

STATESMEN, POPULAR WISDOM, AND  
EMPIRICAL REALITIES IN THE STUDY  
OF CONFLICT AND WAR

Extending the “Predictors of War in History and in the  
State of the World Message”

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In 1974, J. David Singer and Melvin Small published “Foreign Policy Indicators: Predictors of War in History and in the State of the World Message,” in *Policy Sciences*. Like many other pathbreaking studies by these two authors, the pioneering nature of this study was largely overlooked. For example, since its publication this article was cited only twenty-three times. It was reprinted in Coplin and Kegley (1975) and has probably appeared in a few reading lists in various graduate courses.

However, even now, thirty years after its publication, the innovative ideas underlying this study, on the one hand, and its elegance and simplicity, on the other, are still compelling. The basic idea of this article was to examine the fit between the beliefs that world leaders have about the causes (or predictors) of war and the empirical evidence. Using Richard Nixon’s 1972 State of the World Message, as a source representing this “conventional wisdom,” Singer and Small extracted hypotheses about war and peace in international affairs. They subjected some of these ideas to fairly simple empirical tests, showing that many of them have little or no empirical foundation.

The wish to be relevant for policymakers, or to “bridge the gap” between theory and policy (George 1997), has always been a goal of international relations researchers. However, it seems that only a few political leaders have adapted ideas and facts that emerged out of empirical research on international politics. In most cases, political leaders have developed ideas of their own about international affairs. These

ideas have become the source of knowledge that in many cases is either detached from or opposite to the knowledge obtained through scientific investigations of various aspects of world politics. This message comes out loud and clear in Singer and Small's study, which ends on a somber note: "We conclude with an emphasis . . . on the need for a very different kind of 'education for world affairs.' In the primary and secondary schools, in colleges and graduate schools, and, perhaps more critically, in the public and private discussions of public policy questions, it is essential that we move out of the Neanderthal Era."

Even when politicians cite actual academic research, they typically demonstrate a superficial understanding of the scholarly ideas and empirical results entailed in such research. Worse, in many cases, politicians deliberately reframe and manipulate these findings. An example concerns the use of the democratic peace proposition by political leaders. The notion that democracies do not fight each other—which had received considerable support at the dyadic level of analysis—has often been extended by political leaders to the systemic or monadic level of analysis, where this proposition either does not apply at all or applies under specific conditions (Maoz 2001). Furthermore, the democratic peace proposition specifies a *sufficient but not necessary* condition for peace. This means that whenever two states are democratic, they will avoid fights with each other. It does not mean that peace cannot exist between democratic and nondemocratic states. However, politicians have often used it as a *necessary but not sufficient* condition, arguing that if a given state does not convert to democracy, it is unwise to make peace with it, because any agreement is bound to be violated (Maoz 1998).

In light of the apparent discrepancy between political leaders' notions about war and peace and the available evidence, it may be instructive to examine if the pessimistic conclusions entailed in the Singer and Small (1974) study withstood the test of time. It is also useful to examine whether a new generation of leaders of different states had new and improved notions about empirical reality and whether the fit between the leaders' notions and the data is better than in the original Singer and Small study.

My aim in the present study is threefold. First, I wish to replicate Singer and Small's (1974) study by reexamining some of the issues raised by the authors. This replication is meaningful given the availability of new or updated data, as well as more complex estimation procedures. Second, I attempt to extend this study by deriving a more up-to-date version of statesmen's "conventional wisdom about war and peace." I use the statements of leaders during the UN Millennium Summit of September 6–8, 2000, as the source for these notions. I extract a

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number of statements made at that summit about war and peace and rephrase them as testable hypotheses. Third, I evaluate these statements by pitting them against the historical record. On the basis of these analyses, I reassess Singer and Small's sad conclusion.

This chapter is organized as follows. First I outline a number of propositions that have been extracted from national leaders' statements at the UN Millennium Summit. I derive testable hypotheses from these statements. The following section discusses the research design of the study. Then I replicate the original Singer and Small's article, using more recent data and more elaborate estimation procedures. Next, I test the hypotheses derived from the Millennium Summit and conclude by discussing the implications of these findings for theory and policy in world politics.

#### PROPOSITIONS ABOUT WAR AND PEACE: THE UN MILLENNIUM SUMMIT

Singer and Small's focus on leaders' intuitive notions about war and peace is important not only from the didactic point of view, as they have suggested in their conclusion. It is significant from a policy point of view as well. Leaders' beliefs about the sources, courses, and consequences of conflict serve as the foundations of international security policy. To the extent that the belief-policy nexus is indeed valid, it is instructive to broaden the scope of this exercise of fitting leaders' beliefs to empirical reality. First, the "causal" beliefs about war and peace that Singer and Small extracted from Nixon's State of the World Message were couched in a realist conception, with the notion of "war begets war" driving the logic. This may have been a common conception in a bipolar world wherein the superpowers were engaged in a cold war, yet searching for ways to coexist despite their differences and the competition between them. Second, Nixon's beliefs may have been representative of the realist conception of world politics; they may have even been representative of a broader American conception of the world. Yet, it is unclear that Nixon's ideas were representative of the beliefs of leaders in other states at the time. It makes sense therefore to broaden the scope of the people who express their beliefs about war and peace in the international system. Third, a long time has passed since Nixon's State of the World Message. The world has experienced revolutionary change on almost every dimension of the human experience. It is therefore important to examine whether and how these changes are reflected in leaders' beliefs about war and peace in the international system.

On September 6, 2000, political leaders from over 150 nations gath-

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ered in New York for the UN Millennium Summit, convened under the title “The Role of the UN in the Twenty-first Century.” In the course of this conference, all leaders made statements concerning their own nation’s policies as well as about the state of the world.<sup>1</sup> I have selected a number of statements made by various leaders that suggest notions about the causes of conflict and the conditions of peace.

To choose the statements, each was examined for the keywords *conflict*, *war*, *peace*, and related terms (e.g., *conflict-ridden*, *peaceful*, *war-like*, *war-prone*). Once a phrase containing the keyword was found, I examined its context. I excluded any statement about the causes and consequences of conflict that was not couched in general terms. In many cases, leaders referred to a specific conflict or war, or to a specific state or group of states.<sup>2</sup> These statements were excluded. Also, I have excluded statements about the causes and consequences of war for which I could not develop testable hypotheses (e.g., that shared beliefs about the unity of mankind and our responsibility to future generations would enhance the prospects of global peace). Finally I have excluded testable hypotheses for which I could not find appropriate data for an empirical test (e.g., a large number of statements about the effect of peacekeeping operations on peace, or on relationships between conflict and environmental issues).

The following statements are neither exhaustive nor representative of the entire spectrum of views and conceptions represented at the Millennium Summit; in fact, the number of exclusions is vastly larger than the number of statements included here. However, these statements do reflect what we can consider as “conventional policy wisdom” about these issues. There were hints to similar ideas in other statements, but if they were not sufficiently explicit, they were not included in the sample.<sup>3</sup> I present these notions verbatim. I provide my interpretations to each of these statements and convert them into testable hypotheses.

A fair number of leaders addressed internal and ethnic conflict, mostly in specific states or regions. This suggests a growing concern with non-interstate wars, a concern that is reflected in a general trend in modern warfare (Levy, Walker, and Edwards 2001). Some have also hinted to a relationship between external and internal conflicts. I start out with what is probably the clearest statement in this regard, a hypothesis about the impact of external intervention on the duration of internal wars.

1. *Afghanistan* (Burhanudin Rabanni). The Islamic State of Afghanistan wishes to emphasize that in most of conflicts termed *internal*, external politicoeconomic and strategic inter-

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ests and interventions play a primordial role in sustaining that conflict.

This statement suggests that local or internal conflicts are better left to themselves if they are to be resolved quickly. International intervention in such conflicts serves only to prolong them. The implication is spelled out in the interventionism hypothesis.

**A. INTERVENTIONISM HYPOTHESIS: External interventions in a domestic conflict prolong the conflict. Domestic conflicts involving intervention by states external to the conflict last longer than conflicts without such intervention.**

One of the most important trends in the scientific analysis of world politics in the last two decades is the decline in the number and impact of system-level analyses of international relations. This is also reflected in the prominent absence of system-level statements—at least of the realpolitik variety—in most statements in the Millennium Summit. Yet, some leaders still have beliefs about the relationships between structure and stability in international politics. Here is the clearest statement on this issue.

2. *China* (Xiang Zemin). To build common security is the prerequisite to the prevention of conflicts and wars. To promote a multipolar international configuration is required by the progress of our times, conforms to the interests of the people of all countries, and also contributes to world peace and security. A multipolar configuration differs from the old one in which big powers contended for hegemony and carved up spheres of influence as seen in history. All countries should be independent. Mutual cooperation and partnership of various forms between countries should not be targeted at any third party. The big countries have an important responsibility for the maintenance of world and regional peace. The big countries should respect the small ones, the strong should support the weak, and the rich help the poor.

It is probably a bit of a stretch, given the latter part of the statement, but it may seem that Xiang Zemin was in fact suggesting the stability of a multipolar world, to paraphrase another important contribution by J. David Singer (Deutsch and Singer 1964). Therefore, we will keep this proposition.

**B. MULTIPOLARITY HYPOTHESIS: A multipolar international system is more stable than other types of system.**

More in line with recent trends in the scientific literature are statements linking domestic structures and processes to international relations and international processes. One of the more prevalent ideas in the scientific literature is the diversionary war hypothesis (e.g., Levy 1989) that focuses on the relationship between domestic conflict and international conflict. In contrast, some of the most interesting beliefs of political leaders stress the relationships between external penetration and control of states and their level of development.

3. *Cuba* (Fidel Castro). The poverty and underdevelopment prevailing in most nations as well as the inequality in the distribution of wealth and knowledge in the world are basically at the source of the present conflicts. It cannot be overlooked that current underdevelopment and poverty have resulted from conquest, colonization, slavery, and plundering in most countries of the planet by the colonial powers and from the emergence of imperialism and the bloody wars motivated by new distributions of the world.

Castro seems to suggest that most conflicts in the modern international system result from poverty, underdevelopment, and unequal distribution of wealth across states. It is also suggested that colonization and conquest indirectly affect conflict propensity through underdevelopment.

Curiously, the president of the United States, Bill Clinton, concurred with these statements.

4. *United States* (Bill Clinton). We must also work with just as much passion and persistence to *prevent* conflict, recognizing the iron link between [economic] deprivation and war. (Emphasis in original)

The representatives of Norway and of Pakistan made the complementary argument, namely, that development promotes peace.

5. *Norway* (King Harald V). The elimination of poverty is not only a bridge to peace and development, not only a bridge to human rights and individual dignity, but also a bridge to the preservation of the environment for future generations.

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6. *Pakistan* (Gen. Pervez Musharraf). The best assurance for the consolidation of global peace lies in the economic development and prosperity of all regions and all peoples.

Accordingly, the following hypotheses are derived.

**C.1. POVERTY AND CONFLICT HYPOTHESIS:** The greater the extent of world poverty, the more conflict does the world experience.

**C.2. INEQUALITY BREEDS CONFLICT HYPOTHESIS:** The higher the economic inequality in the international system, the more conflict the system experiences.<sup>4</sup>

Castro and Clinton did not specify whether the rich attack the poor, the poor attack the rich, the rich attack each other, or the poor attack each other. Thus, we have some ambiguity regarding the dyadic and monadic version of these beliefs. Hence, I develop several subhypotheses from this proposition regarding dyadic and monadic implications.

**C.2.1. INEQUALITY AND DYADIC CONFLICT:** Conflict between economically unequal states is more/less likely than between economically equal states.

**C.2.2. INEQUALITY AND MONADIC CONFLICT:** Poor states are more/less likely to get involved in conflict than rich states.

In contrast to these notions that treat poverty, underdevelopment, and inequality as *predictors* or *causes* of conflict, the following statement treats development as a possible *outcome* of peace.

7. *India* (Shri Atal Bihar Vajpayee). We cannot have true development without peace between nations and democracy within them. Indeed, democracy and peace continue to remain the best guarantors for unhindered development; each secures the other.

The implication here is that conflict in one period inversely affects development in subsequent periods. The same applies to the effect of democracy on development, but this is an issue to which I turn later. Here, however, I reverse the hypotheses regarding development and conflict stated earlier.

**D.1.** The higher the rate of conflict during a given period in history, the slower the rate of development in the subsequent period.

**D.2. The higher the rate of democratization in one period, the higher the rate of development in another period.**

As in the case of ideas about the relationship between economic development and conflict, which are probably characteristic of the beliefs of leaders in the post–Cold War era, another favorite topic in the Millennium Summit was some version of the democratic peace hypothesis. Consider the following quotes.

8. *Germany* (Gerhard Schroeder). For effective protection of human rights is an important prerequisite for peace and stability.
9. *France* (Jacques Chirac). Democracy, because democracy alone ensures respect for human rights and human dignity, because it is the surest path to stability, development, and progress for all. Because it is also the surest way to guarantee peace.

We interpret these statements to be in line with the monadic and systemic version of the democratic peace notion. Specifically:

- E.1. Democratic states that protect their citizen's right experience less conflict and war than nondemocratic states.**
- E.2. As the proportion of system members that protect human right increases, the level of peace and stability in the system also increases.**

An inverse idea suggests that democracy is the victim of (possibly external) conflict.

10. *Jordan* (King Abdullah II). Peace, stability, and prosperity still elude many countries at the turn of the century, sacrificing the noble principles of justice, equality, and democracy, and widening the digital divide that separates them from the developed world.

This statement suggests that conflict involvement of states in one period prohibits democratization in those as well as in subsequent periods. This statement can also be converted into a systemic version of this logic. Specifically:

- F.1. The greater the level of conflict involvement of a state, the less democratic it is likely to be in subsequent periods.**
- F.2. The higher the level of conflict in the international system,**



the lower the proportion of democratic states in the system during the same or subsequent periods.

These hypotheses seem to be consistent with the argument that it is peace that promotes democracy, not democracy that promotes peace. The system-level version of this hypothesis is particularly consistent with this argument (Thompson 1996).

As noted, this is a small and probably unrepresentative sample of political leaders' beliefs about the "laws" that guide international politics. What is interesting about these statements, however, is their shift from power-based issues to issues of democracy, economic development, and their effect on peace. Judging from this sample of statements, one can argue that leaders' beliefs in the post-Cold War era are embedded more in liberal notions of world politics than in realpolitik ones. The remainder of this essay attempts to test these statements against available empirical data.

## METHOD

### *Spatial and Temporal Domain*

I use both the war and MID data set which determine the temporal domain as the 1816–1992 period. To minimize selection bias, a feature that probably was a problem in the Singer and Small article, we rely on all states that existed in the interstate system during that era. For the dyadic analyses we employ the Maoz and Russett (1993) definition of politically relevant dyads (also Maoz 1996) to delimit our analyses only to those dyads that have a meaningful a priori probability of conflict and war involvement. As noted by Lemke and Reed (2001b), this definition does not lead to any significant level of selection bias in relation to the study of conflict as a dependent variable.

### *Data*

In general, since most of the focus in our analyses is on conflict and war as dependent variables, we employ the Dyadic MID (Maoz 1999b) data set as the principal source for measuring these dependent variables. In addition, we employ COW military capability data (Singer 1991) to measure economic development and military capability. To measure economic indices over the 1950–90 period we use the Penn World Table (Heston, Summers, and Aten 2002). Finally, we employ the Polity VI data set to code regime attributes.

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### *Variables*

Rather than providing a list and a set of operational definitions for all variables used herein, we define the specific variables and indicators as we do the hypothesis testing, much in the spirit of the Singer and Small article. At that point we also mention the sources used to derive the specific measures employed.

### *Statistical Techniques*

Singer and Small's strategy was to test the variables derived from the State of the World Message against the dependent variable in a series of bivariate tests. We follow this approach but also employ multivariate estimation methods employing other control variables commonly used in the empirical literature of recent years. The specific estimation procedure used to test a given hypothesis is spelled out along with the discussion of this hypothesis.

## FINDINGS

### *Reanalyzing Singer and Small's (1974) Findings*

Singer and Small's first extraction from the State of the World Message was the notion that "war begets war."

This proposition was also repeated in the UN Millennium Summit.

*Georgia* (Edward Shevarnadze). The unsettled conflicts of today—both between and within states—could flare up into horrific conflagration tomorrow.

Singer and Small tested this proposition by examining whether the outbreak of war at a given time affected the frequency of war outbreak in a subsequent year. I start by simply replicating this result, using a temporal domain that is twenty-eight years longer than that of Singer and Small. I then extend this test to examine the "MID begets MID" notion, looking at MID outbreaks. Here, however, I examine whether highly disputatious years (with number of dispute dyads above the average) are followed by conflictual years. I employ a number of estimation methods, starting with simple bivariate contingency table tests and going on to more sophisticated multivariate tests. The type of test is specified in table 1.

The findings reported here largely corroborate Singer and Small's

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conclusions about this issue, but the extensions of test types and data suggest that other conclusions may be possible. For example, we see a statistically significant effect of MIDs on subsequent MIDs. We also observe significant effects of past MIDs on present wars. Thus, Singer and Small's conclusion that "the prediction is not solidly based" is corroborated only in the confines of the kind of analysis they had conducted. If we expand the analysis to examine the impact of MID outbreak on future MID outbreak, or the impact of MID outbreak on subsequent wars, then the notion of "conflict begets conflict" receives significant support in the last two centuries.

Another set of tests of the "conflict begets conflict" hypothesis that

**TABLE 1. Tests of the "Conflict Begets Conflict" Hypothesis**

Dependent Variable	Independent Variable	Stratum	Type of Estimation Procedure	Test Statistic	Value of Statistic	PRE Statistic	N
War year 0 no 1 yes	Lagged war year (1 yr. Lag)	None	Crosstab	Chi-square	1.744	0.100	176
		19th C.	Crosstab	Chi-square	0.005	-0.008	83
		20th C.	Crosstab	Chi-square	0.724	0.088	93
MID freq. 0 low 1 high	Lagged MID freq (1 yr. Lag)	None	Crosstab	Chi-square	131.56**	0.865	176
		19th C.	Crosstab	Chi-square	5.300**	0.253	83
		20th C.	Crosstab	Chi-square	64.413**	0.832	93
War year no wars	Lagged (1 yr. Lag)	None	Logit	Parameter estimate	0.089*	0.022+	176
		19th C.	Logit	Parameter estimate	0.172	0.028+	83
		20th C.	Logit	Parameter estimate	0.053	0.012+	93
War frequency	Lagged war freq (1 yr. Lag)	None	TS-regression	Parameter estimate	0.209	0.044 <sup>z</sup>	176
		19th C.	TS-regression	Parameter estimate	0.049	0.003 <sup>z</sup>	82
		20th C.	TS-regression	Parameter estimate	0.102	0.010 <sup>z</sup>	95
MID frequency	Lagged MID freq (1 yr. Lag)	None	TS-regression	Parameter estimate	0.859*	0.737 <sup>z</sup>	176
		19th C.	TS-regression	Parameter estimate	0.549**	0.305	82
		20th C.	TS-regression	Parameter estimate	0.747**	0.546	95

\*  $p < .05$     \*\*  $p < .01$

+ Pseudo =  $R^2$     <sup>z</sup>  $R^2$

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Singer and Small conducted entailed introducing various controls into this relationship. Specifically, using the wars themselves as units of analysis, they tested for each war whether it was preceded by a previous war as well as whether (1) the target was allied, and (2) the initiator of the previous war won. Rather than repeat their limited control contingency table analysis, I conduct a more conventional proportional-hazard estimation with a number of control variables. In order to explicate the nature of this test, we start out by spelling out the unit of analysis.

### *Method*

It is important to note that this data set was prepared for a study replicating Maoz (1984) on the impact of prior dispute outcomes on the outbreak of subsequent disputes, a topic much related to the notion of “war begets war” that is our focus here. This data set is based on the Dyadic MID data set. It is organized as a dyad-by-year unit, but—for each dyad—it is left-censored, starting with the first dispute between dyad members. From that point on, each dyad-year is recorded.

The key variables used for this analysis include the duration of peace, defined as the number of days that have elapsed between disputes. This is the time variable in the proportional-hazard estimation model. The outbreak of a dispute is considered a failure and the time variable is again set to 1 the day after the termination of the dispute. So what we are estimating is the duration of peace between disputes or wars. Rather than test for the outbreak of a militarized dispute within a fixed time interval as a function of a prior conflict, we examine how long it would take to two states to engage in another conflict given that they engaged in 1, 2, . . . ,  $k$  conflicts in the past.

The independent variable is the number of past MIDs between the states. Control variables include the following.

1. The number of allies of each state, weighted by the type of alliance and the status (minor or major power) of each ally (Maoz 1996, 169–70). The minimum of both dyads’ allies is used, based on the weak link notion established in the democratic peace literature (Maoz 1998).
2. The existence of a formal alliances between members of the dyad.
3. The outcome of the previous dispute, coded as  $-1$  (initiator lost),  $0$  (the previous dispute ended in a draw), or  $+1$  (initiator won).

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4. Joint democracy, coded as 1 (both states were democracies) or 0 (otherwise) (Maoz 1996, 53–54).
5. Capability ratio (ratio of military capability of strongest member of dyad to weakest) (Maoz and Russett 1993).

Table 2 provides the results of this test. We focus only on militarized interstate disputes because there appeared to be no significant effects of past wars on the duration of peace between wars. Table 2 suggests indeed that the number of past disputes between members of the dyad significantly affects the duration of peace between successive disputes. Like Singer and Small, we find that having third-party allies has no significant effect on the duration of peace between disputes. Also, an alliance between dyad members has no significant effect on the duration of peace between disputes. However, in contrast to Singer and Small, we find that if the initiator won the previous dispute, this tends to increase the peacetime between disputes. Likewise, in contrast to Singer and Small, the relationship between past disputes and current disputes is stable across the two centuries. Other variables show significant effect on the duration of peace between disputes. Joint democracy and high capability disparity significantly increase the duration of peace between disputes.

It seems that quite a few of Singer and Small’s findings withstand the

**TABLE 2. Cox Proportional-Hazard Estimation of the Duration of Peace (1816–1992) between Dyad Members, as a Function of Prior Conflict and Control Variables**

Independent/Control Variable	Parameter Estimate (SE)	Change in Probability of Conflict <sup>a</sup>
No. of past MIDs between dyad members	0.090** (0.003)	0.043
Alliance between members of dyad	-0.074 (0.069)	-0.001
Joint democracy	-0.660** (0.141)	-0.318
Weighted allies of dyad members	0.015 (0.010)	0.001
Initiator’s outcome in previous dispute	-0.232** (0.079)	-0.115
Capability ratio in dyad	-0.001** (0.000)	0.002

*Note:* Number of observations, dyads, and MIDs refer only to politically relevant dyads (Maoz 1996) with at least two disputes. First dispute between each dyad is omitted from observation.

<sup>a</sup> Negative probabilities indicate reduction in the hazard rate of MID outbreaks.

\*  $p < .05$     \*\*  $p < .01$

test of time. However, moving from wars to disputes changes things quite a bit. Specifically, the notion of “MID begets MID” appears to hold rather strongly. This brings us to the test of the other hypotheses derived from the Millennium Summit speeches.

*Testing the Interventionist Hypothesis*

In order to test the hypothesis that external intervention in internal conflicts prolongs the conflict, I employ a simple test of war duration by intervention. The data used are the COW intrastate war data set (Sarkees 2000).<sup>5</sup> Table 3 provides the results of this analysis. This very simple test tends to support the hypothesis. External intervention tends to prolong civil war. However, this effect is present only in the twentieth century, and it does not hold for the nineteenth century. The small number of cases of external interventions in civil wars in the earlier century prohibits a definite rejection of the hypothesis for this century. All in all, the proposition that civil wars involving outside third parties tend to last longer than those that are fought only between indigenous groups seems to have some empirical foundation, at least in the twentieth century.

As we have done in the previous analyses, we want to examine whether the proposition connecting external intervention to the duration of civil wars holds when controls are introduced. But before we do that, we wish to provide an alternative measure of outside intervention. This alternative measure is simply the number of outside states that intervened in the civil war. This number ranges from 0 (no outside intervention) to 5 (in the Russian civil war of 1917–21). This measure could be connected indirectly to the Afghani president’s statement. If external intervention prolongs the duration of civil wars, then the more states intervene, the longer is the civil war expected to last.

We introduce four control variables.

**TABLE 3. The Effect of International Intervention on the Duration of Civil Wars, 1816–1997: Analysis of Variance**

Period	Intervention?	Mean Duration in days (SD)	No. of Wars	F-Statistic
1816–1997	No	905.18 (1,337.93)	164	14.19**
	Yes	1,867.68 (1,890.44)	41	
1816–99	No	862.76 (1,027.20)	63	0.00
	Yes	862.63 (881.56)	8	
1900–1997	No	931.64 (1,418.58)	101	13.90**
	Yes	2,111.33 (1,995.86)	33	

\*  $p < .05$       \*\*  $p < .01$

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1. *Regional Locus of the War.* We wish to test regional differences in civil war duration. Thus we used a series of dummy variables for the five regions (Western Hemisphere, Europe, Africa, Middle East, Asia).<sup>6</sup>
2. *History of Statehood and Instability.* The degree of past political stability in the focal state may affect the duration of civil war. We measure the number of years that have elapsed from the previous regime change in the state to the year of civil war outbreak.
3. *Democratic Involvement in the War.* Democratic states are typically assumed to have low tolerance for long-fought wars. Thus if a democracy is involved in a civil war (either as an indigenous participant or as a third-party intervener), this might shorten the duration of the civil war. We code this variable as 1 if a democratic state was involved in the war and 0 otherwise.<sup>7</sup>
4. *Ethnic Diversity of the Focal State.* States with a more heterogeneous population in terms of ethnic composition are more likely to get entangled in longer civil wars than countries that are more homogeneous in nature. We code this variable as the number of ethnic groups that amounted to 10 percent or more of the state's population in the decade prior to the outbreak of the civil war.<sup>8</sup>

Since the duration of civil war is a discrete count variable, we ran a Poisson regression of the duration of the civil war in days on the number of intervening states and the various control variables. The clear message, shown in table 4, is that external intervention in civil wars has a significant impact on its duration. This is so even when we control for a number of potentially confounding variables. The observation of the Afghani president—who should know this from personal experience—appears in this case to be right on the mark.

### *Testing the “Multipolarity Breeds Stability” Hypothesis*

Several measures of polarity have been offered in the literature (Wayman and Morgan 1990). It was noted that there are some logical and empirical problems in these measures in terms of their relationship to war and peace. Here, however, we use a simple measure of the number of major powers in the system in any given year and their alliance relationships. The major power list is given by Small and Singer (1982). To measure polarity we used the following procedure. First, for any given number of major powers  $m$ , we compute the maximum polarization

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index. This maximum occurs when the major powers are split into two blocs, nearly equal in size. We calculate the number of possible alliance dyads in each of these (near) halves, then sum across the two blocs.<sup>9</sup> Next, we count the number of dyadic alliances between major powers and divide it by the maximum polarity score. We term this variable *polarity*. Since we conduct a more comprehensive analysis of system conflict in connection with the next hypothesis, the results for the “multipolarity breeds stability” hypothesis are given in table 5.

In general, multipolarity appears to be associated with peace. The higher the polarity (the more bipolarized the system), the more disputes and the more war exists. However, for MIDs this association holds for the entire period and for the nineteenth century, but not for the twentieth century. In the case of wars, the relationship appears to be consis-

TABLE 4. The Duration of Civil Wars Regressed on the Number of Intervening States and Control Variables

Independent/Control Variable	Entire Period, 1816–1997	19th Century	20th Century
No. of intervening states	0.364** (0.003)	0.158** (0.008)	0.413** (0.003)
Western Hemisphere	5.644** (0.577)	-1.160** (0.014)	5.867** (0.577)
Europe	5.112** (0.577)	-1.220** (0.014)	4.665** (0.577)
Africa	6.066** (0.577)	NA	6.021** (0.577)
Middle East	5.863** (0.577)	-2.299** (0.014)	5.950** (0.577)
Asia	6.350** (0.577)	NA	6.234** (0.577)
Years of previous regime	-0.0001 (-0.001)	-0.015** (0.004)	0.005** (0.001)
Democracy involved	-0.148** (0.006)	-0.420** (0.015)	-0.121** (0.008)
No. of distinct ethnic groups of 10% and above	0.022** (0.001)	-0.046** (0.002)	0.028** (0.001)
Constant	1.033 (0.577)	8.157** (0.008)	0.950 (0.577)
Model statistics	$\chi^2 = 60,517.06^{**}$ Pseudo- $R^2 = 0.187$ N = 194	$\chi^2 = 24,766.29^{**}$ Pseudo- $R^2 = 0.331$ N = 69	$\chi^2 = 43,918.30^{**}$ Pseudo- $R^2 = 0.186$ N = 125

Note: Standard errors in parentheses.

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



tent over time. In terms of this fairly simple measure of polarity, then, it appears that Xiang Zemin of China can find some empirical support in the history of the last two centuries.

*Testing the “Inequality and Poverty Breed Conflict” Hypothesis*

This hypothesis can be tested at various levels of analysis, but the system level appears to best capture Fidel Castro’s and King Harald’s statements. To measure these variables we use two measures from the Correlates of War Material Capabilities Dataset (COW2).

1. *Inequality in the Distribution of Economic Wealth.* This is simply the Gini index of a mean measure of the proportion of energy consumption and iron and steel production of states in a given year.
2. *Proportion of States below the “Poverty Line.”* For each year a “poverty line” was calculated using the following index. First, I calculated the average energy consumption score over all states for a given year. Second, I draw the poverty line for each year as 50 percent of the average energy consumption level for that year. Finally, I created an index of energy poverty, by assigning a state a score of 1 if its actual share of energy consumption was less than 50 percent of the mean level of energy consumption (and 0 otherwise). I repeated this set of operations for iron and steel consumption. Now I ranked states for each year as follows.

$$POVERTY = \begin{cases} 0 & \text{if } ENCONPOV = 0 \text{ and } IRNSTLPOV = 0 \\ 1 & \text{if } ENCONPOV = 1 \text{ or } IRNSTLPOV = 1 \\ 2 & \text{if } ENCONPOV = 1 \text{ and } IRNSTLPOV = 1 \end{cases} \quad (1.1)$$

where poverty level 1 is quite poor and poverty level 2 is very poor. Now for each year I summed across the number of quite poor and very poor states and divided the number of poor and very poor states by the number of states in the system, to get the proportion of states below the “poverty line.”

The dependent variables in this test are the number of dyadic militarized interstate disputes and the number of dyadic wars in the system in a given year. The independent variables are the degree of economic

**TABLE 5. Economic Inequality, Poverty, Polarity, Control Variables, and Conflict in the International System, 1816–1992: A Poisson Autoregressive Model**

Independent/Control Variable	Entire Period, 1816–1992	19th Century	20th Century
<b>No. of MIDs</b>			
Constant	0.274 (0.279)	–0.871 (0.892)	–9.727* (4.504)
Proportion of states in alliances	11.644** (2.398)	20.810** (5.975)	8.729** (1.629)
Proportion of jointly democratic dyads	–57.315** (8.323)	–56.026 (37.946)	–41.929** (8.673)
Polarity of major power system	–0.732* (0.333)	–2.096** (0.746)	–0.410 (0.340)
Gini index of economic inequality	–0.001 (0.001)	–0.001 (0.001)	12.792** (4.758)
Proportion of states below poverty line	6.474** (0.510)	6.187** (1.822)	3.009** (0.818)
AR(1)	0.807** (0.049)	0.154 (0.122)	0.788** (0.067)
Model Statistics	$F = 109.86^{**}$ Pseudo- $R^2 = 0.794$ $N = 171$	$F = 7.33^{**}$ Pseudo- $R^2 = 0.319$ $N = 82$	$F = 33.71^{**}$ Pseudo- $R^2 = 0.693$ $N = 88$
<b>No. of Wars</b>			
Constant	–0.995 (0.706)	–3.987 (2.130)	–49.908** (14.800)
Proportion of states in alliances	27.839** (3.489)	33.760 (19.827)	16.981** (4.640)
Proportion of jointly democratic dyads	–85.150** (22.974)	–225.119* (93.561)	–44.815* (24.068)
Polarity of major power system	–2.979** (0.718)	–5.328* (2.594)	–1.710* (0.991)
Gini index of economic inequality	–0.002 (0.003)	–0.005* (0.002)	58.389** (15.473)
Proportion of states below poverty line	4.526** (1.420)	10.461* (4.369)	–0.601 (2.541)
AR(1)	0.791** (0.052)	0.327** (0.103)	0.474** (0.085)
Model Statistics	$F = 53.50^{**}$ Pseudo- $R^2 = 0.650$ $N = 171$	$F = 4.43^{**}$ Pseudo- $R^2 = 0.203$ $N = 82$	$F = 15.66^{**}$ Pseudo- $R^2 = 0.500$ $N = 89$

Note: Standard errors in parentheses.

\*  $p < .05$     \*\*  $p < .01$

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inequality in the system and the share of states below the poverty line. As was the case in previous analyses, I use a number of control variables to prevent confounding effects in the relationship.

The control variables include the following:

1. Proportion of states in formal alliance networks (Maoz 2001).
2. Proportion of states in democratic networks (Maoz 2001).<sup>10</sup>
3. Proportion of major powers in the system that are in dyadic alliances with each other (discussed previously).

All independent/control variables are lagged one year back. We use Poisson regression allowing for autocorrelation and overdispersion (the AR-POIS function in Stata 7).<sup>11</sup> Table 5 provides the results of this analysis.

The results of this analysis provide mixed support for the hypotheses. With regard to MIDs, the Gini index of economic inequality does not appear to be related to the amount of conflict in the system in the general population and in the nineteenth century, but it does positively affect the number of MIDs in the twentieth century. On the other hand, the proportion of states below the poverty line does show a significant relationship to the number of MIDs in general and in both centuries.

The Gini index of economic inequality is significantly related to the number of wars in the twentieth century. The proportion of states below the poverty line is also significantly related to wars in the nineteenth century, but not in the general population and in the twentieth century.<sup>12</sup> All in all, the findings suggest that there is some empirical basis to the inequality and poverty hypotheses, but the evidence is not as definitive as Castro and Harald IV would have us believe.

Moving to the dyadic and national level, we use the dyad-year and nation-year unit to test this hypothesis, as well as the following measures to represent economic inequality and poverty. For the nation level I use the state's percentile in the distribution of economic wealth (consisting of an average of its percentile on the energy consumption and iron and steel production distributions, respectively). The control variables for the national analyses are applied from a number of studies on national conflict behavior (Maoz 1997b, 2000b, 2001), specifically, the following six variables.

1. Number of states in the focal state's politically relevant international environment (PRIE) (see Maoz 1996 for a discussion of this concept).
2. Capability ratio of the state's military capability to the sum of military capability scores of members of its PRIE.

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3. Weighted number of allies of the state (Maoz 1996).
4. Average number of MIDs the state was involved in over the three-year period preceding the current year (Maoz 1997b).
5. Regime change in the state in the four years preceding the current year (coded 0 for no regime change and 1 for regime change).
6. Regime score of the state multiplied by the average regime score of its PRIE.<sup>13</sup>

For the dyadic level analysis I use the two variables mentioned by the statesmen. First I employ the minimum and maximum (high/low) economic wealth percentiles of the members of the dyad to examine how the dyad members are ranked in terms of wealth, relative to all nations in the system. Second, I use a wealth ratio, which is the ratio of the richest-to-poorest members of the dyad. Control variables are the typical variables used in the other analyses. Estimation procedures are cross-sectional time-series regressions, with *AR1* corrections for autocorrelation. Table 6 provides results of the nation-level test, and table 7 provides the results of the dyadic-level test.

As table 6 shows, the impact of economic inequality on national conflict involvement is statistically significant, but the evidence suggests the opposite of what is implied in the leaders' statements. In general, it is the rich who are the more conflict-prone states. Specifically, as the percentile of economic wealth of a state goes up, the amount of conflict involvement (both MID involvement and war involvement) goes up as well. Here, too, the results are not robust. For example, in the nineteenth century, economic wealth has a nonsignificant effect on MID involvement and a significant, but negative, effect on war involvement. The results for the entire period and for the twentieth century are in line with the proposition that rich states are typically more conflict prone than poor states (Maoz 2000a).

The results in table 7 suggest that, just as in the case of the nation-level analysis, as the minimum level of economic wealth of the dyad increases, the more likely is that dyad to engage in conflict. However, the more equal the economic wealth of dyad members (measured by the ratio of the richest member to the poorest), the less likely is the dyad to get entangled in conflict. These results hold for the entire period and for the twentieth century, but not for the nineteenth century.

On the whole, the economic inequality and poverty hypotheses received some support, but this empirical support is neither simple nor extremely robust. First, on the system level, there is some support to the notion that the greater the number of states living in relative poverty,

**TABLE 6. Economic Status and Conflict Involvement of Nations, 1816–1992: Poisson Cross-Sectional Time-Series Analysis**

Independent/Control Variable	Entire Period, 1816–1992	19th Century	20th Century
<b>No. of dyadic MID involvements of a state</b>			
No. of states in PRIE	0.010** (0.003)	0.032* (0.017)	0.007* (0.003)
Capability ratio state-to-PRIE	2.207** (0.736)	2.566* (1.356)	3.123* (1.423)
Weighted no. of allies of the state	-0.005 (0.006)	-0.095** (0.018)	-0.010* (0.005)
No. MIDs state was involved in past three years	0.044** (0.014)	-0.056 (0.067)	0.045** (0.011)
Regime score*regime score of PRIE	-0.012** (0.005)	-0.009 (0.022)	-0.011** (0.004)
Regime change in last four years?	0.138 (0.139)	0.523* (0.209)	0.045 (0.146)
Percentile economic wealth of state	1.057** (0.310)	0.432 (0.712)	1.025** (0.338)
Model's statistics	N = 7,663 States = 154 $\chi^2 = 215.38^{**}$	N = 2,358 States = 47 $\chi^2 = 236.21^{**}$	N = 5,305 States = 136 $\chi^2 = 182.19^{**}$
<b>No. of dyadic war involvements of states</b>			
No. of states in PRIE	0.006 (0.005)	0.068** (0.021)	0.003 (0.005)
Capability ratio state-to-PRIE	1.271** (0.399)	2.388** (0.758)	1.453* (0.770)
Weighted no. of allies of the state	-0.052** (0.021)	0.028 (0.020)	-0.061** (0.024)
No. MIDs state was involved in past 3 years	0.082** (0.017)	0.036 (0.219)	0.076** (0.019)
Regime score*regime score of PRIE	-0.014* (0.008)	-0.014 (0.033)	-0.014* (0.007)
Regime change in last four years?	0.410** (0.151)	0.729* (0.325)	0.338* (0.175)
Percentile economic wealth of state	1.783** (0.423)	-1.191* (1.014)	2.314** (0.637)
Model's statistics	N = 7,663 States = 154 $\chi^2 = 458.30^{**}$	N = 2,358 States = 47 $\chi^2 = 33.13^{**}$	N = 6,580 States = 145 $\chi^2 = 137.89^{**}$

Note: Standard errors in parentheses.

\*  $p < .05$     \*\*  $p < .01$

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the more conflict the system experiences. However, the expectation that increased economic inequality breeds conflict is only partially supported. When we get down to the monadic and dyadic levels, we observe that there is a consistent set of links between economic wealth and conflict. Richer states are more likely to engage in conflict than poorer ones, but economically equal dyads are less likely to engage in

**TABLE 7. Economic Status, Economic Inequality, and Dyadic Conflict, 1816–1992: Probit Cross-Sectional Time-Series Analysis (Politically Relevant Dyads)**

Independent/Control Variable	Entire Period, 1816–1992	19th Century	20th Century
<b>No. of dyadic MID involvements of a state</b>			
Minimum regime score	–0.003** (0.001)	0.003* (0.001)	–0.005* (0.001)
Capability ratio	–0.0002** (0.000)	–0.002* (0.001)	–0.001* (0.000)
Alliance	–0.294** (0.063)	–0.196 (0.131)	–0.368** (0.072)
Contiguity	0.128** (0.013)	0.073** (0.023)	0.143** (0.019)
Minimum percentile wealth of dyad members	0.811** (0.046)	0.423 (0.302)	0.894** (0.148)
Wealth ratio	–0.154** (0.049)	–0.172* (0.089)	–0.161** (0.053)
Model's statistics	<i>N</i> = 57,047 Dyads = 1,136 $\chi^2$ = 188.74**	<i>N</i> = 11,316 Dyads = 260 $\chi^2$ = 33.26**	<i>N</i> = 45,697 Dyads = 1,065 $\chi^2$ = 214.20**
<b>No. of dyadic war involvements of states</b>			
Minimum regime score	–0.005** (0.001)	–0.001 (0.003)	–0.006** (0.001)
Capability ratio	–0.002** (0.001)	–0.010** (0.004)	–0.002* (0.001)
Alliance	–0.480** (0.120)	–0.039 (0.205)	–0.572** (0.136)
Contiguity	0.046* (0.019)	0.082** (0.031)	0.036 (0.022)
Minimum percentile wealth of dyad members	0.534** (0.209)	–0.249 (0.350)	0.647** (0.246)
Wealth ratio	–0.065** (0.064)	–0.164 (0.121)	–0.064 (0.078)
Model's statistics	<i>N</i> = 57,047 Dyads = 1,136 $\chi^2$ = 101.09**	<i>N</i> = 11,316 Dyads = 260 $\chi^2$ = 21.88**	<i>N</i> = 45,697 Dyads = 1,065 $\chi^2$ = 108.89**

Note: Standard errors in parentheses.

\*  $p < .05$     \*\*  $p < .01$

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conflict than economically unequal dyads. Conflict between rich and poor states is more common than between rich states only or between poor states only.

#### *Testing the Effect of Conflict and Democratization on Development*

This hypothesis can be tested on different levels of analysis, but it seems that, in order to be loyal to the spirit of the statement from which it had been extracted, the systemic level is the most appropriate level to analyze it. I used three indices to measure the level of world's economic development. The first two measures are the world's per-capita energy consumption and iron-steel production levels per year. These measures cover the entire 1816–1992 period. Second, for the post-1950 period, I used the world's per-capita GDP in real (1980) prices. Third, I used yearly percentage rates of change on these indices to measure the effects of democratization and conflict on change.

The independent variables for these analyses are the proportion of democracies in the system and the number of MIDs and wars in the system, lagged one year back. Results are shown in table 8. We list only a subset of the analyses on the various dependent variables. The results of the other analyses are fundamentally similar to those reported herein. This analysis suggests, again, that there is some—albeit weak—evidence in support of the hypothesis that conflict impedes the world's economic growth. The evidence that democratization facilitates economic growth on a global scale is more consistent; yet, it is not sufficiently robust to suggest an unequivocal confirmation of these hypotheses. The impact of conflict and democratization on development and economic growth depends on the measure of economic growth used and on the time-horizon. In general, the results for the twentieth century give more support to these hypotheses than do the results for the nineteenth century. This suggests that the linkages between politics—domestic and international—and economics have been more apparent in the twentieth century than in the nineteenth century.

#### *Testing the Democratic Peace Proposition*

The democratic peace proposition was arguably the single most tested proposition by the scholarly international relations community in the last decade and a half. Thus, we will not delve too much into the test of Schroeder's notions derived from this proposition. However, since democracy—or more broadly defined regime type—was used as a

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control in most of the analyses of the other hypotheses, we can address this hypothesis quite simply.

The test of hypothesis E.1, which suggests that democratic states that protect their citizens' rights experience less conflict than those states that do not, is presented in table 6. The results of this table cor-

**TABLE 8. The Effect of Conflict and Democratization on the World's Economic Development: A Time-Series Analysis, 1816(1950)–1992**

Dependent Variable	Independent Variable	Entire Period	19th Century	20th Century
Per-capita energy consumption	Proportion of democratic dyads	105.397** (37.386)	23.958 (30.390)	93.528* (54.284)
	Lagged no. of MIDs	-0.042** (0.017)	0.010 (0.006)	-0.052* (0.025)
	Constant	-26.664 (17.488)	168.999* (65.649)	-884.113** (200.030)
Model's statistics		N = 175 F = 8.49** $\bar{R}^2 = 0.079$ D-W = 1.90	N = 82 F = 1.44 $\bar{R}^2 = 0.011$ D-W = 2.57	N = 92 F = 4.37** $\bar{R}^2 = 0.069$ D-W = 1.83
Rate of change in per-capita iron and steel consumption	Proportion of democratic dyads	2.552** (0.552)	-0.762 (0.880)	3.666** (0.905)
	Lagged no. of MIDs	-0.000 (0.003)	-0.000 (0.001)	0.001 (0.001)
	Constant	-0.022 (0.029)	0.057** (0.017)	0.184* (0.085)
Model's statistics		N = 175 F = 10.27** $\bar{R}^2 = 0.096$ D-W = 1.90	N = 82 F = 1.24 $\bar{R}^2 = 0.006$ D-W = 2.57	N = 92 F = 8.33** $\bar{R}^2 = 0.139$ D-W = 1.83
Percent change in world's per-capita GDP (1950–92)	Proportion of democratic dyads	1.337* (0.448)	NA	NA
	Lagged no. of MIDs	0.000 (0.000)	NA	NA
	Constant	-0.062 (0.041)	NA	NA
Model's statistics		N = 41 F = 4.69** $\bar{R}^2 = 0.156$ D-W = 1.99		

Note: Standard errors in parentheses.

\*  $p < .05$     \*\*  $p < .01$



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roborate Maoz's (2001a) findings. Generally speaking, if Schroeder's notion about the impact of the preservation of human rights within a state on its international conflict involvement ignored the kind of environment the state lived in, then this notion has no empirical support. However, if we do take into account the fact that a spillover effect from domestic practices to international practices can occur only in environments where the preservation of human rights is a general norm, then Schroeder's notion has fairly robust empirical support. This is true especially for the twentieth century. But it appears to apply both to the impact of democracy on MID behavior and to the impact of democracy on war behavior. We can thus suggest that there is a solid foundation in international history, at least in the twentieth century, for a modified version of the belief regarding the idea that domestic protection of human rights has a dampening impact on conflict behavior.

The results for the systemic version of this hypothesis (E.2) are given in table 5. If we control for other systemic factors that may confound the relationship between democratization and peace, then the proportion of democratic dyads has a dampening impact on conflict, but this impact appears to be characteristic only of the history of the twentieth century, but not earlier. This is probably because the networking between democracies in the twentieth century was much more prevalent—thus generating more pronounced spillover effects—than in the nineteenth century. We can thus state cautiously that Schroeder's version of the democratic peace proposition rests upon fairly solid empirical foundations.

### *Testing the Effect of Conflict on Democracy*

Following King Abdullah's proposition, we now examine whether conflict affects democratization. The tests are conducted on the national and systemic levels of analysis. On the national level, I test the effect of conflict involvement on democratization using a cross-sectional time-series regression of regime score (Maoz and Russett 1993). I use two sets of analyses. One is based on a nation-year unit, wherein a state's regime is regressed on a set of independent variables lagged one year back. The other analysis employs the nation-half-decade unit. In this analysis, a nation's average regime score during a given five-year period (starting with its first five years of independence and continuing in five-year intervals) is regressed on a set of independent variables lagged one five-year period back.<sup>14</sup> This kind of analysis is based on the supposition that the effects of conflict on regime structure take more time to materialize.

The independent variables in the analyses include the number of

**TABLE 9. The Effect of Conflict on Democracy and on Development of States, 1950–1992: Time-Series, Cross-Sectional Regression**

Independent Variable	Entire Period 1816–1992	Unit of Analysis	
		Nineteenth Century 1816–1899	Twentieth Century 1900–1992
<b>Nation-Year Unit of Analysis</b>			
Constant	0.377 (0.336)	1.439* (0.624)	0.348 (0.407)
Avg. democracy score of PRIE	0.061** (0.014)	0.055* (0.023)	0.051** (0.018)
Past level of democracy	0.901** (0.012)	0.942** (0.016)	0.891* (0.014)
Lagged no. of MID involvement	0.049 (0.107)	–0.081 (0.190)	0.040 (0.117)
Lagged economic wealth	0.119* (0.061)	0.079 (0.086)	0.133* (0.064)
Model statistics	N = 10,062 States = 158 $\chi^2 = 10,898^{**}$	N = 2,484 States = 48 $\chi^2 = 8,605^{**}$	N = 7,577 States = 149 $\chi^2 = 5,730^{**}$
<b>Nation-Five-Year Unit of Analysis</b>			
Constant	–11.463** (1.824)	0.654 (0.731)	2.367** (0.649)
Avg. democracy score of PRIE	0.163** (0.049)	0.025 (0.021)	0.022 (0.027)
Past level of democracy	0.818** (0.015)	0.949** (0.017)	0.781** (0.017)
Lagged no. of MID involvement	0.167** (0.066)	–0.093 (0.140)	0.158* (0.070)
Lagged economic wealth	0.257* (0.115)	0.393* (0.195)	0.301** (0.116)
Model statistics	N = 2,158 States = 179 $\chi^2 = 4,121^{**}$	N = 540 States = 52 $\chi^2 = 5,626^{**}$	N = 1,617 States = 166 $\chi^2 = 2,546^{**}$
<b>System-Year</b>			
Constant	–0.007 (0.017)	–0.0001 (0.020)	0.012 (0.030)
Capability concentration	0.025 (0.036)	–0.008 (0.047)	0.059 (0.055)
Lagged no. of MIDs	0.001** (0.000)	0.0002* (0.001)	0.000 (0.000)
Lagged proportion of poor states	0.015 (0.021)	–0.003 (0.036)	–0.009 (0.036)
Lagged proportion democracies	0.925** (0.032)	0.964** (0.059)	0.882** (0.049)

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TABLE 9—Continued

Independent Variable	Entire Period 1816–1992	Unit of Analysis Nineteenth Century 1816–1899	Twentieth Century 1900–1992
Model statistics	N = 175 F = 1,148.30** $\bar{R}^2 = 0.964$ D-W = 2.012	N = 82 F = 363.48** $\bar{R}^2 = 0.947$ D-W = 1.977	N = 92 F = 126.08** $\bar{R}^2 = 0.846$ D-W = 2.039
	<b>System Five-Year</b>		
Constant	–0.164 (0.137)	NA	NA
Capability concentration	0.153 (0.138)	NA	NA
Lagged no. of MIDs	0.001** (0.000)	NA	NA
Lagged proportion of poor states	0.215 (0.166)	NA	NA
Lagged proportion democracies	0.670** (0.091)	NA	NA
	N = 34 F = 28.37** $\bar{R}^2 = 0.768$ D-W = 1.931		

Note: Standard errors in parentheses.

\*  $p < .05$     \*\*  $p < .01$

MIDs (or wars) the state was involved in during the last year or five-year period, the state’s level of economic development, and the average regime score in the state’s politically relevant environment. Table 9 provides the results of this analysis. Table 9 suggests that conflict involvement does have an impact on democratization at both the monadic and systemic level, but (1) the impact is, by and large, positive, as opposed to the negative impact that was expected by King Abdullah and by Thompson (1996), and (2) it is not especially robust. Thus it appears that conflict may be an excuse for avoiding democratization, but it is empirically related to greater rather than lower rates of democratization.

**CONCLUSION**

Where do we stand now compared to the exercise that Singer and Small (1974) attempted over thirty years ago? Before we perform this comparison, we must keep in mind several caveats. First, the Singer and Small article was principally a didactic exercise. They called for a re-education of the world’s leaders to include more pertinent empirical

knowledge on the issues they were dealing with, in general, and on war- and peace-related issues, in particular. The empirical analyses contained in that article were of a primarily heuristic value. Second, the evidence that we have today on these matters is based on a considerably richer database than that available to Singer and Small in the early 1970s. Third, the statistical and programming tools available today are almost incomparable to the ones available to scholars of international conflict at that time. Clearly J. David Singer's contributions were invaluable in terms of the upgrading of the level of data and the quantum improvement in the quality and sophistication of quantitative research on war and peace that characterizes current scholarship. In light of these improvements, the comparison of our findings to Singer and Small's is like comparing the speed and quality of computing and programming using a 1940s von Neumann computing machine to that of a supercomputer in the twenty-first century.

With these caveats in mind, we can say that our effort to examine the empirical foundations of leaders' beliefs about international affairs leads to more encouraging conclusions than those of Singer and Small thirty years ago. First, we corroborated some of Singer and Small's findings regarding the "war begets war" hypothesis and some of the control variables' effects on this notion. However, when we expanded this hypothesis to the "conflict begets conflict" version, we found that leaders' notions about this fact have substantial empirical support. More important, the history of the twentieth century adds considerable credence to the "conflict begets conflict" notion.

Second, with respect to the statements extracted from leaders' speeches at the UN Millennium Summit, we emerged more hopeful regarding the correspondence between leaders' beliefs and the empirical record. Admittedly, our sample of leaders' beliefs is quite small and probably unrepresentative of the whole. But on the basis of what we did examine, we can say that most of the hypotheses derived from these statements receive at least some degree of empirical support. One can also say—this may be more true with respect to some of the hypotheses than others—that leaders of the early twenty-first century are more attuned to what scientists find out than they have been in the past.

Let us now summarize what we have found when we compared leaders' notions about international conflict to the actual empirical record.

1. *The "Conflict Begets Conflict" Hypothesis.* This hypothesis appears to be strongly supported for short-of-war militarized interstate disputes, but not with respect to war. Specifically, it is fair to say that "MIDs beget MIDs" but "wars do not beget

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wars.” What we did discover (see, e.g., the bottom part of table 6) is that “MIDs beget war.”

2. *Intervention and the Duration of Civil Wars.* This hypothesis appears to be clearly supported by the empirical record, at least in the twentieth century. This is true both as to the question of whether or not outside intervention occurs in the course of a civil war and also with respect to the question of how many outside states have intervened in a civil war. This notion holds even when we control for other factors that may affect civil war duration. This hypothesis has not—to the best of our knowledge—been examined by previous research. The support for this hypothesis provides a number of interesting policy-relevant suggestions.
3. *Multipolarity Affects Peace.* This proposition appears to have some support. It must be noted, however, that the general record of tests of the relationships between multipolarity and peace is mixed at best (e.g., Bueno de Mesquita and Lalman 1988). We need, therefore to take this support as very qualified and tentative.
4. *Inequality, Poverty, and Conflict.* There is some empirical support to the notion that economic inequality and poverty breed conflict. This is true at the systemic level where in some cases the level of inequality in the system and the proportion of states below the poverty line is significantly related to the number of MIDs and wars in the system. However, it is typical that richer states are more conflict prone than those that are poor, and the higher the level of economic equality between states, the more likely they are to engage in conflict. This corroborates a more structural analysis of conflict-proneness and pacifism (Maoz 2000a).
5. *Democratic Peace, Democratization, and Economic Growth.* It does seem that conflict has an adverse impact on economic growth as measured by energy consumption, but this does not apply to other—some more commonly used—measures of wealth. Here, too, there is some empirical evidence that leaders’ beliefs are grounded in reality, but the evidence is far from clear and unequivocal.

The question is whether the glass is half-full or half-empty. The good news is that there is some evidence that supports leaders’ beliefs. However, the bad news is that the evidence is neither sufficiently strong nor sufficiently robust to justify the level of conviction that comes out of

these statements. There still is a need to educate leaders not only to use more cautious language when it comes to identifying the causes of conflict and the conditions for peace, but also probably to place some of their beliefs in a more tentative mode. It is fair to advise them to be more cautious about those issues prior to making policy based on such beliefs.

#### NOTES

1. For texts of these statements see <http://www.un.org/millennium/summit.htm>.

2. A vast majority of the leaders' speeches were of that nature, i.e., dealing with their own states' or regions' specific disputes and the conditions for their resolution.

3. Finally, I have only reviewed statements that had an English version. There were quite a few statements that were not given in English, and no English version was available for them. Those were omitted.

4. Note that, following the Norwegian and Pakistani statements, the complementary proposition is also raised, namely, that economic development and prosperity breeds peace.

5. The data can be downloaded from the COW2 website at <http://cow2.la.psu.edu/cow2dslist.htm>.

6. There is a regional coding for Oceania, but no civil war observations for this region.

7. Data for the last two variables is obtained from the Polity IV data set.

8. Ethnic composition data set can be obtained in the COW2 Project website.

9. The formula is  $\frac{m}{2} \binom{m}{2} - 1$  for even  $m$  and

$$\frac{\binom{m-1}{2} \left( \binom{m-1}{2} - 1 \right)}{2} + \frac{\binom{m+1}{2} \left( \binom{m+1}{2} - 1 \right)}{2}$$

for odd  $m$ .

10. Maoz (2001) discusses the notions of networks in the context of testing the democratic peace proposition across different levels of analysis. He defines a network as a set of at least three states that (1) are politically relevant to each other and (2) share a common property or are linked by some trait. Accordingly, an alliance network is a set of at least three states that are politically relevant and allied with each other. This is what network analysis calls *cliques* (Wasserman and Faust 1994, 253–57). A democratic network is a set of at least three states that are politically relevant to each other and are democratic. The proportion of states in alliance nets is the set of states in alliance nets divided by the number of the politically relevant dyads. For a more general discussion of these concepts see Maoz et al. (2002).

11. This program can be downloaded from Stata's website (STB-46). See [www.stata.com](http://www.stata.com).

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12. I ran a similar analysis on the number of civil wars in the system and found both the Gini index of economic inequality and the proportion of states below the poverty line to be significantly related to the dependent variable in both the entire period and in the twentieth century. I do not report this in detail because it is not directly derived from the leaders' statements. But it is a fact worth noting.

13. Based on the finding by Maoz (2001) that the monadic version of the democratic peace works (that is, democracies are *generally* less conflict prone) if we take into account not only the regime of the state, but also the regimes of other states in its politically relevant environment. This specific version of the regime measure is also relevant for testing the E.1 hypothesis (discussed later).

14. The values of independent variables are also averaged over the preceding five-year period.