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RICHARD ROSECRANCE
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Power, Balance of Power, and
Status in Nineteenth Century
International Relations

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Power, Balance of Power, and Status in Nineteenth Century International Relations

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INTRODUCTION

It is a commonplace that "power," "balance of power" and "status" have impact in social relationships. Individuals with greater "power" will have influence upon those with less (Lasswell and Kaplan, 1950). Persons with higher "status" will be treated differently from those with lower social standing (Tedeschi, 1972). Among social groups competing for influence, certainly among states, it is a traditional contention that an approximation toward balance of power will emerge (Hinsley, 1962). If it does not, higher levels of conflict are deemed likely (Gulick, 1955).

What is striking in any survey of the literature on these topics, however, is how much disagreement there is among social scientists. Is "power" an attribute in that each social actor has an absolute stock of it (Knorr, 1956); or is it to be defined relationally (Lasswell and Kaplan, 1950), so that one actor's position carries weight only in relation to the position of others? Is the acquisition of a large amount of power (defined either absolutely or relatively) by an actor desirable in terms of the impact upon the larger social system? Or will such an agglomeration of power in a single

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hand promote conflict with other actors? Regardless of the answer to these two questions, students are not certain whether it is the power of the individual actor or only of his social group (coalition) which matters. Is it true that even if a single actor has a large amount of power (or status) the regard in which he is held by others is largely determined by the total power (or status) of the group to which he belongs?

There is an extensive literature in domestic political analysis on this topic (Dahl, 1957, 1968; Lasswell and Kaplan, 1950; March, 1955, 1956, 1957; Simon, 1953; Riker, 1964; Faley and Tedeschi, 1971). In the field of international relations, the situation is if anything even more chaotic. Respectable historical investigators have disagreed whether it is better to have a balance of power in the international system or to have an overbalance in the hands of a preponderant coalition (Taylor, 1954; Langer, 1950). Political scientists have differed over the same issue (Doran, 1971; Organski, 1968a, 1968b). There is uncertainty whether the critical condition is the power of a single state or of the alliance of which it is a part (Hinsley, 1962; Organski, 1968b).

In regard to "status" it is not clear that the nations at the top of the international social pyramid are also those which elicit the greatest amount of cooperation from others (Singer and Small, 1966a). Honorifics may not confer realistic benefits. The relationship between "status" and "power" is also uncertain. A venerable strand of analysis contends that it is the disparity between the power of an actor and his status which leads to conflict. In international relations this effect might be most typically seen where the power of one nation exceeds the amount of status accorded to it, while the power of another is less than its status or prestige. The first then is expected to contend with the second to gain a greater share of the prestige benefits. Galtung calls this phenomenon "rank disequilibrium" and an entire literature has grown up on this subject alone (Galtung, 1964, 1966a, 1966b; Gleditsch, 1969; East, 1969, 1970, 1972; Wallace, 1970; Singer et al., 1972). It remains unclear in systemic analyses, however, whether the nations suffering the greatest disparity between power and status are those which are also the most engaged in international conflict (Ray, 1974).

A major reason for the great differences in viewpoint on these concepts and relationships is that (at least until recently) few attempts have been made to operationalize "power" and "status" or to measure the amount of conflict in the system or between two actors. Both "power" and "status" are protean terms, capable of reinterpretation and extension in different linguistic contexts. "Power" is particularly difficult to grasp concretely because statesmen operate on "perceived" notions of power which may or may not be accurate. For different periods of time, it is certainly clear that

American and Soviet power was underestimated; the power of Britain and France overestimated. Decisions were taken utilizing these erroneous estimates which had great impact in the system. Attempts at more accurate rendering of power relationships neglect the perceptual dimension and thus do not fully account for national decisions.

It remains true, however, that most "power" and "status" theories of international politics have been stated in objective form. It is the objective power or the objective status of an actor which is supposed to determine the behavior of other actors, and to condition their attitude toward him. If it could be shown that such objective factors did not actually determine such behavior or attitude, a classical strand of international theorizing would be refuted. It is therefore important to find a basis for assessing such theories to see whether the inconsistency of previous findings can be remedied, or, if not, to narrow the range of divergence among approaches. It simply cannot be the case that a "balance of power" is both a restraint on international conflict and a stimulus to it: that rank disequilibrium is both associated and not associated with hostility between states. Somewhere errors in fact or definition have been made. The present essay is an effort at redefinition of the critical theories and a reassessment of their empirical validity.

OBJECTIVES OF THIS ESSAY

Specifically the objectives of this essay are five-fold:

- (1) to formulate as clearly as possible different clusters of "power," "balance of power" and "status" theories of international behavior so that they may be subjected to appropriate test;
- (2) to develop valid approximations to or measures of "power," "status," "balance of power" which permit the operationalization of the different clusters of theory;
- (3) to formulate valid measures of international "cooperation and conflict" so that the measures of "power" and "status" may be compared with the resulting degree of "cooperation" and "conflict" both as between two nations and within the system as a whole;
- (4) to seek to establish a relationship among "power," "balance of power," "status" and the dependent variables of "cooperation" and "conflict," thereby testing the theories sketched in (1); and
- (5) to draw conclusions about the general applicability of such theories in the nineteenth century, with comments upon the results of such an investigation for twentieth century practice.

Each of these tasks will be attacked in the succeeding sections of this paper.

CLUSTERS OF THEORY

Enough has been said above to indicate the range of competing theories and approaches in the international relations field. What is necessary now is to delineate the separate "clusters" or "islands" of theory that are deserving of empirical test. Roughly speaking, there appear to be five such clusters. First, there are a series of propositions or assertions which link conflict and cooperation, peace and war in the system to the absolute amount of some crucial quantity: "power," "status" or other. States with the high stocks of this quantity could then be expected either to enjoy high levels of cooperation, or to be the objects of great rivalry or conflict.

A second cluster would relate cooperation and conflict to relative amounts of the crucial quantity (power, status or other) possessed by states. Unlike absolute measures, the cooperation derived by states on relative bases, would depend strictly upon their rank in the hierarchy of the value possessed.[1]

A third cluster of theories would relate the amount of cooperation and conflict derived to the change in the amount of power or status (Singer et al., 1972). It might be true that the amounts of power or status possessed (whether measured absolutely or relatively) by actors would be strictly irrelevant to the amount of cooperation they receive, while the change in power or status would be more directly related to cooperation gained. According to some historical hypotheses, German power may not have been preeminent during the Bismarckian system but the change in the German position was so dramatic that Berlin gained the greatest share of European cooperation.

A fourth series of theories links disparity between power and status and the amount of cooperation received or given. Is there a relationship between conflict and the amount of discrepancy between power and status in the international system? If this pattern does not hold overall, is there a relationship between conflict and negative discrepancies (that is, where power exceeds status)? This hypothesis should be tested separately because it is plausible that nations with high power but low status might be prone to initiate conflict while those with high status and low power would not be so prone.

Finally, it is possible that there is no relationship between power and status (measured absolutely, or relatively), change in power or status, status discrepancy (or rank disequilibrium) and cooperation. An alterna-

tive hypothesis would be that it is the way in which power or status is exercised, and not their amount that is a crucial determinant of the amount of cooperation in the system. If there were some appropriate way of measuring the *exercise* of power, this variable might turn out to be a more sensitive predictor of cooperation and conflict than gross measures or comparisons of the amount of power or status.

In what period of historical reality should these theories be tested? If theory is to have the greatest contemporary relevance a strong case can be made for the present or immediate past period. Extrapolations to the future, could then most easily be made. The difficulty with such a solution, however, is that the data for such a test are not fully available. While the general patterns of cooperation and conflict in the international system can be seen, specific dyadic relationships and even some major events are partly obscured by the barrier of official secrecy. Until the diplomatic collections and archives become available, historians will not be able to observe the full record of relations among states. Lacking the diplomatic historical materials one, of course, could use newspaper sources as a surrogate. The special complication of newspaper sources, however, may be that they tend to overstress conflictual events and thus to miss the underlying substratum of cooperation that lies beneath the surface. Conflict tends to appear more characteristic than in fact it is.[2] In any event, sources which fail to capture the complete diplomatic record are unsatisfactory.

The problem of sources then, augurs in favor of testing power generalizations in a period in which the diplomatic material is fully available. For most European powers this means prior to World War I. A choice in favor of the Bismarckian or post-Bismarckian periods, however, raises the question of relevance: in what sense could it be argued that relationships in the eighteen seventies or eighties could have application to the world of today? There are a number of answers to this question. First, the problem of state relationships has structurally not changed since the French Revolution when the nation-state first took form. Since 1790 states have been in process of becoming instruments of their nationalized publics. In structural terms factors which helped to account for the accommodation of interests and the limitation of conflict in the nineteenth century should have application today.

Second and more fundamentally, in basic respects human behavior must be similar across historical epochs. If human nature does not change, there must be some behavioral constants. The problem then becomes that of searching out elements of commonality. These elements can be found as long as comparisons are generic rather than specific. The greater the

historical distance between behavior to be compared, the more generalized and aggregative must be the principles of comparison. The same is of course true of comparisons of different social and political institutions in different geographic locations in a given historical epoch. The more universal the political behavior one wants to describe and analyze, the less system-specific must the terminology be. Thus the typical traditional political categories used in the analysis of Western democratic government (such as "executive, legislative and judicial," "political parties," "interest groups" and so on) could not be used in the analysis of non-Western societies and politics. More general terminology (such as "rule-making," "interest articulation," "interest aggregation" and the like) had to be employed to compare political systems across geographic and developmental lines. Thus, there is no difficulty in principle in making cross-temporal comparisons or in relating the behavior of the nineteenth century diplomatic system to the twentieth century political system. The difficulty is practical: on what conceptual bases to make the linkage.

This introduces a third and very particular reason for the choice of nineteenth century diplomacy as the setting in which to test the variety of power and status theories. The nineteenth century, and particularly the decade of the eighteen seventies, has been regarded as the archetype of the balance of power system. If power variables were ever to have influence in world politics, they should be observed in operation in the eighteen seventies.

Indeed, power variables should have even greater application in the Bismarckian system of international relations than they do today. Today, we are told, military power is unusable or at a discount (Knorr, 1966). Thus, for those exponents of the various theories involved, the choice of the eighteen seventies is one most favorable to the demonstration of power and balance of power hypotheses.

Finally there is an especial contemporary relevance to a survey of the diplomacy of the eighteen seventies. While strict power factors may have changed in the interim, the shifting alignments of the Bismarckian period may have even greater application to the world of the nineteen eighties than do contemporary cold war alliances. The diplomacy of five major units: Russia, America, W. Europe, China and Japan may be more akin to the diplomacy of the eighteen seventies than to recent bipolarity.

For all these reasons we have chosen to center the testing of power, status, and balance of power theories in the decade of the eighteen seventies. Diplomats, historians and even statesmen from the era concerned talked incessantly about power. Does it follow that power and status are variables which help to explain a large part of international behavior?

APPROXIMATIONS TO "POWER," "STATUS," AND "BALANCE OF POWER"

In order to test such claims, it is necessary to have a satisfactory measure of "power"; "balance of power"; and "status." These are extremely difficult and evanescent terms; indeed in a strict sense, they are capable of unlimited extension and are hence undefinable (Rosecrance, 1961). It is impossible to tell how to combine "zeal" with "military strength" in reaching a reliable compound of "power." Indeed, even if this could be done so that x units of "zeal" could be regarded to offset y units of "military strength," the equation could not be written because "zeal" cannot be estimated concretely. The same is true of other elements that are typically regarded to form part of a nation's "power": "quality of government"; "quality of diplomacy"; "morale" and so on (Morgenthau, 1973). The difficulty of measuring "power" in this comprehensive sense would be critical if the theories to be tested were formulated in such terms. If they were formulated in such terms, however, *they could not be tested at all* since "power" could not be defined or precisely approximated. We do not propose to attempt to assess such grandiose formulations: rather, we seek to find approximations to the *objective* power of a state, the power which is capable of objective assessment. Further, as noted above, it is crucial to separate the amount of power from its modes of exercise if the two different competing explanations are to be compared. If terms like "quality of diplomacy," "quality of government" and so on are to be included in "power," then the means of exercise of power becomes identical with power itself and no assessment of the respective utilities of the two different approaches is possible.

It follows then that what is necessary for an objective approximation to or measurement of "power" is data on a nation's objective qualities: such factors as economic strength and potential, military preparedness, degree of modernization, demographic strength, and financial liquidity and stability. We have gathered just such data for the five major European powers in the period, 1870-1881. In all, some 107 different variable measures have been compiled on a yearly basis (see Table 1). These measures are balanced between somewhat crude military and demographic variables (reflecting the sheer ponderousness or "weight" of a nation) and financial, educational, economic, and communicational variables (that indicate the degree of modernization, the speed and flexibility with which "weight" may be exercised). In addition, twenty-five variables were chosen for inclusion in a "power index": this index included those measures from each crucial category which seemed best to "represent" the category in question.[3] Seven categories were included in the index: demographic, economic, military, educational-scientific, financial, trading and fiscal. Nations which

Table 1. Approximations of Power and Status

<u>Demographic Variables</u>	<u>Diplomatic Variables</u>
Population	Number of Diplomatic Recognitions
Population Density	Foreign Diplomats in Austria
Urban Population (over 50,000)	Foreign Consuls in Austria
Emigrants	Foreign Diplomatic Representatives in Austria
<u>Education Variables</u>	Foreign Diplomats in England
Primary School Enrollment	Foreign Consuls in England
Primary School Enrollment/Capita	Foreign Diplomatic Representatives in England
Secondary School Enrollment	Foreign Diplomats in France
Secondary School Enrollment/Capita	Foreign Consuls in France
Primary and Secondary Enrollment	Foreign Diplomatic Representatives in France
Primary and Secondary Enrollment/Capita	Foreign Diplomats in Germany
University Enrollment	Foreign Consuls in Germany
University Enrollment/Capita	Foreign Diplomatic Representatives in Germany
Total School Enrollment	Foreign Diplomats in Russia
Total School Enrollment/Capita	Foreign Consuls in Russia
<u>Financial Variables</u>	Foreign Diplomatic Representatives in Russia
Amount Coinage Minted Annually	<u>Trade Variables</u>
Wheat Price	Imports General ^a
Bank Discount Rate	Exports General ^b
Open Market Discount Rate	Imports Special ^b
Number of Bonds	Exports Special
Total Amount of Bonds Unredeemed	Imports Totals
on London Market	Exports Totals
Average Market Price of Bonds	Imports Bullion General
(Par = 100)	Exports Bullion General
Cost of Living	Imports Bullion Special
Gross Money Wages	Exports Bullion Special
Discount Rate--Yearly Spread	Surplus or Deficit--General Commerce
Number of Changes in Discount Rate	Surplus or Deficit--Special Commerce
<u>Fiscal Variables</u>	Surplus or Deficit--Bullion General
Total Government Expenditures	Surplus or Deficit--Bullion Special
Total Revenue	Imports from Austria
Military Expenditure	Exports to Austria
Interest on Debt	Imports from England
% Military of Total Expenditures	Exports to England
% Interest of Total Expenditures	Imports from France
Total Public Debt	Exports to France
Surplus or Deficit--Government	Imports from Germany
Revenues and Expenditures	Exports to Germany
<u>Military Variables</u>	Imports from Russia
Military Expenditure	Exports to Russia
% Military of Total Expenditures	Relative Acceptance Imports from Austria
Naval Tonnage	Relative Acceptance Exports to Austria
Number of Ironclads	Relative Acceptance Imports from England
Men in Army	Relative Acceptance Exports to England
<u>Transactional Variables</u>	Relative Acceptance Imports from France
Telegrams	Relative Acceptance Exports to France
Telegrams/Capita	Relative Acceptance Imports from Germany
First Class Mail	Relative Acceptance Exports to Germany
First Class Mail/Capita	Relative Acceptance Imports from Russia
All Mail	Relative Acceptance Exports to Russia
All Mail/Capita	Surplus or Deficit--Trade with Austria
<u>Economic Power Variables</u>	Surplus or Deficit--Trade with England
Pig Iron Production	Surplus or Deficit--Trade with France
Steel Production	Surplus or Deficit--Trade with Germany
Coal Production	Surplus or Deficit--Trade with Russia
Railroad Mileage	Surplus or Deficit--Trade with Major Powers
Railroad Mileage/Square Mile	^a General: Trade including reexport
Telegraph Mileage	^b Special: Trade excluding reexport
Telegraph Mileage/Square Mile	

did not have a very large demographic base might yet be superior on indices of economic or educational development. Nations which were not strong militarily might have great potential in terms of high modernization, fiscal stability, and trading position. (See Table 2.) In the absence of explanatory theory which would provide a basis for weighting these variables in the compilation of an index, we assume that each variable has equal status. At least for the eighteen seventies, such a procedure is intuitively satisfying in that it places France and England in the lead at the beginning of the decade, both of them giving place to Germany at the end. Russia and Austria-Hungary remain a distant fourth and fifth respectively.

If such an index validly represents objective power assessments for the eighteen seventies, "balance of power" becomes easy to measure. If coalitions contain states which sum to an approximate balance in strength, then there is a "balance of power." If one coalition contains the strongest states and another the weaker states, then power certainly is not balanced.

More difficult is the measurement of "status." While "power" has obvious objective referents, "status" does not. Insofar as status is equivalent to reputation, it might be measured by obtaining the views of national leaders about their and other states' standing. This has not been and could not be done. Diplomats do not provide such estimates; nor, if they did,

Table 2. Twenty-Five Power Variables

<u>Military</u>	<u>Economic</u>
Military Expenditure	Pig Iron Production
Percent of Budget Spent on Military	Steel Production
Number of Military Personnel	Coal Production
Number of Ironclad Warships	Telegraph Mileage
	Telegraph Mileage/Capita
	Railroad Mileage
	Railroad Mileage/Capita
<u>Demographic</u>	<u>Educational</u>
Population	Primary School Enrollment
Urban Population	Primary School Enrollment/Capita
	University Enrollment
	University Enrollment/Capita
<u>Fiscal</u>	<u>Financial</u>
Total Government Expenditure	Bank Discount Rate ^a
Total Government Revenue	Open Market Discount Rate ^a
Surplus or Deficit in	Discount Rate--Yearly Spread ^a
Government Budget	Number of Changes in Discount Rate ^a
<u>Trade</u>	
Surplus or Deficit with the	
Major Powers	

a. While it was assumed that a nation's power would vary positively with the other variables, bank discount rate and open market discount rate were related to power inversely: that is, it was assumed that a low rate of discount would indicate a plenitude of financial resources and therefore greater power. Also, the larger the spread in the rate of discount (the greater the instability and fluctuations) the lower the presumed power. For similar reasons, the greater the number of changes in the discount rate, the lower the power.

could they be relied upon or a diplomat's calling would be misnamed. A partial surrogate for status might be found in the number of diplomatic recognitions accorded to a state by other powers (Singer and Small, 1966a; Wallace, 1970). Another measure, still not fully satisfactory, would be the number of diplomats accredited to a foreign capital, with the assumption that the more diplomats accredited, the higher the status (Brams, 1966). As East (1972) has argued, "the general theory underlying this indicator of prestige closely parallels that of the reputational school of social position." Yet, neither of these measures is adequate in itself. Failing other objective measures, we have chosen to use both as indicators of status. The reader should be aware of our caveats, however, and that we are continuing to search for better measures of national status and prestige.

MEASURES OF INTERNATIONAL COOPERATION AND CONFLICT

If power, balance of power and status theories are to be tested, they must be compared both dyadically and systemically to a valid and reliable indicator of the amount of international cooperation and conflict. At least four possible sources of cooperation and conflict data might be used for the eighteen seventies. The first, similar to the data used in the contemporary period by many analysts, is newspaper data. Newspapers, however, do not have access to secret diplomacy; many of the events which they record are trivial; and there is also the possibility of systematic bias. A second source might be data on wars (as evidence of conflict) and alliances (as evidence of cooperation). Singer and his associates have plumbed this material with great profit (Singer and Small, 1968). Alliances and wars, however, represent only the endpoints of the continuum of cooperation and conflict. The vast middle segment of this continuum (which represents less conflict than war and less cooperation than alliance) is left out. Since the vast preponderance of international actions fall within this category, this is a crucial disadvantage. A third approach might be to utilize archival material or the official collections of documents issued by national foreign offices. The difficulty here is winnowing the grain from the chaff: most of what transpires between governments is of little importance; most of the actions taken pass beneath the threshold of diplomatic significance. For example, an American Secretary of State sees and takes action upon only about .1 to .3% of the incoming cable traffic per day (Goodman et al., 1974). The question is then posed: how might the important actions and events be screened from the unimportant? A fourth method, and the one employed here, is to use the guidance of the diplomatic historian. On the basis of his expert knowledge he is able to

distinguish between significant and trivial occurrences. Presumably, those acts and events which diplomatic historians have seen fit to record in their works are those that the most highly trained and knowledgeable scholars regard as most important and most relevant to an understanding of the period concerned. But how are their works to be used? How might one construct some measure of international cooperation and conflict from the salient diplomatic historical surveys? First, it is necessary to develop a list of standard sources. In our case we have used works on the American Historical Association's *Guide to Historical Literature* (1961). In addition we have further limited this list by requiring in addition that the works in question cover at least a twelve-year historical period. The specification of a twelve-year rule prevents inclusion of essentially monographic treatments of short time periods. We also rule out studies that deal solely with a functional area of interest (such as colonial or naval policy). The reason for requiring generality of treatment is that inclusion of purely monographic and specialized treatments would alter criteria of significance. The general diplomatic historians aim at a roughly common level of abstraction and a roughly similar standard of significance. To have included monographic accounts of, say, the Near Eastern Crisis (1875-78) or the negotiation of the Dual Alliance (1878-79) would have skewed the list toward two specific episodes; it would not have provided relatively "even" coverage of the entire period. Moreover, since detailed treatments do not exist for each microscopic time period in the monographic literature, there was no way to include all the monographic accounts and still attain an evenness of abstraction and a common standard of significance.

The sources used were works by: Albertini, Fay, Hinsley, Langer, Schmitt, Sontag, and Taylor. Other sources might also have been employed, but the marginal utility of plumbing additional sources is already very small in that each new source adds less and less to the previously formulated list of events. The procedure used to "code" these sources was as follows:

1. Each coder (historians and political scientists) was given instructions specifying what an event is and how to code it (see Goodman et al., 1974).
2. Coders were instructed to list each event recorded by the historian in language as close as possible to that of the historian.

An initial check on the reliability of event selection was made. In numerous trials coders selected events from the same passage in several different sources. The average overlap of events was over 85%—that is, less than 15% of the events listed by any given coder were not listed by other coders. Moreover, reliability improved in later stages of the project. After cross-coder reliability checks, each coder went on to code all events for the

Table 3.
Measures of Cooperation and Conflict

1. Cooperation/conflict scores for a nation as actor on the international system.
2. Cooperation/conflict scores for a nation as actor on the major power subsystem.
- 3-7. Cooperation/conflict scores for a nation as actor on England, France, Germany, Austria-Hungary, Russia—separately.
8. Cooperation/conflict scores for a nation as target of the international system.
9. cooperation/conflict scores for a nation as target of the major power subsystem.
- 10-14. Cooperation/conflict scores for a nation as target of England, France, Germany, Austria-Hungary, Russia—separately.
15. The number of events in which a nation was the initiator of actors on the international system.
16. The number of events in which a nation was the initiator of actions on the major power subsystem.
- 17-21. The number of events in which a nation was the initiator of actions on England, France, Germany, Austria-Hungary, and Russia—separately.
22. The number of events in which a nation was the target of actions by the international system.
23. The number of events in which a nation was the target of actions by the major power subsystem.
- 24-28. The number of events in which a nation was the target of actions by England, France, Germany, Austria-Hungary, and Russia—separately.
29. Systemic balance of cooperation (cooperation received from the international system minus cooperation given to the international system). o
30. Major power balance of cooperation (cooperation received from the major powers minus cooperation given to the major powers).

required period in one historical source. Events were coded in the order in which they appeared in the text. The collation of the event lists of separate historians resulted in the compilation of a single master list of events for the 1870-1881 period.

After the creation of a cooperation-conflict scale (see Goodman et al., 1974) the master list was formally scaled with interscaler reliabilities over .90. Each dyadic interaction among states received a specific scale score. This made possible the testing of hypotheses concerning the amounts of cooperation or conflict between two states as well as those dealing entirely with systemic cooperation. In this paper the measures of international cooperation-conflict were used in more than thirty different forms, each dealing with the major nations—England, France, Germany, Austria-Hungary and Russia—year-by-year. It thus became possible to distinguish between the role of a nation as *actor* and its role as *target*. (See Table 3.)

RELATIONSHIPS BETWEEN INDEPENDENT VARIABLES (POWER, STATUS, BALANCE OF POWER) AND DEPENDENT VARIABLES (COOPERATION/CONFLICT)

Given measures of power, status, balance of power on the one hand and cooperation-conflict on the other, we can now seek to establish relationships between variables. If power, status, and balance of power approaches are valid, one should expect to find the amount of cooperation which a state derives as a function of its (power, status, balance of power) position.

Absolute Theories of Power and Status

The first cluster of theories to be tested links absolute amounts of power or status with the amount of cooperation. According to such hypotheses, if France and England have large stocks of power or status they should either receive a large amount of cooperation or be the recipient of a great deal of hostility from other actors. It is not necessary to report here correlations of 107 power and status variables with cooperation. We shall rather concentrate upon the relationships between the twenty-five variables making up the power index and the amount of cooperation received or given out by each major actor. Interestingly, none of the twenty-five constituents of power showed significant correlations with cooperation for each actor. Table 4 summarizes these results. While France and England evinced the largest percentage of significant correlations between power measures and cooperation measures, not one of the 25 power variables was significantly correlated with cooperation for every

Table 4. Number of Significant Correlations (at .05 or better)
between Each of the Twenty-Five Power Variables and
the Major Dependent Variables for the Major Powers^a

Countries	Nation as Actor on Major Power Subsystem (C/C)	Nation as Actor on Entire System (C/C)	Nation as Target of Major Power Subsystem (C/C)	Nation as Target of Entire System (C/C)	Percentage of 25 Variables Signifi- cantly Correlated with Dependent Variable
England	0	3	9	4	16%
France	6	6	3	4	19%
Germany	0	0	1	1	2%
Austria-Hungary	1	3	0	0	4%
Russia	0	0	3	3	6%

a. Four major measures of cooperation given and received are presented here and elsewhere. (1) "Nation as actor on major power subsystem" refers to the amount of cooperation a state gives to the four other major powers. (2) "Nation as actor on entire system" refers to the amount of cooperation given by one state to the entire remaining system. (3) "Nation as target of major power system" refers to the amount of cooperation a state receives from the four other major powers. (4) "Nation as target of the entire system" refers to the amount of cooperation a state receives from the rest of the system.

It should be reiterated that cooperation and conflict are the opposite endpoints of a scale. Thus, measures of cooperation are also measures of conflict. High cooperation = low conflict; high conflict = low cooperation. Positive correlations with cooperation are then negative correlations with conflict.

Not one of the 25 power variables was significantly correlated with cooperation/conflict for every nation.

nation. No linkage between absolute amounts of power and cooperation can therefore be established. Further, there is no apparent distinction between power-oriented states and non-power-oriented states. All of the five major states appear to be non-power-oriented and non-power-affected. The results lend no support to absolute theories of power.

What about absolute theories of status? As previously mentioned, there is no truly satisfactory measure of international status. We here employ two surrogate measures: the number of diplomatic recognitions a country receives and the number of foreign diplomats stationed in its territory. The assumption is that high status is indicated by a large number of recognitions and accreditations. The absolute version of status theories would have a nation's position directly affected by its status position. One would anticipate either that a high status nation would receive high cooperation or that it would receive high conflict. The findings, however, as revealed in Table 5 do not bear out any such relationship. Oddly enough the two measures of status often appear to operate inversely: that is, when a nation derives status from recognition, it often does not do so in terms of the number of diplomats stationed within its territory. Germany and Austria-Hungary show opposite signs on the two measures; the Russian pattern is

Table 5. The Relation between Two Status Measures and Cooperation/Conflict

	England n=12	France n=12	Germany n=12	Austria- Hungary n=12	Russia n=12
Status as Measured by Diplomatic Recognition with:					
C/C: Actor on major powers	.55	-.04	-.06	.34	.27
C/C: Actor on system	.12	-.37	-.17	.01	.01
C/C: Target of major powers	.01	.62 ^a	-.16	.48	.09
C/C: Target of system	.05	.65 ^b	-.15	.38	.02
Status as Measured by Diplomatic Representation with:					
C/C: Actor on major powers	-.09	.62 ^a	.31	-.22	.01
C/C: Actor on system	.18	-.42	.40	-.55 ^a	-.05
C/C: Target of major powers	.01	.31	.52 ^a	-.37	-.27
C/C: Target of system	.25	.35	.52 ^a	-.22	-.36

^a $s \leq .05$

^b $s \leq .01$

similar to that of Austria; in the case of England and France the record is mixed. Obviously, however, there is no pattern which holds across the diplomatic board, even utilizing a single status measure. Most of the correlations, moreover, are below minimum significance levels. It is perhaps interesting though, that absolute theories of status receive slightly more support than absolute theories of power, even though neither attains significance.

Relative Theories of Power and Status

If absolute theories of power and status cannot be validated during the eighteen seventies, an era typically regarded as the perfection of *Macht-politik*, are relative formulations of power, status, and balance of power more successful? In this mode, the cooperation (or conflict) received by a state would be the function of its relative position in a ranking of power or status. States with high absolute power, but low power ranking, would in this formulation receive little cooperation (or conflict). To test the power version of relative measures, we employ the 25-variable power index mentioned previously.[4] Since each variable has equal status in the index, the rank for each power consists of a summation of rankings on each variable. (A score of 25 would then be all firsts, a score of 125 all fifths.)[5] The results are depicted in Table 6. Utilizing the power index we can now compare national rankings with cooperation and conflict, that is, we can test a cluster of theories that assert that there is a relationship

Table 6. Rankings on Twenty-Five Variable Power Index, 1870-1881^a

Year	England Rank/Score	France Rank/Score	Germany Rank/Score	Austria-Hungary Rank/Score	Russia Rank/Score
1870	2 / 67	1 / 60	3 / 75	5 / 93	4 / 84
1871	1(tie)/ 62	1(tie)/ 62	3 / 67	5 / 98	4 / 92
1872	2 / 62	1 / 59	3 / 63	5 / 102	4 / 84
1873	1 / 58	2 / 62	3 / 66	5 / 95	4 / 86
1874	1(tie)/ 60	1(tie)/ 60	3 / 65	5 / 94	4 / 91
1875	2 / 65	1 / 58	3 / 68	5 / 94	4 / 89
1876	2 / 63	1 / 58	3 / 66	5 / 96	4 / 88
1877	2 / 64	1 / 62	3 / 68	5 / 85	4 / 83
1878	3 / 70	1 / 60	2 / 62	5 / 95	4 / 81
1879	1(tie)/ 64	1(tie)/ 64	3 / 67	5 / 96	4 / 79
1880	1 / 58	3 / 69	2 / 66	5 / 88	4 / 87
1881	2 / 65	3 / 66	1 / 63	5 / 94	4 / 86

a. France was regarded as the premier military power in Europe before the Franco-Prussian War. After that her primacy waned. She remained superior to both England and Germany in terms of military preparations and expenditure, however, during most of the decade. In economic terms England was ahead of France even at the beginning of the period, and Germany passed her at the end.

between relative power and cooperation in the system. The findings are given in Table 7. These results make clear that power rankings for the five major nations do not account for the amount of cooperation they receive or contribute. Only one significant correlation emerges (for France), and that only in reference to one measure of cooperation. Recurring to Table 6, one notes that French power is trending downward during the decade, that English power is fluctuating and that German power is increasing. But the amount of cooperation that these nations derive bears no relationship to such trends. France receives greater cooperation at the end of the decade (when she is weaker) than she did at the beginning. The German pattern is precisely opposite: she gets more cooperation as she grows in strength. England shows no consistent pattern. The cooperation she receives from others goes steadily downward while her power fluctuates in relation to that of France and Germany. These findings do not appear to corroborate hypotheses concerning the impact of relative power upon cooperation between nations.

Table 7. Twenty-Five Variable Power Index and Major Dependent Variables (Cooperation/Conflict Scores)^a

Variables	Major Power Subsystem n=60	England n=12	France n=12	Germany n=12	Austria- Hungary n=12	Russia n=12
25-variable power indices with:						
Cooperation/conflict scores: nation as actor on major power subsystem	.01	.44	-.63 ^b	.25	--	--
C/C scores: nation as actor on entire system	.09	.26	.24	.16	--	--
C/C scores: nation as target of major power subsystem	-.17	.32	.04	.37	--	--
C/C scores: nation as target of entire system	-.16	.36	-.03	.37	--	--

a. There are no strictly satisfactory correlation measures for this data. The interval cooperation data could have been transformed into ordinal data (with great loss of information) and the two ordinal scales compared by Kendall or Spearman measures. We decided, however, to use a Pearson product-moment measure which probably slightly overstates the degree of association actually present.

No correlations appear for Austria-Hungary and Russia for there is no variation in their ranking during the decade.

b. Significant at .013 level; all other correlations are above the .05 level and insignificant.

If relative power measures do not seem to account for changes in cooperation that nations give or receive individually, it still remains possible that relative balance of power measures, taking alignments into account, may help to explain the amount of total cooperation and conflict in the system. It might be true that when there is a balance of power between alignments, either high cooperation or high conflict is to be expected systemically. Here, therefore, we will be looking not at the amount of cooperation given or received by individual states, but at the average level of cooperation in the system for a particular year. In order to chart such relationships, we shall also have to have a measure of alignments. These have been derived in slightly modified form from Hart (1974). Table 8 offers data on power relationships, alignment patterns and systemic cooperation. The power column shows the amount of power (in terms of rank) of the nations in each grouping (with five as the highest amount of power for any one nation). The cooperation/conflict column gives the amount of systemic cooperation for the year (> 50 = cooperation; < 50 = conflict). The patterns in the table, however, do not show any clear relationship between power balances on the one hand and conflict and cooperation on the other. Neglecting the periods in which cooperative

Table 8. Balance of Power Patterns and Level of Cooperation/
Conflict in the Major Power Subsystem

Year	International Alignment			Power Alignment	C/C Major Power Subsystem
	Germany/France	Austria	England/Russia		
1870				5/10/2	48.406
1871		AFGRE		15	56.805
1872		AFGRE		15	57.118
1873		F/GARE		4/11	57.858
1874		FARE/G		12/3	48.795
1875		FARE/G		12/3	54.534
1876		AFGRE		15	55.186
1877		FAE/E/G		8/4/3	51.654
1878		AGEF/R		15/2	53.814
1879		AGEF/R		15/2	52.464
1880		AFGRE		15	57.381
1881		E/AGR/F		4/8/3	55.394

alignments include all five powers, we have eight years in which counterbalancing coalitions existed. In five of these, 4 v. 1 unbalanced coalitions exist. In each case the power of the single excluded state is dwarfed by that of the remaining four. Yet the amount of systemic cooperation associated with these cases varies enormously. In 1873 the highest amount of general cooperation is recorded in a system characterized by marked power imbalance. Yet in 1874, a year also evincing a great imbalance in power relationships, there is very low systemic cooperation. The other four versus one alignments display moderate cooperation.

There are only two cases where power could be said by any approximation to approach balance. In 1877 and again in 1881 there are 3 v. 1 v. 1 coalitions. These instances are not ones of strict balance as the figures show: the group of three clearly over-balances each of the other two excluded states. Presuming, however, that the excluded two might sometimes work together against the central three, the relationship becomes one of 8 v. 7 units of power. Even these cases, however, do not show a uniform tendency. In 1877 there is a tiny positive net balance of cooperation, verging on indifference. In 1881 cooperation is much higher at the moderate to high end of the spectrum with the same configuration of power. In short, high imbalances of power are associated with both low and high cooperation. There is no definite relationship shown between balance of power and conflict.

If relative power and balance of power measures do not account for patterns of cooperation and conflict in the international system, do status

rankings help to do so? It might be hypothesized that the distribution of prestige and reputation is a sensitive predictor of international rivalry. Perhaps states with low prestige will compete with those with high prestige for a more equal share of the benefits. We shall employ two surrogate measures of status: diplomatic accreditations (representation) and diplomatic recognitions. The assumption is that the nation with the highest foreign diplomatic representation and the highest number of diplomatic recognitions will have the greatest prestige and status. Table 9 displays the status rankings on the two measures. As the table shows, however, there is some disjunction between the separate measures. Germany's rise to pre-eminence is most clearly captured in the representation measure, as is France's decline. The possible invalidity of the recognition measure of status is shown most clearly in the Austrian case where Vienna moves from fourth to second in a period of just four years. Again utilizing the recognitions measure, we observe that France appears to gain much greater status during the decade. But the representation measure is also not fully satisfactory. It probably understates Austria's position. The reason may be Vienna's modest economic and commercial potential which translated itself into diminished consular representation.

Table 9. Ranking of Nations on the Two Status Indicators, by Year

Year	England		France		Germany		Austria-Hungary		Russia	
	Status on Rep.	Status on Rec.	Status on Rep.	Status on Rec.	Status on Rep.	Status on Rec.	Status on Rep.	Status on Rec.	Status on Rep.	Status on Rec.
1870	3	2	1	3	4	1	5	4	2	5
1871	1	2	2	2	4	1	5	4	3	5
1872	2	2	1	3	2	1	5	4	4	5
1873	2	2	1	3	4	1	5	4	3	5
1874	3	1	2	1	1	3	5	3	4	5
1875	3	1	2	1	1	4	5	3	4	5
1876	3	1	2	1	1	4	5	3	4	5
1877	3	2	2	1	1	4	5	2	3	5
1878	3	2	2	1	1	2	5	2	4	5
1879	3	3	2	1	1	2	5	2	4	5
1880	3	4	2	1	1	3	5	2	4	5
1881	3	3	2	1	1	3	5	2	4	5

Table 10 compares four cooperation indicators with the two status measures. Unfortunately, there appears to be no pattern of significant relationships between status rankings and cooperation. Some powers appear to give more cooperation when they have higher status; others give more cooperation when they have less status. There are similar differences in terms of cooperation received. Some powers appear to get more cooperation when they have high status; others receive less cooperation when they have high status. Patterns are slightly more uniform within a single measure, but France is inconsistent on each measure. Certainly no general conclusion can be drawn concerning a specific relationship between status rankings and the amount of cooperation which nations either receive or contribute to others. Again, however, it is interesting to observe that there seems to be a stronger association (be it not uniform) between status measures and cooperation than between power measures and cooperation. This relationship, however, is neither strong enough, nor consistent enough, to be able to claim that relative status measures satisfactorily explain patterns of international cooperation and conflict.

Table 10. Correlations between Rankings on Status and Cooperation/Conflict

	<u>England</u>	<u>France</u>	<u>Germany</u>	<u>Austria-Hungary</u>	<u>Russia</u>
	n=12	n=12	n=12	n=12	n=12
Diplomatic Representation Rankings with:					
C/C: Actor on major powers	.66 ^b	-.26	-.18	---	-.07
C/C: Actor on system	.76 ^b	.12	-.42	---	.18
C/C: Target of major powers	.52 ^a	-.64 ^b	-.25	---	-.06
C/C: Target of system	.72 ^b	-.69 ^b	-.24	---	-.05
Diplomatic Recognition Rankings with:					
C/C: Actor on major powers	-.27	.20	.14	.15	---
C/C: Actor on system	-.16	-.55	.23	-.52	---
C/C: Target of major powers	.13	.67 ^b	.59	.02	---
C/C: Target of system	-.07	.72 ^b	.58	-.01	---

^a s ≤ .05

^b s ≤ .01

Theories Involving Change in Power or Status

Both absolute and relative measures of power and status, however, have a single difficulty: they are static. It is possible rather that nations respond to dynamic factors in the system, to changes in power or status positions. Nations which are increasing in status or power, then, may be expected to stimulate one type of response; nations which are losing power or status to evoke another. If Germany is increasing and France declining, this fact may be much more important than their static positions at any given point in time. Particularly in power terms, historians and political scientists have been wont to claim that the nation which is increasing in power will be the object of most international attention and rivalry (see Doran, 1971). Singer, Bremer and Stuckey (1972) have argued that for the nineteenth century at least, changes toward a further concentration of power were positively correlated with war. Alternatively, it could be argued that a nation increasing its power position might be the beneficiary of an "ingratiation effect" (Healy and Stein, 1973) and derive even more cooperation. Table 11 compares cooperation measures with the change in power position of a nation.

The results, however, do not manifest a central tendency. Changes in power appear to cut in different directions for different countries. Some nations appear to become more involved in conflict because of growing power; others appear to become less involved. The system-wide correlations, moreover, are the least suggestive of significant relationships. There is little evidence supporting theories of change in power as predictors of international conflict and cooperation.

Table 11. Delta of 25-Variable Power Index with Cooperation/Conflict^a

	<u>System</u>	<u>England</u>	<u>France</u>	<u>Germany</u>	<u>Austria-Hungary</u>	<u>Russia</u>
	n=55	n=11	n=11	n=11	n=11	n=11
Delta of 25-variable power index with:						
C/C: Actor on major powers	.01	.33	-.05	-.01	---	---
C/C: Actor on system	-.02	.14	-.22	.01	---	---
C/C: Target of major powers	.09	.20	-.13	-.33	---	---
C/C: Target of system	.10	.08	.06	-.31	---	---

In the tests of previous clusters of theory, however, it appeared that status measures were slightly more sensitively associated with cooperation than power measures. It therefore might be hoped that dynamic theories of status would offer a satisfactory account of patterns of cooperation and conflict. Table 12 displays correlations between the four cooperation measures and change in status for the five major European powers. There is a *prima facie* relationship between change in status and German participation in cooperation. Yet, this conclusion is an artifact, because diplomatic representation in Germany and the recognition of Germany were greatly affected by the unification of Germany. Standard sources like the *Almanach de Gotha* do not provide a unified German total until 1874, previously listing Prussia and the other German states separately. Since combining the German states with Prussia results in double-counting (due to internal recognitions), we took Prussian totals from 1870-73, and totals

Table 12. Delta of Two Status Variables with Cooperation/Conflict

	<u>England</u>	<u>France</u>	<u>Germany</u>	<u>Austria- Hungary</u>	<u>Russia</u>
	n=11	n=11	n=11	n=11	n=11
Delta Diplomatic Representation Rank with:					
C/C: Actor on major powers	.24	.03	-.69 ^b	---	.02
C/C: Actor on system	.21	-.24	-.71 ^b	---	-.12
C/C: Target of major powers	.12	.02	-.62 ^b	---	-.12
C/C: Target of system	.16	.02	-.62 ^b	---	-.22
Delta Diplomatic Recognition Rank with:					
C/C: Actor on major powers	-.44	-.14	.69 ^b	.02	---
C/C: Actor on system	-.17	.09	.65 ^a	.05	---
C/C: Target of major powers	-.36	.08	.64 ^a	.23	---
C/C: Target of system	.28	.07	.67 ^b	.05	---

^a $s \leq .05$

^b $s \leq .01$

for the unified German Empire from 1874-81. This results in a large decrease in 1874, however, when diplomatic recognitions of Prussia by the smaller German states are no longer counted. In much the same way diplomatic representation in Germany went up when foreign diplomats in the German states were counted as accredited to Germany (also in 1874). Thus, the high correlations which appear are not to be taken as evidence of a real relationship in the data.

Even if the German correlations were taken as significant, however, no relationship between change in status and the amount of cooperation given and received emerges for all countries; sign changes exist for both measures of status. While there appears to be a stronger relationship between change in status and cooperation than change in power and cooperation, it cannot be said that change in status is a satisfactory predictor of the amount of cooperation either in regard to a specific state or to the system as a whole.

Theories Relating the Disparity between Power and Status to the Amount of Cooperation in the System

At this point, the reader may begin to be discouraged: all the clusters of theories tested thus far have failed to demonstrate significant relationships across nations. Neither power nor status in their various forms have accounted for changes in the patterns of cooperation. Could it not be, however, that the failure of previous clusters of theory has been due to their narrowness, and that an approach which considers power and status *in their relationship to each other* might fare better? The theoretical literature would deem it so. Much of the literature of the late sixties and early seventies concentrates upon just such a linkage. In more precise terms, the occurrence of conflict in the system is related to the disparity between power and status, to rank disequilibrium or status inconsistency. Galtung (1964, 1966a, b, c, d) proposes rank disequilibrium as a nearly sufficient condition of aggression. More recently there have been a series of analyses concerned with the systemic consequences of stratification (East, 1969, 1970, 1972; Midlarsky, 1969; Wallace 1970a, 1970b, 1972). The general conclusion of these studies has been that the systemic disparity between power and status is positively correlated with war (East, 1972; Wallace, 1970).

In more traditional terms, such a linkage has frequently been made. Organski's "power transition" theory relates the onset of major war to the attempt of a challenger to catch up with a dominant power. The challenger is stimulated to make his attempt by the disparity between his relatively high power and relatively low status (Organski, 1968a, 1968b). Even

Lenin's theory of imperialism (Lenin, 1917) makes much of the same type of disparity. The reason capitalist alliances can never last and must break down in war is the "uneven development of capitalism." As some states are developing much more rapidly than others, alliances formed at one time on the basis of one power relationship must be forcibly changed as a new economic power relationship emerges. Hence world war. There is therefore a special impetus to testing clusters of theory which relate war or conflict to the discrepancy between power and status. Table 13 presents information on precisely this topic. Twenty-eight status discrepancy variables (disparities between power and status) have been tested against our four measures of cooperation. But again, no pattern holds for all five countries. The significant correlations for one country are not on the same status discrepancy variables as correlations for all other countries. Negative discrepancies between status and power (where power > status) are not more highly correlated with conflict than absolute discrepancies (where power > status or status > power). It therefore does not appear that there is a demonstrable relationship between conflict and the disparity between power and status at either the national or the systemic level. [6]

If the reader is inclined to throw up his hands at this point he should by no means do so. Negative findings are as important as positive findings in the development of a discipline, particularly when the propositions questioned are those typically and seriously propounded by other investigators. Eckstein (1974) points out that approximately 30% of articles in physical science journals report negative findings. In this particular case the failure of power and status variables to account for patterns of cooperation and conflict is salient precisely because the conditions for their verification

Table 13. Percentage of Significant Correlations between 28 Status Inconsistency Variables and Cooperation/Conflict

	<u>England</u>	<u>France</u>	<u>Germany</u>	<u>Austria-Hungary</u>	<u>Russia</u>	<u>Total</u>
28 Status Inconsistency Variables (Disparities between Power and Status) and:						
C/C: Actor on major powers	7	0	0	0	0	6%
C/C: Actor on system	7	0	0	0	0	6%
C/C: Target of major powers	0	8	5	1	0	11%
C/C: Target of system	6	9	5	0	0	16%
Totals in %	18%	15%	5%	1%	0%	

were so relatively favorable. The analysis has focussed on a period in history in which historians and political scientists have typically regarded balance of power operations to be at their peak (Hinsley, 1962; Organski, 1968; Doran, 1971). It has centered attention on the major powers, those that might be expected to be most involved in balance of power policies. The data used to confirm or disconfirm power, balance of power and status theories include on the one hand: a wide variety of power measures in economic, industrial, educational, financial, demographic, governmental and military terms; on the other, 2,046 interactions among the great powers reliably scaled in terms of degrees of cooperation and conflict. If power and status propositions were to be supported, it could be assumed *prima facie* that they would receive their greatest support on the basis of the present study.

The failure of these approaches in the present context leads one to ask how historians, diplomats, and political scientists could so generally have committed themselves to theories which bear such apparently meagre fruit? Is it possible that "power" was misconceived or misinterpreted? That nations which statesmen perceived as "powerful" were not powerful in more objective terms? We have already noted that diplomatic perceptions of power have often been erroneous. Is it possible, indeed, that statesmen attributed high power positions to nations that were aggressive but not particularly powerful? One of the difficulties of pure power and status approaches, of course, is that they neglect the vital question of degree of involvement. A nation may be highly powerful and yet minimally participant in the system; it will evoke much less response (either cooperative or conflictual) than a lesser power which is much more highly involved. While power theories tended to assume that high power meant high participation, the disjunction between them is very marked. This disjunction alone could account for the failure of the four previous clusters of theory.

Theories of the Mode of Exercise of Power

It therefore seems even more relevant to try to find a way of testing the impact of the mode of exercise of power or status upon cooperation and conflict. If attributes like power or status do not explain the amount of cooperation a nation receives, perhaps a variable of more behavioral complexion might remedy the defect. Before such a theoretical variable can be formulated for test, however, it is desirable briefly to review the actual diplomatic employment of power by the major nations in the eighteen seventies. This will give us a clue to the kind of indicator we seek.

We shall look at the diplomatic position and performance of each of the major European powers.

France. During the eighteen seventies, France's diplomacy was in a state of almost total paralysis. She had not yet recovered from the shattering effects of the Franco-Prussian War which led to a pervasive change in her domestic institutions as well as her standing in international diplomacy. According to diplomatic history compilations of significant events, France was the least active of major powers, and she was twice as inactive as her nearest competitor (see Appendix Table A). She also was the target of fewer actions initiated by other states than any other major power (Table B). She made fewer requests or demands than did other states, and rarely received compliance from others. Oddly enough, even though England reverts episodically to "splendid isolation" during the eighteen seventies, Britain was a much more active initiator and responder than France.

This passive status is harder to understand in that France was a very powerful state (see Table 6). Her governmental revenue and expenditures were higher than those of other powers. Her trade surplus was more marked. While in certain categories, like steel and coal production and urban population, she ranked second or third to England and Germany, she spent vast amounts on military preparedness (second only to Russia) and maintained the second largest army in Europe. For most of the decade her position in naval ironclads rivaled Britain's. Her status was also at a peak. In terms of both diplomatic recognition and representation, she was a primary focus of respect and attention (Tables C and D). Yet, given this substantial power and status base, she was very ineffective diplomatically. In terms of cooperation given and received, she ranks last among the five major powers in the European system (Table E). Her position is also ambivalent in regard to other states. She is hostile to some other states, particularly Germany, thus the conflictual amplitude of her policy is high. In sum, France has great power and status, but she is very unsuccessful in capitalizing upon it in practice.

Austria-Hungary. Almost opposite to France is the case of Austria. In terms of both power and status, Austria ranks very low. She is fifth (last) in power; and fourth or fifth in measures of status. Yet her diplomacy is uncommonly effective. She is second only to Germany in the balance of cooperation given and received. She receives more direct cooperation than any other power in the system (Table F). The conflictual amplitude of her policy is low, indicating that she has no fundamental or permanent antagonisms with other states. It is also worth noting that Austria is a

member of every majority alignment in the twelve-year period (see Table 8); she is never caught out on a diplomatic or military limb.

Germany. Germany is typically thought to be the center of the European system of the eighteen seventies. This is partly because of her victory over France in 1870-71 and the diplomatic virtuosity of Chancellor Otto von Bismarck. It is certainly true that Germany is a very active power in international relations, ranking first in the number of diplomatic initiatives. She is also very successful in negotiation, achieving the highest return for cooperation given of any state, and ranking second to Austria-Hungary in the amount of direct cooperation received. Her status and power rankings are high and increasing over the decade. If there is any defect in her policy, it is to be found in the estrangement from France occasioned by the seizure of Alsace-Lorraine at the close of the Franco-Prussian War. The continuing hostility toward France ensures that the conflictual amplitude of German policy will be very high: except for France's corresponding score, it is the highest in the European system.

England. England's role in European diplomacy is in part a function of her leadership. Under Gladstone's reform ministry of 1868-74 England played a largely passive, even an aloof role in regard to the continent. During Disraeli's ministry, 1874-1880, however, England took a large part in European affairs, involving herself in the Near Eastern crisis and its settlement at the Congress of Berlin in 1878. British power vied with French and German for paramountcy on the European continent. After Germany took over material leadership in the eighties, England became the major rival. Partly because of the oscillation between isolation and intervention, England was not as successful in European diplomacy as either Austria or Germany, ranking third in the balance of cooperation and fourth in the amount of direct cooperation received.

Russia. Russia was one of the most ineffective powers in the European system. She was highly active, ranking second only to Germany in the number of diplomatic initiatives. In diplomatic effectiveness, however, she was fourth in balance of cooperation, and last in the amount of diplomatic cooperation received. Her case invites comparison with Austria, a state with an even slighter power base. Russia, by virtue of her activity, was often caught in an exposed position with other states ranged against her, as took place in 1877-79. In this same period, she permitted her amplitude to grow, developing conflictual relations with several other states. In comparison to Austria, her policy goes in fits and starts, with amplitude and

activity varying greatly from one period to the next (see Table 14). Austria, in contrast, maintains a relatively constant posture of low amplitude and activity for the ten-year period.

Perhaps it is possible to see now why correlational comparisons between power and status, measures, on the one hand, and cooperation, on the other, do not evince any significant relationships. Cooperation can be obtained with low power, provided that is carefully husbanded and exercised. Cooperation can be lost even by powerful states if they do not assert their positions vigorously. Cooperation can also be lost if states permit their conflictual amplitude with others to reach very high levels.[7] In fact, it appears that low power states may gain cooperation if they operate with low amplitude and low activity. Indeed, one of the interesting facets of this study is the degree to which it appears that low power states may sometimes do better than high power states in terms of cooperation gained. Of course, it should be remembered that in the 1870s five major European nations were closely commensurate in power. Even the weaker states, Russia and Austria, could not be taken lightly. Given this rough approximation in power, however, the weaker states often did better than the stronger ones. There may be something in the nature of a premier power position which creates opposition or antagonism.[8] It follows that neither high power nor low power uniformly predicts to cooperation on the international scene. Power measures must be combined with modes of exercise, at least with amplitude and activity, before a reliable theory of cooperation can be derived.

This should give us some guidance to the formulation of a theoretical hypothesis concerning modes of exercise of power. Reviewing the historical cases, one notes that cooperation in the international system can be attained in two different ways:

(1) *High Power, Low Amplitude and High Activity.* The first is through high power, low amplitude and high activity. Germany achieved its best result in terms of cooperation when its activity was high and its conflictual amplitude low. She did less well when either amplitude was higher or activity lower. Even France, a generally unsuccessful state in European diplomacy in this period, received the greatest amount of cooperation when her activity was high and her amplitude low. Britain, on the other hand, did well when her amplitude was high and her activity low. Decreases in amplitude or increases in activity did not lead to any greater degree of cooperation. In this respect, Britain appears as a special case.

(2) *Low Power, Low Amplitude and Low Activity.* A second means to cooperation, however, may be found where power is deficient. Austria is

successful, even outstandingly successful because of her adoption of the maxim: "Don't make waves!" Austria has low policy amplitude and makes certain that she does not fall into a conflictual relationship with any other European state. She even manages to keep on reasonable terms with Russia, her natural rival in the Balkans, by encouraging England to take a leading role in the containment of Russian schemes. Because she has no insistent patterns of antagonism, Austria can afford to be relatively inactive (though not so inactive as France). Given the contrariety of interests in the Balkans, one is astonished to find that Austria receives more direct cooperation from Russia than from any other state in the 1870s. The enormous success of Austrian diplomacy under the Magyar, Count Julius Andrassy, suggests that perhaps some of the Germanocentric accounts of the diplomacy of the period need revision.

In somewhat analogous fashion it appears that cooperation can be lost and conflict engendered in two different ways:

(1) *High Power, High Amplitude and Low Activity.* The first is through high power, high amplitude and low activity. France pursued far too passive a policy after her defeat by Prussia. While Austria-Hungary came back into the European system after her reversal at the hands of Prussia in 1866, France did not. Moreover, she missed many chances to build support for her position. Aside from 1874-5, France did little to seek help against Germany, and offered little in turn to Russia, her logical ally. When Russia needed support at the Congress of Berlin, France did not give it, nor did she give assistance when Russia was casting about for an alternative after the conclusion of the Austro-German Alliance in 1879. We know that a Franco-Russian alliance eventually emerged in 1894, but inactivity in this and other respects was greatly deleterious to French interests from 1871 on. The French also suffered through acceptance of too much conflictual amplitude in their policy. They developed a major antagonism toward Germany, but were not active enough to gain needed cooperation from other powers.

(2) *Low Power, High Amplitude, and High Activity.* A second means to failure and ineffectiveness may be found in a policy of low power, high amplitude and high activity. If high power states can take major initiatory roles in international relations, weaker powers must adhere to more stringent limits. Russia, a relatively weak state, revealed the bankruptcy of her position by an overly active policy in diplomacy. She was second only to Germany in activity, but had far less material power to back up that active policy. She allowed herself to develop patterns of antagonism (particularly with England) that her slender power position could not

sustain. After the Congress of Berlin in 1878 Russia was so vocal and abusive that she drove Bismarck into an anti-Russian alliance with Austria. She received less cooperation than any other major European power for the entire period.

These considerations offer the basis for the formulation of a theory of the exercise of power. This theory should be able to predict when nations will receive and lose cooperation in the international system. It revolves around combinations of three variables: power; conflictual amplitude; and activity. It also rests on three presumptions about the hierarchy of their centrality:

- (1) The first presumption is that low power is better than high power, *ceteris paribus* in terms of procuring cooperation.[9]
- (2) The second presumption is that low conflictual amplitude is better than high amplitude in terms of procuring cooperation.
- (3) The third presumption is that low activity is the appropriate policy for a low power state, but that high activity is appropriate for a high power state.

Eight combinations of the three variables then exist:

Power	Conflictual Amplitude	Activity
Low	Low	Low
Low	Low	High
Low	High	High
Low	High	Low
High	Low	Low
High	Low	High
High	High	High
High	High	Low

These eight combinations can then be ranked according to the explanatory presumptions of the theory in terms of the amount of cooperation they would be expected to produce. This ranking would be as follows:

	Power	Amplitude	Activity	Explanation
1.	Low	Low	Low	Accords with all three presumptions.
2.	High	Low	High	The first presumption

is not meant to require that all low power cases be superior to all high power cases. Low power is superior to high power only where it is at least equivalently exercised. High activity accords with presumption three.

3.	Low	Low	High	Amplitude is deemed to be more important than activity in producing cooperation.
4.	High	Low	Low	
5.	Low	High	Low	
6.	High	High	High	
7.	Low	High	High	
8.	High	High	Low	

If this one to eight ranking is correct, the scores of cooperation received should also be distributed in roughly the same order.

Two alternative rankings should also be considered. It is possible that presumption one overstates the case for low power. It might be that low power properly exercised provides the best outcomes in terms of cooperation received, but that high power has certain advantages at the lower end of the scale. High power, therefore, might be a way of avoiding the worst outcomes in terms of cooperation received. If this were true, either cases 7-8 would be reversed or cases 5-6 and 7-8 would be reversed. The alternative rankings then would be:

II			III		
Low	Low	Low	Low	Low	Low
High	Low	High	High	Low	High
Low	Low	High	Low	Low	High
High	Low	Low	High	Low	Low
Low	High	Low	High	High	High
High	High	High	Low	High	Low
High	High	Low	High	High	Low
Low	High	High	Low	High	High

In order to test this theory of the exercise of power in its three formulations, it is necessary to allocate the data in ways that give a sufficient population of cases under each variable. We have divided the 1870-81 time period into four shorter periods (each with a similar, though not identical population of events):

- (1) 1870-73 (where events are sparse);
- (2) 1874-76;
- (3) 1877-78 (where events are frequent); and
- (4) 1879-81.

Table 14 shows these results. Taking the systemic averages in each case as the dividing point between high and low scores, we have Table 15. Given

Table 14. Power, Amplitude and Activity in the
European International System, 1870-1881

	Period	Power ^a	Amplitude ^b	Activity ^c	Cooperation Received ^d
Great Britain	1870-73	62.2	38.1	17	56.7
	1874-76	62.7	40.3	61	52.3
	1877-78	67.0	40.1	113	51.4
	1879-81	62.3	41.7	28	50.8
Germany	1870-73	67.7	33.2	84	53.5
	1874-76	66.3	40.0	65	47.9
	1877-78	65.0	41.8	65	53.0
	1879-81	65.3	42.8	184	55.9
Austria-Hungary	1870-73	97.0	42.3	38	56.8
	1874-76	94.6	41.7	51	56.5
	1877-78	90.0	40.9	58	55.4
	1879-81	92.6	41.6	70	61.4
France	1870-73	60.7	33.4	28	44.1
	1874-76	59.0	40.6	47	53.7
	1877-78	61.0	38.8	14	52.4
	1879-81	66.3	41.4	5	52.3
Russia	1870-73	86.5	41.5	44	56.6
	1874-76	89.3	43.2	104	54.0
	1877-78	82.0	38.6	82	46.5
	1879-81	84.0	41.9	69	50.3

a. Power scores are derived from Table 6, in each case constituting the average for the period in question. High scores denote low power; low scores, high power.

b. Amplitude scores are the average of conflictual actions initiated (the average of all actions below 50, the null or indifference level).

c. Activity scores record the number of actions initiated by the nation in question during the period. This measure is based on historical accounts of significant events.

d. Cooperation received is the average of the scale scores of the events for which the nation is the target. Scores above 50 indicate a net balance of cooperation; scores below 50 indicate a net balance of conflict.

our explanatory theory, it is possible to calculate a relationship between the outcomes predicted by the power exercise hypothesis and the actual outcomes of international diplomacy in the eighteen seventies. Predicted outcomes are ranked on a scale of one to eight. Actual outcomes are given in terms of the cooperation score received. On the basis of the initial version of the hypothesis, a Pearson r of .574 (significance level .004) is achieved. On the basis of version II, a correlation of .615 (significance level .002) is reached. This tends to suggest that the mode of exercise of power may be an even more sensitive predictor of cooperation in the system than the amount of power or status themselves. It also tends to support the notion that behavioral data are more likely to produce relationships with cooperation and conflict, peace and war than attribute data. If this is true, objective power and status theories may have to be reconsidered.

Table 15. Categorizations of Power, Amplitude
and Activity with Cooperation

	Period	Power	Amplitude	Activity	Cooperation
Great Britain	I	H	H	L	56.7
	II	H	L	L	52.3
	III	H	L	L	51.4
	IV	H	L	L	50.8
Germany	I	H	H	H	53.5
	II	H	H	H	47.9
	III	H	L	H	53.0
	IV	H	L	H	55.9
Austria	I	L	L	L	56.8
	II	L	L	L	56.5
	III	L	L	L	55.4
	IV	L	L	H	61.4
France	I	H	H	L	44.1
	II	H	L	L	53.7
	III	H	H	L	52.4
	IV	H	L	L	52.3
Russia	I	L	L	L	56.6
	II	L	L	H	54.0
	III	L	H	H	46.5
	IV	L	L	H	50.3

Applications of Theory to Practice

It would of course be premature to conclude that gross power is not effective in international affairs and that balances of power are irrelevant to peace or war. Yet it remains surprising that balance of power theories have the hold on informed opinion that they do. At the beginning of the nineteenth and twentieth centuries what was objectionable was not so much that one nation was accumulating a large store of power, but the manner in which that power was being used. Napoleonic France and Wilhelm II's Germany were obnoxious because of the way in which they exercised their power: through wars in the first case and flamboyant crises and demands in the second. Neither power attained the kind of relative predominance which the U.S. enjoyed in 1950; yet, both provoked much more opposition.

To put it shortly, it does not follow that the most powerful nation in the world must automatically engage in the greatest conflict; nor does it follow that lesser states will avoid provoking such conflict. The image of

power held by statemen has unfortunately been an undifferentiated amalgam of both power and practice. Aggressive states have seemed powerful because they were aggressive. Much more powerful states have seemed less powerful because they were quiescent. Merely to take the example of Japan is to see this truth. The Japanese were much less powerful relative to their possible competitors in 1941 than they are today. But today few worry about Japanese power because of the way in which it is exercised. Soviet Russia is much more powerful today than she was in 1945-47 when her intransigence and ostensible aggressiveness brought on the Cold War. European states and the United States are far less worried by her position, because of the relative moderation of her policies. Nazi Germany, on the other hand, was probably less strong in relation to potential opponents than the Kaiser's Germany of 1914. Both Russia and America had emerged on the world scene as stronger international contenders. Yet Germany preoccupied the attention of the world, not because of her overweening power, but because of the use she made of it. Power does not automatically translate itself into aggressiveness.

The eighteenth and nineteenth century applications were similar. Frederick the Great commanded the weakest major state in Europe in both 1740 and 1756; yet this weakness did not stop Prussian expansionism. In 1800 Napoleonic France was stronger relative to opponents, but she undertook wars against leagued powers far stronger than France. Inevitably she was defeated. Yet in 1850, Britain, at the peak of her powers and predominant economically, did not seek to exercise them in a major war with continental states. Nor did the United States in 1910 when she had outstripped all European nations and had an industrial plant more than equal to her two most formidable rivals.

The failure of power analyses leads one to ask why states seek to expand aggressively if power is not the primary motivation? Why should one state challenge another? Organski (1968) argues that states undertake expansion when they are deprived of what they believe to be their fair share of status rewards and when their power enables them to make such a challenge. The strongest states do not have to be aggressive, they already have won the rewards of prestige and status. Very weak states cannot risk a challenge. The up-and-coming powers which are yet inferior in strength and deficient in prestige are the logical candidates for aggression. Yet it is no more true that rapidly developing second-rank states are expansionist than it is that first-rank nations utilize their power in aggression. The United States passed Britain, Germany and Russia in power without making a frontal military challenge. In the nineteenth century Britain passed France without military conflict.

In short there probably is no answer in strict power or status terms to the question of aggression. Often it seems that powers which foresee a radical decline in their own position if they do not strike are the ones most tempted to launch an attack. And this attack may take place almost regardless of the force ranged against them. Predicted decline may then be a greater stimulus to expansion than anticipated growth in power.[10]

Today, powers can no longer afford the luxury of military aggression against major opponents. Whether military success has been the vehicle for greater cooperation in the past (and it probably has not), it is certainly a mixed blessing in the present. If the lessons of theories of the exercise of power are to be taken seriously, one might hazard the opinion that one crucial variable for strong states is conflictual amplitude. Regardless of their power, such states are not likely to win positive rewards of cooperation from other members of the system unless they simultaneously reduce the conflict they express to most external rivals. Both the United States and the Soviet Union improved their positions internationally when they reduced the conflictual tone and application of their policies.

If amplitude is important, so is activity. One of the errors of American diplomacy in the nineteen twenties and thirties was to assume that if the United States became inactive in world affairs, its interests would contract accordingly so that its net position would improve. But if strong friendships and animosities are entertained, inactivity cannot serve national interest. Only active participation will suffice. Indeed, if interests are to be protected and cooperation gained, amplitude must be reduced far more than activity.

None of these strictures should be read as suggesting that power is unimportant in international affairs. If national policy requires a long and difficult agenda of action, power is the necessary, though it may not be the sufficient, condition of success. If the agenda is shorter, great power may not even be a necessary condition. As we have seen, Austria-Hungary achieved a great deal with little power relative to her competitors. The same conditions probably hold with greater force today.

In future, the world will probably witness an interaction of four or five major units: United States, Russia, Japan, W. Europe, and China. This interaction will be much more fluid than the bipolarity of recent vintage. It is therefore likely that conflictual policy amplitude will be reduced in comparison with its cold war equivalent. Alignments will take place with a shifting series of candidates: such fluidity will be inhibited if specific antagonisms retain their prior strength. The rules of the game will have some similarity to those of the eighteen seventies. If so, diplomacy and alignment will have a much greater role than they have had in the recent

past. The central position, the role of "honest broker," will be sought by a number of nations. Its assignment may even go to nations or units whose power would not appear to justify such a status. As in the eighteen seventies, however, the mode of exercise of power is likely to be more important than power itself.

NOTES

1. On absolute bases, states with large stocks of power would all receive large amounts of cooperation (or conflict); on relative bases a nation ranked fourth in the power or status hierarchy would get very little cooperation even though it might have very large absolute stocks.
2. The reverse may also be true: when historical sources were compared with newspaper accounts of European international relations in 1875 it was found that the extremes of the "war-scare" crisis occurring in that year were missed in newspaper accounts because the crisis was one of cabinet diplomacy (Gray, 1971).
3. In many cases, the category variables were highly intercorrelated. For example, only four of ten educational measures were necessary to capture the variety of the educational variables.
4. We do not claim that such an index would offer intuitively satisfying results for each period of modern diplomatic or contemporary history, but we do claim that it validly represents power relationships for the 1870s.
5. This procedure, of course, assumes a simple ratio scale of 1 through 5 in our rankings. Although this scale will not correspond to the actual degrees of difference among the nations on the power variables, it does correspond to the hierarchy of precedence that statesmen themselves perceive and employ in their dealings with one another. In other words, national leaders think in terms of first, second, third and so on, not in terms of degrees of differences among nations on each power dimension. The power index, moreover, makes possible the comparison of status and power rankings for each state. Our findings utilizing the 25-variable index, moreover, are quite conclusive. It is unlikely that a more refined ratio scale, differentiating differences on each variable, would give alternative results.
6. It should be noted that Ray (1974) found a similar result when he sought to determine whether the nations suffering the greatest status discrepancy were also those most involved in conflict: they were not.
7. This, of course, is not a logical consequence of high conflictual amplitude. According to one version of the deterrent hypothesis, conflict on the part of one state (the deterrer) will be returned by cooperation on the part of another (the deterree).
8. This conclusion receives support from British historian A. J. P. Taylor (1954).
9. This presumption would accord with typical balance of power approaches.
10. This formulation covers the Austrian and German motivations in World War I and the Japanese motivations in World War II.

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Appendix

Table A. Major Power Totals (Actor)

	<u>England</u>	<u>France</u>	<u>Germany</u>	<u>Austria</u>	<u>Russia</u>	<u>Total</u>
Number of events initiated by each power, 1870-1881	205	140	458	280	575	1,558
Percentage of total events initiated by each power	18.9%	9.5%	29.5%	18%	24%	

Table B. Major Power Totals (Target)

	<u>England</u>	<u>France</u>	<u>Germany</u>	<u>Austria</u>	<u>Russia</u>	<u>Total</u>
Number of actions received by each power	267	246	350	518	594	1,555
Percentage of actions received by each power	17.1%	15.8%	21.2%	20.4%	25.3%	

Table C. Diplomatic Representation

	<u>England</u>	<u>France</u>	<u>Germany</u>	<u>Austria</u>	<u>Russia</u>
Total ^a	52	21	22	60	45
Rank Overall	5	1	2	5	4

^a Summation of yearly rankings with 12 the best score and 60 the worst possible score.

Table D. Diplomatic Recognitions

	<u>England</u>	<u>France</u>	<u>Germany</u>	<u>Austria</u>	<u>Russia</u>
Total ^a	24	19	29	55	60
Rank Overall	2	1	3	4	5

^a Summation of yearly rankings with 12 the best score and 60 the worst possible score.

Table E. Balance of Cooperation (Cooperation
Received Minus Cooperation Given)
Measured by Country for the Entire Period

	<u>Major Power Balance of Cooperation</u>	<u>Systemic Balance of Cooperation</u>
England	+6.52	+4.54
France	-33.49	-7.59
Germany	+26.59	+37.20
Austria	+21.07	+37.04
Russia	-9.07	+2.78

Table F. Direct Totals

	Target				
	<u>England</u>	<u>France</u>	<u>Germany</u>	<u>Austria</u>	<u>Russia</u>
England		55.686 / 2	50.785 / 3	56.413 / 1	47.759 / 4
France	57.129 / 1		52.512 / 3	57.013 / 2	52.126 / 4
Germany	55.463 / 3	46.057 / 4		57.119 / 1	55.838 / 2
Austria	52.801 / 4	54.619 / 2	58.231 / 1		54.608 / 3
Russia	55.424 / 4	54.341 / 3	53.560 / 2	59.071 / 1	
	12	11	9	5	13
Rank order of most direct cooperation received by a nation	4	3	2	1	5

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