to be combined in a broader theory of conflict.¹⁰ Indeed, Oneal and Russett (1999, 3) frame their recent work in terms of a "con-

ceptual synthesis of Kantian and realist theories." This increases the explanatory power of the model, but at some cost to parsimony and to any claim for a distinctively "liberal" theory of international conflict.

The role of other variables in explaining international conflict also suggests that it is misleading to argue that economic interdependence actually deters war, in the sense that a certain threshold of interdependence is a sufficient condition for peace. It makes more sense to treat economic interdependence as a contributory cause of war and to construct the hypothesis in probabilistic terms: the greater the degree of economic interdependence, the lower the probability of war or other forms of militarized international conflict. War can still occur despite the pacifying effects of economic interdependence, if strategic or possibly domestic pressures for war are sufficiently strong.

Though the focus of most of the theoretical literature and all of the empirical literature is on current trade, the logic of the commercial liberal theory of peace and its key economic-opportunity-cost proposition implies that it is expectations of future trade that really matter. This idea is the cornerstone of Copeland's (1996) "theory of trade expectations." He argues that if trade between two states is substantial, but is expected to decline significantly in the future, the economic opportunity costs of war are substantially lower than if trade is expected to continue at current levels. Indeed, if states expect trade to decline, and if they expect to lose access to vital goods in the process, they may be tempted, in some situations, to resort to military force to seize those goods.¹¹ Similarly, expectations of future trade can have a dampening effect on future conflict even when current trade levels are low.¹²

Expectations of future trade are not necessarily exogenous, however, and political and economic leaders concerned about future trade often take actions to insure against the loss of trade and possibly to increase it. This is explicit in Mansfield and Pevehouse's (2000, 778-81) theoretical explanation of the beneficial effects of preferential trading agreements (PTAs) and their dampening effects on international conflict. Mansfield and Pevehouse talk about "the future stream of gains" from participation in a PTA and emphasize the role of PTAs in maintaining a state's access to key international markets and also in providing insurance against the possibility of protectionist measures by their trading partners in the future.

Some Analytic Problems

The economic-opportunity-cost hypothesis of commercial liberalism states that economic interdependence promotes peace because of the fear that the

outbreak of war or other forms of militarized conflict will disrupt trade and other economic relationships. It is possible, however, that the causal arrow runs in the opposite direction or is reciprocal. Blainey (1988) criticizes the Manchester liberals on the grounds that peace creates the conditions that facilitate the development of interdependence, not the reverse, and Pollins (1989) and Gowa (1994) each argue that trade follows the flag, so the causal arrow goes from conflict and politics to economic interdependence and not the other way around. The liberal economic-opportunity-cost hypothesis itself states that trade promotes peace precisely because war inhibits trade, so that the relationship is fundamentally reciprocal.

While scholars in principle recognize the reciprocal relationship between economic interdependence and conflict, most empirical research focuses only on one unidirectional relationship or the other. Scholars have only recently begun to systematically examine the reciprocal influences of economic interdependence on conflict and of conflict on interdependence (Reuveny and Kang 1996; Reuveny 2001). This is an important step forward, but one limitation of most of these studies is that they are generally restricted to the post-World War II period (where events data measurements are ample). These studies also say little about the relationship between economic interdependence and war, particularly major war, given the absence of the latter in the last half-century. Empirical studies of the reciprocal relationship between interdependence and peace need to be extended to a broader temporal domain that incorporates greater variation in the intensity of international conflict, including great power wars of the past.³

The observed association between economic interdependence and peace may also be the result of other factors that simultaneously affect both variables.⁴ For example, states with common interests tend to trade with each other (Morrow, Siverson, and Tabares 1998), and their common interests generate fewer issues to fight about, so the association between trade and peace may be spurious and explained in part or in full by the commonality of interests, quite independently of trade. A related possibility is that because there is more trade between allies than between adversaries (Gowa 1994), and because allies are less likely to go to war with each other (Ray 1990), alliances may account for part of the association between trade and peace. Finally, hegemonic-stability theorists argue that one of the primary conditions facilitating trade is the existence of a hegemon that is able and willing to maintain a stable political economy. They also argue that hegemony promotes peace (Keohane 1984; Gilpin 1981).⁵ If so, the association between trade and peace might be

spurious and explained primarily by the degree of hegemony over the political economy.⁶

There is another respect in which theorists have not fully specified the causal linkages leading to peace in the economic-opportunity-cost variation of commercial liberalism. The widely repeated argument that the fear of the loss of the gains from trade helps to deter political leaders from taking actions that might lead to war is logically incomplete because it attempts to explain a dyadic outcome (peace/war) with state-level variables (state cost-benefit calculations) and ignores the questions of the strategies states use to advance their interests and the processes through which they interact with their partners/adversaries.

The desire to preserve peace and its associated gains from trade may very well lead two trading partners to each refrain from belligerent actions when a conflict of vital interests arises. It is also possible, however, that one side might conclude that its partner/adversary is so eager for peace and so fearful of war that by increasing its own demands the first side can secure additional concessions without an appreciable risk of war and its associated economic costs. Or, a state content with the status quo may nonetheless fear that any concessions it makes in the name of peace might only be perceived as a sign of weakness and induce the other side to increase its demands. In the absence of additional information about each side's expectations regarding the economic benefits of trade and the economic opportunity costs of war, as well as each side's domestic sensitivity to those costs and willingness to take risks, not to mention the role of other variables, it is impossible to say for sure whether the conflict of interests will be resolved peacefully or whether it might lead to militarized conflict.

Guided by insights from game-theoretic approaches, scholars have recently begun to emphasize the theoretical indeterminacy of the monadic economic-opportunity-cost hypothesis and have attempted to incorporate a theory of strategic interaction to help explain the potentially pacific effects of economic interdependence (Morrow 1999; Gartzke, Li, and Boehmer 2001). These scholars build on the argument that in the context of full information there are settlements that each side prefers to violence and that explaining militarized conflict requires explaining how uncertainty, private information, and incentives to misrepresent that information preclude agreement on mutually beneficial and efficient settlements (Fearon 1995). They also build on the logic of signaling games to suggest that actors can reduce uncertainty through costly signals of their preferences and intentions.

The basic argument is that trade and other forms of economic interdepen-

dence can promote peace by providing opportunities for states to send credible signals of their resolve without resorting to riskier military actions as instruments of signaling (Morrow 1999; Gartzke, Li, and Boehmer 2001). Higher levels of interdependence lead to a broader menu of options for signaling and thus make signaling more efficient.¹⁷ Cutting back trade or financial flows is costly and helps to distinguish between actors making genuine demands and those who are bluffing in a crisis. This reduces each actor's uncertainty about the intentions and resolve of the other, increases the likelihood that adversaries can find an outcome that each prefers to violence, and reduces the dangers of crisis escalation driven by misperceptions.¹⁸

Because the hypothesized deterrent effects of the economic opportunity costs of war, and therefore the impact of economic interdependence on peace within a dyad, may be indeterminate in the absence of an explanation of the nature of strategic interaction or bargaining between trading partners, an important task for future research is to explore the nature of these bargaining processes. Game-theoretic models provide one clear way of doing this. Institutional approaches (game theoretic or otherwise) can also be useful, as demonstrated in Mansfield and Pevehouse's (2000, 781) discussion of the role of preferential trading arrangements in providing a forum for negotiation and bargaining, providing information and reducing uncertainty, and establishing norms of reciprocity.

Other Implications of the Economic-Opportunity-Cost Hypothesis

While most tests of the economic-opportunity-cost hypothesis focus on its prediction that economic interdependence reduces the likelihood of international conflict, it is useful to examine some of the proposition's other testable implications. This will extend the analytic power of the hypothesis and provide additional ways of testing it.

One key premise of the economic-opportunity-cost hypothesis is that dyadic trade will be significantly reduced or eliminated once war breaks out between trading partners. Evidence contrary to this prediction would raise questions about the validity of the general hypothesis and hence the primary causal mechanism in the liberal economic theory of peace and war.¹⁹ If a substantial amount of trade is expected to continue during wartime, then the anticipated economic opportunity costs of war, and hence the economic incentives for avoiding war, will be much lower.

There is a long history of "trading with the enemy" that goes back many

centuries (Levy and Barbieri 2001). The Dutch were particularly well known for this practice, and certainly no Dutch leader or his international adversary in the sixteenth or seventeenth century would refrain from war on the assumption that trade with the enemy would cease during wartime. Most of the evidence of trading with the enemy is anecdotal and drawn from histories of particular periods, however, and there have been few if any systematic and theoretically driven studies of this phenomenon, at least until recently.

In the last few years scholars have begun more systematic investigations of the impact of war on trade. In their study of seven minor power dyads, for example, Barbieri and Levy (1999) found that in most cases war has no statistically significant effect on dyadic trade. Anderton and Carter (2001), while not challenging these particular findings, questioned whether they could be generalized to other cases. Anderton and Carter extended the analysis to major powers and found evidence of significant declines in dyadic trade in a number of major power dyads going back to 1870. While Anderton and Carter raise serious questions about the extent of trading with the enemy, there are enough examples of this phenomenon to warrant future research on this question. It is an important question in itself, and it has critical implications for the economic-opportunity-cost variant of the trade-promotes-peace hypothesis.²⁰

It is clear that trade between adversaries sometimes declines during war while at other times it does not, and the total number of cases analyzed is still too small to reach any definitive conclusion. A resolution of this debate on the impact of war on trade will require further analyses based on additional cases, with attention not only to the aggregate effects of war on trade but also to the particular conditions under which trade declines significantly during war and the conditions under which such trade continues at substantial levels. It would also be useful to explore whether the extent of the continuation of trade during war has declined over time as a function of the growth of the state's ability to monitor and sanction such trade; the growth of nationalism and patriotic norms against trading with the enemy; and the institution of the income tax, which reduced the state's dependence on revenues from trade.²¹ Scholars should also broaden the focus beyond trade and analyze the extent to which financial flows continue between wartime adversaries.

There are also questions regarding what kinds of trade continue, in what kinds of goods, between what kinds of adversaries, in what kinds of wars, and with what impact on states' war efforts and domestic economies. Another question concerns the expectations of political and business leaders regarding the impact of war on trade. Do firms want to continue trade in search of profits or to cut back trade in an anticipation of increased transport and insurance

short, the resumption of trade following war is critically dependent on the political context in which the war ends (Barbieri and Levy 2001).

Given the ambiguity of the predictions of the economic-opportunity-cost hypothesis as to the rate of recovery of trade after the termination of war, it would be premature to use trade data in the aftermath of war as evidence for or against the hypothesis. We need to specify the implications of the economic-opportunity-cost hypothesis more precisely before that hypothesis can be tested empirically.

This discussion of the termination of war raises another issue as well. Almost all of the theoretical and empirical literature on economic interdependence and war looks at the impact of interdependence on the *outbreak* of war. It would also be useful to examine the impact of interdependence on the *termination* of war. The logic of the economic-opportunity-cost argument implies that the hope of recovering the gains from trade should be one factor motivating political leaders to end a war. In fact, there may be theoretical grounds for expecting that economic calculations have a greater impact on decisions to seek an end to war than they do on decisions regarding the possible initiation of war.²⁴

Recall Blainey's (1988) argument, refined by Fearon (1995) and others, that disagreements about relative power are the central cause of war, that war serves to eliminate uncertainty about the dyadic balance of military power between adversaries, and that peace comes when adversaries agree on the dyadic balance of power and therefore on the likely outcome of the war. The onset of war is normally characterized not only by uncertainty about the outcome of war but also by enormous uncertainty about the economic costs and opportunity costs of war, the public's reaction to those costs, and its political and diplomatic ramifications. Just as the course of war reduces uncertainty about relative military power, it also reduces uncertainty about the economic costs of war and hence reduces misperceptions about relative resolve. This increases the likelihood of adversaries finding negotiated solutions that they each prefer to a continuation of a costly war.

I suspect there are a number of cases in which leaders who were contemplating war concluded that the economic costs of war would be tolerable, decided on war in part for that reason, came to realize that the economic costs of war (and the public's adverse reaction to those costs) were much greater than they had anticipated, and sought to end war in part for economic reasons. One example comes from the War of the Spanish Armada (1585–1604) between England and Spain. While there is some evidence that Elizabeth and possibly Philip II attempted to assess the likely economic costs of war (Parker 1998, 356),

costs? Are governments willing to permit trade to continue, either because of pressures from key economic groups or because of more general fears that the continuation of trade with the enemy is necessary for economic stability? Or are they driven by strategic concerns or patriotic pressures to prohibit trade? Most important for our purposes, how do these considerations affect political leaders' decisions on war or peace?²² The use of case-study methods to explore the decision-making processes of political leaders during important international crises would help answer some of these questions.

Another question raised by the assumption that war diminishes trade, one that has important implications for how we test that hypothesis, is how quickly dyadic trade resumes after the termination of war. Although some scholars assume that trade will resume immediately after cessation of wars, and take evidence of such resumption as supporting the war-impedes-trade hypothesis (Anderton and Carter 2001), liberal theory offers no clear predictions with regard to trade after the ending of hostilities (Barbieri and Levy 1999, 2001).

It is certainly possible that the cessation of hostilities will lead to a rapid recovery of prewar trade by removing economic and political impediments to free trade. Postwar trade may even exceed prewar levels, if prewar trade was partially depressed by the perceived risks of a coming war. On the other hand, the economic-opportunity-cost argument might suggest that business and political leaders fear not only the loss of trade during war but also a disruption of the trading *relationship* and a slow recovery of trade in the years after the end of war. The vision of a community of shared interests created and reinforced by trade (Deutsch et al. 1957) may be shattered by war and be very slow to recover in its aftermath. The same is true of preferential trading arrangements (Mansfield and Pevehouse 2000) and other institutions that facilitate economic interchange. In addition, trade may be lost to third parties and not easily recovered, depending on both the structure of trade and on economic ideology.²³

A delay in the recovery of trade is also influenced by the political context surrounding the end of formal hostilities. If the underlying conflicts between states are not resolved by war—and they often are not, particularly in wars between enduring rivals—the occurrence of war may only enhance the perceived risks of a subsequent war and keep trade depressed. Economic restraints designed to prevent the economic and military resurgence of the defeated adversary (such as those imposed on Germany after World War I) may further depress trade. Alternatively, the victor in war might impose conditions that facilitate an increase in trade, as illustrated by the United States in its relations with Germany and Japan after World War II. Or, the motivation for war in the first place may be to open up markets, resources, or trade routes. In

strategic considerations clearly dominated economic ones in their decisions for war. But the economic costs of war, and particularly the costs resulting from restrictions on trade between the two countries, turned out to be enormous. The impact on merchants' revenues and on daily life led to substantial and creative efforts to circumvent state restrictions on trade; to widespread war-weariness in both England and Spain; and to public pleas for peace, at least in Spain. By the end of the 1590s Elizabeth and Philip were each "swimming against a strong-running economic tide," and the expectation that peace might bring unimpeded trade was "one of the most persuasive arguments" in favor of ending the war in the late 1590s (Croft 1989, 296-99).²⁵

The idea of war reducing uncertainty about the economic costs and opportunity costs of war raises the interesting question of how leaders learn, or update, their beliefs about those costs. This is quite complex, because these costs are endogenous to state strategies regarding the extent to which trade with the enemy and neutrals should be prohibited and to the course of the war. If political leaders allow trade with the enemy to continue, the economic opportunity costs of war will be minimized, but if they impose embargoes and other economic sanctions, those costs of war will be increased. Those decisions will affect the domestic support for the war effort and for state policies regarding trading with the enemy—support by key economic groups; by organized political opposition; and by the public, which may be motivated both by concerns about the economic costs of war and by the symbolic appeals of patriotism. These changing levels of domestic support in turn affect state policies with regard to trading with the enemy.

This suggests that state policies with respect to trading with the enemy are the product of a series of decisions rather than a one-time decision and that these policies change during the course of the war as a function of changes in the military, economic, and domestic political context. One example comes from the United States in the War of 1812. After blocking several efforts by President Madison to cut off trade with Britain, in December 1813 Congress passed a sweeping embargo aimed at stopping the flow of supplies to British armies in Canada and Europe and to British fleets in American waters, tightening the nonimportation system, preventing the British from fraudulently using neutral flags, and stopping the use of ransom as a cover for illegal trade. Although the embargo reduced trade with the enemy, it also reduced U.S. government revenues, cut into prosperity, and generated a swell of protests, particularly in New England, and Congress was forced to back off from some of the harsher provisions (Hickey 1989; Levy and Barbieri 2001). The analysis of the evolution

of state policies on trading with the enemy, and the reaction to those policies by key economic groups and the public, could be profitably explored through longitudinal case-study analyses.

Third-Party Considerations

Explanations for the trade-promotes-peace hypothesis, whether based on the logic of economic opportunity costs or signaling games, are basically dyadic-level explanations.²⁶ Proponents of this hypothesis usually ignore the systemic context in which trade and financial flows take place, particularly the role of diplomatic alignments and alliances. This is a critical omission, because the logic underlying the economic-opportunity-cost and signaling-game models does not necessarily imply that economic interdependence always promotes peace when third parties are involved. At the dyadic level, economic interdependence between A and B may help to reduce the probability of war between A and B. But if B threatens C, and if A simultaneously has trade ties with B and an interest in maintaining C's security against B, A's economic ties with B may prevent A from attempting to deter B's attack on C or at least raise the threshold of threat before which A attempts to deter B. As a result, economic interdependence between A and B may *increase* the probability of war between B and C (and possibly even draw in A).

Whereas the 1914 case is often seen as a violation of the liberal trade-promotes-peace hypothesis because war occurred despite high levels of interdependence, the logic of economic opportunity costs and signaling combined with the logic of diplomatic alignments helps to explain that outcome.²⁷ Britain's failure to make a formal commitment to join France and Russia if they were attacked by Germany, which many historians argue was a critical factor leading to the German decision for war (Fischer 1967), is explained in part by the extensive economic ties between Britain and Germany prior to the war and by Britain's hesitation to alienate its key trading partner by attempting to restrain that partner's strategic ambitions (Papayoanou 1999).²⁸

In the context of third parties and of alliances in particular, the dyadic economic-opportunity-cost and signaling models are incomplete. The theoretical implications of those models must be further developed by incorporating the interaction effects between economic interdependence and diplomatic alignments and alliances. Until that is done, behavior in nondyadic cases such as World War I cannot be used to confirm or disconfirm dyadic models of economic interdependence and conflict.

Oneal (2001) call for a conceptual synthesis of Kantian and realist theories and incorporate variables from each theoretical tradition in their statistical models. Game-theoretic models of interdependence and conflict have demonstrated the analytic limitations of traditional formulations of the liberal economic-opportunity-cost hypothesis, recast that hypothesis in terms of models of signaling in the context of strategic uncertainty, and in the process built on insights from the literature on the causes of war. The result in each case is a significant increase in the explanatory power of our theories of economic interdependence and international conflict and several useful frameworks for further theoretical and empirical research on these questions.

NOTES

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1. There may be some important differences in the impact of trade flows and financial flows on international conflict, and scholars need to give more attention to the distinctive impact of financial interdependence (Gartzke, Li, and Boehmer 2001). But most of the existing theoretical literature uses "trade" interchangeably with economic interdependence, and for convenience I refer to the "trade-promotes-peace" hypothesis in its broader sense.
2. For an example of the role of the identification and testing of new theoretical implications in the development of the democratic-peace research program see Russett and Starr 2000.
3. For surveys of alternative explanations of the trade-promotes-peace phenomenon see Stein 1993; Doyle 1997; Barbieri and Schneider 1999; Russett and Oneal 2001; and Mansfield and Pollins (this volume).
4. For reviews of the empirical literature and some of the controversies, see McMillan 1997; Barbieri and Schneider 1999; and Mansfield and Pollins (this volume).
5. On the debate over the appropriate statistical techniques see Lake and Gourevitch 2001.
6. Similarly, the Manchester liberals also spoke primarily of the role of economic interdependence in reducing the likelihood of war in international politics (Blainey 1988). For evidence on interdependent dyads having more nonmilitarized disputes, see Gartzke 2002b.
7. Significant exceptions are Mansfield 1994; and Barbieri 1996, 2002. For a quick summary see table 2 in Barbieri and Schneider (1999, 395) and also Mansfield and Pollins (this volume).
8. The few studies that have looked at both war and MIDs find that any (negative) association between economic interdependence and broader measures of conflict breaks down when the dependent variable is operationalized in terms of war (Barbieri 1996).

Conclusion

I have argued that the logic of the opportunity-cost model is essentially monadic in nature and that for this reason it is incapable of explaining the impact of economic interdependence on war or other forms of international conflict, which are dyadic outcomes. The model is also incapable of explaining the impact of economic interdependence on the likelihood of war in a multi-actor system in which the actors in question also have important security ties with other actors. The economic-opportunity-cost model requires a theory of bargaining that explains how trading partners interact in situations involving serious conflicts of interests, and the model must also incorporate the interaction effects between economic interdependence and diplomatic alignments if it is to explain the impact of economic interdependence in multiactor systems involving conflicting security interests.

These limitations, along with other ideas developed in this chapter, suggest that a satisfactory theory of economic interdependence and conflict must incorporate variables traditionally associated with both the liberal and realist traditions in international relations theory. Such a theory must incorporate concerns about the opportunity costs associated with the loss of trade, the influence of multiple domestic actors who have interests in increasing trade and the political power to influence state decisions, the role of governments in discouraging or encouraging trade, and the outcome of state-societal bargaining.²⁹ The theory must also incorporate adversaries' conflicting strategic interests, the security externalities of trade, the impact of economic interdependence on the dynamics of alliance behavior, and the systemic security consequences of the loss of trade during war.

Thus we need to move away from the tendency to frame the debate over interdependence and conflict in terms of the paradigmatic clash between liberalism and realism. While the "paradigm wars" probably contributed to the growing interest in the question of the relationship between economic interdependence and international conflict, it has become more and more clear that neither liberal nor realist theories by themselves can provide a satisfactory analysis of this relationship.

Scholars have increasingly begun to recognize the limitations of traditional liberal and realist paradigms for the analysis of the relationship between economic interdependence and war. Papyoanou (1999), for example, builds on realist theories of balancing behavior, liberal theories of the dyadic and domestic factors linking economic interdependence to peace, and the logic of signaling games to construct a general theory of great power behavior. Russett and

9. This is a version of the old stability-instability paradox at different levels of conflict (Snyder 1965). See also Morrow's discussion of signaling-game models in this volume.
10. Oneal and Russett (1999) also incorporate the effects of international institutions, but their measure of the number of joint memberships in intergovernmental organizations is not sufficiently discriminating to explain the impact of institutions on international conflict. More useful in this regard is Mansfield and Pevehouse's (2000) study of the impact of preferential trading arrangements (PTAs), which include free-trade areas, common markets, customs unions, and other economic-related institutions. Mansfield and Pevehouse (2000) find (for the 1950–85 period) that for states in the same PTA, there is a strong negative relationship between trade flows and militarized disputes, whereas for states that do not belong to the same PTA there is only a weak relationship between trade flows and disputes.
11. Copeland (1996) applies this argument to the period leading up to World War I, which is generally viewed as the classic anomaly in the liberal theory of peace because of the high levels of interdependence before the war (Waltz 1979). Copeland argues that despite high levels of trade, German leaders expected trade to decline and that these expectations led them to resort to force to secure long-term access to markets and raw materials.
12. Oneal and Russett (1997) capture part of this idea when they include a measure of the trend in economic interdependence as well as its level.
13. Another interesting question here concerns the impact of trade on the duration of war (Barbieri and Bremer 1998), which in turn affects the impact of war on trade.
14. This section builds on Levy 2002a.
15. Scholars rarely define hegemony with much precision, and the ambiguities are compounded by the different conceptions of hegemony in the security and political-economy literatures and by the failure of scholars to acknowledge those differences (Levy 2002a). In addition, scholars rarely fully develop the causal linkages from hegemony to peace. The implicit assumption is that the hegemon is a liberal hegemon that is committed to a liberal world economy and also possesses sufficient military power to deter leading challengers and maintain the peace among weaker states. These attributes may have been shared by the United States in the late twentieth century and perhaps by Britain in the mid-nineteenth century, but they are not always congruent. The Dutch, for example, dominated the world economy in the early seventeenth century but lacked the attributes of a military leader who could enforce the peace.
16. Recent empirical studies (Oneal and Russett 1999; Russett and Oneal 2001; Mansfield and Pevehouse 2000) have included a control variable to capture the degree of economic hegemony in the system. In focusing on the impact (presumably negative) of hegemony on conflict, however, these studies neglect the positive impact of hegemony on trade flows and thus fail to deal with the possibility that the observed negative relationship between trade and conflict is spurious. Similarly, well-designed quantitative studies incorporate alliances into the model to capture the effects of alliances on trade and war.
17. An interesting question here is whether different forms of economic interdependence

ence (e.g., trade, capital, or monetary) have different utilities for purposes of sending credible signals.

18. For more detailed discussions of different signaling models of economic interdependence and conflict, see the chapters by Erik Gartzke, James D. Morrow, and Arthur A. Stein in this volume. Morrow suggests a useful test between alternative signaling models, based in part on when signaling should take place (before or after a conflict becomes militarized). Morrow suggests an empirical model based on events data, which provides a more nuanced set of categories than the militarized interstate dispute data set. This approach might be usefully supplemented by using case studies to trace the process of interactions between partners/adversaries over the evolution of the dispute. On recent treatments of the strengths and limitations of case-study methods see George and Bennett (forthcoming), Brady and Collier (forthcoming), and Levy (2002b).
19. Liberals assume that dyadic trade drops significantly with the onset of war between trading partners but usually are not always explicit about *why* this occurs. If trade between adversaries stops primarily because state leaders prohibit it for fear that the adversary will reap a disproportionate share of gains from trade and convert those gains into military power (the realist relative-gains argument), the distinctively "liberal" character of the liberal economic theory of war comes into question. Arguments based on the impact of increased transportation and insurance costs on incentives to trade would be more consistent with fundamental liberal assumptions.
20. Realist theories of economic interdependence and war also predict that trade between adversaries will be significantly reduced during wartime. Thus evidence of substantial trading with the enemy would not help to empirically distinguish between liberal and realist theories of economic interdependence and international conflict. Evidence bearing on alternative explanations for the trading-with-the-enemy phenomenon and the conditions under which it is most likely to occur might give more support to one paradigm than to the other.
21. For evidence of trading with the enemy in recent wars in Bosnia and in Chechnya see Judah 1997 and Lieven 1998, respectively.
22. These questions suggest the need for a theory of the state and of state-societal relations, as Beth Simmons emphasizes (this volume).
23. An example of economic ideology reinforcing the idea that it might be difficult to win back a trading partner that has shifted to other markets and suppliers comes from eighteenth-century Britain and the concept of "channels" of trade. In the words of one contemporary analyst, "When trade is once lost, it will be too late by a mistimed care, easily to retrieve it again, for the currents of trade, like those of waters, make themselves channels, out of which they are afterwards as hard to be diverted as rivers that have worn themselves deep within their banks" (quoted in Pares 1963, 405).
24. Selection effects associated with the onset of war between interdependent dyads should affect the conduct and termination of war. Given the economic opportunity costs of war, only the most highly resolved states will be willing to fight (Gartzke 2002a). As a result, we would expect wars between economically interdependent dyads to be

more intense or longer than wars between less interdependent dyads. A signaling model would predict that greater interdependence leads to shorter wars.

25. The war did not end until 1604, which raises questions regarding the impact of economic factors relative to other variables in the termination of war. In the case of England, economic arguments for peace were validated by the boom in Anglo-Spanish trade after the end of the war in 1604, which became the "single most important feature" of England's commercial expansion in the early seventeenth century (Croft 1989, 297).

26. An important exception is Dorussen (1999), who constructs a multiplier model and finds that the pacifying effects of trade diminish rapidly with a larger number of actors.

27. Copeland (1996) argues that key actors believed that economic interdependence would decline in the future, reducing the economic-opportunity costs of war.

28. The linkages between security and political economy are further reinforced by the fact that variations in the strength of the Franco-Russian alliance against Germany in the decade leading up to World War I (a loosening in alliance ties after 1905 and an increase after 1911) was more highly correlated with the variation in economic ties between each of those states and Germany than with changes in the balance of power and perceptions of the German threat (Papayoanou 1999, chap. 4). In strategic terms, the weakening of Russia after its 1904 defeat by Japan should have contributed to a further tightening of the Franco-Russian alliance.

29. Some domestic groups may have incentives to restrict trade.

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