

Identifying and Classifying Complex Interstate Wars

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This article takes a closer look at multiparty wars in the modern state system. Because wars are different, a classification system of interstate wars is useful for theoretical concerns and empirical testing. We label multiparty wars “complex” because we believe that the processes that bring them about are much more complicated and difficult to understand than dyadic wars. Complex wars are identified and classified on the basis of their size, the issue that gives rise to them, and whether they are preceded by certain behavioral processes. To see if the classification is empirically useful, a set of empirical expectations on which wars should differ is derived and employed to conduct a series of tests. It is found that dyadic wars are associated with different patterns from complex wars, and that within the set of complex wars, the larger wars differ from the smaller ones on several dimensions. It is also found that larger wars and wars over certain issues are likely to be preceded by different behavioral processes, especially in terms of the use of power politics practices. The classification breaks down each complex war into its component dyadic participants on a number of variables so that one can compare originating dyads with each joiner dyad to show how wars differ according to type.

Not all interstate wars are alike. Yet quantitative scholars typically treat them as if they are. This was true of early analyses of the interstate war data (like Singer and Small 1968; Bueno de Mesquita 1981) as well as later ones.² It is equally true of analyses of the more recent data on militarized interstate disputes (MIDs) (see Bremer 1992; Senese and Vasquez 2008). Sometimes scholars look at certain

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² For example, Geller and Singer (1998:156 note 1) state: “...the explanation of war presented in this book treats all wars as the product of a set of factors drawn from multiple analytic levels.”

kinds of wars because they have data on only certain types of actors. For example, Levy (1981) looks only at wars involving “great powers” because his data on alliances is confined to alliances that have a great power. The reason scholars are reluctant to break down wars into types is that they believe a good scientific theory should explain war across time and space, and that the best theory is a highly generalizable one.

However, a careful look at the statistical findings that have accumulated over the years suggests that a single theory is not apt to account for all war occurrence, because certain kinds of wars seem to be associated with different statistical patterns (see Vasquez 1993: chapter 2). They have, if you will, a different behavioral footprint. Wars between major states, for example, seem to be different from wars between major and minor states, and wars between exclusively minor states. The main question directing this analysis is what characteristics differentiate wars, specifically complex (multiparty) wars from dyadic wars.

A few scholars have recognized theoretically that some wars are different. The two major schools that do this are the power transition and the long-cycle schools (for overviews see Organski and Kugler 1980; Modelski and Thompson 1989). The power transition explanation is confined to wars between the top two or three most powerful states in the system (see also Wayman 1996). The long-cycle school develops a theory of war confined to “global wars” over leadership of the global system. It then posits that a long cycle (of power) is associated with the outbreak of these global wars. Neither the long-cycle nor the power transition schools attempt to develop a typology of all interstate wars, but instead select out those wars that their theory is trying to explain. This implies that other wars require some other theory to delineate their causes.

Sometimes the difference between types of wars is recognized indirectly by saying that war is multicausal (Levy 1989:227, 279, 281; Vasquez 1993:48–50). Both Levy (1989) and Vasquez (1993) emphasize that there can be distinct causal paths or sequences that precede certain wars. The power transition and long-cycle schools posit two such causal paths. Levy (1989) points out others (such as those posited in the diversionary theory of war). Vasquez (1993) has delineated certain steps to war as embodying one path to war. If some wars have one set of causes and other wars another, this seems to require two different explanations and two statistical models. In either case, when the factors associated with the onset of war differ depending on the sample, this implies that a classification of wars would improve not only statistical analysis, but theoretical understanding.

The purpose of this article is to begin to differentiate interstate wars on what are seen as important theoretical dimensions. This is done based on the assumption that seeing certain wars as different will help us elucidate the underlying causal processes that lead to one kind of war but not another. We anticipate that a classification of wars will serve at least three purposes. First, it will differentiate phenomena that are currently seen as a single phenomenon with one set of causes, but in fact may have different causal processes. In particular, the analysis will distinguish wars that are fairly simple in terms of their underlying causal structure from those that are much more complicated. Ultimately, whether it is the case that certain wars have different causal processes is an empirical question, but such a question cannot be investigated without some classification of wars.

Second, this analysis will seek to identify some of the key dimensions on which interstate wars differ. To determine whether certain classes of war have different causes from others involves grouping wars. The classification of war project offers three different dimensions on which wars can be grouped. Again whether these are the best dimensions is a subject for further investigation. For now, we have two more modest goals: to examine whether such dimensions can meet the minimum criteria of a scientific typology—that is, can the dimensions be used to

classify wars into mutually exclusive and logically exhaustive categories (see Bailey 1994)—and whether the delineated types of wars are associated with different empirical patterns.

Third, the analysis develops a typology of wars in order to improve both quantitative and theoretical analyses. If wars with different causes are grouped together in an undifferentiated fashion, as is the case now, this will weaken statistical associations. A typology of wars can aid in stipulating the proper domain of an explanation (Most and Starr 1989). We also hope it will permit scholars to do more theoretically-informed case studies. These will aid the field in tracing out the processes by which states enter wars and how these processes might differ and exhibit different paths to war.

How should one go about classifying wars? To a certain extent this is a chicken and egg problem. One wants to classify wars so that the classification clearly distinguishes the alleged different causal processes, but such a classification is difficult to create without knowing what the causes of war are. We begin with some reasonable hunches of the factors that might be consonant with the actual underlying causes. There are three obvious dimensions on which wars could differ that might have some relationship to their underlying causes. The first is their size or the number of participants. The second is the issue or grievance that gives rise to the war, and the third is the behavior that precedes the war. Since we cannot look at all behaviors, we look at one set of behavior that is often seen as relevant to war and peace: power politics (whether, and the extent to which, it is present). In this study we focus primarily on the first and third dimensions—size and power politics behavior.

We begin by dividing wars into two fundamental types based on their size. We maintain that those involving just two states, what we call *dyadic wars*, are the simplest to understand and that the second group, those involving three or more states, what we call *complex wars*, involve more complicated processes that have heretofore not been sufficiently recognized. We then further classify the complex wars and break them down into more refined types.

The other factor we examine to classify wars is behavior. Wars that have different causes should be preceded by different behavioral profiles. This is not a controversial assumption; the real problem is to delineate the different types of behavioral profiles. Here we look at the use of power politics foreign policy practices and the extent to which dyads resort to outside alliances, repeated confrontations (thereby becoming rivals), and arms racing as a way of gaining leverage prior to the crises that bring about war. Since power politics is a frequent form of behavior, wars preceded by it should be different from those which are not. Unlike the first factor—size—this factor is a process variable. In addition, wars can be further broken down by the number and type of power politics practices that are present.

After analyzing the conceptual problems involved in identifying and classifying wars on these two dimensions, we present the research design which outlines a set of rules for operationalizing our types, and we present a set of empirical expectations to probe the empirical validity of the classification. Next, we classify all complex wars from 1816 through 1997 and present test results on whether, and on what basis, wars differ. We discuss the implications of the findings in detail.

Identifying Complex Wars

If one observes interstate wars and thinks about what might make them different in terms of the processes that bring them about, one obvious difference is that most wars are between two parties and occasionally three, while only a few have a large number of participants. Long ago, Richardson (1960:258–259) observed that the typical war in international history is the two-party war. Since multiparty

wars are rarer, they are likely to have additional or different causes than two-party wars. Rare events, such as these, can be explained in two ways. One way is to argue that they must be preceded by different or additional variables from frequent events; otherwise they would not be rare. A second way is to argue that rare events are simply outliers due to chance. Which explanation is true is an empirical question, but the rare events must be identified first. Are large wars inherently more complex, so much so that they should be separated out as a class? Does size introduce a level of complexity that warrants it being a foundation for building a classification system? These are the kinds of questions that motivate this study.

Bremer (1995:8–9) gives some reasons for thinking that the answer to both of the above questions is affirmative. He goes further than Richardson in specifying why a separate explanation is needed for larger wars (see Yamamoto and Bremer 1980). He maintains that large wars often expand and grow out of smaller (typically dyadic) wars. He suggests that the factors bringing about war in the first place (the onset of war) are likely to be different from the factors that make states join an ongoing war. War expansion, Bremer strongly believed, required a separate explanation and data analysis from war onset. We agree with Bremer's supposition, and we suspect that, if anything, he underestimated the complexity of the processes that bring about multilateral wars. For Bremer, very large wars can grow out of small wars (often two-party, as did World War I [Austria-Hungary/Serbia] and World War II [Germany/Poland in Europe]).³ Because large wars can grow out of smaller wars, models of diffusion and contagion seem relevant for explaining them (see Yamamoto and Bremer 1980). Such models are relevant even for those like Bueno de Mesquita (1981) who thinks that both small and big wars are preceded by the same necessary conditions, because shared necessary conditions (like a positive expected utility for war) imply nothing about shared sufficient conditions, nor does it mean that diffusion processes are not at work.

There have not been many empirical studies on large wars. Sabrosky (1985) makes an important distinction between the mere expansion of war and its enlargement to include a major state on each side. Alliances as a diffusion mechanism for war expansion are the focus of much of the work of Siverson and King (1979) and Siverson and Starr (1991); see also Leeds (2005). Likewise, formal analyses by Altfeld and Bueno de Mesquita (1979), Smith (1995), and Siverson (1996), look at war onset and expansion in terms of alliance commitments and selection effects.⁴ Territorial contiguity has also been seen as an important diffusion mechanism (Most and Starr 1980; Siverson and Starr 1991). These kinds of studies have led several scholars to consider if "big wars" are so different that they require a different theory to explain them (cf. Bueno de Mesquita 1990; Midlarsky 1990; Thompson 1990). Not much has been done on "big wars" since the 1990s. What studies have been done suggest that "big wars" have more

³ Nonetheless, scholars tend to over-estimate the number of multiparty wars that begin as dyadic wars. Not all wars start out as two-party wars. We find that 18 of the 28 complex wars (64.2%) escalate immediately (on the first day) to a multiparty war. These cases include: Roman Republic, Crimean, Second Schleswig-Holstein, Seven Weeks, Franco-Prussian, Boxer Rebellion, Third and Fourth Central American, First and Second Balkan, Hungarian (1919), Nomohan, Palestine, Vietnamese, Six Day, Yom Kippur, Ethiopian-Somalian, and Ugandan-Tanzanian. If the first three days are used, there are an additional four wars 22/28 (78.6%) that begin as multiparty wars: the above plus Korean, Sinai, World War I, and World War II. Using day 4 adds the 1859 War of Italian Unification and using day 5 adds the Austro-Sardinian War of 1848. After five days only four wars are added: Pacific, Lopez, Spanish-Chilean, and the Persian Gulf War.

⁴ Smith (1995) for example, argues that alliances prevent war when commitments are credible and that war occurs when alliances commitments are not perceived that way. While this logic follows nicely, such models have not been rigorously tested empirically and often assume, as in Smith's case, that the logic of conventional deterrence actually works to prevent armed intervention.

complicated causes than two-party wars. For this reason we label them *complex wars*, and not the more conventional *multilateral wars*.

For us, multilateral wars are more complex than dyadic wars, which in comparison are more straightforward in their underlying causes. A given dyadic war is apt to have a fixed set of causal processes preceding them. Explaining historically why two states go to war involves studying only two sets of decisions or the conditions of two states. The study of multilateral wars involves many more units of observation. One must look at the various originators that start the war as well as those that join later. In addition to the sufficient conditions that might bring about the war initially and cause its expansion, one must also see if there are diffusion processes operating. Lastly, it is not unlikely that some dyads within the larger war will fight for some reasons different than other dyads. All this adds to the complexity of multilateral wars.

It is logical to also ask whether within the class of multilateral wars some wars are more complex than others, and if so, how these wars might be grouped. From the beginning of the scientific study of war, even those who have eschewed looking at types of war have always seen certain multilateral wars, namely world wars, as different. What makes them different? One thing is their size, another is the fact that they tend to be total wars both in their objectives and the means used to fight them. Lastly, they involve all the major states in the international system and often settle the major issues on the global agenda which makes the war a watershed event, thus giving rise to a new historical era. It is not surprising that some scholars have argued that the onset of world war requires its own explanation; Midlarsky (1988) does this, as does Vasquez (1993: chapter 7).

However, selecting out world wars does not provide a classification of other multilateral wars. In this study, we will attempt to provide such a classification and in the process identify the underlying dimensions that we think are most theoretically relevant for explaining why these wars are large and how the complex wars, themselves, might differ from each other. Of no small importance in such an effort is a discussion of how one classifies wars in a scientific manner and the unique problems complex wars pose to constructing a classification.

We begin by operationally defining complex wars, simply as multilateral wars or all wars involving more than two parties (see Vasquez 1993:71). The number of state participants is seen as critical, not only for identifying the initial set of complex wars, but also for providing a rough measure of the degree of complexity within complex wars. Treating this as an integer variable would attribute too much precision to the measure, so we set various thresholds to distinguish levels of complexity. Thus, although complex wars can range from three-party wars to n -party wars, with the largest involving most of the major states in the system, we group them into four categories.

The key point and the assumption of this measure is that the sheer size of a war can make things more complicated. This has always been known in terms of fighting large wars (various fronts) and even dealing with them diplomatically (negotiating with allies, coordinating and integrating different goals, and dealing with the problem of a separate peace). Whether the size of a war reflects different underlying causal processes that makes it useful to distinguish wars according to their size has been less appreciated.

One way of illustrating how size introduces complexity is to conceptualize complex wars not simply by the number of states involved, but by the number of dyads fighting each other. The larger the war, the more difficult it is to study because treating participants dyadically quickly leads to an exponential growth in the number of observations that must be studied. We assume a dyadic approach is worth this cost because it better captures decision making about entering a war. A country that decides to go to war when there is more than just one

opponent must look at its chances for success against a coalition and its disagreements with each opponent. Sometimes a country will avoid declaring war against a member of a war coalition,⁵ but normally it realizes that it will end up at war with all members of a coalition, and must examine its relations with each potential belligerent. Multilateral wars, then, are inherently complex because they involve multiple sets of decisions, at minimum, one for each dyad involved.

An increase in dyads also increases the possible combinations of strategic coalitions. A four-party war, for instance, may produce a war of three against one or two against two. The 1956 Suez War reflects the former. A fifteen-party war, like World War I, leads to a very large number of possible dyads. It can lead to further complications, particularly if some states, like Bulgaria and Romania, enter the war to fight their own dyadic wars. Very large wars, especially world wars, can be seen as umbrella wars where a number of minor states fight out their own private wars (see Vasquez 1993:245).

Another question worth looking at that illustrates how big wars are more complicated and more difficult to study is just how many dyads are actually fighting each other. Likewise, we might want to look at other things about the warring dyads that might provide a hint as to the underlying processes that lead states to either go to war initially or later join the ongoing war. One variable would be the issue that leads a state to fight a war against another state. Clearly this might vary by dyad. So too might considerations of whether a possible opponent is an existing rival. Being allied to a belligerent is already documented as an important diffusion mechanism, as is bordering a belligerent (Siverson and Starr 1991). All of these are factors that make an analysis of a multiparty war more complicated than a straightforward two-party war.

There is one other factor that leads us to distinguish dyadic wars from multiparty wars and makes us believe the latter are more complex. This has to do with the idea that large wars may embody two distinct paths to war—the path that leads the initial belligerents to war and a second path by which joiners come to war (Vasquez 1996:535–536, 547). This *second path to war* is important because, it may be the case that if it were not for diffusion mechanisms certain joiners would never have gone to war with each other in the first place. For example, Britain would not have gone to war against Austria-Hungary to defend Serbia if Germany (the ally of Austria-Hungary) had not attacked France (and attacked France through Belgium to boot). Nevertheless, Britain ended up actually fighting Austria-Hungary (on the Italian front) because its coalition partners were at war with Austria-Hungary. Although such questions have been asked by historians, they have been rarely asked in quantitative analyses of war. Our attempt to classify complex wars helps us to ask and address such questions within a larger generalizable theoretical structure.

We have argued that complex wars involve two different paths to war in that the causal sequence that brings in initial belligerents is apt to be different from the path (or causal sequence) that brings in subsequent belligerents (joiners). How do the operating causal sequences differ across the two paths? One way they differ involves the effect of “opportunity.” An ongoing war may provide an opportunity for non-belligerents to settle previous grievances which they might not choose to pursue in the absence of a war environment. Also we think diffusion and contagion processes are at work in war-joining that are not at work in war onset.

Nonetheless, it could be the case that large wars do not result from two paths or sequences to war, but from a single set of factors. Big wars may result from a set of multiple conjunctural causal conditions in which several variables come

⁵ Italy tries to do this in World War I, unsuccessfully, by not declaring war against Germany and only Austria-Hungary (Stevenson (2004:92).

together to produce rare events (see Bremer 1995:18–25; Geller 2004:232–233).⁶ This unusual concatenation of factors may be the true cause of big wars with diffusion playing little or no role. This seems to be the position of Midlarsky (1988) and those that look at systemic factors, like Thompson (1988). From this perspective, the causes of World War I would be seen as inherent from the onset even though other states join later. Yet a third position would be one where the causes of both dyadic and complex wars are the same, but additional factors (like those associated with diffusion) are required to explain war expansion beyond the initial war.

Whether our assumed causal path model or a multiple conjunctural causation model (see Ragin 1987) is the best explanation of big wars is an empirical question and somewhat outside the scope of this analysis. What we seek to do here is to identify and measure the size of wars to see if they have different characteristics. While we assume that wars with different characteristics will have different causes, how those causes should be modeled will need to be analyzed elsewhere. We turn now to how complex wars can be identified and classified.

Classifying Complex Wars

The first factor we examine to classify a complex war is the size of the war as calculated by the number of warring dyads. Theoretically, it is not unreasonable to expect that the size of wars has real limits and that wars that are very large have reasons for being so, and these reasons are not present in smaller wars. Indeed, even medium-sized wars may have identifiable factors related to their particular size—for example, certain factors that promote expansion and others that limit expansion. We anticipate that the larger wars will have different causal processes preceding them and that these wars are good candidates for uncovering diffusion processes that operate in what we have called “the second path to war.”

To the size dimension, we add the nature of the coalitional structure of the war. Is the war two against one, three against one, and so forth? Understanding coalitional structure is a way of getting at strategic calculations that might be involved in the decision to join an ongoing war, albeit in an indirect manner. While strategic calculations are not the only reason for joining a war, and may not be the prime reason, they are an element. Joining a war often involves a calculation as to which side will win, and it is not unusual, especially in a world war, for opposing sides to bargain with neutrals (and vice versa) in attempts to get them to join their side.⁷

Rather than measuring the various strategic calculations that occur prior to the war, our indicator of coalition structure looks at the overall effect of the joint calculations. It measures the outcome of these calculations and distinguishes wars accordingly. The main advantage of this measure is that it is straightforward and reliable.⁸ We simply count the number of countries on each side. The point of such a measure, it must be remembered, is to try to distinguish wars. All that this measure indicates is that wars with different coalitional structures are embodying different strategic calculations.

An alternate measure of size that was considered is nation-months, the standard Correlates of War measure of magnitude. We decided against using this measure for two reasons. First, “months” measure the “duration” of war, which is a function of relative equality of the sides and is a variable that is more apt to

⁶ Our thanks to one of the anonymous reviewers for suggesting this point.

⁷ For example, in World War I, Italian decision makers were spurred on to enter the allied side because they thought the allies would win, and if they waited too long they would not be needed as much and could not exact an optimal price for their entry (Stevenson 2004:91).

⁸ Whereas looking at prior calculations is difficult because they can be hidden.

tap the dynamics of fighting and commitment levels rather than causal factors related to war expansion. Second, our size measure is related to the number of states on each side, which Richardson (1960: chapter X) also uses and we want to replicate his early findings. Nevertheless, to see if the “magnitude” of war would produce very different results, we did examine it and we will present the results briefly.

In addition to size, another factor that we use to classify wars is whether they are preceded by power politics practices. We examine three power politics practices: outside politically relevant alliances, escalating rivalry, and arms races. The wars that have at least two of the three main power politics practices preceding conflict are classified as power politics-related wars, although one could also group the wars along a continuum from none to all factors present. We also examine each specific power politics practice. In doing so, we further break down rivalry into two variables—whether the rivalry is a proto- or enduring rivalry according to Diehl and Goertz (2000:44–45) and whether it is an escalating rivalry (see Valeriano 2006). Having identified two main theoretical dimensions by which we will classify complex wars, we now turn to how we operationalize these factors and how we come up with a list of dyad participants in complex wars. Lastly, we present our test design for assessing the empirical utility of the classification.⁹

Research Design

Operational Rules

The first step we take to identify complex wars is to come up with a list of all participants in each of the wars so we can distinguish dyadic wars from complex wars. The Correlates of War project has a list of interstate wars on which side each participant fought. We are drawn to their list because it includes only states that meet a certain threshold of involvement, so that countries that have merely declared war, but have not actively participated are eliminated. These data (Small and Singer 1982) and updates (Sarkees 2000; see also Sarkees, Wayman, and Singer 2003) form the foundation for the analysis.

One of the problems in developing a list of war dyads that was unexpected is that the Correlates of War project’s war data only lists which states are on which side and do not explicitly identify dyadic pairings. These pairings are obvious for most wars, but not for the world wars. To get pairings we also consulted the MID data of the Correlates of War project. The MID3.02 data records all the participants of every threat or use of force including those that escalate to war (see Ghosn, Palmer, and Bremer 2004). However, when using these data to create dyadic pairings, we found several dyads where the parties had neither declared war nor been at war; for example, Romania and China in 1941.

To deal with such problems we took several steps. First, we used Small and Singer (1982:83–99) to eliminate dyads that did not have overlapping dates of participation. Thus, Italy-Netherlands is not considered an accurate pairing because the Netherlands left the war on May 14, 1940, and Italy did not enter until June 10, 1940. Second, we compared the resulting list with a list of states that legally declared war on each other. For World War I, Goldstein (1992: Appendix A) was used to determine which participants were legally at war. For World War II, Wright’s (1965:1539–1540) list of participants declaring war was used. Third, to get some sense of the level of involvement in the war (including fatalities) the Maoz (2005) MID data was consulted, since it eliminates

⁹ Elsewhere (Vasquez and Valeriano 2010) we have also classified wars based on a third set of factors, the issues that give rise to them, whether wars arise out of territorial disputes, disputes over the regime of a state, or disagreements over a state’s foreign policy. This is not done here for reasons of space.

dyadic pairings that do not engage in armed action toward each other or do so at a level below 1,000 battle deaths. Dyadic pairings on the COW list were deleted if they were neither on the legal declaration of war list nor in the Maoz data; in other words, if they were on one of these other two lists they were retained.

Through the above procedures a number of dyads that would have been erroneously included by a straightforward coupling of participants on opposite sides were eliminated. For World War I seven dyads were deleted, and for World War II, more than 20 dyads were eliminated. Our next step is to delineate the operational rules for classifying complex wars. We begin with the size principle. Once we have a list of participants that satisfy our threshold concerns, then we can easily determine the size of the war by counting the number of dyads. Complex wars can then be classified according to the number of dyads, ranging from wars with two dyads, three dyads, and so forth, all the way to the largest war in the data. The classification of each complex war (as an aggregated unit) is presented in Table 1 with its size recorded.

The last issue that needs to be addressed is how to determine where one war ends and another begins. This is important for identifying the initial belligerents and distinguishing them from joiners. This problem is more difficult in previous historical periods; for example, with the Thirty Years' War and the Napoleonic Wars (for the former, see Levy 1983). The only instance where this problem arises in the 1816–1997 period is with World War II. We treat it as one war. The initial belligerents (or originators) are distinguished from later joiners by using the first day of entry. The dates used are derived from the Correlates of War project (see Small and Singer 1982:47–50) and at <http://cow2.la.psu.edu/>, which can also be consulted to find a list of initial belligerents and joiners by looking at the date of entry). For World War II, we identify Poland and Germany as the initial belligerents on September 1, 1939 with France, Britain, and the Commonwealth nations joining on September 3, 1939. We identify the USSR, Japan, and the United States as joining in 1941.¹⁰

Once the number of dyads is identified then the coalitional structure of the war can be measured by comparing the number of states on each side. A categorical index is created for the typical sort of coalitions one would expect to find. Thus, a dyadic war can only have a 1 vs. 1 coalitional structure, a complex war with two dyads is likely to have a 2 vs. 1 structure; a war with four dyads, however, could have 4 vs. 1 or 2 vs. 2.¹¹ It must be emphasized that the coalitional measure is treated as a categorical measure. Even though the larger codes indicate a higher degree of complexity, we are not, at this point, positing that each category is always more complex than the one it proceeds.

In addition to size, we seek to classify wars according to some of the behavioral processes that precede them. Our second set of indicators for classifying wars is the extent to which the participants have politically relevant outside allies, are rivals, and/or are involved in an arms race (prior to their involvement in the war). Again these factors are seen as theoretically significant because certain explanations, like the steps-to-war explanation, see crises that have these attributes as more apt to escalate to war. We would assume that some dyads (but not necessarily all) that come to war with each other by joining an ongoing war may

¹⁰ An alternate view might be to see the United States joining the 1937 Sino-Japanese War. We do not do this because Japan is unlikely to have attacked Pearl Harbor if Germany were not already at war in Western Europe and in the USSR. (See Iriye's [1987:162] discussion of the debate in Japan over the Northern strategy [attack the USSR] and the Southern strategy [attack the United States and Britain].)

¹¹ The codes are: 1=1v1, 2=2v1, 3=3v1, 4=4v1, 5=5v1, 6=6v1, 7=7v1, 8=8v1, 9=9v1, and so forth to 15=15v1. Beyond that, the codes do not follow a logical progression, but label particular wars in the data. Thus, code 20 refers to 14v2, code 21=8v3, code 30=11v4, code 31=18v7.

TABLE 1. Classification of Interstate Complex Wars

War #	War name	Start	End	Nation-months	Rival type	Escal rival	Ally	Arms	Issue rev type	#Dyads	Coalition	Scale
Small Multiparty Wars—Type 2—Non-Power Politics Wars												
88	Third Central American	1906	1906	4.0	1	0	0	0	3	2	2	2
91	Fourth Central American	1907	1907	4.0	1	0	0	0	0	2	2	2
112	Hungarian	1919	1919	6.0	1	0	0	0	1	2	2	2
46	Second Schleswig-Holstein	1864	1864	6.0	1	0	1	0	1	2	2	2
49	Lopez	1864	1870	124.0	2	0	1	0	4	2	2	2
64	Pacific	1879	1883	112.0	2	0	1	0	1	2	2	2
148	Palestine	1948	1948	32.0	1	0	1	0	1	5	5	2
Small Multiparty Wars—Type 2—Power Politics Wars												
28	Italian Unification	1859	1859	4.0	2	1	1	0	1	2	2	2
52	Spanish-Chilean	1865	1866	10.0	2	1	1	0	4	2	2	2
136	Nomohan	1939	1939	10.0	3	0	1	1	1	2	2	2
189	Ethiopian-Somalian	1977	1978	14.0	3	1	1	0	1	2	2	2
190	Ugandan-Tanzanian	1978	1979	10.0	2	1	1	0	1	2	2	2
10	Austro-Sardinian	1848	1848	12.0	2	1	1	0	1	3	3	2
16	Roman Republic	1849	1849	5.0	2	1	1	0	2	3	3	2
100	First Balkan	1912	1913	14.0	3	1	1	0	1	3	3	2
157	Sinai	1956	1956	1.5	3	1	1	0	2	3	3	2
169	Six Day	1967	1967	0.5	3	1	1	0	1	3	3	2
22	Crimean	1853	1856	88.0	2	1	1	0	2	4	4	2
58	Franco-Prussian	1870	1871	19.0	3	1	1	0	4	4	4	2
103	Second Balkan	1913	1913	3.0	2	1	1	0	1	4	4	2
82	Boxer Rebellion	1900	1900	7.5	3	1	1	0	2	5	5	2
181	Yom Kippur	1973	1973	2.5	3	1	1	0	1	5	5	2
Medium-Sized Wars—Type 3												
163	Vietnamese	1965	1975	621.0	2	1	1	0	3	7	7	3
211	Gulf War	1990	1991	32.0	3	1	1	0	1	13	13	3
55	Seven Weeks	1866	1866	23.0	2	1	1	0	1	24	21	3
151	Korean	1950	1953	873.0	2	1	1	0	1	28	20	3
World Wars—Type 4												
106	World War I	1914	1918	1,322.0	2	1	1	1	2	37	30	4
139	World War II	1939	1945	2,178.0	1	1	1	1	1	66	31	4

also be brought into the war by these factors. In other words, these three factors not only help to bring about war initially, but may also act as diffusion factors in the spread of war. Likewise, the steps-to-rivalry model (Valeriano 2003) sees each of these practices as steps and factors that produce recurring disputes. They are also in a condition of rivalry between the contending states, which acts as a diffusion mechanism.

From this theoretical perspective, we are led to classify complex wars according to how they may have reflected the impact of these factors. Of course, we are not directly assessing this impact, but simply recording whether these factors are present in the intervening dyads. We cannot assess the causal impact of these factors because we are only looking at wars and not the sufficient conditions that give rise to war. Other analyses that do examine sufficient conditions have provided evidence that each of these factors increase the likelihood of war onset (Senese and Vasquez 2008). Thus, we feel justified in using the prior presence of these factors to distinguish wars from each other and as a basis by which to group wars into more refined types.

The data we have assembled on politically relevant alliances, rivalry, and arms races are based on measures taken from other data sets, so we will give only a brief description here of each indicator. Politically relevant outside alliances refers to whether one or both sides have an outside ally that could aid in a MID. These are alliances that include either a minor state in the same region or a major state. This specification of alliances eliminates minor allies that (it is assumed) cannot reach at least one state in a dispute. The politically relevant alliance data is drawn from the steps-to-war project (Senese and Vasquez 2008), which in turn is based on the alliance data of the Correlates of War project (see Gibler and Sarkees 2004).

We employ two different operational indicators of rivalry. The first and most well-known is the standard listing of enduring rivalries by Diehl and Goertz (2000:44–45). They operationalize an enduring rivalry as any two states that have at least six MIDs with each other within a roughly 20-year period (coded as 3). We treat states with just two MIDs as states having isolated conflict (coded as 1), and states in between these two categories, usually having 3–5 disputes we treat as proto-rivalries (coded as 2). After counting the number of MIDs in a period, Diehl and Goertz (2000:44–45) then assign a label to the dyad going back to the first dispute.

Our second measure attempts to get at one of the main characteristics seen as making rivals go to war, namely that as MIDs repeat they also escalate (Leng 1983; Vasquez 1993: chapter 5). Valeriano (2003: chapter 7) has found that multiple ongoing rivalries (typical in complex wars) increase the severity of conflict within a rivalry. We suspect that rivalries that escalate their hostile acts across disputes are an important characteristic of a truly dangerous rivalry. This measure—escalation within rivalries—is meant to more precisely capture the idea (within the steps-to-war explanation) that realism prescribes the use of escalatory realpolitik tactics across crises if one fails to attain one's goal in the previous crisis. It cannot be assumed that states in a rivalry as measured by Diehl and Goertz automatically escalate their tactics across MIDs.

A rivalry is coded as escalating if any of the Diehl and Goertz rivalry cases shows a pattern of increased dispute severity. Severity is taken from Diehl and Goertz's (2000: Appendix B) basic rivalry level variable. Thus, if a proto-rivalry shows increased severity from the time period between disputes one through three, it is coded as an "escalatory rivalry." If an enduring rivalry shows an increased severity level from the time period between dispute one and six, it is coded as an "escalatory rivalry." We calculate the escalating tendency of a rivalry up through *the phase of the rivalry* in which a dyad goes to war. The arms race data is drawn from Sample (2002), who has compiled data on both major and minor

states from 1816 through 1992. She measures arms races in two ways—one developed by Horn (1987) and one developed by Diehl (1983). Only the Horn measure is used here.

Once the information for the outside politically relevant alliances, rivalry, and arms races is compiled for each dyad, we need to get a single score for the entire complex war so that we can classify wars according to whether they have been preceded by outside alliances, some form of rivalry, and/or arms races. We begin by coding whether a war dyad exhibits the use of one or more power politics practices prior to the onset of the war. We are primarily interested in whether any dyads in a war “ever” exhibit prior power politics behavior. However, we recognize that some dyads in a multiparty war may be more important than others for determining both the start of the war and its expansion. For example, for World War II, Japan-US is more important than Japan-New Zealand.

How do we aggregate the measures of the individual dyads to determine whether the war as a whole is a power politics-related war? When the originating and joining dyads have discrepant codes we need a way of determining whether there are key joiners that should govern the aggregated code or whether all joiners should be treated equally. Our basic rule is that when joiners change the fundamental character of a war, then the joiners who do that should have their codes reflected in the overall classification of the war. We assume that when major states intervene they change the character of the war. Codes of major states that are joiners are given precedence over those of minor states in the aggregated measure.¹²

Since many complex wars become diplomatically important and quite severe as major states intervene on each side, we have given them a priority in classification. This makes eminent sense with the world wars, because it is the major states that make the war a world war. To determine whether a given complex war should be classified as a war involving outside alliances, rivals, or arms races, the pertinent code for each dyadic participant is aggregated according to the following rules:

1. The code for the major-major dyad that is an originator (day one belligerent) is used.
2. If there is no major-major originator, then the code of the major-major joiner is used so long as this major state dyad enters the war within the first two years.
3. If there is no major-major dyad, then the code of major-minor originator is used. If there is none, then the code of the minor-minor originator is used.

The highest codes are utilized in order to see if these factors are ever present prior to the war in the dyads that are seen as most important for the onset or expansion of the war.¹³

The reliance on the practices of power politics signifies a different behavioral profile in that actors resort to a specific strategic orientation prior to the conflict. For example, certain variants of realism (for instance, Vegetius) maintain that to achieve peace, you must prepare for war—the peace through strength hypothesis (see Wallace 1982). Typical strategies for doing this include either

¹² A listing of major states is presented in Small and Singer (1982:47–50) and at <http://cow2.la.psu.edu/>.

¹³ An alternative aggregation procedure would be simply to sum the codes of all dyads. We decided against treating dyads as equals, because we believe major-major dyads and originators have more impact on the character of the war and thus should be weighted. The raw data do, however, permit researchers to develop alternate aggregation procedures.

external power accumulation (alliance formation) or internal power augmentation (military buildups). It is our contention that these strategies are steps toward war, not toward peace. Therefore, we expect them to be present and not absent before wars. At the same time we recognize that these steps are not necessary conditions, so they will not precede all wars. Those wars that are preceded by power politics can be seen as a type of war. Of course, not all wars will have all three power politics practices preceding them; some may have more steps than others. We group wars as power politics wars if they have two or more prior power politics practices. We then see if this behavioral profile is connected with the size of the war.

Test Design

Although our classification is intended to have intrinsic theoretical merit, its main purpose is to guide and improve empirical research. A pressing question, therefore, is how we can know that the classification is empirically useful. Ultimately, we will only be able to know this by the research findings it produces. We anticipate that early uses of the classification will be as: i) a set of sampling criteria for including or excluding cases to determine the proper domain of an explanation; ii) a guide for selecting and comparing case studies; and iii) a more differentiated and new way of thinking about war and designing tests. All of these sorts of research efforts are clearly beyond the scope of this article. Nevertheless, we can derive and test certain empirical claims that permit us to see if the classification scheme has any empirical validity.

The most important claim that needs to be demonstrated is that the classification identifies wars that are different and that the differences have some theoretical significance. The empirical utility of the classification will first be assessed by seeing whether wars can be reliably classified according to our rules into mutually exclusive and logically exhaustive categories. The second and more important way in which the empirical utility of the classification will be tested is by whether the resulting types of wars are theoretically significant in a way that makes them associated with different profiles.

Given the theoretical analysis in the previous two sections of the article and the steps-to-war explanation, which has been our overall theoretical guide, we can derive the following empirical expectations to probe the empirical utility of the classification. Adopting the logic of Popper (1959), we can say that if most of these empirical expectations are not borne out, then the utility of the classification will fail to be demonstrated:

1. Dyadic wars should be associated with different sorts of behavior than complex wars.
2. The larger the war, the more likely it will have different characteristics and profiles than those associated with smaller wars.
3. Larger wars and wars fought over certain issues (for example, territorial wars) are more likely to be preceded by certain behavioral processes.
4. Wars and joiners to wars are not likely to all have the same path to war in terms of preceding outside alliances, rivalry, and/or arms races. Rather, certain kinds of wars are likely to be favored by certain paths to war.

We now turn to the findings section, which will list which wars fit in which categories, as well as test for the above empirical expectations.

Findings

Is there a Difference between Large and Small Wars?

Table 1 presents a classification of complex wars based on the measures we outlined above. We begin with size, which is used to distinguish complex wars from dyadic wars, and then move to distinguish wars within the class of complex wars. As anticipated and as can be seen in Figure 1, most interstate wars are dyadic—51 of the 79 wars or 64.6% involve only one dyad with one state fighting the other. Next in frequency (13.9%) come wars involving two dyads, with two states against one. This involves only 11 wars and is a very sharp drop from the 51 dyadic wars. Beyond this, the number of wars in each category falls sharply and rapidly with only five wars having three dyads, and three wars each having four dyads and five dyads. The remaining categories have only one war each. This distribution is highly skewed and reflects an exponential function.¹⁴

Can we make any theoretically interesting inferences from this distribution? Of note is that the distribution reconfirms Richardson's (1960:249) early finding (based on 1820–1939) that most wars involve only two parties and that wars involving more than three parties are fairly rare with the largest wars being extremely rare. Generally, the larger the war the less frequently it occurs, with wars involving more than five dyads being the rarest. Wars, then, are not randomly distributed by size, but clustered. It is much more difficult to get three dyads in a war than it is two, and much more difficult to get two dyads to fight than one. This implies that there is some barrier that prevents wars from expanding. These are important inferences that justify seeing complex wars as different; that is, they are likely to have different causes than dyadic wars.

Why is it so difficult to get states to enter a war? One obvious answer is that wars are costly and risky. Yet as one side approaches victory, why would other countries not jump in? Why does the presence of a war not provide an opportunity for gain of which more states would take advantage? These deductive questions outline two possible approaches to the question of war expansion. The findings presented here suggest that states appear to see war as more of a costly risk than as an opportunity for gain. This general conclusion, however, does not mean that this need always be the case, since some wars get very big. What

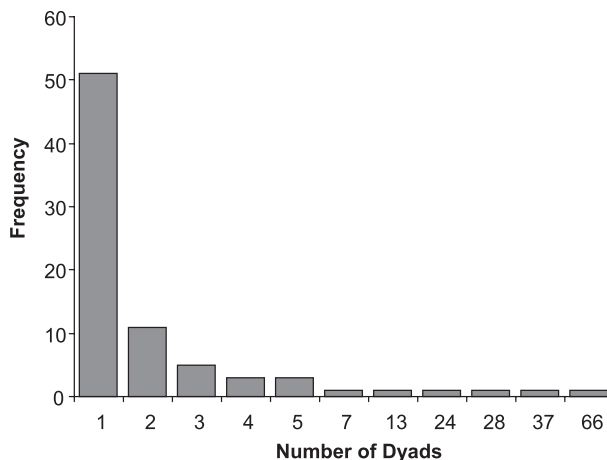


FIG 1. Distribution of Wars by Size and Number of Dyads in the War

¹⁴ Richardson (1960:259ff) models the kind of distribution in Figure 1 using Bernoulli's binomial distribution.

factors might change the equation or at least make states overcome what appears to be a resistance to entering wars?

The remaining factors by which we classify wars suggest some possible answers, but for now let us examine the various war sizes to see if they fulfill some of our empirical expectations about how wars differ. The largest wars range from seven dyads to 37 and 66 dyads for the two world wars. What accounts for these very large wars? Surely there is some diffusion or contagion going on here, but what are the mechanisms and factors that bring it about?

One of the utilities of a typology is that it helps us think of hypotheses to answer such questions. The point here is not so much to provide answers or even hypotheses, but to use the typology to suggest new questions and new ways of looking at interstate war. In this instance we want to use size to see if complex wars can be fruitfully grouped into theoretically meaningful categories. The following four groups seem to be worth investigating:

- Type 1: Dyadic Wars—2 party, 1 dyad (51 or 64.6%)
- Type 2: Small (multiparty) Wars—2–5 dyads (22 or 27.8%)
- Type 3: Medium-Size Wars—7–28 dyads (4 or 5.1%)
- Type 4: World Wars—37–66 dyads (2 or 2.5%)

With this grouping we get a less skewed distribution than that reported in Figure 1. The main utility of the four-fold typology, however, is that it lends itself more easily to theorizing and generalizations that might distinguish the complex wars from each other, and for this reason we use it in our classification in Table 1.

Are there certain patterns of war expansion that distinguish the four types of complex wars? An inductive comparison suggests some hypotheses worth investigating in the future. For example, Type 2 small (multiparty) wars seem to be neighborhood wars in that they are wars fought solely within a given neighborhood. We do not think that this is an accident; it indicates something about the limits or boundaries of the diffusion process at work. Examples of such wars include regional Latin American wars such as the Lopez, Third and Fourth Central American conflicts, regional Middle Eastern wars such as Palestine, Sinai, and Six Day, and various conflicts in Eastern Europe such as the First and Second Balkan Wars.

Most, but not all dyadic wars, tend to be between two specific neighbors; in this sense they are like the wars in category 2, but the latter have spread to include other states in the neighborhood, whereas the former have not. These Type 2 small (multiparty) wars can also be distinguished theoretically from the medium-size wars. The latter are bigger in part because they have states outside the region, typically major states, intervening into what started as a dyadic war or war confined to a particular neighborhood. There is some dynamic here that brings in the additional states.¹⁵ Such wars are apt to involve not only “contagious diffusion,” which is typical of wars fought among contiguous states in the same neighborhood, but “hierarchical diffusion” as well.¹⁶ Lastly, the world wars are very rare. They involve much more extensive diffusion processes. In addition to their large size, they are distinguished by bringing in all the major states into

¹⁵ For example, the intervention of a major state on one side often brings in other states. We note that in at least three medium-size wars—Vietnam (7 dyads), the Gulf War (13), and Korea (28)—the major state appears to have marshaled a large coalition in order to legitimize its intervention. In these wars, alliances and even IGOs (like the UN) that sanction the war can act as diffusion mechanisms (on the latter see Morgenthau’s 1978:421–422 criticism of collective security, that it makes wars expand, which in the absence of collective security arrangements, they would not).

¹⁶ Contagious diffusion is spreading through contact, as when wars spread because states are contiguous. Hierarchical diffusion is non-contiguous spreading usually by a shared structure, as when wars spread because states are in the same alliance, see Gould (1969).

the conflagration and they tend to be total wars. Such wars are rarer than indicated by the data, since Levy (1985:371–372) finds only 10 from 1495 on.

The above findings are consistent with the first two empirical expectations we presented in the test design. They provide evidence that complex wars are different from dyadic wars and that larger wars (especially when grouped into our four-fold typology) have different characteristics from smaller wars. The findings demonstrate that classifying wars according to size has a certain empirical validity to it. More importantly, however, is that classifying wars according to size gets us thinking in new ways. Are there certain processes, diffusion mechanisms, or barriers operating to make a war a certain size? The distribution in Figure 1 and the limited analysis we have presented here suggests that the larger wars are a product of diffusion processes.

We turn now to coalition structure as a second way of grouping wars according to size. This is clearly related to looking at the sheer number of dyads. The basic question here is: Why does the war take on the coalitional structure it does? The coalitional structures range from 1 vs. 1 up to 18 vs. 7. One interesting theoretical pattern that emerges from an examination of coalitional structures is that the wars become less “balanced” as they expand. “Balanced” here is defined not in terms of capability, but simply the number of states on each side. Dyadic wars have one state on each side and these are the typical wars, but as wars expand they expand in a direction that generally finds one state battling a coalition of states and sometimes a very large coalition. So we see the following distribution: 2 against 1, 3 against 1, 4 against 1, 5 against 1, 7 against 1, and 13 against 1. These account for 85.7% of the complex wars. The question is: Why do the wars not expand so there are more equal numbers on each side? There seems to be more of a pile up (or “bandwagoning”) pattern going on here than a “balancing” pattern. With the three largest wars, the difficulty in getting a more balanced war is fairly extreme, although not as much as the Gulf War’s 13 to 1.¹⁷ Coalitional structure, with its obvious relevance to strategic calculations, is another interesting theoretical question suggested by the attempt to classify complex wars.¹⁸

Lastly, one might ask if a standard Correlates of War measure of the *magnitude* of war—nation-months—might not also serve as a measure of the *size* of war. We have calculated the nation-months of each war by looking at the length of time each dyad is engaged in fighting. This variable appears in Table 1 in column 5. The size and magnitude measures produce mostly the same results at the extremes; that is, the wars ranked the three “biggest” wars—Korea, World War I, World War II—have both the largest number of dyads and the most nation-months. Also with the exception of three Arab-Israeli wars (Six Day, Sinai, and Yom Kippur) and the Second Balkan War, the top 25 shortest wars (those lasting three months or less) are all dyadic. In between these extremes however, the length of war is not closely related to the number of dyads fighting. Some wars, like the Seven Weeks’ War, which has many dyads (24), are relatively short (23 nation-months) whereas others, which have only a few dyads, are longer (for example, the dyadic Lopez War lasted 124 nation-months). The overall ranking of association between the two measures results in a tau-b score of 0.35. This leads us to believe the two indices are measuring different things and should be kept separate. Since the nation-months indicator was developed as a measure of

¹⁷ Mathematically the ratio for three of the four largest wars is under 3 to 1: Seven Weeks’ War: 8 vs. 3=2.6, World War I: 11 vs. 4=2.75, and World War II: 18 vs. 7=2.5.

¹⁸ There are other obvious differences based on the size of the war that are beyond the scope of the analysis, but we can offer them as future hypotheses for investigation. First, the smaller the war, the more likely it is fought mostly by contiguous dyads. Second, the larger the war, the more likely it will be severe in terms of the number of fatalities.

magnitude it is best left as that, especially since duration is most likely a function of the relative capability of two sides rather than the number of dyads fighting.

Is the number of dyads a better measure of size than nation-months in terms of developing a typology of interstate wars? Both indicators satisfy the minimal condition of a typology in that they both produce mutually exclusive and logically exhaustive categories. However, we believe the number of dyads indicator better captures the differences between wars that might be theoretically significant in terms of their underlying causal structure and in terms of identifying diffusion processes. This is best seen by looking at some of the Type 3 medium-size wars. Here the dyad measure of size includes three wars that have a "family resemblance": Vietnam, the Persian Gulf, and Korea; whereas the nation-months would group Vietnam and Korea, but not the Persian Gulf (which had only 32 dyadic nation-months compared to 621 and 873 for Vietnam and Korea).

Is the Type 3 grouping useful? If it is more useful for constructing a classification of wars it should better tap the common underlying causal processes and the diffusion mechanism at work in these three wars. If the Persian Gulf War is truly different, then its underlying causes and diffusion mechanism should be different. We think all three wars are similar. In each of the wars, the United States is the most powerful joiner in the war. Also, each war is sparked, at least from the US perspective, by one minor state attacking a neighboring minor state illegitimately. The United States then takes the lead in marshalling a coalition by drawing upon its existing allies against this perceived "aggressor." Alliances serve as a key diffusion mechanism, since many of these "joining" states would not have joined without US encouragement. The nation-months measure does not capture this similarity. It tells us more about duration of war.

Is the Use of Power Politics Related to the Size of War?

The second dimension on which we classify complex wars is whether they have any outside alliances, have some form of rivalry, or are engaged in an arms race preceding war onset or expansion. If it is the case that alliances and rivalry act as diffusion mechanisms, then we would not expect the smaller wars to have as many power politics characteristics as the larger wars. In this section, we will conduct several tests to see if this is the case.

An analysis of these three power politics indicators shows that most complex wars involve a previous pattern of having an outside alliance and some form of rivalry, but only a few wars are preceded by arms races. Table 2 reports an analysis comparing the complex and dyadic wars on these dimensions. All but 3 of the 28 complex wars (89%) are preceded by a pattern of entrants having an outside politically relevant alliance compared to 29 of 51 wars (56.9%) of the dyadic wars which are preceded by outside alliances. This is a statistically significant difference (Fisher's exact test $p = .002$), that shows that having an outside alliance is related to large wars.

TABLE 2. Statistical Differences between Complex and Dyadic Wars, 1816–1997

<i>Characteristic</i>	<i>Complex wars</i>	<i>Dyadic wars</i>	<i>Significance/Gamma**</i>
Outside alliance	89.3	56.9	.002/.73
Escalating rivalry	71.4	39.2	.006/.59
Rival/proto/enduring	78.6	64.7	ns/.33
Arms*	11.1	9.5	ns/.09
Power politics*	77.8	31.0	.000/.77

(Notes. Entries are percents; $N = 79$ unless otherwise indicated, see below; * $N = 69$, for arms and power politics, due to missing data; **Fisher's exact significance test, one-tailed test used. Significance tests are based on 2×2 tables, for example, outside alliance "yes/no" with "complex/dyadic.")

If alliance is a diffusion mechanism, we would expect that wars which start without the belligerents' having prior outside allies would be smaller. This is what Siverson and King (1979:48) find, and they remind us that in 1870 France had no allies and fought alone and in 1914 it had plenty of allies. Likewise, Leeds (2005) shows that while defensive alliances tend to have fewer MIDs than dyads with other types of alliances, if their MID escalates to war then allies live up to their defensive commitments and the war expands.

There are only three complex wars that do not have prior allies. Based on our theoretical analysis we would expect them to be relatively small; in fact, they all fall into the smallest category of complex wars—wars with only two dyads, three parties with two against one.¹⁹ To summarize, we expected the few complex wars without allies to be different from the other complex wars and perhaps similar to the dyadic wars, which frequently do not have outside allies. Both of these expectations have been fulfilled.

The other main significant behavioral factor that distinguishes complex wars from dyadic wars is the presence of a pattern of escalating rivalry; about 70% of the complex wars have this characteristic, compared to only 39% of the dyadic wars (see Table 2). This is a statistically significant difference. Here we find that it is not just the presence of rivalry but whether the rivalry is escalating that is significant.

Only 8 of the 28 complex wars do not have an escalating rivalry. What do they have in common? One factor we would predict is, again, that they would be small wars. If an escalatory rivalry is a factor related to war expansion, we would expect its absence to occur in small wars. In fact, this seems to be the case—7 of the 8 (87.5%) cases without an escalatory rivalry have only two dyads.

We also need to point out that complex wars have more proto- and enduring rivalries at the time a MID escalates to war, but this relationship is not statistically significant, as can be seen in Table 2.²⁰ The same is true of arms races, which are quite rare.

The three major indicators of the presence of power politics practices—outside alliances, escalating rivalry, and arms races—can also be used to compare wars according to whether they have at least two power politics practices preceding them. Using this threshold, it can be seen in Table 2 that a number of complex wars are preceded by (at least two) power politics practices—78% (21 of 27) compared to only 31% (13 of 42) of the dyadic wars. This is a statistically significant difference and a fairly strong association ($\text{gamma} = 0.77$).²¹ This evidence is consistent with the hypothesis that complex wars are associated with certain prior behavioral processes (empirical expectation #3).

If power politics encourages larger wars, then we should expect that the larger the war, the more likely it is to have a power politics practices. A cross tab between having at least two power politics practices (a dummy variable) and the 4-point size scale (not reported in a table) shows there is a statistically significant ($p < .01$) and strong relationship ($\text{gamma} = 0.78$ between the two variables).²² As one moves up the size scale, most of the wars preceded by the use of power politics are complex wars. Examining the specific power politics practices—outside alliances, escalating rivalry, and arms race—also shows a statistically significant relationship for each of these factors.

¹⁹ These three cases (the Hungarian War of 1919, and the Third and Fourth Central American War) are also very short, lasting only a few months, and the participants are not rivals.

²⁰ These findings imply that rivalry is a factor associated with war in general; that is, that it is associated with both dyadic and complex wars. An examination of the percentages supports this inference; a little more than 3/4 (79%) of the complex wars and almost 2/3 of the dyadic wars are preceded by some form of rivalry.

²¹ The number of complex wars is reduced to 27 because one case (the Third Central American War) is dropped due to missing data on arms races.

²² $N = 69$ because 10 cases are dropped due to missing arms race data.

These findings support our empirical expectation (#4) that larger wars are more likely to be preceded by power politics behavior.

We also anticipated that power politics behavior would be associated with wars fought over certain types of issues. The steps-to-war explanation anticipates that territorial issues which are handled through the use of power politics have a higher probability of going to war than policy or regime issues handled in this manner (see Senese and Vasquez 2008: chapter 6). By comparing the three types of war (see Tables 3–4 for the territorial and policy wars) and observing the marginals for each row, we can see that about 60% of the territorial wars (22 of 37), 40% of the policy wars (8 of 20), and 25% of the regime wars (2 of 8) (not reported in the tables) involve the use of power politics.²³ This suggests that territorial wars are, as expected, more prone to have been preceded by power politics behavior than policy or regime wars.²⁴

We also find a connection between the size of territorial wars and whether they are preceded by power politics. Most complex territorial wars, 77% (13 of 17), are also power politics wars compared to 45% (9 of 20) of the dyadic territorial wars (see Tables 3 and 4). All five complex policy wars are power politics wars. There are only two complex regime wars, so these are not analyzed. All of the complex wars have a fairly large percentage of power politics wars regardless of issue. These trends suggest that the size of war is more important than the issue in determining whether a war is a power politics war.

Lastly, although space does not permit us to look at all the paths to war, we note that the world wars are associated with a specific path to war. They are the only complex wars that have all three power politics practices present—outside alliances, rivalry, and arms races. This is theoretically interesting because previous research shows that when these three factors are present during a MID there is roughly a 90% probability the conflict will escalate to war (see Vasquez 2004; Senese and Vasquez 2005), but it turns out that only a handful of wars (dyadic and complex) reflect this path to war.²⁵ Thus, while having an arms race in the presence of outside alliances and rivalry is extremely dangerous and likely to end in war, this condition is rare in the post-Napoleonic era.

TABLE 3. Percent Territorial Wars that are Power Politics Wars

<i>Power Politics</i>		<i>Dyadic</i>	<i>Complex</i>	<i>Total</i>
No	Count	11	4	15
	Expected count	8.1	6.9	
	% Within complex	55	23.5	40.5
Yes	Count	9	13	22
	Expected count	11.9	10.1	
	% Within complex	45	76.5	59.5
Total	Count	20	17	37

(Notes. $\chi^2 = 3.78$ [df = 1] p [Fisher's exact test] = .053
[Gamma = 0.598].)

²³ The originating issue over which war is fought is operationalized by using the standard revision type code (1. territorial, 2. policy, 3. regime, 4. other) of the MID that escalated to war (for details see Senese and Vasquez 2008: chapter 2 and Vasquez and Valeriano 2010).

²⁴ If each revision type is cross-tabulated with power politics, the relationship is not statistically significant; however, if the single non-applicable case is dropped and the three coded "other" are grouped with territory, which mirror territorial MIDs (see Senese and Vasquez 2008:197 note 20) then the relationship is significant (<0.05 one sided test, gamma = 0.46).

²⁵ There are three dyadic wars with all three power politics practices present: two of them are temporally related to World War II in the Pacific—the Sino-Japanese War of 1937 and the Changkufeng War (1938). The third is the Second Kashmir War.

TABLE 4. Percent Policy Wars that are Power Politics Wars

<i>Power Politics</i>		<i>Dyadic</i>	<i>Complex</i>	<i>Total</i>
No	Count	12	0	12
	Expected count	9	3	
	% Within complex	80	0	60
Yes	Count	3	5	8
	Expected count	6	2	
	% Within complex	20	100	40
Total	Count	15	5	20

(Notes. $\chi^2 = 10.0$ [df = 1] p [Fisher's exact test] = .004
[Gamma = 1.0, $\phi = 0.71$].)

Conclusion

This study has utilized new data to provide a classification of complex wars in terms of their size and the extent to which they are preceded by power politics practices. We have seen that classifying complex wars themselves into types reveals important differences. Larger complex wars are different from smaller ones, and more complicated coalitional structures seem to be associated with different diffusion processes. We suggest, based on size, that complex wars can be usefully grouped into three types: small (multiparty) wars, medium-size wars, and world wars.

We have also found that it is useful both theoretically and substantively to distinguish power politics-related wars from non-power politics wars. We do this by using the data to map some of the characteristics of participant dyads in terms of the prior history of their disputes; that is, whether they had outside allies, were engaged in a rivalry, or had an ongoing arms race. We find that the presence of power politics paths may also have something to do with the size of a war. The analysis shows that the use of two or more power politics practices is related to large wars. Lastly, the analysis shows that the type of issue giving rise to the war is associated with the use of power politics. This is especially true of territorial wars. All these findings support our initial suspicion that interstate wars are different from each other. More importantly, we hope the approach we outline in this article will be useful in beginning to document those different paths to war in the most deadly of all wars—complex wars.

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