

THE SLOW ROASTING OF SACRED COWS

J. David Singer and the Democratic Peace

Errol A. Henderson

As one of the architects of the behavioral revolution, J. David Singer argued forcefully yet skillfully for a more positivistic orientation in world politics. Dismayed by the poor record of scientific advancement in the field, he proffered not only a spirited defense of the use of scientific method in world politics (1969b) but also provided the strategy and framework for the type of experimentation that should be undertaken (1977). Singer not only sought to provide the basis for scientific cumulation in world politics, but he was (and is) convinced that findings derived from scientific analyses should occupy pride of place in the field, and conclusions drawn from them should be relied upon to inform foreign policy. Probably the most robust nontrivial, nontautological finding in world politics to emerge from the research of behavioralists is that democracies rarely if ever fight each other. Moreover, in a manner consistent with Singer's effort to have findings garnered from rigorous systematic analyses of world politics guide foreign policy, the democratic peace thesis has become the centerpiece of the U.S. post-Cold War strategy of "democratic enlargement," which is aimed at expanding the community of democratic states. President Clinton (1996, 9) made it clear that such a strategy would help engender peace because democracies are "far less likely to wage war on one another." President George Bush, while giving less credence to the Wilsonian idealism that undergirds Clinton's assessment, nonetheless has colored his self-styled "war on terrorism" as an attempt, in part, to assist more democratic elements to assume control of states such as Afghanistan and Iraq, with the explicit assumption that once transformed these states will be more peaceful and less likely to support forces aligned against Western

states.¹ Nevertheless, Singer remains one of the most consistent critics of the democratic peace thesis, even as the research in support of it—a fair share of it conducted by his former colleagues and students (e.g., Russett 1993 and several of his coauthored works; Bueno de Mesquita in several coauthored works; Ray 1995; Maoz 1997a; Henderson 1998)—continues to pile up.²

More than any other author, Singer, along with Melvin Small, provided both the major empirical and theoretical justifications for the democratic peace thesis in world politics. To be sure, scholars have long been concerned about the relationship between a state's regime type and its probability of war involvement, with systematic analyses of the relationship between democracy and war evident in Quincy Wright's research published during World War II and Dean Babst's empirical analysis of the absence of war between democracies first published in two rather obscure journals in 1964 and 1972 (*The Wisconsin Sociologist* and *Industrial Research*, respectively). The 1976 Small and Singer study, which sought to refute key aspects of Babst's (1972) findings, introduced his research to mainstream political scientists. In their study, Small and Singer found—as Wright's (1942, 841) research had shown—that democracies were no more peaceful than nondemocracies, and they noted almost in passing that democracies rarely fight each other, thereby substantiating Babst's (1972) findings. Nevertheless, they did not seem too impressed by the latter finding, reasoning that the relative absence of such wars in the 1816–1965 period was probably due to the rarity of democratic government and the lack of contiguity among democratic states. Since states that are not contiguous are, in general, less likely to fight each other, and democracies were rarely contiguous, they conjectured that infrequent contiguity more than regime type accounted for the relative absence of war between democracies.

Subsequent studies using multivariate analyses, and thus providing controls for a host of factors including contiguity, have refuted Small and Singer's argument that contiguity vitiates the democratic peace. In fact, scholars have built a veritable research program around what Small and Singer regarded as a largely spurious inference drawn from the correlation between joint democracy and peace. Democratic peace advocates have proffered two major theoretical arguments to account for the democratic peace, which, in turn, emphasize the conflict-dampening role of structural/institutional or cultural/normative factors in preventing war between democracies (see discussion in Russett 1993; Ray 1995; Russett and Oneal 2001).³ Even more interesting—and rarely noted—is the fact that Small and Singer anticipated these theoretical arguments in the first paragraph of their study, where they ponder “whether the al-

Slow Roasting of Sacred Cows

legedly pacific nature of [democracies] is a result of bureaucratic sluggishness or of a more fundamental humaneness on the part of the masses (as opposed to the moral insensitivity of dictatorial leaders)” (1976, 50). Similarly, the structural/institutional approach posits that institutional constraints (evocative of their reference to “bureaucratic sluggishness”) on the decision-making choices of democratic leaders make it difficult for them to opt for the use of force in their foreign policies, which acts as a brake on conflict with other democracies; while the cultural/normative perspective assumes that democracies are less disposed to fight each other due to the impact of their shared norms that proscribe the use of violence between them (evocative of their reference to “fundamental humaneness”).

How, then, does one reconcile Singer’s skepticism regarding the empirical and theoretical arguments in support of the democratic peace, which he himself has largely supplied? Well, Singer’s skepticism is rooted in several factors. First, in what his students recognize as Singer’s First Law, he is hesitant about monocausal “theories” of war and peace that assign to a single variable, such as democracy, a chief explanatory role in what are often complex relationships such as the processes leading to international war. Second, Singer has not been very keen on the explanatory ability of variables that focus on state-level attributes, such as democracy, in accounting for international war, sensing, as he does, that arguments with respect to these types of variables will be weighed less by evidence and more by the propaganda of elites who reside in—or are otherwise positively disposed to—a particular political, social, or cultural arrangement. Therefore, he has been more inclined to examine the relationships and interactions between and among entities across various levels of aggregation. For example, in 1971, prior to the burgeoning democratic peace literature, Singer took a sanguine view of research orientations that focused on the “similarities and differences between and among entities in order to see whether they help account for the war-proneness of particular pairs” (63). He also stated that “we may profitably ask to what extent we can predict to the frequency and magnitude of war for a given nation if we know something about its links and bonds to other nations, or to the war-proneness of a pair of nations on the basis of the interdependence and connections between them” (64). In these statements Singer was pressing for, among other things, analyses of dyadic relationships such as those that dominate democratic peace research. Further, they are consistent with a focus on both the conflict-dampening impact of regime similarity and trade interdependence, which would come to dominate analyses of the democratic peace (discussed later). But Singer was not as positively disposed to studies that

The Scourge of **WAR**

sought to account for war by analyzing the “structural” attributes of the state—“the institutions and configurations normally associated with the labels ‘political, economic, and sociological’” (62)—a category in which regime type falls. He assumed that studies of this type could serve more as brush-clearing exercises: “helping to clear away the debris of political folklore, they will eventually fit into analyses which look at other classes of independent and intervening variables at the same time” (63).

Nearly thirty years later, and now focusing specifically on the role of democracy in the war-proneness of individual states, he does not equivocate: “Regime type turns out to be unimportant [as a correlate of war], with autocratic and democratic regimes showing an equal propensity to enter into or to initiate war over the past century and three-quarters” (1999, 467). As for the role of democracy in the war-proneness of pairs of states, Singer acknowledges that regime type “turns out to be a fairly powerful factor at the dyadic level, and the data-based literature is massive and growing” (467). But, at this point, he stubbornly returns to the rationale he offered in 1976: “There are quite a few plausible explanations for this dramatic correlation, but it may simply be a spatial-temporal artifact in the sense that up to 1945 there were very few democratic regimes in the interstate system, and few of them were geographically contiguous. And since World War II, most of the world’s democracies were bound together in a U.S.-dominated collective defense and collective security coalition” (467).

In a larger sense, Singer’s skepticism provides a deeper insight into his philosophy of science. It clearly belies the notion that behavioralists are barefooted empiricists exalting only what they can quantify. Those types of charges were never applicable to his research in the first place (see Singer 1969b), and his skepticism further reminds us that our research should not be guided by a simple search for correlations but by a search for explanations. In *The Scientific Study of Politics: An Approach to Foreign Policy Analysis*, Singer (1972b) clearly lays out what he views as the primary path for the development of a scientific study of world politics that could provide cumulation in the field and also serve as a basis for a more informed foreign policy. For him, these objectives require the accumulation of several types of knowledge: existential, correlational, and explanatory. *Existential* knowledge refers not only to facts and data, but to “empirical regularities or patterns,” which, for Singer, “constitute the bedrock of knowledge” without which “we cannot make predictions or explanations with any degree of confidence (5). *Correlational* knowledge provides information on the degree of association between two or more factors—such as two or more observations drawn from our existential knowledge—and “to the extent that we can predict

Slow Roasting of Sacred Cows

to the future by observation and analysis of the past . . . correlations provide the basis for successful prediction” (6). Finally, *explanatory* knowledge is causal knowledge, which addresses “the extent to which a given class of outcomes or events was ‘caused’ by a given sequence of prior conditions and events” (1).

He argues that all three types of knowledge are important in predicting foreign policy behavior; however, he maintains that while existential and correlational knowledge are important, they can “carry the decision makers only so far.” He makes it clear that “the more explanatory knowledge that is available—especially in the form of well-tested models and theories—the better one can predict in complex or unfamiliar situations. That is, in the absence of good correlational knowledge, one many nevertheless deduce such principles from a good theory, and use them as the basis for prediction” (2). He continues: “Without denying, then, the tremendous value of correlational and predictive knowledge in the conduct of foreign affairs, we must nevertheless recognize that causal and explanatory knowledge is ultimately essential” (6). He reemphasizes these assertions in his later work in which he states that “despite the folklore to the contrary, *prediction* is neither the major purpose nor acid test of a theory; the goal of all basic scientific research is *explanation*” (1979d, 52). He remains convinced that “a strong explanatory theory will—because it is better able to account for and explain the effects of changing conditions—provide a more solid base for predicting than one that rests on observed covariations and postdictions alone” (52).

For him, a theory consists of “a body of propositions that: offer a credible explanation of the outcome phenomena, are logically compatible with one another, are essentially consistent with other relevant knowledge, are stated in testable language, and—most of which have been successfully tested” (71). He insists that “using these criteria, it is clear that social scientists have produced, so far, precious few theories, despite audacious or careless claims to the contrary” (71). While Singer is doubtful that theories worthy of the name exist in social science, he is even less sanguine about theories in world politics: there aren’t any. For Singer, while existential knowledge was expanding in world politics, the breadth of correlational knowledge was very poor, offering little empirical bedrock upon which to rest explanatory models that could, in turn, provide the building blocks of scientific theory. In the absence of explanatory knowledge, what often passed as theories were often little more than informed guesses, speculations, hunches, or, at best, hypotheses, waiting to have their main premises substantiated by rigorous systematic analysis. But even with support provided by correlational

evidence, the explanation of the relationships invoked by the theories in world politics such as “balance of power” or “power transition” left Singer unconvinced. For him, correlational knowledge could provide the basis for our explanation of allegedly causal processes, but it could not substitute for explanatory knowledge: what was needed was sound theory. Finding the theoretical arguments of democratic peace advocates as unconvincing today as he did when he first suggested them in 1976, he is skeptical of the correlational evidence used to support democratic peace claims. Basically, Singer is compelled by the absence of what he perceives as sound theoretical support for the democratic peace thesis to reject the explanatory claims that rely mainly on the statistical evidence. Therefore his skepticism with regard to the democratic peace findings is consistent with his larger epistemological orientation.

To be sure, Singer is not alone in his skepticism regarding the democratic peace; however, although skeptics continue to challenge the theoretical basis of the democratic peace (e.g., Layne 1994; Oren 1995; Gowa 1999), neither they nor Singer have been able to refute the statistical evidence that democracies rarely if ever fight each other (e.g., Maoz and Abdolali 1989; Ray 1995; Maoz 1997a; Oneal and Ray 1997; Russett and Oneal 2001)—remember that even Singer’s own research supports it. It is the meticulous statistical evidence in support of the democratic peace that has been most persuasive. Nevertheless, Singer appears convinced that other factors will vitiate the democratic peace relationship if and when more fully specified models are introduced into research designs that test for the phenomenon. In this chapter, I show how Singer’s skepticism is borne out: by slightly modifying the prominent research design among democratic peace advocates and paying particular attention to Singer’s concern with similarity and interdependence as factors contributing to our understanding of international conflict, even utilizing a widely used data set among democratic peace advocates, one can demonstrate that joint democracy is not significantly associated with the probability of international conflict. In this way, I provide the empirical substantiation for Singer’s theoretical agnosticism.

The chapter proceeds in several sections. First, I discuss the basic research design used in important studies of the democratic peace. Second, using this research design, I replicate one of the most important studies of the democratic peace. Third, using the data from that study, I slightly modify the research design by introducing an additional control variable—one of the relational variables to which Singer alluded in his earlier research—into the model and, in so doing, show that joint democracy is not significantly associated with the absence of inter-

Slow Roasting of Sacred Cows

national disputes for pairs of states. Fourth, I briefly discuss the implications of the findings for future research aimed at explaining war along the lines suggested by Singer and his colleagues.

THE EVOLVING DEMOCRATIC PEACE RESEARCH DESIGN

The empirical support for the democratic peace thesis is voluminous; however, ONeal and Russett's (1997) "The Classical Liberals Were Right: Democracy, Interdependence, and Conflict, 1950–1985" has been rightly viewed as a definitive empirical substantiation of the democratic peace thesis using multivariate analyses controlling for alliance membership, geographic contiguity, economic development, and trade interdependence. Focusing on the post–World War II era, which is more amenable to statistical analyses of the democratic peace given the greater number of democratic states as compared to the pre–World War II period, they established the significance of the conflict-dampening impact of joint democracy (coded as a continuous variable) when controlling for trade interdependence. No other study up to that time had been successful in accomplishing this. Further, their research design has become one of the most widely utilized, cited, and respected approaches in the analysis of the democratic peace thesis. The significance of this study was recognized immediately after its publication, and several authors replicated its findings.

The research design utilized in studies of the democratic peace such as ONeal and Russett's draws on a "weak link" assumption, which presumably allows one to draw inferences about the relative war-proneness of dyads by focusing on the regime score of the least democratic state in the dyad. This approach derives from Dixon's (1993) assertion that by focusing on the weakest link in the dyad one can better grasp the motive forces compelling the states to conflict (also see Bueno de Mesquita and Lalman 1992). These theorists tend to agree that "the likelihood of conflict [is] primarily a function of the degree of political constraint experienced by the less constrained state in each dyad" (Oneal and Russett 1997, 274). To better appreciate the importance of the weak-link specification and its centrality to democratic peace research, a discussion of the evolution of scholarly reliance on this approach is warranted.

THE WEAK-LINK THESIS AND THE SEARCH FOR A CONTINUOUS MEASURE OF JOINT DEMOCRACY

The main theoretical arguments on the democratic peace suggest that the greater the extent of shared democracy between two states,⁴ the

greater the ability of shared democratic norms and/or institutions to prevent conflict (see Rummel 1983; Russett 1993).⁵ This is an argument with respect to the magnitude of democracy and not simply its presence or absence; therefore, an appropriate operational measure of joint democracy should be scaled as a continuous rather than a discrete (i.e., dichotomous or trichotomous) variable (Henderson 1999). But many early studies of the democratic peace utilized noncontinuous—mainly dichotomous—measures of democracy (even my own, Henderson 1998). A dichotomous or discrete measure of joint democracy implies that the conflict-dampening impact of joint democracy is only evident above some threshold value. But such thresholds have been largely atheoretical and arbitrary, leading Oneal et al. (1996, 24) to remark that “our confidence in a democratic peace would have to be tempered . . . if the pacific influence of democracy were strong only above a high threshold.” Even with more widely accepted measures of regime type garnered from the Polity datasets, analysts continued to caution against the use of dichotomous measures in evaluating the democratic peace because “any threshold used to distinguish democratic from non-democratic states in the Polity data is bound to be largely atheoretical,” since “all but the highest and lowest values on the Polity democracy-autocracy scale can be achieved by different combinations on the constituent dimensions making the resulting sums of uncertain meaning” (Oneal and Ray 1997, 771). Nevertheless, it soon became apparent that variables derived from the Polity measures that had been used in important studies of the democratic peace had some unattractive characteristics.

For example, one of the most widely utilized continuous measures of joint democracy was Maoz and Russett’s (1993) *JOINREG*, which they used in their influential *American Political Science Review* article, which presumably demonstrated the greater salience of normative than institutional factors in accounting for the democratic peace. According to Russett (1993, 76–77), this indicator was constructed to “reflect two things simultaneously: How democratic or undemocratic are the members of the dyad, and how different or similar in their regime types are the two states?” Accordingly, *JOINREG* is a ratio with a numerator that measures the degree of joint democracy between the states and a denominator that gauges the difference between the regime scores. However, it is unreliable as a measure of joint democracy for the very reasons that it was found useful to Russett. That is, since *JOINREG* measures both the average level of democracy and the similarity of the regimes, interpreting the results from analyses that utilized it were very difficult because, as Ray (1995, 26) noted, “a pair of states will attain a high score on [*JOINREG*] either because they are relatively demo-

Slow Roasting of Sacred Cows

cratic or because they are relatively similar in regime type.” An even more troubling feature of *JOINREG* is that it does not increase monotonically with increases in the constituent states’ democracy scores. That is, in certain cases where a dyad becomes more democratic, its *JOINREG* score decreases.

Rummel initially pointed out this inconsistency in the *JOINREG* measure. *JOINREG* is measured as the ratio between the sum of the two states’ regime scores (taking the highest score first) and the difference of the two states’ regime scores plus 1: $(\text{Democracy}_{\text{HI}} + \text{Democracy}_{\text{LO}}) / (\text{Democracy}_{\text{HI}} - \text{Democracy}_{\text{LO}} + 1)$. As Oneal and Russett (1997, 274) point out, if one takes a pair of states whose regime scores are both 50 (well above the democracy threshold of Maoz and Russett 1993, which is +30), then *JOINREG* is $(50 + 50) / (50 - 50 + 1)$, or 100. If one state becomes more democratic and now scores 70, while the other state remains at 50, *JOINREG* for this more democratic dyad now equals $(70 + 50) / (70 - 50 + 1)$, or 5.7. The continuous measure of joint democracy *decreases* substantially as one of the two states—and, therefore, the dyad—becomes *more democratic*. Once this shortcoming was recognized, scholars sought more reliable measures of joint democracy, such as the sum or product of the individual state’s regime scores as recorded in the Polity data sets.

At the same time, they also began to examine the impact of trade on the democratic peace. In another groundbreaking study, Oneal et al. (1996), still relying on *JOINREG*, found that trade interdependence had a more robust conflict-dampening impact than joint democracy. Their findings presented a quandary for democratic peace advocates since they also revealed that only a dichotomous democracy variable was significant when controlling for trade interdependence, while continuous democracy variables were not significant in such models. In attempting to address the failure of continuous democracy variables to remain significant in models that controlled for trade, democratic peace scholars redoubled their efforts to devise a measure that captured both the degree to which two states were democratic and the degree to which they were politically dissimilar (they called the latter attribute “political distance”), while avoiding the problems associated with *JOINREG*. One potential source of problems was that which Ray (1995) observed earlier: they were attempting to fuse two attributes, each of which, they believed, had an independent impact on international conflict. Of these two attributes, joint democracy was viewed as reducing the probability of conflict, and political distance was seen as increasing the probability of conflict. Put another way, theorists were fusing what Singer (1971, 62–64) called a “structural” variable, regime type, with a “relational”

variable, political distance, hoping that their impact would not be vitiating by another “relational” variable, trade interdependence.

Appreciating the contrasting effects of joint democracy and political distance and seeking to resolve the quandary of Oneal et al.’s findings, Oneal and Ray (1997) evaluated several indicators of joint democracy to test their robustness in models that included a measure of trade interdependence. When different results were garnered from estimations using a joint democracy variable measured as the sum of the states’ regime scores and one measured as the geometric mean of the states’ regime scores, they thought they could explain why Oneal et al.’s dichotomous measure of joint democracy had been robust while their continuous measure had not.⁶ Oneal and Ray (1997) noted that the geometric mean measure—which was the most robust of the continuous measures they used initially—was more sensitive to changes in the differences of the two regime scores and increased more with an increase in the less democratic state’s regime score than with a similar increase in the more democratic state’s regime score. For Oneal and Ray (764), “this suggests that the prospects for peace improve more when the less democratic nation in a dyad becomes more democratic, which reduces the political distance along the democratic-autocratic continuum separating the two states.” On the other hand, their joint democracy variable measured as the sum of the two states’ regime scores “is affected equally by an increase in either regime score,” therefore, “its poor performance suggests that a high level of democracy in one state does not compensate for a low level in a strategic partner.” They reasoned that “the absolute difference in regime scores—the political distance separating the members of a dyad along the autocracy-democracy continuum—is important for understanding the influence of political regimes on the likelihood of conflict” (764). They concluded that “a discrete measure of joint democracy lends more support for the democratic peace because it identifies those dyads for which political distance is a minimum and the sum of the states’ democracy scores is a maximum.” They expected pairs of states with these characteristics to be the most peaceful because “the probability of a dispute is not only a function of the average level of democracy in a dyad, but also the political distance separating the states” (768).

Since Oneal and Ray (1997, 771) were clear that scholars should “not rely on a dichotomous measure of regimes because it masks the separate effect of democracy and political distance,” they opted for a “weak-link” specification of joint democracy because with such a specification there was “no need . . . to postulate that the effect of democracy on conflict is discontinuous—involving a threshold—or that a club

good is involved.” In addition, they thought that it captured both the level of democracy of the two states as well as the “political distance” between them. When they included their weak-link joint democracy variable(s) in models that also included a trade interdependence variable, the coefficient of the joint democracy variable(s) was statistically significant. These findings replicated those of Oneal and Russett (1997), which were published just months prior to Oneal and Ray (1997). Both sets of findings overcame the statistical quandary of Oneal et al.’s results. Oneal and Ray (1997) explained that the problem with previous continuous joint democracy measures was that analysts did not fully appreciate that “combining states’ regime scores into a single dyadic measure entails a loss of information, however it is done,” therefore, “it is preferable simply to identify the higher and lower democracy scores and to use these” (770). They noted that “Maoz and Russett’s (1993) instincts were correct; they erred only in combining these two factors into a single variable (*JOINREG*)” (768).

As noted previously, Oneal and Russett (1997, 274) adopted the weak-link approach for much the same reasons as Oneal and Ray, although they were even more emphatic that the likelihood of a dispute is “a function of the lower democracy score in the dyad” (274) and that “the probability of a dispute is strongly associated with the continuous measure of the political character of the less-democratic state” (288). Therefore, in their basic equation, Oneal and Russett include only the regime score for the less democratic state, while introducing the regime score for the more democratic state when their interest turns to the specific impact of political distance on conflict involvement. In fact, in their subsequent study (Russett and Oneal 2001) all of their estimations of the democratic peace rely on models that include only the democracy score for the less democratic state in the dyad. Clearly, for both sets of authors, the weak-link specification was viewed as a huge improvement over previous continuous measures of joint democracy because it was theoretically derived, reliable, and remained statistically significant in models that controlled for the impact of trade interdependence.

So the adoption of the weak-link specification of joint democracy should be seen as part of a process aimed at generating a more theoretically consistent, reliable, robust, continuous measure of joint democracy that could be utilized to systematically evaluate democratic peace claims. Within this context, Oneal and Russett’s (1997) findings served as a reaffirmation and extension of democratic peace research that had faced a serious empirical quandary—the impact of joint democracy was vitiated by trade interdependence. The weak-link specification gained greater acceptance, in large part, because it allowed

for the substantiation of democratic peace claims; and it is not surprising that in relatively short order it became a standard operationalization for joint democracy in systematic studies of the link between democracy and international relations.⁷

As is evident from the previous discussion, earlier democratic peace advocates argued in favor of a measure of joint democracy that reflected both the level of democracy of two states as well as the “political distance” between them. However, since both of these factors are assumed to predict to international conflict, it strikes me as a much simpler—and a more methodologically consistent—task to construct one measure of joint democracy and a separate measure of political distance. It is assumed that a weak-link specification enables one to determine the impact of political distance on the likelihood of conflict, which is important because democratic peace advocates assert that the difference in the regime scores of both states also contributes to the conflict-proneness of the dyad. That is, “making a dyad more democratic by increasing the [regime] score of the less democratic state reduces the likelihood of conflict; but raising the level of joint democracy by increasing democracy in the more democratic state, increasing the political distance separating the pair, makes the dyad more prone to conflict” (Oneal and Russett 1997, 281–82). Such a research design seems to conflate both the allegedly conflict-dampening impact of joint democracy and the presumably conflict-exacerbating impact of political distance in the regime variables (or as is often the case, in the single regime variable for the less democratic state). Fusing these two contrasting attributes in a single variable makes it difficult to distinguish between the competing processes. To be sure, if political distance—or “political dissimilarity”—is an important factor in international conflict, one should simply include it as a separate variable in the analysis. Such a specification would allow us to better determine the independent impact of political distance on conflict and to determine whether the effect of joint democracy is robust once one controls for this variable. Therefore, I also include a political distance variable, *Political Distance*, which is measured as the absolute value of the difference between the two states’ regime scores. In addition, by including a political distance variable we will also be able to examine the extent to which “structural” variables such as regime type are less important than “relational” variables such as trade interdependence, as Singer (1971) surmised. If Singer is correct, then the impact of the “relational” variable, trade interdependence, should supersede that of the “structural” variable, joint democracy. More important, if Singer is correct, in the more

Slow Roasting of Sacred Cows

fully specified model, the coefficient for the joint democracy variable should not be significant.

The only other modification of Oneal and Russett's research design is that whereas they code ongoing years of militarized disputes as additional cases of conflict, I do not. Not including subsequent years of multiple-year disputes as additional cases of conflict is consistent with the coding used in previous studies of the democratic peace, and it simply reflects the view that the factors that contribute to the onset of a dispute are often distinct from those factors that affect its continuation. Most of the research on international conflict from the Correlates of War Project substantiates this view (see Vasquez 1993). Moreover, Oneal and Russett (1999) maintain that their findings are consistent even when subsequent dispute years are excluded; therefore, in the final model, I do not include ongoing dispute years as additional cases of conflict. With these modest changes in mind, we now turn to the data analyses.

Data Analysis

A multivariate logistic regression model is estimated to replicate Oneal and Russett's (1997) findings. This is the identical statistical method that they used. The basic model takes the following form:

$$\Pr (MID_{ij,t}) = 1 / (1 + e^{-Z_i}).$$

$\Pr (MID_{ij,t})$, is the probability that the outcome variable (the onset of a militarized interstate dispute) equals 1; and Z_i is the sum of the product of the coefficient values (b_i) across all observations of the predictor variables ($X_{ij,t}$), that is:

$$\begin{aligned} &\beta_0 + \beta_1 Democracy_{LO} + \beta_2 Economic Growth_{LO} + \beta_3 Allies \\ &+ \beta_4 Contiguity + \beta_5 Capability Ratio + \beta_6 Trade Ratio_{LO}. \end{aligned}$$

Findings

Equation (1) in table 1 replicates Oneal and Russett's (1997) results found in equation (1) of their table 2 (278), which regresses MID involvement (including ongoing years) on the less democratic state's regime score ($Democracy_{LO}$), the lower economic growth rate of the two states ($Economic Growth_{LO}$), whether or not the states are allies ($Allies$), whether or not the states are contiguous ($Contiguity$), the ratio

TABLE 1. Logistic Regression of the Relationship between Democracy and MIDs, 1950–85

	(1) (Replication)	(2) (Drop Ongoing MIDs)	(3) (Add Political Distance)	(4) (Drop Ongoing MIDs, Add Political Distance)
Democracy _{LO}	-.05*** (.001)	-.03*** (.008)	-.035*** (.008)	-.011 (.009)
Economic Growth _{LO}	-.02*** (.01)	-.03*** (.01)	-.03*** (.01)	-.04*** (.01)
Allies	-.82*** (.08)	-.64*** (.09)	-.64*** (.09)	-.51*** (.10)
Contiguity	1.31*** (.08)	1.67*** (.10)	1.42*** (.08)	1.80*** (.10)
Capability ratio	-.003*** (.000)	-.002*** (.001)	-.003*** (.000)	-.002*** (.000)
Trade ratio _{LO}	-.66.13*** (13.44)	-.43.82*** (12.08)	-.68.82*** (13.74)	-.45.13*** (12.28)
Political distance	—	—	.02*** (.005)	.04*** (.007)
Constant	-3.29*** (.08)	-3.99*** (.10)	-3.57*** (.10)	-4.36*** (.12)
-2 Log Likelihood	6,955.14	4,979.55	6,925.64	4,945.77
N	20,990	20,990	20,990	20,990
χ^2	764.043***	560.36***	793.54***	594.14***

Standard errors are in parentheses; all p -values are estimated using two-tailed tests.

* $p \leq .10$, ** $p \leq .05$ level, *** $p \leq .01$ level

Slow Roasting of Sacred Cows

of the two states' relative capability scores (*Capability Ratio*), and trade interdependence measured as the lower of the two states' ratio of dyadic trade to GDP (*Trade ratio_{LO}*).⁸ The results of equation (1) are identical to those in equation (1) of Oneal and Russett (1997), and they show that their democratic peace findings are robust. The results are also consistent when one modifies the analysis and focuses on the onset of disputes, excluding ongoing dispute years, as in equation (2), which substantiates the authors' claims that their findings were robust even in light of the dropping of these cases. Extending the analysis further, the findings reported in equation (3) allow us to isolate the impact of political distance on dispute involvement, and as expected, political distance has a significant conflict-exacerbating impact, even as the impact of joint democracy remains significant.

But the findings reported in equation (4), which control for political distance but exclude ongoing years of disputes in the outcome variable, tell a much different story. They reveal that the impact of *Democracy_{LO}* is not significantly associated with the probability of dispute onset. This lack of consistency with respect to the democracy variable across the models is even more surprising since the other predictor variables (i.e., *Economic Growth_{LO}*, *Allies*, *Contiguity*, *Capability Ratio*, and *Trade ratio_{LO}*) are quite robust across the various equations. The results indicate that when controlling for political distance and dropping ongoing years of disputes—two straightforward modifications that are widely accepted in the democratic peace literature—the heretofore-significant

TABLE 2. Logistic Regression of the Relationship between Democracy and MIDs, 1950–85, Excluding Continuous MIDs

	(2a) (Drop Ongoing MIDs)	(4a) (Drop Ongoing MIDs, Add Political Distance)
Democracy _{LO}	-.03*** (.008)	-.012 (.009)
Economic Growth _{LO}	-.03*** (.01)	-.04*** (.01)
Allies	-.68*** (.09)	-.54*** (.10)
Contiguity	1.70*** (.10)	1.83*** (.10)
Capability ratio	-.002*** (.001)	-.002*** (.001)
Trade ratio _{LO}	-46.22*** (12.31)	-47.60*** (12.52)
Political distance	—	.04*** (.007)
Constant	-3.96*** (.10)	-4.33*** (.12)
-2 Log Likelihood	4,932.34	4,908.55
N	20,656	20,656
χ ²	577.61***	611.41***

Standard errors are in parentheses; all *p*-values are estimated using two-tailed tests.

p* ≤ .10, *p* ≤ .05 level, ****p* ≤ .01 level

TABLE 3. General Estimating Equation (GEE) of the Relationship between Democracy and MIDs, 1950–85

	(1) (Replication)	(2) (Drop Ongoing MIDs)	(3) (Add Political Distance)	(4) (Drop Ongoing MIDs, Add Political Distance)
Democracy _{1,0}	-.05*** (.01)	-.03* (.016)	-.003*** (.001)	-.01 (.02)
Economic Growth _{1,0}	-.02** (.01)	-.03** (.013)	-.02** (.01)	-.04*** (.01)
Allies	-.82*** (.22)	-.65*** (.21)	-.77*** (.21)	-.52*** (.20)
Contiguity	1.24*** (.23)	1.66*** (.21)	1.31*** (.23)	1.78*** (.22)
Capability ratio	-.003*** (.001)	-.002*** (.001)	-.003*** (.001)	-.002*** (.001)
Trade ratio _{1,0}	-40.64** (20.52)	-41.23** (23.02)	-43.26** (21.17)	-42.36* (23.55)
Political Distance	—	—	.02 (.01)	.04*** (.01)
Constant	-3.26*** (.18)	-3.97*** (.17)	-3.44*** (.22)	-4.33*** (.22)
Deviance	6,957.57	4,974.48	6,931.83	4,940.70
N	20,985	20,985	20,985	20,985
χ ²	78.20***	110.77***	81.21***	112.00***

Standard errors are in parentheses; all *p*-values are estimated using two-tailed tests.

p* ≤ .10, *p* ≤ .05 level, ****p* ≤ .01 level

impact of joint democracy washes out. Moreover, the findings in equation (2) and equation (4) of table 1 are not affected by completely excluding the ongoing years of MID's entirely from the analyses or by simply making the observation 0 as is done in table 1. The values for equation (2) and equation (4) when dropping the values entirely are shown in table 2 as equation (2a) and equation (4a), respectively. Again, the results indicate that joint democracy is not a significant factor in international conflict.

Table 3 includes additional tests using the general estimating equation (GEE) to control for both serial and spatial autocorrelation, and the results reveal that the main findings are confirmed.⁹ In light of these findings, it appears that Singer's skepticism is borne out; but why should we be able to observe this rare finding in the democratic peace literature when so many other studies find just the opposite? To my mind, the key lies in two factors. First is the obvious tenuous relationship between joint democracy and peace, which is well documented. For example, Ray (1997, 14) reminds us that the relationship between joint democracy and war "is in fact so modest in strength . . . that it is something of a minor miracle that it has yet to be eliminated by most of the controls' to which it has been introduced."

Second, the slightly modified research design utilized in this study serves to separate the two tendencies captured in the variable commonly used to measure joint democracy. In so doing, it excises the conflict-dampening impact of low political distance from that of joint democracy, such that only the impact of joint democracy remains; and in light of trade interdependence, this impact washes out just as it did in the earlier models of Oneal et al. (1996). One is left to question whether the extent to which continuous joint democracy variables such as the weak-link variable(s) have been significant may be largely due to the fact that they capture aspects of regime similarity, especially at the two extremes of their ranges (i.e., at total democracy or total autocracy where Dem_{HI} and Dem_{LO} are at their respective maximum and minimum values of democracy/autocracy. That is, where Dem_{HI} and Dem_{LO} both have values of +10, or where Dem_{HI} and Dem_{LO} both have values of -10, they are not simply measuring the regime score of the two states but they are also capturing the absence of political distance between the two states (i.e., either full democracies or full autocracies).¹⁰ Once one includes a political distance variable in the same model with the weak-link variable, the greater conflict-dampening impact of low political distance is excised from the weak-link democracy measure, and what is left is the nonsignificant relationship between joint democracy and the probability of conflict that Singer assumed. One might

conjecture that common regime type is largely significant to the extent that it also takes into account political similarity, but when one evaluates the effect of regime type qua regime type—in this case, joint democracy—one finds that it is not significant. In sum, earlier tests of the democratic peace thesis that utilized continuous measures of joint democracy in the presence of trade interdependence failed because the democratic peace thesis failed: joint democracy does not appear to be a significant factor in reducing the likelihood of international conflict once one controls for political distance and trade interdependence, and excludes subsequent years of ongoing disputes.

CONCLUSION

In this chapter, I've discussed Singer's agnosticism toward the democratic peace thesis in light of the overwhelming statistical evidence in support of it. I noted that Singer's skepticism is ironic since he has been key in establishing both the empirical and theoretical framework for studying the democratic peace. I situated Singer's skepticism in his philosophy of science and argued that it was consistent with his approach to theory building in world politics. Drawing on his discussions of the significance of "structural" and "relational" variables in analyses of the correlates of war, I replicated the findings of one of the most important studies on the democratic peace thesis and then reexamined them in light of several straightforward modifications of the basic research design, which were consistent with Singer's basic logic. Importantly, the modifications that I presented here have each been utilized in previous studies of the democratic peace; however, those studies have not examined these modifications in combination. Further, the modifications are not arrived at arbitrarily to stack the deck against the democratic peace; on the contrary, they derive consistently from the theoretical arguments on the democratic peace voiced by liberal advocates themselves and capture the relationships assumed by democratic peace supporters in a much more straightforward fashion than the "weak-link" specifications currently in vogue. Utilizing this more straightforward specification, I find that the results contradict the democratic peace finding and provide statistical support for Singer's skepticism.

In addition, the results from this chapter also suggest that the arguments of those who've maintained that the democratic peace is epiphenomenal of factors related to any of the control variables that are consistent throughout the models presented here (alliance membership, trade, relative capability, growth, etc.) should be reconsidered. Importantly, one of these variables is contiguity—which Singer thought was

Slow Roasting of Sacred Cows

the key to the apparent relationship between joint democracy and peace. Its impact remains significant even as that of joint democracy fades—an important vindication of Singer’s skepticism. The results also call into question the accuracy of deductive models that derive the democratic peace relationship from their rational choice assumptions (e.g., Bueno de Mesquita and Lalman 1992; Bueno de Mesquita et al. 1999). Most significant, the findings seem to suggest that Singer was right insofar as democracy does not appear to be significantly associated with international conflict.

What is probably needed to push our understanding of the causes of international conflict forward is the complex, process-oriented analysis of foreign policy decision making that Singer (1958, 1963, 1985) has supported for decades. Such rich analyses may provide the bedrock for the type of explanatory knowledge that is necessary for theory building in world politics. The accumulation of more and more correlational studies of basically monocausal models is not an auspicious path toward a more scientific and policy-relevant world politics. Even less auspicious are recent and recurrent assertions that war has changed so fundamentally that large-*n* studies of wars across long time periods are inherently flawed if not fruitless (see Henderson and Singer 2002 for a response). Beyond research, the most important policy implication of the findings in this chapter is that the post-Cold War strategy of “democratic enlargement,” which is grounded in the Wilsonian idealist aim of ensuring peace by enlarging the community of democratic states, is quite a thin reed upon which to rest a state’s foreign policy—much less, the hope for international peace.

NOTES

1. Several authors observe presidential support for spreading democracy as a means of encouraging peace back to the nineteenth century. Such assessments, however, are difficult to reconcile with U.S. imperialism and antidemocratic interventions epitomized in its rapacious policies against American Indians and Filipinos during the Second Philippines War of the nineteenth century; and a plethora of interventions to overturn incipient democracies in Iran, Guatemala, and Chile, among the most notable during the twentieth century (Henderson 2002).

2. Russett was an early postdoctoral student on the COW Project while at Yale, while the others were Singer’s students at the University of Michigan.

3. For a fuller discussion of the divergent strands of theorizing on the democratic peace, see chapter 1 of Henderson (2002).

4. The following argument draws on Henderson (2002, 26–30).

5. Russett (1993, 77) states that “our hypothesis . . . says that the more

The Scourge of **WAR**

democratic both members of the pair are they [*sic*] less likely they are to become embroiled in a militarized dispute.” Rummel (1983) makes a similar point.

6. The geometric mean is measured as the n th root of the product of n values. Unlike a simple arithmetic mean (i.e., an average), it takes into consideration the difference in the values.

7. An often overlooked finding of both these studies is that *individual* democracies are more peaceful than other types of states. Both Oneal and Ray (1997, 770) and Oneal and Russett (1997, 288) explicitly state that there is a *monadic* as well as a dyadic democratic peace.

8. See Oneal and Russett (1997, 277) for the coding rules for the variables in the original model.

9. Also see Henderson (2002, appendix).

10. Although one can make this case for any point along the democracy-autocracy continuum where the regime scores for the two states are identical, the points of full democracy and full autocracy are important because it is by focusing on their relative conflict-proneness that scholars have argued most profusely in support of the democratic peace thesis.