Game Theory, Political Economy, and the Evolving Study of War and Peace
BRUCE BUENO DE MESQUITA  New York University and Hoover Institution, Stanford University

James Russell and Quincy Wright suggested in the Review in 1933 that the danger of conflict could be diminished by looking within states to discern what contributes to the risk of war. Revolutions in game theory technology and political economy modeling are helping to advance those goals. The combination of non-cooperative game theory as an analytic tool and the assumptions of political economy models about leaders’ domestic interests and incentives offer a different explanation of international relations from that suggested by realist theories and other state-centric viewpoints. Together with more macro-level theorizing we gain insights into what makes some polities more prone to international conflict than others. By adding the micro-level, game theoretic investigation of domestic factors to the analytic repertoire we have now supplemented the aspects of received wisdom that are consistent with the record of history with explanations for puzzling facts about conflict that no longer seem anomalous.

Students of international relations are concerned with the description, prediction, and control of the external behavior of states, particularly of their more violent types of behavior such as intervention, hostilities, and war. It is clear that mere description of a diplomatic or military event has little meaning by itself and that such an event can neither be predicted nor controlled unless account is taken of the circumstances which preceded it within each of the states involved.

—James T. Russell and Quincy Wright, “National Attitudes on the Far Eastern Controversy” (1933, 555)

So opened one of the Review’s first explicitly analytic studies of international relations, a study concerned to predict and influence the risk of international conflict. Russell and Wright articulated the mission of what they described as the scientific study of international affairs, offering data-based evidence to demonstrate the feasibility of that undertaking. In this essay, I discuss why, after an extended exploration of relations between states and international systems, studies of international conflict have turned toward Russell and Wright’s proposal. Using developments in noncooperative game theory and political economy modeling, studies of war and peace increasingly look within states at how domestic interests and institutions help shape international affairs. This evolution seems like a natural progression from macro-level accounts that linked system structure to conflict outcomes to the specification of their micro-foundations, exposing new insights and contextualizing some earlier ones in unanticipated ways.

Russell and Wright’s (1933) view lay dormant for most students of international conflict until well after the empirical demonstration by Babst (1964) that democracies rarely, if ever, fight wars with each other. That insight, originally articulated by Immanuel Kant in 1795, slowly percolated through the security studies community, eventually leading to a proliferation of theories and empirical studies that look within states to sort out why different types of regimes behave differently when it comes to decisions about war and peace. No other aspect of conflict studies since the advent of nuclear deterrence theory has had as large an impact on American foreign policy as the theorizing and empirical assessments of the democratic peace. Presidents Bill Clinton and George W. Bush embraced the central insight from this literature, with Bush making the promotion of democracy a theme of his foreign policy. Therefore, understanding the shift in research strategies that led to the insights of the democratic peace is important from both a theoretical and a practical standpoint.

When Russell and Wright (1933) wrote, Wilsonian idealism, the then dominant approach to international affairs, had begun to face intellectual and policy challenges from realists. During the decade of the 1930s, realists observed that the Russian Revolution, naval arms races both in Europe and between European powers and Japan, and regional conflicts seemed incompatible with idealist expectations. They noted that deliberation through the League of Nations was insufficient to sustain peace. By the end of World War II, structural realist approaches largely supplanted Wilsonian idealism. Thus, even as the United Nations replaced the League as a deliberative peace-keeping body, states began organizing into regional alliances for mutual defense and hard-nosed realist tactics replaced idealist expectations in the nascent cold war. Today, realist ideas, in their turn, are being modified as they face practical and theoretical challenges. These challenges reflect (1) the force of history that has uncovered the insufficiency of realist theories to anticipate or explain the implosion of the Soviet Union and the unraveling of its East European empire (Gaddis 1992); (2) the discovery that several of the propositions of structural realist theories contain internal inconsistencies when assessed from the perspective of their micro-foundations (Milner 1998;
Powell 1994, 1999); and (3) the growing evidence from political economy studies that the causes of and solutions to international conflict can be better understood by looking within states (Bueno de Mesquita et al. 2003; Fearon 1994; Schultz 2001; Werner 1996).

Political economy was turned to as one means to try to overcome the limitations of realist approaches. It is not, of course, the only such alternative. Numerous other theoretical perspectives were also stimulated by the perception that realism faced limits on its ability to explain remaining puzzles concerning international conflict. Neo-liberalism, gender studies, constructivism, and computational models are among the alternative and sometimes complementary approaches explored as means to solve conundrums regarding war and peace. Like some of the alternative approaches, political economy models—the focus here—enjoy a history of success in other aspects of social inquiry. These include elucidating the democratic peace; clarifying issues in American and comparative politics, at least since the origins of the “Rochester” school in the 1960s; and providing micro-foundations for research in economics and politics about growth, the resource curse, trade, and banking policy. Political economy models, like some other modeling, also benefited from improvements in game theory that facilitated the construction of more sophisticated models than was possible prior to the late 1970s, as well as from the stimulus provided by the recognition that domestic factors contributed significantly to the demise of the USSR and the end of the cold war.

The political economy perspective treats leaders, not states, as the object of study. In doing so, it argues that relations among nations are produced by the normal pulls and tugs of domestic affairs, taking into account the domestic and international constraints under which leaders in contending states operate. That this is a significant conceptual departure from state-centric, realist accounts is exemplified by the inability of such languages as English, French, Chinese, Urdu, and perhaps all others to describe international relations without invoking the nation as the key unit of analysis.

Political economy models and empirical assessments evaluate policy choices as parts of equilibrium behavior induced by domestic institutions. They conceive of the choice of foreign policy interactions as incentive-compatible with the motives of national leaders. These leaders’ motivations may not be—and often are not—compatible with their nation’s interest. Domestic institutional structures (such as the competitiveness of leadership selection or the extent of government accountability and transparency) help shape the interplay of leaders, elites, and ordinary citizens, resulting in policies that create the contours of the international environment—contours that in realist approaches are taken as given rather than as factors to be explained.

By drawing attention to leaders, recent scholarship illuminates empirical regularities not previously discerned. Gaubatz (1991), Fordham (1998a, 1998b), and Smith (2004), for instance, show that war-timing by democratic leaders depends on the election cycle, electoral rules, and domestic political circumstances. Fearon (1994) and Smith (1996) suggest that democratic leaders are more constrained than autocrats to carry out the threats they make because of domestic political audience costs. Schultz (1998, 2001) shows that the existence of a domestic political opposition limits democratic foreign policy adventurism in ways not experienced by non-democrats. Bueno de Mesquita et al. (1999, 2003) develop a “selectorate” theory of politics, showing how variations in the size of a polity’s political institutions, that is, its selectorate and its winning coalition, help explain the empirical regularities that make up the democratic peace.1 They also suggest an explanation for the preparedness of democracies to fight wars of imperial and colonial expansion and the preparedness of democracies to overthrow foreign rivals. Bueno de Mesquita and Downs (2006) build on the selectorate account to explain the willingness of democratic military interveners to restrict the spread of democracy even when these interveners declare that they are motivated to promote democratic reform elsewhere.

Each of these studies shares a conviction that policy decisions are strategic, taking into account expected responses by foreign and domestic adversaries and supporters, and so use noncooperative game theory as their foundational analytic structure. Many then go on to use statistical and case study methods to probe the generality and the verisimilitude of their proposed explanations of international conflict. These studies also suggest critical empirical tests to help sort out the explanatory power of alternative perspectives.

A game-theoretic focus on strategic interaction that assumes that states are rational unitary actors shows that war, being costly, is always ex post inefficient (Fearon 1995). Political economy, game-theoretic models agree but add that war, although ex post inefficient in terms of citizen welfare, can be beneficial for leaders (Chiozza and Goemans 2004). Just consider Margaret Thatcher’s poor prospects of reelection as Britain’s prime minister before the Falklands/Malvinas War. Her popularity soared following the UK’s victory, which may have been instrumental to her reelection in 1983. We can only conjecture on what the electoral consequences would have been for Thatcher had she—cost-effectively—bought off Argentina’s generals and the Falklands’ shepherds rather than fight to defend Britain’s territorial claims.

The political economy approach’s micro-foundations separate the interests of leaders from those of the broader populace, or the national interest. This may be its most significant evolutionary step beyond realism’s focus on the state as a unitary entity. As many have noted, the policies that leaders adopt to enhance their hold on power often make their subjects worse off (Acemoglu and Robinson 2001; Bueno de Mesquita et al. 2003; McGuire and Olson 1996;

---

1 The selectorate consists of those who have at least a nominal say in choosing leaders and are eligible to become members of a winning coalition. The winning coalition is the subset of the selectorate without whose support an incumbent cannot be sustained in office.
Wintrobe 1990). Consider, for instance, the personally beneficial and nationally debilitating actions of North Korea’s Kim Jong-il, Zimbabwe’s Robert Mugabe, Iraq’s Saddam Hussein, or the Philippine leader Ferdinand Marcos. Each managed to retain his position of national leadership for many more years—often decades longer—than democratic counterparts can reasonably aspire to, and yet each contributed to the impoverishment of his nation’s ordinary citizens even as he and his inner circle of cronies ensured their own wealth. In such self-aggrandizing circumstances it is difficult to square their international interactions with a state-centric approach’s attentiveness to the “national interest” (Bueno de Mesquita et al. 2003; Chiozza and Goemans 2003, 2004; Morrow et al. 2006). Yet such policies are understandable when one expands upon earlier macro-level theories by adding within-state micro-foundations.

When domestic institutions constrain a leader to require a broad base of support—as is true in most democracies—then private rewards are an inefficient way to retain power (Bueno de Mesquita et al. 2003; de Toqueville 2000; Lake and Baum 2001). Democratic leaders would have to spread these rewards across so many people that each would receive too little for the benefits to influence their loyalty to the incumbent. In such a situation, it is more efficient for leaders to rely on public goods as their best means to retain office. When political institutions compel a leader to depend on many supporters, so that a bundle of public goods is the reward for retaining the incumbent, the institutions of governance induce weak loyalty to the incumbent. After all, everyone benefits from public goods, whether they support the incumbent or not. Conversely, when a leader needs backing from only a few people to stay in power, the few are expected to be loyal both because they are well rewarded with private benefits and because they face a high risk of losing those privileges if a challenger topples the incumbent regime. Thus it is that resource allocations—including provisions for national defense—are induced by domestic political institutions rather than by international compulsions, culture, or the luck of the draw in leaders.

REALIST THINKING: ITS ORIGINS AND CURRENT CHALLENGES

Realism evolved from the study of post-Westphalian Europe and in reaction to inconsistency between the optimistic view advanced by Wilsonian idealists and reality after World War I. The post-Westphalian environment was typified by strong, if not absolute, monarchy. This “absolutist” outlook seemed to mesh well during the 1930s and 1940s with the totalitarianism of Hitler’s and Stalin’s regimes, a totalitarianism that led those seeking an alternative explanation for international affairs to that offered by idealism to develop realist theories about power and national security. In doing so, they drew equivalence between seemingly absolutist leaders and “the state.” This equivalence, however, masked institutional differences across monarchies, juntas, rigged-election autocracies, and various forms of democracy. Central among these differences are (1) the extent to which leaders are accountable to a small inner circle or a broad constituency and (2) the extent to which leaders insulate themselves from accountability to their core constituency (whether it be the aristocracy, members of the military or civil service, or a broad electorate) with the pool of substitutes available to replace disloyal backers.

Contemporary international politics is characterized by interactions among autocrats, between autocrats and democrats, or between pairs of democrats. The difference in the extent to which leaders are accountable to the “national” interest as a result of domestic political arrangements means that war and peace interactions vary more today in their consistency with realist thought than they did in the past. To get a sense of this, let us briefly examine the insights uncovered by game theoretic analyses of balance-of-power hypotheses to see how what follows logically from realist theories comports with what we observe in the world.

THE BALANCE OF POWER

In contrast to political economy’s attentiveness to domestic politics, realist theorizing emphasizes the idea that uncertainty about the distribution of power and the reliability of commitments between states shapes international politics (Morgenthau 1978; Waltz 1979). For realism, the primary subject matter is efforts by states to maximize their power or security as they pursue national survival. For those concerned with how domestic conditions help give rise to international policies, the primary subject matter is the impact of interstate relations on the welfare of leaders and on the constituents whose support maintains them in office.

A common and venerable idea holds that a balance of power promotes peace and an imbalance, war (Morgenthau 1978; Thucydides 1959; Waltz 1979). Ideas about the balance of power and conflict permeate the thinking of such influential American statesmen and women as Madeline Albright, Henry Kissinger, Colin Powell, and Condoleezza Rice. Given their long and distinguished pedigree, balance-of-power hypotheses should not be dismissed lightly, but we should be open to the possibility that they give too grainy a view of conflict decision making. Neither game theoretic nor empirical analyses that are faithful to informal statements of realism support a clear, straightforward, or monotonic relationship between the distribution of power and the likelihood, intensity, or termination of international conflict (Kim and Morrow 1992; Niou and Ordeshook 1990; Powell 1993, 1994, 1999; Vasquez 1997, 2000), suggesting that we need a more nuanced view than is provided by system-level theorizing alone.

Niou, Ordeshook, and Rose (1989) and Niou and Ordeshook (1990), operating within a state-centric, game-theoretic perspective, show that the logic of neorealist theory, when made fully explicit, does not point to any distribution of power as being unique in promoting international stability. They demonstrate that balance-of-power arguments about the conditions under which states survive or cease existing lead to
empirical generalizations that inadequately explain the record of history. For instance, they show that under neorealist assumptions any state that can turn a losing coalition into a winning coalition (i.e., an essential state) is expected to survive, whereas no state lacking this ability can survive under realist conditions. Yet in 1992 the Soviet Union—an essential state—ceased to exist through peaceful change and in 1918 Austria-Hungary—also an essential state—ceased to exist as a result of defeat in war. Conversely, the United States, a sleepy backwater in 1787, flourished and became an essential actor on the international stage.

Powell (1993, 1999) uses noncooperative game theory and assumes that states are rational unitary actors to show that such central tenets of neo-realist thought as that anarchy is a distinctive characteristic of international politics or that relative gains are critical to states because they always face the threat of war cannot be sustained logically from the theory’s assumptions. Similarly, Kim and Morrow (1992) and Powell (1996, 1999) demonstrate game theoretically, while assuming that states are rational unitary actors, that neither power balance nor power preponderance between rivals is either necessary or sufficient for war. Kim and Morrow also provide extensive statistical tests that support their formally derived hypotheses. Bueno de Mesquita and Lalman (1992) show that within neorealist assumptions a probability of victory greater than 0.5 is necessary but not sufficient for war, but then report that the evidence across two centuries of history contradicts this claim.

Wittman (1979) shows that, because the price at which rivals will settle a dispute changes as battlefield performance changes, establishing a military power advantage does not inherently facilitate conflict resolution as long as demands depend on changing expectations regarding the probability of victory or defeat. As the prospects of victory improve, the conditions under which the prospective victor will settle escalate to meet updated expectations. Indeed, as Downs and Rocke (1994) highlight, it is possible that a high probability of defeat may even embolden political leaders to take risks in war that would be unwarranted by a state-centric, balance-of-power perspective. These and other findings from noncooperative, state-centric models that faithfully attempt to replicate the claims of balance-of-power theorists represent important logical and empirical challenges that are stimulating revisions of contemporary realist theories.

THE POLITICAL ECONOMY OF THE DEMOCRATIC PEACE

Although realism’s predictions are challenged by game-theoretic analyses within the state-centric context, so too is its axiomatic challenge that what happens within states is of limited significance for international politics. This challenge arises from game-theoretic studies that rely on political economy assumptions, especially studies regarding the democratic peace and international efforts at nation-building. In both areas, the political-economy perspective, like realism in other arenas, offers not only analytic insights but also practical, accessible policy guidance to decision makers (e.g., Bueno de Mesquita and Downs, 2005; Drezner 2004; Easterly 2001, 2002). While explaining the democratic peace’s empirical regularities, it also offers a cautionary tale for those who infer that because pairs of democracies tend to interact peacefully, therefore democracies have incentives to promote global democratic reform.

The political economy perspective, with its emphasis on domestic political interests and incentives, uncovers the logic that differentiates the foreign policies of democratic and nondemocratic leaders. Defeat in war, for instance, is costly for society and therefore for accountable democratic leaders more so than for nonaccountable autocrats, monarchs, or junta leaders (Chiozza and Goemans 2003, 2004; Schultz 1998, 2001; Werner 1996). Given the political costs of defeat, democrats engage in wars only when they believe at the outset that their chance of victory is high or when all efforts at negotiation (as in the period 1938–1939) fail (Bueno de Mesquita et al. 1999, 2004; Reiter and Stam 1998, 2002). Autocrats, in contrast, are not primarily retained or deposed by their domestic supporters because of their policy successes. Consequently, defeat in war is often less costly politically for autocrats than it is for democrats (Chiozza and Goemans 2003, 2004), making them more willing to fight with relatively poorer prospects of victory than are democrats.

Because democrats are selective about the wars they fight, they generally win the wars they initiate. Over the past two centuries democracies won about 93% of the wars they initiated. Autocrats won only about 60% of their war initiations (Reiter and Stam 2002), a modest premium over a random draw, probably due to a first-strike advantage. If two democrats are at loggerheads, war is unlikely. Each democratic leader has similar, institutionally induced incentives: each tries hard to win if war ensues; each needs policy success to be retained in office; each must believe at the outset that the probability of winning the war is fairly high. The likelihood is practically nil that two rival democrats both believe that their prospects of victory are really high. When democrats do not think they are nearly certain of victory, they opt for negotiations over fighting (Fordham 1998b; Morrow 1991; Nincic 1997). Thus, political economy models conclude that leaders of two rival democracies are unlikely to fight rather than negotiate (Dixon 1994; Downs and Rocke 1994). These models also contend that autocrats do not face the same constraints. They are prepared to fight even when the chances of victory are modest. Apparently they are more likely to be deposed if they spend resources on the war that their cronies had expected to receive as private rewards than if they distribute those resources to their supporters at the cost of losing the war, especially if the victor is not a democrat (Bueno de Mesquita et al. 1999, 2004; Chiozza and Goemans 2004; Morrow et al. 2006).

In the account of the democratic peace provided by political economy models, democratic leaders are not more civic-minded (Niskanen 1997); their actions are
not shaped by superior social norms or values (Maoz and Russett 1993); and they are not inherently better at fighting wars than other types of political leaders (Morgan and Campbell 1991). Hence, the political economy approach allows us to explain not only the apparently jointly pacific behavior of democracies but also such less attractive characteristics as the preparedness of democracies to engage in wars of colonial or imperial expansion and even the willingness of a powerful democracy to force a much weaker democracy to capitulate to its demands rather than pay the price of fighting back. State-centric approaches and many normative or idealist approaches to international relations do not explain these patterns of behavior.

**CONCLUSIONS**

The combination of noncooperative game theory as a tool for analysis and the assumptions of political economy models about leaders’ domestic political interests and institutional incentives have offered a different explanation of international relations from that suggested by conventional informal models of realism and other state-centric viewpoints. Together with more macro-level theorizing we gain valuable insights into what makes some polities more prone to international conflict than others (Huth 1996; Vasquez 1993, 1995). By adding the micro-level, game-theoretic investigation of domestic factors to the analytic repertoire in studies of international conflict we have now supplemented the record of history with explanations for puzzling aspects of received wisdom that are consistent with the theory of international relations from that suggested by conventional informal models of realism and other state-centric viewpoints. Together with more macro-level theorizing we gain valuable insights into what makes some polities more prone to international conflict than others (Huth 1996; Vasquez 1993, 1995). By adding the micro-level, game-theoretic investigation of domestic factors to the analytic repertoire in studies of international conflict we have now supplemented the aspects of received wisdom that are consistent with the record of history with explanations for puzzling facts that no longer seem anomalous. In doing so, we may take solace in the knowledge that the revolutions in game theory and political economy are helping to advance the goals delineated by Russell and Wright (1933) in the pages of the Review nearly three-quarters of a century ago.

**REFERENCES**


