

ANALYTIC PROBLEMS IN THE IDENTIFICATION OF WARS

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The paper examines some of the conceptual and methodological problems involved in identifying interstate wars, particularly wars among the great powers during the 1495-1815 period. The definition of war as substantial armed conflict involving the organized military forces of independent political units leads directly to three major sets of problems regarding the operational identification of wars: identification of the actors whose wars are to be analyzed; specification of a minimum threshold of violence or intensity of interaction for qualification as a war; and boundary problems concerning the determination of the beginning and end of a war and the aggregation or disaggregation of simultaneous or sequential wars. Problems of index construction, validity and reliability, data sources and biases, and data availability are critical. Problems involved in measuring the attributes of war, including its duration and severity are dealt with primarily in terms of their relevance for the issue of identifying wars, though I include a brief note on problems with the intensity indicator based on national population data.

IDENTITY OF THE ACTORS

The first problem concerns the identity of the actors whose wars are to be analyzed. This is part of the larger question of the specification of the spatial and temporal domain of the system. I shall not repeat here the arguments underlying my conceptualization of a modern great power system, or for the identification of the origins of that system at the end of the fifteenth century in general and in 1494-95 in particular (Levy, 1983: ch. 2). I am still confident that this starting date is appropriate.¹ I concede that at some point there needs to be more conceptualization of the linkages between this great power system and the larger global system in which it is embedded, and that questions regarding the changing nature of socioeconomic and political systems over five centuries are not trivial, but I shall not deal with these theoretical questions here.

The identification of the individual great powers within this system, and particularly their dates of entry into and exit from the system, also raises some troublesome issues. Although I am reasonably satisfied with the dates for most of the great powers, I would prefer that they be based on more operational criteria. Ideally, a central component in the definition of a great power should be some percentage share of total capabilities in the system, though some minimal level of interaction in the system and perceived status cannot be entirely neglected. Modelski and Thompson (1987) compute percentage capability shares for their global powers based on seapower, but I do not share their analytic

assumptions and therefore cannot rely on their data. In my conception of a modern great power system, land-based military power is even more important than naval strength. We do not have this capability data, however, and until it is generated we must rely on softer criteria (Levy, 1983: ch. 2) and more detailed analyses of individual cases.

Regarding specific entry and departure dates, the trade-offs and decisions made in Levy (1983) continued to seem justified for the most part. One decision greatly in need of further investigation is the departure date for Spain. My book's date of 1808 (also used by Modelski and Thompson, 1987) is too late. This is a difficult case, however, for whereas the decline of most great powers was fairly monotonic after a certain point in time, Spain's relative capabilities and influence fluctuated widely after her major defeat in 1659. Accordingly, a change to 1659 seems indicated. Some also quarrel with the 1495 date of entry for England, suggesting 1588 instead. Here the weight of evidence seems to favor 1495. My treatment of the Habsburgs under Charles V as a single unified great power in terms of security issues from 1519-1556 rather than separate Spanish and Austrian dynastic territorial states deserves further attention, but the latter approach would raise in my view greater problems. The identification of the great powers in the period since 1945 is much more troublesome because of the conceptual problems regarding the meaning of the great power concept in the nuclear age, but this goes beyond the period of concern here. Another question which needs to be resolved concerns the importance of the temporary exits from the great power system after serious defeats in major wars, and how to deal with these systematically over the entire domain of the study.

This discussion makes clear that the rigorous and systematic generation of great power war data rests on a set of great powers which are identified through criteria that are not fully operational at this time. An important question is the sensitivity of the resulting set of wars to small changes in the interpretation of these coding criteria. Some changes would have no impact on the wars, particularly great power wars, and other changes would have a greater impact on the extent of the war (number of great power participants) than on the inclusion or exclusion of the war itself, especially if the war already involves at least two opposing great powers. The most significant change would result from a revised departure date for Turkey (1699), or its exclusion altogether (neither of which I see any reason to do), because of the large number of its bilateral wars. Otherwise, although the development of more rigorous operational criteria is desirable, this would not generate a large number of changes in the identity of the great power war set itself. The justification for the generation of capability data lies more in their value for testing a number of theoretically important hypotheses than for the operational identification of the historical great powers.

A slightly different question is whether the data set ought to be limited to the great powers as I have defined them or whether it should include the global powers identified by Modelski and Thompson (1987). The main additions would be Portugal (until 1580), Spain (until 1808), and the Dutch from 1579 until 1810. (I shall include Spain until 1659 and the Dutch from 1609-1713, but in each case their naval and commercial strength outlasted their military strength in Europe.) These states were less important in the Eurocentric great power system than in the global system, which is defined by a different set of analytic assumptions. The question of their inclusion involves a tradeoff between the expansion of applicability of the dataset to a larger set of theoretical questions, and the weakening of the connection between the data and the theoretical assumptions from which they are supposedly generated. I am open-minded about the issue of broader inclusiveness, but am somewhat concerned that some users might fail to recognize that some data points are based on different analytic assumptions. One possibility would be to include a procedure

for tagging the wars involving the additional global powers in question. Note that broader inclusion would also entail revisions in the other variables—magnitude, severity, intensity, and possibly duration—as well as the classification of a war as a great power war or not. The number of wars involved is not that great, however, precisely because these other states fought less frequently than the great powers (at least in the past).

THE MINIMUM THRESHOLD OF VIOLENCE OR INTENSITY OF INTERACTION

War refers to "substantial" armed conflict and must be differentiated from less intense uses of military force in the form of demonstrations of force, limited use of force for coercive purposes, border disputes, etc. Singer and Small (1972) use the 1000 battle-death criterion (along with other criteria) as the basis for including a conflict as a war; and so have I, albeit focusing only on battle deaths of the great powers. This raises a number of questions. One concerns functional equivalence through time. Should a continuous sliding scale of intensity replace the fixed 1000 battle-death criterion, since 1000 battle deaths would seem to be far more significant five centuries ago than today? Or would a step function be better? A sliding scale would be of little value unless it were continued past 1815 to the present, but that would require a substantial and unnecessary change in the procedures used in the COW project. Perhaps a lower fixed criterion for the 1648-1815 and a still lower threshold for the 1494-1648 period would be useful. The proper solution might be clearer after we get a picture of the distribution of fatalities across cases of low-level conflicts during the periods in question.²

We could also add alternative criteria, something like the minimum of 1000 armed personal engaged in active combat within the war theater used by Singer and Small (1972). One problem here is the meaning of active combat. Unless it includes actual fatalities, such combat may only be a part of "wars" of maneuver. Should these be included? Or should these be conceived as instruments of coercive diplomacy short of war? Should a case which is generally referred to as a war but which involved only minor skirmishes be included as war? The War of the Bavarian Succession (also called the Potato War, 1778-79), for example, is always referred to as a war, involved over a year of maneuvering in the field, and resulted in a peace treaty—but spawned no real battles and relatively few casualties. Such cases, fortunately for data-collectors, are fairly rare. In other low-level conflicts, especially those which are not significant enough historically to be commonly called a war, the main problem is likely to be less conceptual and more informational.

INITIATION, TERMINATION, AND AGGREGATION OF WARS

The problem of how to draw a line around a single war and separate it from other wars occurring simultaneously or sequentially, is an important one which has received inadequate attention in the literature. My book (Levy, 1983) raised this issue but did not resolve it. Should the Japanese-American War be treated as part of World War II rather than as a separate war, and should the internationalized Russian Civil War be treated as part of World War I? Similarly, should the First, Second, and Third Silesian Wars be aggregated into a single War of the Austrian Succession (1740-48) (yes) and was this distinct from the War of Jenkins' Ear (1739-48) (no)? Some simultaneous wars are unrelated (Sinai

War and Hungarian War of 1956), some clearly related (Probably the European and Asian theaters of World War II), and others more ambiguous. These questions are particularly important for studies of the causes of war or other questions which rely on the outbreak or frequency of war as the key dependent variable, including studies of war catagion.

The problem of the temporal aggregation of sequential wars is particularly serious in the 16th and 17th centuries, when the Ottoman Empire engaged in what appears to have been nearly continuous warfare. For example, my dataset (Levy, 1983) lists Ottoman great power wars of 1521-31, 1532-35, 1537-47, 1551-56, 1556-62, and 1559-64. How should these be aggregated or disaggregated? Ottoman warfare presents some serious conceptual and methodological problems not only because of its relatively continuous nature but also because these wars have received less attention from Western historians than have major wars between European great powers. This issue is one of the main concerns of my present data-collection effort.³

The aggregation of war is affected directly by analytic decisions regarding how to handle temporary interruptions in warfare and by definitions of the termination and initiation of war. Singer and Small (1972) have provided rigorous operational criteria for the identification of dates of initiation, termination, and temporary interruptions in fighting, but both the conceptual and methodological problems multiply as we go back in time. Declarations of war can be used as dates of initiation, as long as combat follows relatively quickly. But declarations of war were less common prior to the 18th century than since then and were often preceded by serious fighting or followed by inactivity. In addition, different transport technology meant that there was a longer gap between "mobilization" for war and actual combat with the enemy. Following Singer and Small, our key criterion is the date of first sustained combat. Identifying the end of wars may also be difficult. There is little problem if the date of the peace treaty (if there is one) coincides with the end of sustained combat. This is often not the case, however. Finding adequate information on when sustained combat first occurs and when it ends may be feasible for most great power wars, but more obscure major-minor wars will be much more difficult to handle.

Another serious problem is temporary interruption in military combat. Two sets of criteria are needed. The first and more important pertains to the problem of temporal aggregation of war discussed above. It concerns the length of interruption in hostilities that is sufficient (in conjunction with other criteria such as cease-fires or treaties) to constitute the end of one war and the beginning of the next. The other criterion, which affects the measurement of the duration of the war rather than the identification of wars *per se*, concerns the point at which temporary cessations of hostilities are subtracted from the measure of the duration of the war. Singer and Small (1972) treat any cessation of hostilities of more than 30 days as a temporary interruption in the war and subtract this from the duration of the war. Shorter breaks are not subtracted. Because of problems of data availability prior to 1815 and for some theoretical reasons as well (Levy, 1983), I defined duration as the total elapsed time of the war. It may be desirable to change my measure to reflect time of actual fighting in order to increase continuity with the Singer-Small data (though for some theoretical questions we must recognize that elapsed time is probably the better measure). Whether or not the necessary information is available remains an open question. The beginning and ends of wars are more visible events and have received more attention in the historical literature than what goes on in between, although detailed military histories might include some of this information. For many of the less significant great power wars, as well as for the most major-minor wars, this information may be very difficult to find.

A BRIEF NOTE ON THE INTENSITY OF WAR

This discussion does not exhaust all the analytic problems involved in current efforts to validate my war data (Levy, 1983) for the period before 1815 and to make it more compatible with the Singer/Small data for the post-1815 period. I have dealt only with those issues pertaining to the identification of the wars. These have led me to some discussion of problems relating to the measurement of the duration of war and the severity in terms of battle deaths, though each of these issues requires greater attention. Another important set of questions needing further attention concerns the "intensity" of war. Singer and Small (1972) suggest three measures, based on the ratio of battle deaths to (1) nation-months of war, (2) size of the armed forces, and (3) population. I include the first and call it the "concentration" of war. The second has been eliminated from the more recent Small and Singer (1982) compilation. My book includes a measure of intensity relative to population but uses estimates of European population as a whole rather than national populations. This is almost entirely because of the absence of accessible national population data for the 1495-1815 period for each of the great powers. I see no solution to this problem. The information *might* exist, scattered in some form in various places, but the generation of a national population data base would involve too great an investment of time and resources relative to its value for our theoretical purposes to be worthwhile.

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NOTES

1. In a minor change from my book, I shall date the origins of the system in late 1494 with the French invasion of Italy, even though it would not be clear until March 1495 that this war would lead to something relatively new in European politics—a general coalition of European great powers (as well as Italian states) against the aggressor. I take this as the beginning of an interdependent European security *system*, something qualitatively different from what existed before.
2. T. Clifton Morgan is working with me on this and other aspects of the project.
3. This problem, involving the protracted wars of the Turks, derives in part from some very basic assumptions about the nature of warfare. Our very conception of warfare as a well-defined activity which is sharply delineated from peace may reflect a Western cultural bias. The Islamic conception of warfare has been fundamentally different, the closest Western analogy being perhaps the Crusades, and these differences in conceptions of warfare have clear behavioral manifestations. For an excellent treatment of this issue, see Guilmartin (1986).

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