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ABSTRACT

"Past Hegemons and Future Prospects"

by Michael D. Doyle, 1Lt, USAF

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Thesis for a Master of Arts in Political Science at
The Ohio State University, 1994

Today, the international system finds itself in a period of dramatic change. Within international political economy, the subject of hegemony has been the focus of a lot of research and speculation. Although the U.S. still holds a commanding position in the international economy, many in the field argue that America has already entered the decline phase of the hegemonic cycle. If the U.S. is losing the preponderant power that has characterized it since 1945, then eventually it will lose its ability to exercise leadership in the world economy.

Issues such as the future of the hegemonic cycle and the prospects for the rise of another world economic leader demand some better criteria for analysis. That fact forms the inspiration for this research. This paper will look at the last two periods of hegemony in an attempt to find some economic, military, and technological attributes that reflected the leadership position of the U.K. and the U.S. in the international system. These measures should give some concrete foundation to the "preponderance of power" idea associated with hegemony.

Furthermore, these attributes will form a standard for evaluating the prospects of future hegemons, particularly Japan. Is Japan truly a candidate to replace America in the near future? Finally, this paper will discuss whether there are any national attributes or systemic factors that could break past patterns and end the cycle of hegemony.

LIST OF REFERENCES

- Bairoch, P. (1976) "Europe's Gross National Product: 1800-1975," Journal of European Economic History (5: 273-340).
- _____. (1982) "International Industrialization Levels from 1750 to 1980," Journal of European Economic History (11: 269-333).
- Berger, T. (1993) "From Sword to Chrysanthemum," International Security (vol 17, #4).
- Boswell, T., and M. Sweat (1991) "Hegemony, Long Waves, and Major Wars: A Time Series Analysis of Systemic Dynamics, 1496-1967," International Studies Quarterly (35: 123-149).
- Choucri, N., and R. North (1975) Nations in Conflict. San Francisco: W.H. Freeman and Company.
- Choucri, N., R. North, S. Yamakage (1992) The Challenge of Japan Before World War II and After. London: Routledge.
- Craddock, A. (1994) "The Hegemonic Use of Force" paper prepared for the 1994 International Studies Association Conference, Washington, D.C.
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- Goldstein, J. (1988) Long Cycles. New Haven: Yale University Press.
- Goldstein, J., D. Rapkin (1991) "After Insularity: Hegemony and the Future World Order" Futures (23: 935-959).
- Ikenberry, G.J. (1989) "Rethinking the Origins of American Hegemony" Political Science Quarterly (104: 375-400).
- Kennedy, P. (1987) The Rise and Fall of the Great Powers. New York: Random House.
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489).

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_____. (1987) Long Cycles in World Politics. Seattle: University of Washington Press.

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_____. (1990) "The Contested Concept of Hegemonic Leadership" In World Leadership & Hegemony, edited by David Rapkin, pp. 1-19. Boulder: Lynne Reinner.

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Russett, B. (1985) "The Mysterious Case of Vanishing Hegemony; or, Is Mark Twain Really Dead?" International Organization (39: 207-231).

Snidal, D. (1985) "The Limits of Hegemonic Stability Theory" International Organization (39: 579-614).

Spiezio, K. (1990) "British Hegemony and Major Power War, 1815-1939: An Empirical Test of Gilpin's Model of Hegemonic Governance" International Studies Quarterly

(34: 165-181).

Stein, A. (1984) "The Hegemon's Dilemma: G.B., U.S., and the International Economic Order" International Organization (38: 355-386).

Thompson, W. (1990) "Long Waves, Technological Innovation and Relative Decline" International Organization (44: 201-233).

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PAST HEGEMONS AND FUTURE PROSPECTS

A Thesis

Presented in Partial Fulfillment of the Requirements for
the degree Master of Arts in the
Graduate School of The Ohio State University

by

Michael Dennis Doyle, B.S.

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CHAPTER I
INTRODUCTION

Today, the international system finds itself in a period of dramatic change. With the disintegration of the Soviet Union, the era of bipolarity that coincided with the Cold War has largely passed. The United States stands unchallenged as the world leader, with the world's most powerful military and the largest economy. The uniqueness of this period has naturally produced intense speculation about the future of the international system. Researchers in political science, for example, are debating whether this period of unipolarity is inherently unstable, or they are speculating about what future system will evolve.

Within international political economy a related subject has been the focus of a lot of research and speculation. Although the U.S. still holds a commanding position in the international economy, many in the field argue that America has already entered the decline phase of the hegemonic cycle. If the U.S. is losing the preponderant power that has characterized it since 1945, then eventually it will lose its ability to exercise leadership in the world economy. If so, then what nation will persuade or coerce

the other major powers into maintaining a free trade regime? What country will actively encourage the spread of the capitalist system? What nation will pay the costs of providing the international stability or sufficient global liquidity so essential to international economic growth?

These questions and many others involve the future of the hegemonic cycle. The past two hegemonies, the United Kingdom and the United States, emerged as world leaders after a destructive period of conflict among the major powers. In an era of nuclear weapons and unprecedented economic interdependence, another round of major power conflict seems more likely to destroy the international economy than to produce another leader. In addition, hegemony requires a concentration of power capabilities in one nation that allows it to influence, encourage, or coerce other nations into following its will. If the U.S. is in decline, are there any nations that seem likely to replace it? What, then, is the future for hegemony in the international system?

These questions demand some better criteria for analysis. That fact forms the inspiration for this research. After reviewing some of the relevant research on hegemony and hegemonic transition, this paper will expand and extend some of those ideas to develop a more complete picture of hegemonic power. It will look at the last two periods of hegemony in order to gain some insight into the

national power wielded by Britain and the United States. It will attempt to find some economic, military, and technological attributes that reflected the position of those nations in the international system. These measures should give some concrete foundation to the "preponderance of power" idea associated with hegemony.

Furthermore, these attributes will form a standard for evaluating the prospects of future hegemon, particularly Japan. Is Japan truly a candidate to replace America in the near future? In what areas of national power is Japan gaining on the U.S.? Are the attributes Japan is missing (e.g. military power) still important to hegemony? Are there any new measures that should be considered? In answering those questions, this research will address the related issues of necessary and sufficient conditions as well as the future of hegemony. Finally, this paper will discuss whether there are any national attributes or systemic factors that could break past patterns and end the cycle of hegemony. The ideas of other researchers in the field on these subjects will serve as a good starting point for this thesis.

CHAPTER II
RESEARCH OBJECTIVE

A. Introduction

Goals for This Study

This thesis hopes to provide some new insights into the prospects for the rise of a new hegemonic state to replace the United States. Arguments for and against declining American hegemony continue to occur within international political economy, and many researchers would label predictions about successors as extremely premature. Nevertheless, the very process of trying to forecast the new hegemon can provide important guidance for further research.

Analyzing the prospects for future world leadership requires the researcher to decide what characteristics of past hegemons to examine. What national attributes distinguished the hegemons from the mere challengers and also-rans? In what areas did the hegemons have clear superiority? Where did other nations equal or surpass the dominant nation, yet remain pretenders to the crown? These inquiries are all subsets of one major question: how do you recognize a hegemon when you see it? While this thesis will not seek a definitive answer to that fundamental question,

it will pursue some of the facets of national power that seem characteristic of the past two hegemons.

By looking at the economic, military, and technological characteristics of the United Kingdom (during the 19th century) and the United States (after 1945), this paper hopes to glean some insight into the salient attributes of hegemons and to sharpen some rather blurry concepts about hegemonic power. These attributes will then be used to judge the prospects of Japanese hegemony in the near future. What characteristics does (or will) Japan share with previous hegemons? What are Japan's trends in the measures that reflected British and American hegemony? What is Japan missing? Are those factors still necessary for hegemony? Any predictions will certainly be tentative, since this research will be showing more correlation than causation. This thesis will nevertheless attempt to answer those questions, or at least suggest areas of further study.

Given the broad scope of literature on hegemony, selecting measures that could capture all the dependent and explanatory variables is quite obviously an impossible task. This research will proceed nearly to the opposite extreme, taking a rather narrow approach to hegemonic power by focusing on some general measures of economic, military, and technological power. Nevertheless, by organizing some explicit empirical measures of British and American hegemony, this paper hopes to facilitate debate about past

and future hegemons.

B. Subject Relevance

Analysis of past hegemons and predictions about future ones inevitably produces connections with other areas of research on hegemony. Much of the work on cycles, for example, implicitly or explicitly links cycles of hegemony with global conflict. Researchers including Robert Gilpin, Immanuel Wallerstein, and George Modelski argue that the strength of the hegemon has an important impact on the scope and frequency of armed conflict. They claim that determining whether a hegemon is ascending or declining can allow for predictions about interstate wars. If in fact American hegemony is really in the decline phase, the implications of these theories in the nuclear age are somewhat ominous. Modelski, for example, argues that the period of hegemonic decline demands strategic emphasis on political innovation for that very reason.¹ Without clear indicators of the status of American hegemony, though, the issue loses a lot of its urgency and potential as a stimulus for change.

Other political scientists like Joshua Goldstein, David Rapkin, and Hanns Maull argue that the era of hegemons has passed. They claim that one or more of the key elements of

¹George Modelski, "Long Cycles of World Leadership," in Contending Approaches to World System Analysis, ed. William Thompson (Beverly Hills: Sage Publications, 1983), 81.

hegemony in the past are no longer relevant today. For Rapkin and Goldstein, the advent of nuclear weapons and inter-continental ballistic missiles has eliminated the territorial insularity essential to previous hegemonies.² Maull, on the other hand, argues that the world system is on the verge of a transformation away from the era of nation-states.³ Both of these points of view claim that when American hegemony erodes, no nation will ascend to take its place. Though provocative, these claims cannot be evaluated without clearer connections between variables. Forecasting the end of hegemony based on a change in one factor begs for more specific links to previous periods of world leadership.

Measuring hegemony can also impact research on international regimes. International political economists like Robert Keohane analyze the various effects a hegemon has on the world economy. For regime theorists, increasingly specific definitions of the characteristics of hegemony could allow for more explicit linkages between regimes and hegemonic leadership. Some researchers in this area use the continued strength of international regimes like GATT as evidence for stable American hegemony. Others argue that increasing friction within these regimes reflects the decline of U.S. leadership. In the absence of any concrete measurements of hegemony, this debate will likely

²Joshua Goldstein and David Rapkin, "After Insularity: Hegemony and Future World Order," Futures 23 (1991): 941.

³Hanns Maull, "Germany and Japan," Foreign Affairs 69 (1990): 93.

continue unresolved.

As David Lake points out, however, the area of hegemony continues to lack sufficient empirical studies to generate confident conclusions. Lake maintains that in the absence of specific variables to test and compare, current studies cannot really test theories of hegemony.⁴

According to Goldstein and Rapkin, little consensus exists over the causes, instances, or periods of past hegemony. The field often seems unable to move beyond a tentative agreement that hegemony implies a preponderance of power, usually in the economic arena. By looking for some empirical manifestations of the dominant positions of the past two hegemon, this paper aims to generate new ideas about the prospects for a new hegemon.

C. Connections to Other Published Works

Definitions of Hegemony

The study of hegemony in international political economy covers a wide range of subjects, from hegemony and war to hegemonic stability to cycles of hegemony. Discussions of hegemony, its sources, characteristics, and implications can be found throughout the literature. Despite this widespread treatment of hegemony, however, the

⁴David Lake, "Leadership, Hegemony, and the International Economy: Naked Emperor or Tattered Monarch with Potential?" *International Studies Quarterly* 37 (1993): 485.

concept often lacks a specificity that could enhance its explanatory power. A number of authors have pointed out this weakness in the hegemony literature, but few have attempted to rectify it. For some researchers ignoring the characteristics of the past two hegemon has little impact on their work. For others, however, clear statements about specific hegemonic traits would certainly enhance confidence in their theories, conclusions, and predictions. This study's focus on revealing some concrete attributes of the past two hegemon should provide useful information to a wide array of research topics.

The issue of hegemony helped lift the field of international political economy to prominence during the 1970's. The efforts of Charles Kindleberger on world leadership and Robert Gilpin on American and British leadership styles represent some of the groundbreaking work in the study of hegemony. Both authors also began a trend that continues to impact the area today: an emphasis on the preponderant material capabilities of the hegemon. Kindleberger linked world leadership and international order through hegemony.⁵ The hegemon's extraordinary capabilities allowed it to provide the international public good of stability. In his work, however, Kindleberger started another trend: a failure to specify what areas of

⁵Charles Kindleberger, The World in Depression, 1929-1939 (Berkeley: University of California Press, 1973), 28.

preponderant capability he considered critical to hegemony.

Robert Gilpin has attempted to integrate traditional structural realism with international political economy largely through his work on hegemony. In particular, his work War and Change in World Politics (1981) addresses the implications of hegemony in an anarchic international system. Gilpin defines hegemony as a combination of preponderant military and economic power, with a strong emphasis on the power capabilities of states. For Gilpin, the fundamental nature of the international system has not changed despite the emphasis on economic strength and trends toward economic interdependence.⁶ Nations continue to pursue power and wealth, and the resulting systematic disequilibria often produce war. For nation-states, therefore, the emphasis remains on military as well as economic strength.

Within this anarchic system hegemony has become the critical ordering principle of international relations.⁷ Given the crucial role the hegemon plays in Gilpin's international system, one would expect some discussion of the salient attributes of a successful hegemon. Unfortunately, like Kindleberger before him, Gilpin makes no explicit attempt to list the important characteristics of a hegemon. He seems content to take U.S. and British hegemony

⁶Robert Gilpin, War and Change in World Politics (Cambridge: Cambridge University Press, 1981), 229.

⁷*Ibid.*, 144.

as givens and proceed from there.

Robert Keohane has written extensively on the relationship between hegemony and regimes. Given his focus on economic regimes and his concern with economic order, Keohane's emphasis on economic capabilities follows naturally from his work. His conception of a hegemon centers around four economic characteristics: control over and access to raw materials, control of major sources of capital, control of markets (especially imports), and competitive productive advantage in high value goods.⁸ Keohane again requires the hegemon to have a preponderant share in these areas, but he does give any specific targets. Likewise, he treats strong military power as a necessary background contributor to hegemony, but he fails to specify any critical measures.

Immanuel Wallerstein has often addressed hegemony in his studies on world systems. He conceives hegemony as one of the unstable ends of a spectrum of competitive relations among core powers, with the other end being multipolar equality.⁹ Wallerstein emphasizes the economic aspects of hegemonic power, arguing that the hegemon must possess superiority in three critical areas: agro-industrial production, commerce, and finance. He also stresses that the hegemon must possess more than merely the largest share

⁸Robert Keohane, *After Hegemony* (Princeton: Princeton University Press, 1984), 32.

⁹Immanuel Wallerstein, "Three Instances of Hegemony in the History of the World Economy," *International Journal of Comparative Sociology* 24 (1984): 102.

of each resource; the hegemon must have a substantial power differential. Wallerstein goes so far as to specify the order in which superiority in each area must be achieved, and he provides arguments to support his hypothesized sequence. As for the military component of hegemonic power, he emphasizes the importance of sea power and the reluctance of past hegemons to develop strong land armies. Though in some areas greater specificity would be helpful, Wallerstein's work represents a real attempt to go beyond a mere reliance on "preponderant power" as a yardstick for a hegemon.

His emphasis on seapower links Wallerstein to the work of George Modelski and William Thompson. Modelski's work on long cycles in particular deals with the characteristics of world leadership. He lists a number of "factors of world leadership" (similar to economic factors of production) essential to the rise of a hegemon: favorable, insular geography; a cohesive and open society; a lead economy; and, a politico-strategic organization of global reach.¹⁰ By a "lead economy" Modelski intends to emphasize technological innovations oriented towards the hegemon's global reach. In the past that global reach has largely been through seapower, which Modelski and Thompson argue has been the *sine qua non* of global leadership since 1500.¹¹ They

¹⁰Modelski, "Long Cycles," 82.

¹¹George Modelski and William Thompson, Seapower in Global Politics, 1494-1993 (Seattle: University of Washington Press, 1988), 13.

consider naval forces to be far superior to land armies for projecting power and exercising leadership for a number of reasons, including seapower's greater mobility, emphasis on technology and innovation, and global visibility.¹²

Modelski and Thompson have led the effort to develop some operational measures of seapower. They argue that the capability of global reach (originally through seapower, now also through air and space power) formed the foundation of British and American world leadership. Modelski and Thompson have created a naval capability share that purports to capture the seapower potential of each nation. For the authors, this measure represents the critical attribute of a hegemon, more important than any measurement of GNP or military expenditures or manufacturing output. Modelski and Thompson are quite specific in their definition of hegemonic characteristics.

These summaries of various authors' writings on hegemonic attributes reveal a wide range of possible responses. Some authors emphasize overall economic strength (Keohane), others stress military power (Modelski and Thompson), and some argue for a mix of the two (Gilpin, Wallerstein). Unfortunately, many researchers refuse to move beyond general statements and fail to specify some concrete characteristics of a hegemon. In the absence of specific attributes, forecasting the decline of a hegemon or

¹²Ibid., 14.

ascendancy of a challenger becomes the province of hunches and guesses. Given the potential implications of hegemonic transition, researchers in this area should pursue more concrete claims about the relevant characteristics of a hegemon.

Hegemonic Transition

A review of research touching on some aspect of hegemonic transition covers a rather broad scope of work in international political economy. The potential implications of the transition from one hegemon (or world leader) to another are a subject of great interest to many. The widespread perception that the American period of hegemony is in the declining phase has provided added impetus to work in this area. Though by no means unanimous (see Bruce Russett or Susan Strange for dissent), this view has enough adherents for the subject of hegemonic transition to deserve serious treatment.

As noted above, Wallerstein's research in world systems has led him to consider many aspects of world leadership. His view of hegemony as an unstable end of a spectrum of competitive relations among major powers leads naturally to a consideration of the implications of that systemic instability. Wallerstein argues that declining hegemony encourages conflict, as the ascending hegemon struggles to secure its economic and political dominance while the

declining leader struggles to maintain its position.¹³ The decline phase of the hegemonic cycle inevitably produces an increasing probability of war among core powers. Wallerstein points to the Napoleonic wars (1792-1815) and the two World Wars (1914-1945) as evidence for his theory.

Modelski also views hegemony as a cyclical process that has distinct phases. A nation emerges as "World Power" largely through its naval power and global reach. As the hegemon continues to bear higher military costs in order to maintain world order, however, the hegemon eventually slides into the "Delegitimation" phase as it attempts to reduce its costs. Disputes among the major powers over the costs and benefits of the current world order lead to the "Deconcentration" stage of the cycle. Finally, the hegemon's eroding power and the increasing competition among the other nations lead to the "Global War" phase.¹⁴ This last stage, dominated by international rivalries, has great potential for serious conflict as states compete for world leadership. Modelski views hegemonic transition as the driving force for the majority of global wars in the past.¹⁵

In contrast to Wallerstein's and Modelski's reliance on systemic factors to explain the cycle of hegemony, Robert Gilpin focuses on the state level for an explanation of

¹³Terry Boswell and Mike Sweat, "Hegemony, Long Waves, and Major Wars: A Time Series Analysis of Systemic Dynamics, 1496-1967," *International Studies Quarterly* 35 (1991): 128.

¹⁴*Ibid.*, 129.

¹⁵Joshua Goldstein, *Long Cycles* (New Haven: Yale University Press, 1988), 126.

international conflict. Gilpin relies on a rational actor model to explain why hegemons arise and how they inhibit conflict. He argues that states will expand politically and economically as long as they perceive a net benefit. The preponderance of power that allows the hegemon to dominate the international system also encourages it to maintain the status quo (and therefore its dominant position).¹⁶ Eventually, however, the costs of maintaining the system erode the hegemon's capability and will to preserve order. The decline and withdrawal of the hegemon encourage other nations to challenge it, leading to a renewed period of competition and conflict. Though he focuses more on the state and less on the system, Gilpin's view of the period of hegemonic transition largely parallels that of Modelski and Wallerstein in his forecast of global conflict.

All three authors seem to be claiming a relationship between the presence of a hegemon and the size and scope of major power wars. Whether because of systemic factors or individual national decisions, the existence of a strong hegemon increases international order and stability, while a declining or overthrown hegemon leads to periods of major power conflicts. It should be noted, however, that none of the three authors considers the cycle of hegemony to be inevitable. Wallerstein views certain politico-economic forces generated by the capitalist world system as the

¹⁶Boswell and Sweat, 131.

dynamic factors creating the instability.¹⁷ Modelski claims that the cycle is in fact a leadership and not a war cycle, and therefore the past occurrences of global war were effects of systemic political processes not causes. Modelski argues that innovations in the leadership selection processes could produce a peaceful transition.¹⁸ Gilpin, though he sees competition among states as timeless and inevitable, makes no predictions about the future course of political change. Depending on the environmental conditions, the cycle of hegemony could continue after the decline of the U.S., or the world could see a return to an imperial system.¹⁹

Other researchers make stronger claims against the prospects for hegemonic succession. As noted above, Goldstein and Rapkin argue that the end of insularity has made future hegemony impossible. They believe that nuclear weapons will prevent any nation from achieving the surplus security essential to past hegemons. Without insularity nations will no longer be able to exploit that security by focusing on economic growth and technological innovation.²⁰ This enforced intimacy should produce greater pluralism and more joint efforts toward world order, according to this theory.

¹⁷Goldstein, 134.

¹⁸Ibid., 131.

¹⁹Gilpin, 145.

²⁰Goldstein and Rapkin, 940.

Hanns Maull also foresees greater international cooperation as U.S. hegemony fades. He states that neither Japan nor Germany will replace America as the world economic leader because the era of superpower hegemony has passed.²¹ Maull argues that the international system is undergoing a fundamental change away from an emphasis on physical security and national sovereignty. He claims that increasing international interdependence will continue to erode traditional concepts of "hard" power and reinforce elements of "soft" power.²² With this argument, however, Maull mistakes superpower status as a synonym for hegemony. His claim that future international processes will demand an increased emphasis on economic and technological competition fails to prove the passing of hegemony. Likewise, arguing that the critical challenges in the future will be in the economic, cultural, or social realms does not rule out the rise of a hegemon.

D. Conclusion

The conflicting claims over the prospects for future hegemony reflect in part the lack of conceptual clarity in the field. (see figure 1) Without a better understanding of the attributes and behaviors of past hegemonies, predictions about future world leaders often rest on shaky foundations.

²¹Maull, 101.

²²Ibid., 92.

Simply accepting 19th century Britain and post-WWII America as hegemons is enough for some areas of research, but for others a clearer picture of previous hegemons should encourage debate and enhance research. The next chapter will examine some economic, military, and technological measures of the power capabilities of the past two hegemons. These explicit empirical measures of hegemonic power should contribute to the increased conceptual clarity essential to better research.

CONFLICTING FORECASTS

<u>PREDICTION</u>	<u>SOURCE</u>
Japan as World Leader	Hudson Institute
U.S. Still Hegemon	Joseph Nye Bruce Russett Susan Strange
End of Hegemony	Joshua Goldstein Hanns Maull David Rapkin
Maybe War, Maybe Not	Robert Gilpin George Modelski

FIGURE 1: FORECASTS FOR HEGEMONY

CHAPTER III
BRITISH AND AMERICAN HEGEMONY

A. Introduction

An overview of some of the major characteristics of the United Kingdom and the United States during their periods of hegemony should begin by breaking down the subject into manageable parts. Based on the survey of some operational definitions of hegemony, this study will focus on the power capabilities of the state. This paper will divide the attributes into three categories: economic, military, and technological. This division is purely for organizational purposes. These categories do not represent an attempt to separate the facets of national power into distinct components. They simply reflect an effort to organize and identify some shared characteristics of past hegemony. The inter-relationships among these three types of national attributes are discussed elsewhere by a number of authors, including Thompson (1990), Wallerstein (1983), and Gilpin (1981).

This thesis will focus on the characteristics themselves rather than their interactions. The indicators of hegemony chosen attempt to cover as much of the category

as possible as well as capture some of the ideas proposed by other researchers in hegemony. Strong emphasis will be given to economic measures, for example, since most research in this area stresses the critical role of economic power. Likewise, on the military side the strong emphasis in the field on sea power requires the use of a measure of naval capability.

In most cases this study will utilize a relative share measure to compare the major powers. As one trite expression goes, "everything is relative." For something as intangible as national power, the expression has some real truth to it. Hegemony is most often viewed as a relationship between a dominant power and some other actors. The concept can imply influence, coercion, or leadership. Examining Britain or the United States by themselves would likely yield little insight into their roles as hegemons. In addition, the concept of "preponderance of power" used by Gilpin, Wallerstein, et al. implies a comparison among major powers. Furthermore, relative shares should allow for easier comparison across different periods of hegemony as well as different hegemons.

This research will also examine the measures of hegemony for the U.K. and the U.S. during the periods when those nations were not hegemons. Comparison to the other major powers during non-hegemonic periods should reveal some insights into the critical characteristics of past hegemons.

Observing, for example, similarities between the U.S., France, or Germany during the early stages of this century may be as important as examining how the U.S. was different after World War II.

This study gathered data for each nation classified as a major power by the Correlates of War Project (from the Inter-University Consortium for Political and Social Research, the University of Michigan). The relative shares computed by this author include data from each nation during their years as a major power (see Appendix A for the inclusive years). Nations classified as major powers at least once from 1816-1980 included the United States, the United Kingdom, France, Germany, Austria-Hungary, Italy, Russia, China, and Japan.

The dating for British and American hegemony reflects a desire to use the common periods found in hegemony literature. Most writers consider 1815 as the starting date of British hegemony in the 19th century (see Gilpin, Thompson, Wallerstein). For the purposes of this study, the precise ending of British hegemony is less important, but for purposes of comparison 1873 will serve as the start of British decline. Nearly all treatments of U.S. hegemony use the end of World War II in 1945 as the starting date. This paper will treat American hegemony as continuing up to the present, although some writers consider U.S. decline to have started as early as 1967. The debate over that subject will

be revisited later.

B. Economic Characteristics

Given the central role of economic capabilities in virtually all treatments of hegemony, an outline of the distinguishing characteristics of British and American hegemony should start with their material power base. Authors from Gilpin to Cox to Chase-Dunn agree that hegemony implies one state's possession of extraordinary economic capabilities. Despite numerous differences over the normative implications of world leadership, researchers in international political economy generally agree on the foundations of modern hegemony. Most conceptions of hegemony imply one form or another of economic leadership (or coercion, or exploitation) that is logically contingent on a material preponderance of power.

The term "preponderance of power" has not been clearly operationalized in the literature. The word "preponderant" itself is part of the definition of hegemony in the dictionary (hegemony = "preponderant influence or authority"), but that does not give us a concrete standard.²³ It obviously implies at least leadership in a category, but it hints at more than merely the highest total, especially when used in relation to hegemony.

²³David Rapkin, "World Leadership," in *Exploring Long Cycles*, ed. David Rapkin (Boulder: Lynne Rienner, 1987), 135.

Leadership in the international economic system would be hard to exert with only a slightly larger power base than a competitor. In an attempt to better capture the ideas inherent in hegemony and preponderance, this research will therefore reserve the use of the term to situations in which the hegemon has either a relative share in excess of 50% or a share twice the level of the nearest nation.

In order to construct as complete a picture as possible of national economic strength, this research examined four measures of economic power. Simply using one indicator could make distinguishing major powers more difficult, and it would greatly oversimplify the foundations of economic leadership. In the case of the U.K., for example, examining only Gross Domestic Product (GDP) would lead to the erroneous conclusion that Britain's economic strength in the 1800's was no greater than France or Germany. By also looking at iron/steel production, energy consumption, and world manufacturing output, this paper more accurately reveals the dominance of the British economy during its period of hegemony.

Other researchers in hegemony have proposed various attributes characteristic of the world leader. George Modelski and William Thompson argue that a key to economic dominance is a nation's ability to innovate, reflected in its leading sector's growth rate. Robert Keohane proposed four areas that underlie a hegemon's position: control of

and access to raw materials, capital, markets, and the production of high value goods.²⁴ Immanuel Wallerstein claimed that the hegemon developed superiority in agricultural & industrial production, influenced financial flows, and controlled commerce.²⁵

Some of these characteristics lend themselves to measurement and some do not, for reasons of variable conceptualization or of data availability. This study's economic attributes (GDP, iron/steel production, energy consumption, and manufacturing output) attempt to capture directly or indirectly as much of those factors as possible. Both iron/steel production and energy consumption imply a certain control of and access to raw materials. A nation's level of manufacturing output suggests some access to markets. Gross domestic product will obviously be influenced by the production of high value goods as well as access to raw materials and markets. Following sections will address the issues of leading sectors (technological) and controlling commerce (military).

Gross domestic product serves as a good starting point based on its common usage as a measure of a nation's economic strength and position in the world economy. GDP represents the total value of goods and services produced by the residents of a nation in a single year. It acts as a

²⁴Keohane, 32.

²⁵Wallerstein, 103.

useful yardstick for estimating the actual size of country's economy as well as a means of comparison across nations. Furthermore, GDP as an aggregate measure reflects a nation's potential capability, since it is impacted largely by long term factors like population growth. As such, it can be useful for forecasting since GDP levels change gradually yet continuously.

United Kingdom

Looking at the relative shares of GDP (see Figure 2) during the period of British hegemony yields some interesting results. Among the major powers the U.K. led in GDP only for a short period of time around 1860, and even then by a small margin. By 1870 Britain had been eclipsed by the United States, a gap that would continue to widen. Clearly, GDP alone does not accurately reflect the economic strength that led to British hegemony. Some other measures are needed to complete the picture.

The graph on iron/steel production (figure 3) much more accurately reflects the economic dominance expected of a hegemon. Britain's relative share of production of these key industrial products stays at least twice as large as its nearest competitor until the 1880's. At some points the U.K.'s share among the major powers tops 60%, over three times the second largest producer. Furthermore, the gap between the hegemon and the other powers stays consistently

Share of GDP

1820-1938

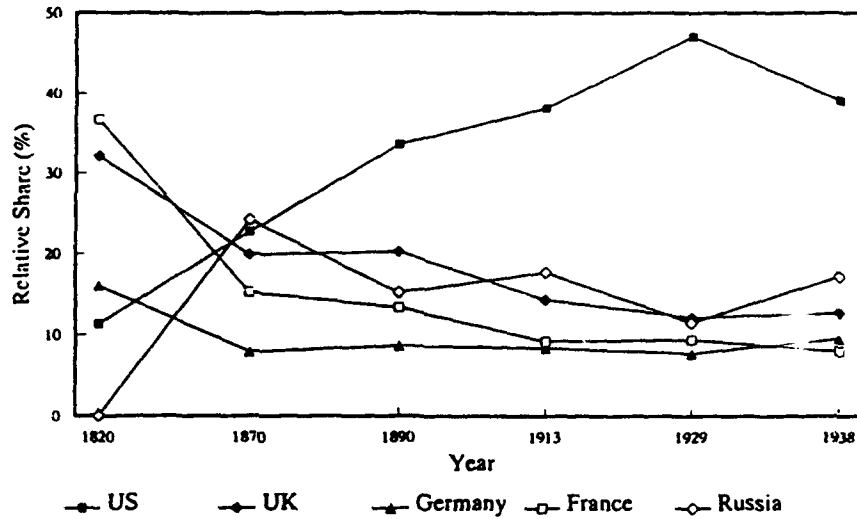


FIGURE 2: SHARE OF GDP

Iron/Steel Production

1816-1880

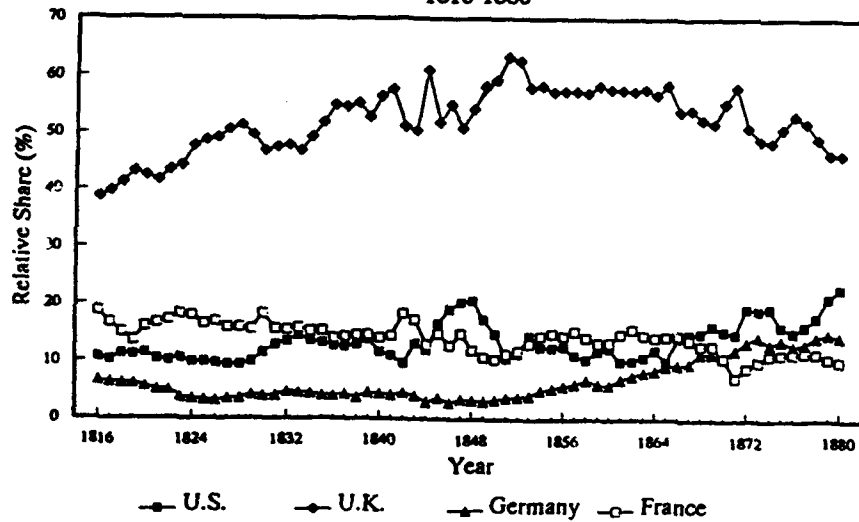


FIGURE 3: IRON/STEEL PRODUCTION

wide until the start of British decline in the 1870's.

The graph on energy consumption (figure 4) as well portrays the pre-eminent position of the British economy during its period of world leadership. The U.K.'s relative share of energy consumption stays at least double its competitors until 1878, meeting the preponderant criteria set by this paper. From its starting point in 1860, however, the graph also shows a gradual decline that parallels the erosion of the U.K.'s hegemony.

Energy Consumption

1860-1900

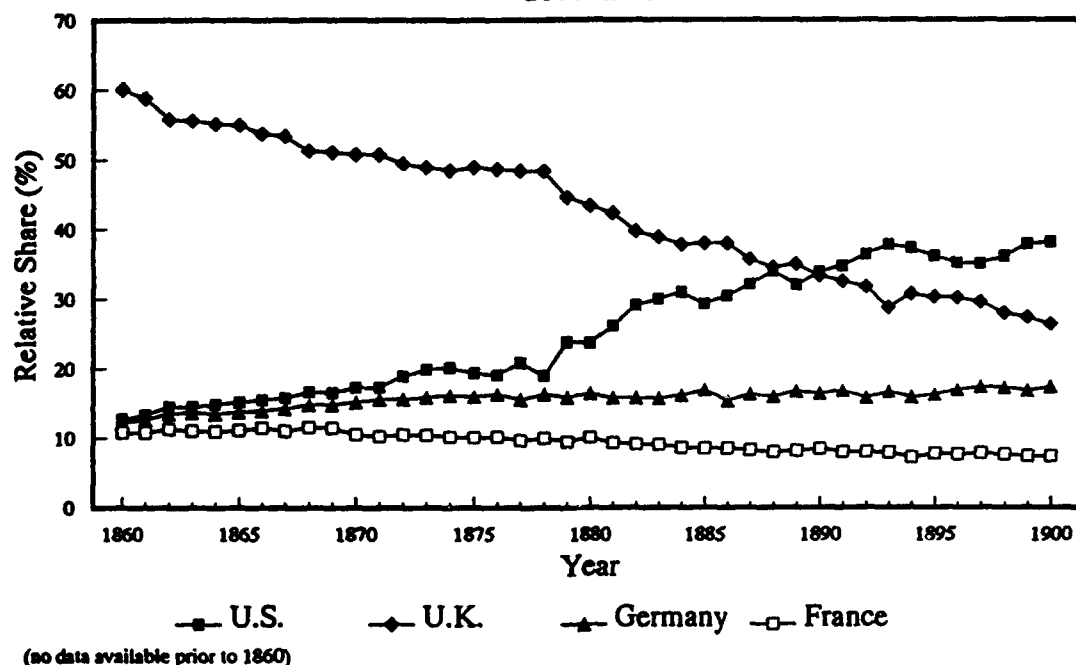


FIGURE 4: ENERGY CONSUMPTION

In both energy consumption and iron/steel production, the United States had surpassed Britain by the 1890's. This trend was repeated in the area of world manufacturing output (graph in Appendix B).

The combination of these four measures gives a good picture of the economic foundations of British hegemony as well as a view of its decline. Iron/steel production, energy consumption, and world manufacturing output reveal a nation on the forefront of the industrial revolution. Britain's economy led the world in these areas, fueling the development and maintenance of a global empire. At the same time, however, its level of Gross Domestic Product revealed that Britain's economic potential was not so much greater than its rivals, and in fact would soon be surpassed by the United States. As Britain's relative share of GDP flattened out, its dominance in the other areas began to erode.

United States

An economic portrait of American hegemony looks somewhat different. With the severe damage to the economies of the other major powers as a result of World War II, the U.S. emerged from that war in a position of unprecedented dominance. America's relative share of the Gross Domestic Product of the major powers was over three times that of its nearest rival (see graph in Appendix B). The war had

World Manufacturing Output

1928-1980

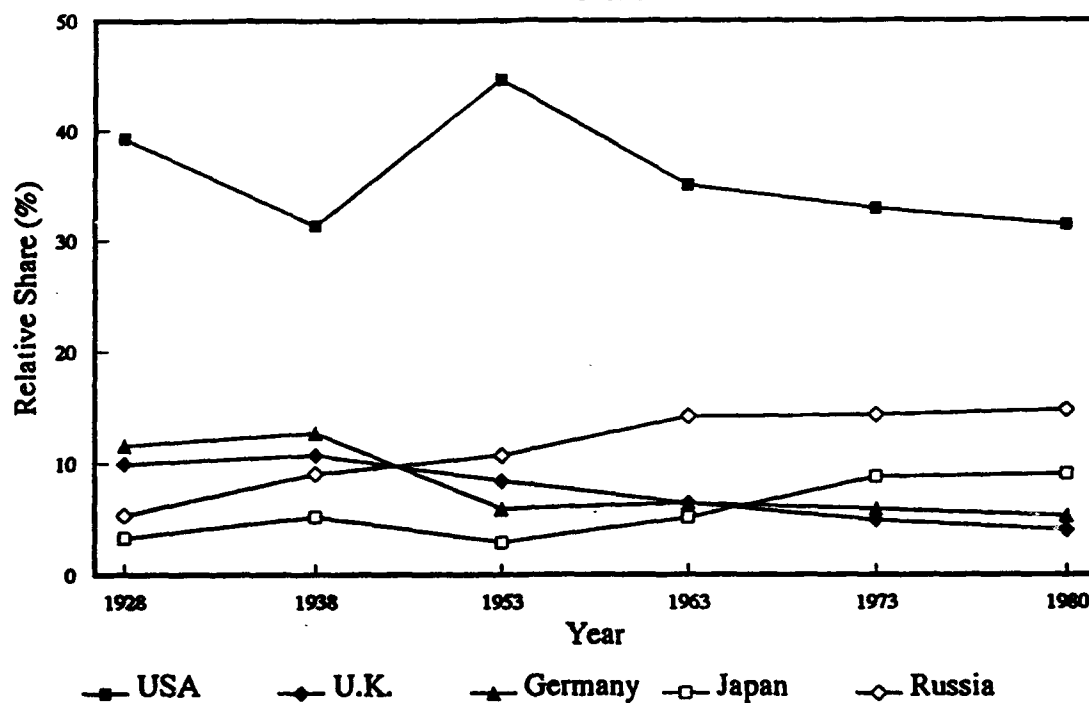


FIGURE 5: WORLD MANUFACTURING OUTPUT

spurred America to convert nearly all of its economic potential into economic power. As many have pointed out, this level of dominance was somewhat artificial due to the effects of the war, and it was reduced as the other major powers recovered. Nevertheless, the U.S. has maintained a GDP at least twice that of any other nation up to the present.

The U.S. share of manufacturing output also reflects a clear preponderance of power since 1945 (see figure 5).

Though it peaked in 1953, this share has declined rather gradually, with America still possessing a share twice as large as any other major power in 1980, and no nation seemingly ready to threaten the U.S. position. In energy consumption as well, America continues to dwarf the other major powers (see Appendix B). Only in iron/steel production has the U.S. lost its lead, surpassed as early as 1970 by the Soviet Union. Despite the steady and strong economic growth in Europe and in Japan, the U.S. continues to possess preponderant economic power. Furthermore, based on the continued strength of U.S. GDP levels, no nation appears ready to challenge America anytime soon.

Using these four measures, therefore, gives a good view of the economic strength that characterized both British and American hegemony. Both nations held dominant positions in at least three of the four areas during their leadership periods. Though GDP, iron/steel production, energy consumption, and manufacturing output cannot capture all the economic elements of British and American capabilities, they nevertheless paint the expected picture of those hegemons' economies.

C. Military Characteristics

The emphasis placed on military power varies widely in the literature on hegemony. Writers in the realist and neo-realist traditions generally consider economic power a

necessary but not sufficient condition for hegemony. Without the corresponding military strength, argues Robert Gilpin, economically powerful nations will not be able to assert their will in the world economy.²⁶ Most researchers concerned with war cycles argue that the hegemon most often emerges after success in a period of armed conflict among the major powers. The ability to project power globally has been the focus of a number of studies on world leadership (see William Thompson and George Modelski).

Other analysts are much less concerned with the implications of military power for hegemony. Few would contest, however, an assertion that some aspect of military power has contributed directly to the leadership ability of past hegemons. It seems no coincidence that both Great Britain and the United States had powerful military forces to go along with their dominant economies. Though the role of military power in future international interactions is the subject of considerable controversy, ignoring the military strength of past hegemons would produce an incomplete and inaccurate picture.

This study will compare the military strength of the major powers by using three different measures: level of military expenditures, amount of military personnel, and share of global seapower. The use of these three measures should give a good picture of the power projection

²⁶Gilpin, 129.

capabilities of the past two hegemons. They should also allow for some further analysis of the importance of land power versus naval power.

United Kingdom

Any student of world history knows the importance of the Royal Navy to the formation and expansion of the British empire. The famous defeat of the Spanish Armada in 1588 prevented the invasion of the United Kingdom by the powerful Spanish Army. That victory solidified the political support for a strong navy and laid the foundation for the expansion that would produce the world's most powerful navy by the early 1700's.²⁷ According to many proponents of seapower (e.g. Alfred Thayer Mahan), the victories of the Royal Navy created the conditions of physical security and global reach that were essential to Britain's rise to world leadership.

A look at the graph of the proportional shares of global sea power (figure 6) certainly shows a correspondence between British hegemony and its status as the world's dominant naval power. The Royal Navy rarely dropped below 40% of global sea power, rising as high as 66%, and it generally maintained a level twice as great as its closest rival. From 1816 onward, British hegemony and superior naval capability went hand in hand as the British empire circled the globe.

²⁷Modelski and Thompson, 118.

Global Sea Power

1816-1900

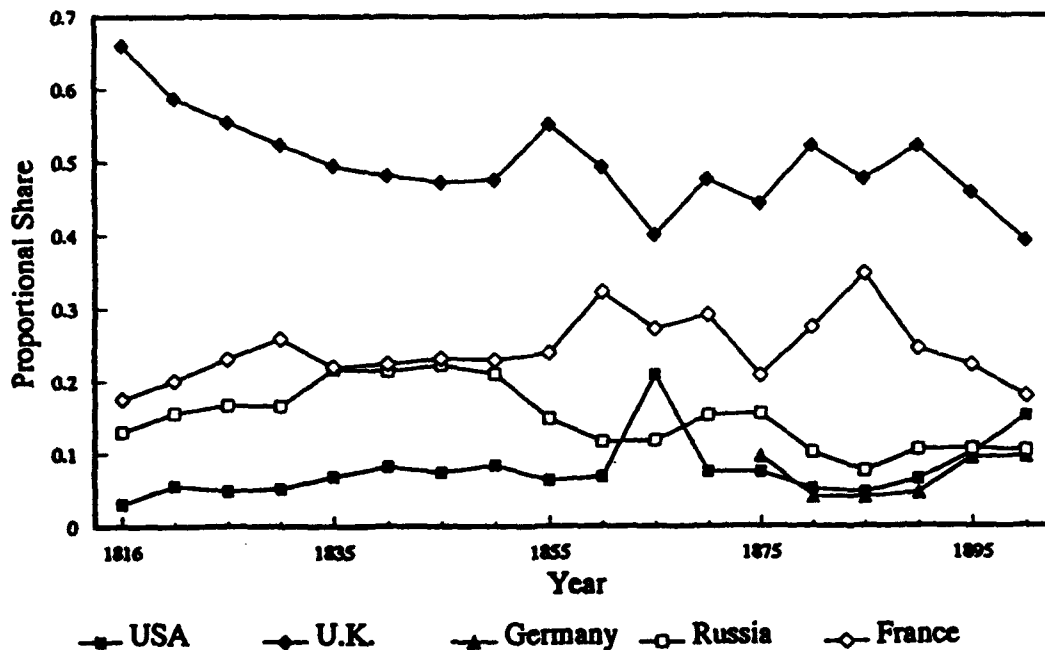


FIGURE 6: GLOBAL SEA POWER

An important qualification should be added, however. A look at Britain's share of global sea power in the 20th century also shows the U.K. in the lead until after World War I. By this time, however, Britain was well into the phase of hegemonic decline. Despite maintaining a substantial lead in naval power, the U.K. had gradually lost its position as world leader. That trend suggests that

dominant sea power may have been a necessary but not a sufficient condition for British hegemony.

The conception of British hegemony as primarily based on sea power appears borne out by the data on military expenditures and military personnel (see Appendix B). The United Kingdom never once had the largest land army during its period of hegemony, and it only led the major powers in military expenditures a few times. In fact, at times during its strongest period of hegemony (the mid-1800's), Britain found itself in third or fourth place among the major powers in either category. Clearly, neither the level of its military spending nor the size of its military forces accurately reflected the leadership position of the United Kingdom in the 19th century.

United States

After decades of indecision over the role, size, and composition of its navy, international power politics finally spurred the United States to pursue a naval capability commensurate with its economic power. The frustration over British and German interference with American shipping during World War I led President Woodrow Wilson to set a goal in 1916 of a navy "equal to the most powerful maintained by any nation in the world."²⁸ The U.S. Navy attained that goal a mere five years later when it

²⁸Ibid., 234.

surpassed Great Britain in the relative share of global sea power (see Appendix B). As Gross Domestic Product, iron/steel production, energy consumption, and manufacturing output had done earlier, the supplanting of the U.K. by the U.S. as the world's leader in naval power signaled the imminent rise of a new hegemon.

At the end of the second world war the United States found itself with the world's most powerful navy. By the late 1940's, according to one index of naval capability, America possessed over 90% of the world's sea power.²⁹ At no time since 1945 has the U.S. share of naval power dropped below 60%, and it was at least twice that of its nearest competitor for nearly the entire period. The demise of the Soviet Union has decimated the Russian navy, which had been the U.S. Navy's closest rival. Once again, the United States finds itself with a sea power capability vastly superior to anyone else.

On the basis of sea power alone, America's capability for world leadership appears undiminished. This level of sustained naval power, however, has not prevented some analysts from concluding that American hegemony is in fact on the decline. These researchers could argue that, just as the Royal Navy lagged behind the decline of the United Kingdom at the end of the last century, the dominance of the U.S. Navy no longer reflects the strength of American

²⁹Ibid., 237.

hegemony. Yet, in contrast to Britain's situation, no challengers to the U.S. Navy's position have appeared. This debate will be revisited later in this paper.

The measures of military expenditures and military personnel reveal some other differences between American and British hegemony. The security demands created by the Cold War and the invention of nuclear weapons have led to continued high levels of U.S. military spending and higher than expected personnel levels (for both graphs, see Appendix B). Since 1945, the U.S. has been consistently near the top in military spending, and its force levels have been surpassed only by the huge armies of the Soviet Union and China. Some would argue, however, that these levels are more related to the superpower military competition than to American hegemony in the international economy. Research pointing to fewer incidents of U.S. armed intervention (as compared to the 19th century U.K.) would seem to support that hypothesis. Nevertheless, those force levels do distinguish American hegemony from its predecessor.

D. Technological Characteristics

This last area of comparison represents an important link between military and economic power. A nation's level of technology often both reflects and reinforces strengths in the other two areas. Many researchers in international political economy have attempted to draw a direct connection

between a nation's leadership in technological innovations and its position in the world economy. Thompson and Modelski, for example, have gone so far as to argue that technological innovations related to seapower and global reach have been the critical factors in international politics since 1494.³⁰ Little argument exists over the proposition that major advances in technology greatly contribute to nation's overall power capabilities.

Measuring a nation's level of technology, however, represents somewhat of a challenge since by definition technological growth involves innovation and change. Attributes like GDP can be used for comparisons of nations in different centuries and still be useful, while comparing the rate in 1850 of technological growth in the railroad or cotton textile industries to the rate in 1970 will not likely yield meaningful results. Decreased innovation in the U.S. steel industry probably reflects more the decline of that sector than an overall decline in American technological strength. Focusing on specific sectors of an economy instead of on aggregate measures like GDP requires careful judgement by the researcher. Furthermore, direct measurement of the impact of particular technologies requires a scope so broad as to make the task virtually impossible. As a result most analyses in this area rely on partial or indirect measures of a nation's level of

³⁰Ibid., 13.

technology.

This study will use two measures as surrogates of technological strength. The first is an index of Gross Domestic Product per man-hour developed by Angus Maddison in Dynamic Forces in Capitalist Development. GDP/man-hour compares the major powers in terms of economic efficiency. The second measure comes from William Thompson's work on technology and long waves. He has developed data on the major powers' shares of growth rates in certain leading economic sectors.³¹ These shares and the GDP/man-hour figures should be useful for the comparative purposes of this paper.

United Kingdom

The measures of Britain's level of technology do indeed fulfill the expectations for the hegemon. A look at the graph on GDP/man-hour (figure 7) reveals that the U.K. led the major powers in that measure until surpassed by the United States in the 1870's. For most of the 19th century Great Britain led the world in economic efficiency, reflecting its high level of technological advancement and leadership in technological innovation. Likewise Britain had the preponderant proportional share of leading sector growth rates throughout its period of hegemonic leadership .

³¹William Thompson, "Long Waves, Technological Innovation, and Relative Decline," International Organization 44 (1990): 214.

Gross Domestic Product

per man-hour

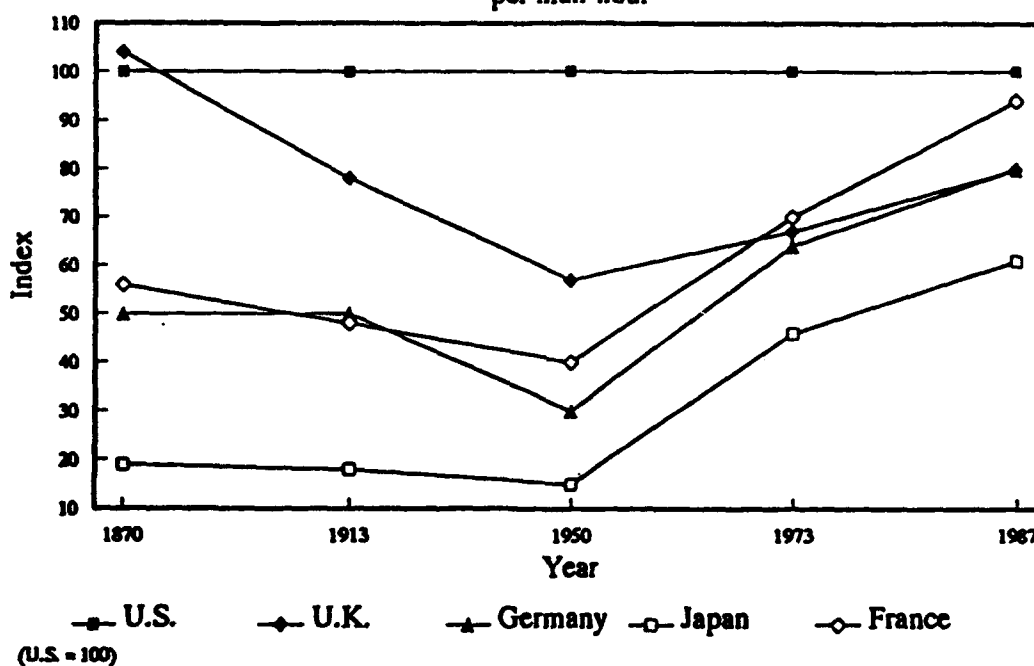


FIGURE 7: GDP PER MAN-HOUR

Its level remained twice that of the United States until 1880 (see figure 8). The U.K. led all the industrialized nations in the proportional share of growth rates in areas like cotton textiles, chemicals, and railroads.

Both GDP/man-hour and growth rates coincide closely with the period of British hegemony, and they give credence to the claims of a relationship between technology and world

Growth rate in Leading Sectors

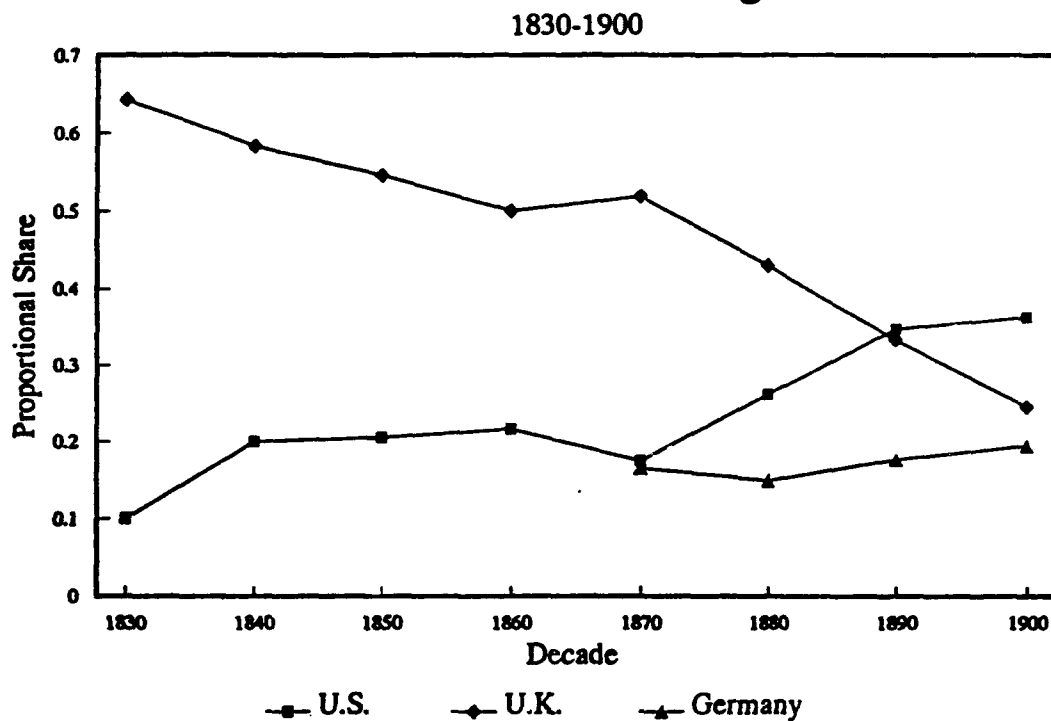


FIGURE 8: LEADING SECTORS' GROWTH RATES

leadership. Both of these characteristics also mirror rather well the decline phase of British world leadership. Most studies in this area date the beginnings of the last phase of British hegemony in the 1873-1887 range.³² The United Kingdom lost its lead in GDP/man-hour in the 1870's, and in leading sector growth rate in the late 1880's. In

³²Boswell and Sweat, 126.

both areas the U.K. was surpassed by the nation that would replace it as world hegemon, the United States.

United States

After the United States surpassed Britain in GDP/man-hour in the 1870's, the gap between the U.S. and the other major powers continued to widen for over fifty years (see figure 8). At its peak in 1950, American productivity (at least as measured by GDP/man-hour) was nearly double that of any other major power. Again, that peak reflects some rather unique circumstances, most notably the industrial devastation of the other major powers in World War II, but it nevertheless reveals an American economy at the forefront of technological innovation. In fact the war itself helped generate strong demand for technological innovations in areas from aerospace to electronics to atomic energy. Clearly, the rise of U.S. hegemony coincided with an explosion of technological innovations in America.

Thompson's proportional shares of leading sector growth rates reinforce the correlation between leadership and innovation (see Appendix B). Though its lead has been declining gradually since a peak in 1950, the U.S. has still maintained a significant edge in overall technological innovations. In leading sectors like aerospace, electronics, and chemicals America faces strong competition from Japan and Europe, but the U.S. continues to lead the

world in overall innovativeness.

E. Comparisons to Non-Hegemonic Powers

The above discussion closely examined the outstanding characteristics of Great Britain and the United States during their periods of hegemony. It utilized one set of measures to examine two cases of hegemony, in an attempt to determine which attributes accurately reflected the leadership capabilities of those nations. In this section, those same measures will be used to focus on the U.K. and the U.S. during their periods as just another major power. In particular, this paper will focus on the United States before it achieved hegemony, looking for any factors that forecast its rise to power. The results will help determine what standards to use in predicting the hegemonic potential of Japan.

An examination of the graphs on economic attributes reveals that the United States generally looked like the other major powers until Britain entered the decline phase of its hegemony. In energy consumption, iron/steel production, GDP, and manufacturing output America performed like Germany and France until around 1870. As the United Kingdom began to decline in those areas, however, the U.S. relative shares began to grow sharply. By 1900, forty-five years before America assumed world leadership, it had surpassed Britain in all four measures of economic strength.

In the economic arena, the U.S. distinguished itself from the other major powers well before it became the hegemon, and around the same time as the U.K. started its decline.

Among the military indicators, only the share of global sea power gave any hint of the rise of the United States. America's levels of military personnel and expenditures were indistinguishable from the other major powers right up until World War II. As for sea power, by the 1920's the U.S. had outstripped the rest of the pack and achieved parity with Britain. Before that rapid rise to equality, however, America's share of sea power had been unremarkable. Finally, in contrast to the economic arena, in sea power the U.S. did not achieve a dominant level until after WWII.

Data on the technological strength of the major powers is more limited, especially before 1870, so any conclusions must be viewed as more tentative. Nevertheless, the measures available for comparison repeat the trends of the economic indicators. In both GDP/man-hour and leading sector growth rates the United States had assumed world leadership from the U.K. well before actually becoming hegemon.

F. Conclusion

The analysis of the economic, military, and technological characteristics in this research clearly show the preponderance of power held by the United Kingdom and

the United States during their eras as hegemon. Both nations led all other major powers in the four economic categories (GDP, iron/steel production, energy consumption, and manufacturing output) at one point, and in three of those areas Britain and the U.S. maintained a level twice that of their nearest competition for nearly their entire period of hegemony. Both nations possessed by far the largest share of global reach, with sea power shares often topping 60%. They also led the major powers in technological capability, particularly in their share of leading sector growth rates.

The above discussion leads to two interesting points. First, economic and technological measures seem far better suited than military attributes for use in predicting the rise of a hegemon. Among the military measures, only sea power corresponded well with both hegemons, and, in the case of Great Britain, it lagged well behind the U.K.'s entry into the phase of hegemonic decline. Second, though these attributes did in fact distinguish the United States from the other major powers, they did so well before the U.S. actually became hegemon. A gap of around forty-five years existed between America passing Britain as the world's number one economy and America taking the U.K.'s place as hegemon. Clearly, Britain had and the United States needed something else beyond merely the capabilities for world leadership. In the case of the United States, some other

factor was missing until after World War II, when America assumed the leadership role in the international economy. The next chapter will consider what that missing ingredient might have been.

CHAPTER IV
RESEARCH IMPLICATIONS

A. Hegemonic Behavior

The conclusion of the previous chapter raised a critical question: Is preponderant power a necessary and sufficient condition for hegemony? This paper has thus far focused on arguing that the evidence strongly supports preponderant power as a necessary condition. Measures like manufacturing output, Gross Domestic Product per man-hour, and share of global sea power have revealed that the past two hegemonies have clearly possessed power capabilities far superior to other major powers. In addition, in the case of Great Britain, the loss of leadership in some of these areas coincided very closely with the beginnings of hegemonic decline. At least for Britain and the United States, superior economic, military, and technological capabilities appear highly correlated with hegemony.

As the last chapter pointed out, however, the United States appeared to have the necessary power to achieve hegemony around forty years before it did so. That gap strongly suggests that preponderant power has not been a sufficient condition for hegemony. That point may not

surprise many researchers (and has been made by others), but this paper has tried to offer some empirical proof of that proposition. Logically, then, the question is asked: what did the U.S. lack before World War II but possess after? This paper will not attempt to prove any one answer but rather explore one of the possibilities and its implications for future hegemony.

One possible answer seems intuitively obvious: America lacked the political will to undertake the role of world leader. Certainly, the U.S. behavior before and after World War I gives credence to that claim. Despite some tentative forays into international politics (e.g. the Spanish-American War, Teddy Roosevelt and the Treaty of Portsmouth), America remained an exceedingly reluctant actor on the international stage. The U.S. remained out of WWI until nearly the end, goaded into the war in 1917 by the German submarine campaigns. After the war, frustrated with the political maneuvering at Versailles, the U.S. Congress and the American people rejected membership in the League of Nations. Many in America seemed to much prefer a retreat into isolationism over a prominent place in the international arena. That sentiment would stay strong even in the face of the rise of Nazism and the outbreak of war in Europe. Only a direct attack could provoke the U.S. into entering World War II.

After WWII, however, America's attitude changed. Though the country celebrated the end of the war by making a headlong rush to demobilize, a retreat into isolationism did not follow as before. A broad consensus in the government would emerge over the need for continued U.S. involvement in the international arena. Though the emergence of the Cold War certainly contributed to this attitude, the impetus for action came from more than military concerns. The massive economic aid of the Marshall Plan, for example, started in 1947, well before the superpower rivalry heated up.

Clearly, the U.S. had gained the political will to lead the postwar international system. But what had produced that transformation? One answer might be that the U.S. now understood that in order to achieve its goals it must assume the role of the hegemon. David Rapkin has argued that hegemons have generally pursued two main goals: surplus security and the reproduction of their socio-economic systems.³³ By surplus security Rapkin means an extra margin of physical security both at home and through regional spheres of influence. As for the reproductive goals of the hegemon, this reflects the basic desire of all social systems to reproduce their essential features, according to Rapkin.³⁴ That point seems intuitively logical, given people's intrinsic belief in the superiority of their own

³³Rapkin, "World Leadership," 150.

³⁴Ibid., 151.

system.

For the U.S., then, these goals of surplus security and social reproduction generated a change in attitude and a desire to assert world leadership. Despite concerted efforts to achieve security through isolationism, the U.S. had been dragged into two highly destructive world wars. The worldwide economic depression created by national economic protectionism signaled the end of Britain's world leadership. When the U.K. lost its position as hegemon, it lost its ability to enforce the free trade rules essential to international capitalism. The resulting economic problems helped convince the U.S. to assert its leadership after 1945.

The behavior of America as hegemon gives support to this argument. In contrast to its rejection of the League of Nations, the U.S. strongly supported the foundation of the United Nations. In pursuit of its security concerns, America created a worldwide network of alliances, starting with the North Atlantic Treaty Organization (NATO) in 1949. As for reproducing capitalism, the U.S. formed a world trading system (GATT) to institutionalize the principles of free trade. It also helped create the International Monetary Fund (IMF) and the World Bank (IBRD) to spur international economic growth and encourage the spread of capitalism.

The question of hegemonic behavior is a large one, well beyond the scope of this paper. It is nevertheless an important part of a portrait of hegemon, and predictions about future hegemons cannot ignore it completely. Behavior can help further distinguish the hegemons from other powerful nations. In addition to their distinctive power capabilities, both the U.K. and the U.S. seem to have acted differently than other major powers. As hegemons each greatly expanded their global presence, either through colonies, military bases, security alliances, trading companies, or multi-national corporations.

In the case of Great Britain, the hegemon had a high level of involvement in interstate conflicts, suggesting a greater willingness to use force to maintain system stability.³⁵ That tendency fits well with many theories on hegemony, including the neorealist view of a self-interested state (see Gilpin) and the public-goods emphasis of other IPE researchers (stability as the public good).

In the American era of hegemony, the emphasis seems to have shifted away from military involvement towards economic incentives and punishments. Two factors have probably contributed to that shift. First, the major powers in the international economic system are generally capitalist democracies (excluding the U.S.S.R. and China). These

³⁵Alden Craddock, "The Hegemonic Use of Force," paper prepared for the 1994 International Studies Association Conference, Washington, D.C., 21.

nations no longer compete with each other in the strategic arena, and in fact many are allied with each other. Second, the reason for that alliance has been the military threat of the Soviet Union. In an age of superpower rivalry and nuclear weapons, the potential costs of hegemonic military intervention have risen sharply. That fact, and the lack of strategic competition among the major powers, has certainly reduced the incidence of hegemonic military involvement.

Despite this shift in emphasis, however, as hegemon the U.S. has nevertheless behaved differently than the other major powers since 1945. The widespread interest in regimes, for example, reflects a recognition in IPE of the increasing importance of those structures during American hegemony. Acting through GATT, the IMF, or in bilateral trade relations has largely replaced armed intervention. Though the mode of behavior appears to have changed, the capabilities involved and goals pursued remain characteristic of hegemons.

The pursuit of surplus security and the reproduction of socio-economic elements are not goals unique to hegemons, according to Rapkin.³⁶ However, the behavior in support of them is, because only the hegemons possess the political will and structural power to achieve them. That is what makes the power characteristics of the hegemon so critical. A country that lacks either the will or the capabilities

³⁶Rapkin, "World Leadership," 146.

should have little chance to become hegemon. With that point, the prospects for the rise of a new hegemon will be considered.

B. A New Hegemon?

So far in this paper the focus has been largely on the past. This section will attempt to make the connection between past trends in hegemony and future prospects for world leadership. In particular, it will consider the prospects for Japanese hegemony, using the same characteristics as for British and American hegemony. Japan's trends in economic, military, and technological power will serve as an excellent starting point for a forecast of future hegemony. Likewise, a brief discussion of current Japanese tendencies in hegemonic behavior will be based on impressions of past hegemonic behavior. The results of those comparisons should inform the debate over not only Japan's future but the future of hegemony itself.

Japan's Attributes

A look at the economic measures of national power (GDP, iron/steel production, energy consumption, manufacturing output) yields one clear conclusion: as of the mid-1980's, Japan was still far behind the U.S. in these areas. In the area of Gross Domestic Product, for example, the Japanese relative share among the major powers remained half that of

the United States in 1989 (see Appendix B). The pattern is repeated in the areas of energy consumption and manufacturing output. Only in iron/steel production has Japan caught up to the reigning hegemon. Japan appears to have a long way to go to achieve a preponderance of power in the economic arena, if one uses past patterns as a guide.

The pattern is repeated in military attributes. Anyone even remotely familiar with international politics is aware of Japan's lack of military power. Japan's military expenditures have only recently exceeded one percent of gross national product, and their relative share of military personnel is so low as to be almost negligible. Japan's navy remains extremely small, especially considering its dependence on international trade and raw materials. Japan's strategic alliance with the United States has allowed it to rely on American military protection, a pattern that continues up to today.

The technological measures used in this thesis do not reflect the common perception of Japanese dominance in this area. The U.S. maintains a strong lead over Japan in its proportional share of the growth rates in leading sectors, as well as in GDP/man-hour. In fact, in GDP/man-hour Japan remained in fourth place as recently as 1987 (see figure 7). Based on these two measures technological strength, Japan has yet to surpass the United States as the world leader in this area.

This comparison of present-day Japan to the United Kingdom and the United States during their periods of hegemony leads to a clear conclusion that Japan is a long way from world leadership. Japan has failed to surpass the United States in any of the nine measures used in this study. In comparison, the U.S. had passed Britain in five categories by 1890. Furthermore, though Japan is gaining on the United States in some of these areas (GDP, growth rate, GDP/man-hour, military expenditures), it remains well behind in them, and it is making little progress in the other areas. Using only these measures, the prospect of Japanese hegemony remains highly unlikely in the near future.

A fuller consideration of Japan's potential for world leadership, however, requires a further question to be asked: Have the necessary characteristics of hegemonic power changed? Rephrased, this question considers whether a preponderance of power still entails dominance in the nine attributes put forth in this research. Will a future hegemon necessarily lead the world in manufacturing output, or sea power, or leading sector growth rates? A definitive answer to this question is beyond the scope of this research, but some possibilities should be considered.

The attributes used in this study probably have understated Japanese power. In the economic arena, the indicators of preponderant power do not directly measure international trade or financial flows, two areas of

considerable Japanese strength. Likewise, per capita GNP is not considered, an area where the Japanese have surpassed the United States.³⁷ Japan's phenomenal rate of overseas investment is not considered systematically in this study. Nor do the technological measures capture Japan's continued leadership in the funding of research and development or their prominent position in the increasing critical computer industry.

The fact that Japan has not surpassed the U.S. in energy consumption or sea power could merely mean that those indicators are no longer characteristic of hegemonic power. In the area of global reach, Japan relies less on traditional naval or military power and more on its multinational corporations, merchant fleet, and electronic information media (e.g. computers, satellites). Japan is also beginning to make important inroads into areas like aerospace technology, much to the consternation of American manufacturers.

Japan's Political Will

Furthermore, one could argue that Japan has not yet attempted to surpass the U.S. in power projection capabilities for a good reason. So long as America continues to protect Japan and its access to world markets, Japan has no rational incentive to invest in naval or

³⁷Paul Kennedy, The Rise and Fall of the Great Powers (New York: Random House, 1987), 457.

military might. Just as the U.S. did not expand its navy until it became clear that Britain could no longer control the Atlantic (in World War I), Japan will not spend large amounts of money on military power until America loses the capability or will to protect it.

The issue of military spending brings up another important part of hegemonic potential: political will. This paper has pointed out that although the U.S. appeared to have the capabilities to become the hegemon after World War I, it lacked the desire to assume that role until after the next world war. Japan has clearly demonstrated in recent foreign policy events a reluctance to assume a prominent role in international politics. Its refusal to contribute personnel in any capacity to the Gulf War generated intense internal debate and external criticism. It has made little attempt to obtain a position in the United Nations reflective of its status as the second largest contributor (i.e. a seat on the Security Council). The recent crisis in North Korea has followed this pattern, with the U.S. and China attempting to work out a solution while Japan stays largely in the background. Like the U.S. in the 1920's and 30's, Japan seems determined to concentrate on domestic matters as much as possible.

Overall Assessment

The above discussion has revealed some important trends about Japan's prospects for future hegemony. It would appear at the very least that Japan lacks any preponderance of power in a number of categories that characterized the past two hegemony. Japan has yet to achieve leadership in any of the economic, military, and technological measures that reflected the international leadership of either Britain or America. In particular, Japan's economic power, while growing, has yet to challenge the dominant position held by the United States. In addition, Japan has shown no signs of a willingness to take on a global leadership role concomitant with its economic presence. Using the criteria of this research, Japan lacks both the capability and the will to achieve hegemony in the near future.

Those facts do not necessarily rule out eventual Japanese hegemony. Japan could eventually surpass the U.S. in a number of the areas considered in this research. Another possibility is that those characteristics are no longer necessary for hegemony, and Japan's leadership in other areas like trade and capital will form the foundation of its period of hegemony. Finally, Japan's lack of potential for future hegemony could reflect the fact that the era of hegemony has passed. Whether because of eroding insularity or growing interdependence, the international system could be entering a new phase of system structure.

That possibility will be considered in the next section.

C. The End of Hegemony?

The possibility that the U.S. will be the last hegemon requires some consideration in this research. If there are systemic factors that have changed to make future hegemony impossible, then forecasting based on the national attributes of any nation including Japan is a futile task. Among the potential factors for change, at least two seem strong possibilities: nuclear weapons and economic interdependence.

Among the military factors analyzed for the periods of British and American hegemony, sea power alone reflected the dominant world position of both nations. The ability of the Royal and U.S. navies to control the seas and project power worldwide contributed to hegemony in a number of ways. They secured access to sources of raw materials, maintained trade routes for manufactured goods, encouraged technological innovation, and preserved territorial integrity. The last task, ensuring that the country would remain safe from a destructive invasion, allowed Great Britain and the United States to build the strongest economies in the world.

Nuclear weapons may have made the insularity afforded by sea power obsolete. The sheer destructiveness and mobility of those weapons has made defense against them virtually impossible. Even after ten years of dedicated

effort on the Strategic Defense Initiative, the U.S. has made little progress on a comprehensive system of defense. In Japan's case, for example, neither their navy nor the U.S. Navy would likely be able to prevent a determined North Korea from wreaking havoc on the Japanese industrial base.

The two previous hegemony have emerged at least partially because they were able to avoid the destruction of their economies during a major war. Should past patterns continue, the decline of the United States will result in global conflict among the major powers as they vie for hegemony. In an age of nuclear weapons, it seems unlikely that any major power could escape that conflict without massive damage to their industrial base. Nuclear weapons may have made the potential costs of achieving hegemony far outweigh the potential benefits. In addition to the deterrent effect of nuclear weapons, the rapid and continuous growth of economic interdependence should also discourage a descent into global war.

At any given moment in history, it seems, the tendency is to assume that the changes currently occurring in the world imply a fundamental and unprecedented change in the international system. In 1919, for example, many felt that the sheer horror at the destructiveness of World War I would make that the "war to end all wars," only to be proved wrong less than twenty years later. That tendency gives pause to any claims of "unprecedented" changes and forecasts of a new

world order. Nevertheless, the current trend of growing economic interdependence and cooperation seems to have the potential to indeed signal a new era in international relations. The implications of that trend for hegemony are important to consider.

The researchers and writers proclaiming the age of interdependence are legion, and their evidence is certainly strong. The growth of transnational corporations, the incredible mobility and volume of capital flows, and the proliferation of inter-governmental organizations represent both causes and effects of this interdependence. Already, areas like macroeconomic policy reveal the reduced power of national governments and the requirements for international cooperation. Nations have lost much of their ability to control exchange rates and the money supply, for example, as well as some of their leverage in trade and fiscal policies.³⁸ The events of the Persian Gulf War demonstrated that the emphasis on cooperation has spread to the security arena as well.

If U.S. hegemony is declining, the results so far appear quite different from previous eras of decline. In contrast to earlier periods of declining hegemony, the major international powers today are nearly all capitalist democracies, generally on good terms with each other, and,

³⁸Brian Pollins, "Governance in the Age of Globalization," paper distributed in Political Science 753 (Winter 1994), Columbus: The Mershon Center, 8.

most importantly, virtually non-competitive in the military-security arena. Within each major power, significant groups of people are increasingly dependent on and supportive of international cooperation. The days of the nation-state may or may not be numbered, but the era of uncompromised national sovereignty has passed.

As international interdependence continues to grow, the costs of a revival of military competition appear more and more prohibitive, and the prospects of another round of global conflict seem increasingly remote. It would appear that when this hegemonic cycle enters the decline phase, nearly every actor will have reasons to prefer an end to the cycle over a return to global conflict. To sum up, the sources of future hegemonic competition are difficult to foresee, any likely challengers have yet to appear, and the potential costs in an age of economic interdependence and nuclear weapons would likely dwarf any potential benefits. Those arguments suggest that the era of hegemony will indeed pass as the American position eventually declines.

CHAPTER V
CONCLUSION

A. Characteristics of Past Hegemons

This research has attempted to generate further insight into the subject of hegemony by taking a relatively new angle. It has sought to develop some concrete measures of the national power inherent in the concept of hegemony. It hoped to show that the past two hegemons could be distinguished from other major powers by comparing some of their economic, military, and technological attributes. After examining the characteristics of British and American hegemony, this paper proceeded to apply those measures to Japan to forecast its prospects for replacing the U.S. as hegemon. It then used the results of that comparison to discuss some implications for future hegemony itself.

The measures selected for estimating national economic power generally reflected the "preponderance of power" commonly attributed to a hegemon. Both the United Kingdom and the United States led all the major powers in all four categories at one time during their periods of hegemony. More importantly, the hegemon had substantial leads (double the relative share of the next major power) in at least

three of the categories for the majority of those eras. Britain dominated the major powers in iron/steel production, energy consumption, and manufacturing output for most of the 19th century. The United States has held commanding margins in Gross Domestic Product, energy consumption, and manufacturing output since the end of World War II.

The measures of military power yielded some interesting points. Neither the U.K. nor the United States ever had the largest land armies during their periods of hegemony. Both countries found themselves in third place at times, often by significant margins. Military expenditures also failed to reflect the hegemonic position of the two nations. Britain only led the world in military spending a few times, and then by slim margins. Likewise, U.S. military spending, though significant, rarely outpaced its Soviet rival by more than ten percent or so.

Among the military measures, only sea power reflects the positions of world leadership held by both Britain and the United States. Both America and the U.K. dominated the other major powers on the world's oceans. Britain generally maintained a naval force twice as strong as its nearest rival, while the United States share of global sea power has remained above 60% since 1945 (at times rising as high as 90%). During their periods of hegemony, both the U.K. and the U.S. clearly controlled the world's oceans.

The results from the area of national technological strength are not as clearcut as the other two categories, but both hegemony did lead the other major powers in the measures selected. Both Britain and the United States held significant margins in their proportional share of leading sector growth rates (as much as three times the second place nation at some points). GDP/man-hour is a less conclusive reflection of hegemony, since both nations led but rarely by large margins. Given the strong results in leading sector growth rates, this study suspects that further measurements of technological strength would reinforce the link with hegemony.

The results from these measures of hegemonic power led to some other interesting points. Clearly, the evidence seems strongly in favor of at least some combination of economic, military, and technological power as a necessary condition of hegemony. Nations that lacked preponderant power in these areas failed to take over the role as hegemon (e.g. Germany in the early 1900's) or failed to keep up with the reigning hegemon (e.g. Soviet Union in post WWII). Likewise, Britain's period of hegemonic decline coincides closely with the loss of leadership in many of these measures of national power.

These same measures suggest, however, that preponderant power may not be a sufficient condition for hegemony. The United States surpassed Great Britain in nearly all of these

measures by 1900, but America failed to take over as hegemon until nearly forty-five years later. Despite having similar material capabilities to the previous hegemon, the United States did not assume the role until after World War II. Clearly, something else was necessary for American hegemony, something that may have been political will. Conclusions based on an N of 1 must be considered highly tentative, but the results in this case are certainly suggestive. They also may have important implications for the future of hegemony.

B. Japan and Future Hegemony

Using the measures in this research, Japan at this point remains far short of the power capabilities of the past two hegemon. Japan has yet to surpass the United States in any of the economic, military, and technological attributes, and it is only beginning to challenge America in a few. Japan remains a distant second in areas like GDP, energy consumption, leading sector growth rate, manufacturing output, and sea power. Furthermore, Japan has thus far shown no inclination to take a leadership role in the international system. At least for the near future, Japan appears to lack both the capability and the will to become hegemon.

Depending on whether one agrees that the U.S. is in hegemonic decline or not, the failure of Japan to show signs

of challenging America has some different implications. Those who maintain that American hegemony remains strong might argue that the level of Japanese power supports their claim, and that Japan's low power levels are more reflective of U.S. strength than any systemic factors.

For researchers who feel that America is in fact in decline, the lack of Japanese development in these areas may lead to other conclusions. It instead implies either that the measures in this research are no longer valid, or that no nation will take America's place as hegemon. If the first statement is correct, then future research must produce measures that will better reflect the power of a future hegemon (e.g. capital, information technology, etc.). Those that take the second position instead should be more receptive to claims that the era of hegemons has past. Factors like the loss of insularity (due to nuclear weapons) and the rapid increase in economic interdependence may make future war so costly that past patterns will not be repeated. The potential costs of achieving hegemony may have risen high enough that the major powers will prevent the decline into armed conflict that produced the past two hegemons.

C. Implications for International Political Economy

The points made in this paper raise some important questions for future research in IPE. Is the U.S. actually

in hegemonic decline? If so, by what criteria is that judgement made? Using the measures of this paper (which did largely reflect the period of British decline - 1873 onwards), America maintains strong leads in economic, military, and technological capabilities. If the measures in this research no longer accurately reflect the U.S. position, what attributes should be considered? Using those attributes, what nations have the potential to replace the U.S. as hegemon? What is the role of political will in hegemony?

If, on the other hand, the era of hegemony has passed, what will replace it? Will the international system enter a new era of cooperation, perhaps through regimes set up during U.S. hegemony (e.g. "complex interdependence")? Will the nation-state remain as we know it today, or will ever increasing interdependence erode the traditional concept of sovereignty? Could the world system return to an era of empires, as Robert Gilpin argues is possible? Or are we instead headed for a single supra-national political organization, a type of world state? How will declining American hegemony affect these changes?

This research has attempted to make debate on these issues more productive by outlining some empirical measures of past hegemonic power. Arguments over what future hegemons will look like, debates about the decline of American hegemony, or discussions about the rise of Japan

can all use the attributes developed in this paper as a starting point. Hopefully, this attempt to flesh out a fuzzy concept of "preponderance of power" and to examine some concrete characteristics of British and American hegemony will spur other efforts to make real empirical progress in the study of hegemony and the field of international political economy.

APPENDIX A
DATA SOURCES

I. Economic Data

a. Gross Domestic Product -

The information on gross domestic product was obtained from two sources:

1. Angus Maddison Dynamic Forces in Capitalist Development, table A.2 (all nations except China, Russia)

2. Paul Bairoch "Europe's Gross National Product:1800 - 1975," tables 2, 10 (Russia)
This data was converted from 1960 U.S. dollars to 1985 U.S. dollars.

No data was available for China.

b. Iron/Steel Production -

The data for iron/steel came from the Correlates of War project (the Inter-University Consortium for Political and Social Research, the University of Michigan).

c. Energy Consumption -

Also from the Correlates of War Project.

d. Manufacturing Output -

Data for world manufacturing output was obtained from Paul Bairoch's "International Industrialization Levels from 1750 to 1980," tables 10, 13.

II. Military Data

a. Military Personnel -

Also from the Correlates of War Project.

b. Military Expenditures -

Also from the Correlates of War Project.

c. Seapower -

Figures for the proportional share of global power seapower came from Modelski and Thompson's Seapower in Global Politics, 1494-1993, table 5.9.

III. Technological Data

a. Share of leading sector growth rates -

The proportional share of leading sector growth rates was taken from William Thompson's "Long Waves, Technological Innovation, and Relative Decline," tables 4, 5. The only available data is that for the countries shown on the graphs.

b. GDP/man-hour -

The figures for gross domestic product per man hour come from Angus Maddison's Dynamic Forces in Capitalist Development, table C.11. No data was

available for Russia or China.

IV. Notes

- a. The relative share figures for GDP, iron/steel production, energy consumption, military personnel, and military expenditures were calculated by the author, and any errors are his responsibility. The other relative shares (manufacturing output, seapower, and leading sector growth rate) and index (GDP/man-hour) come from the sources themselves.
- b. The spike in U.S. military expenditures (1919) appears abnormal but does occur in the data base. No explanation has yet been found.
- c. Dating - The following are the inclusive years for each major power:
 - Austria-Hungary: 1816-1918
 - China: 1950-present
 - France: 1816-present
 - Germany: 1816--present
 - Italy: 1860-1943
 - Japan: 1895-present
 - Russia: 1816-present
 - United Kingdom: 1816-present
 - United States: 1816-present

APPENDIX B
ADDITIONAL GRAPHS

Share of GDP

1950-1989

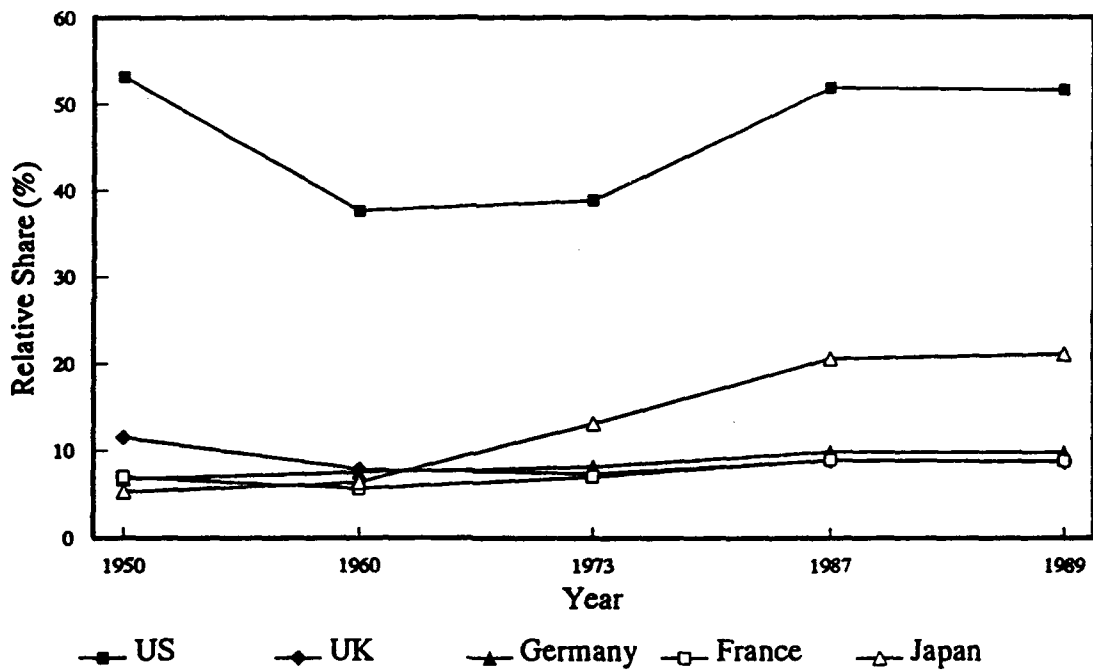


FIGURE 9: SHARE OF GDP

Iron/Steel Production 1880-1940

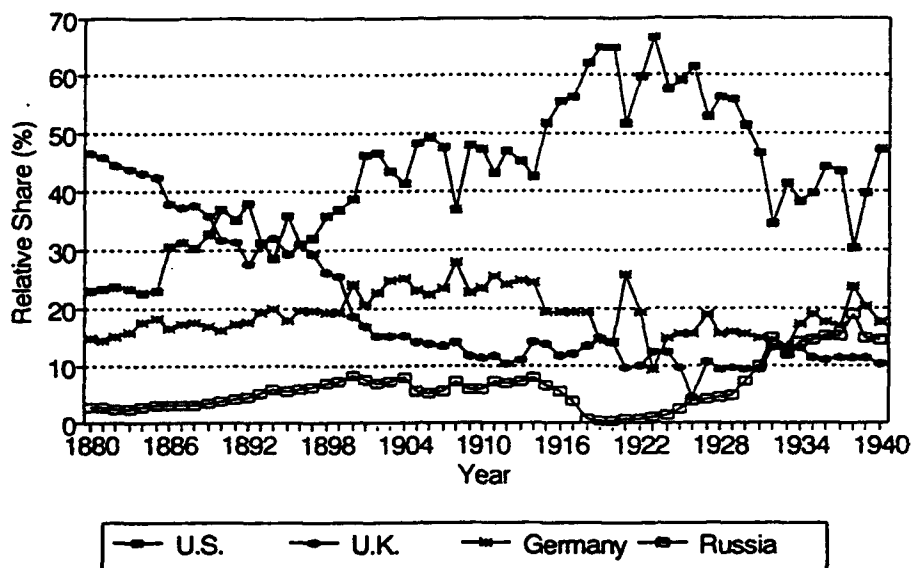


FIGURE 10: IRON/STEEL PRODUCTION

Iron/Steel Production 1946-1985

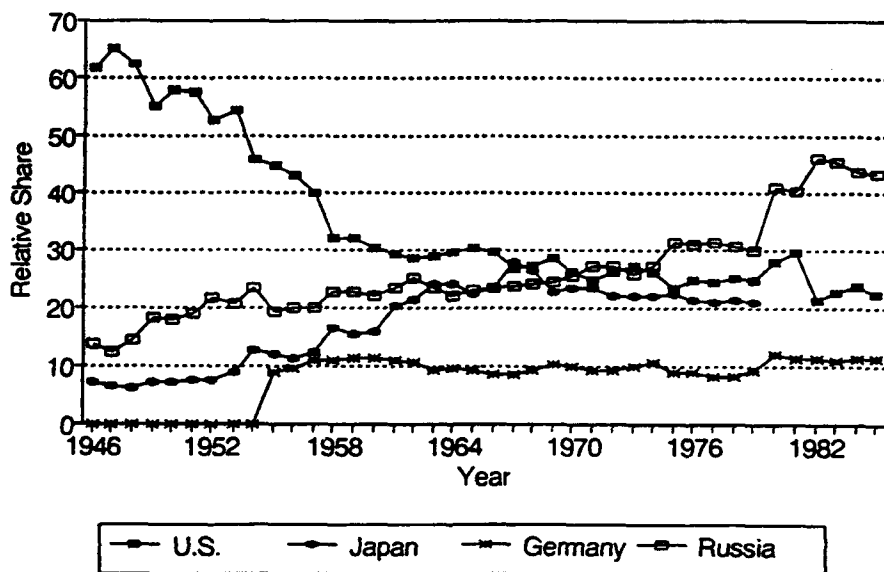


FIGURE 11: IRON/STEEL PRODUCTION

Energy Consumption 1900-1940

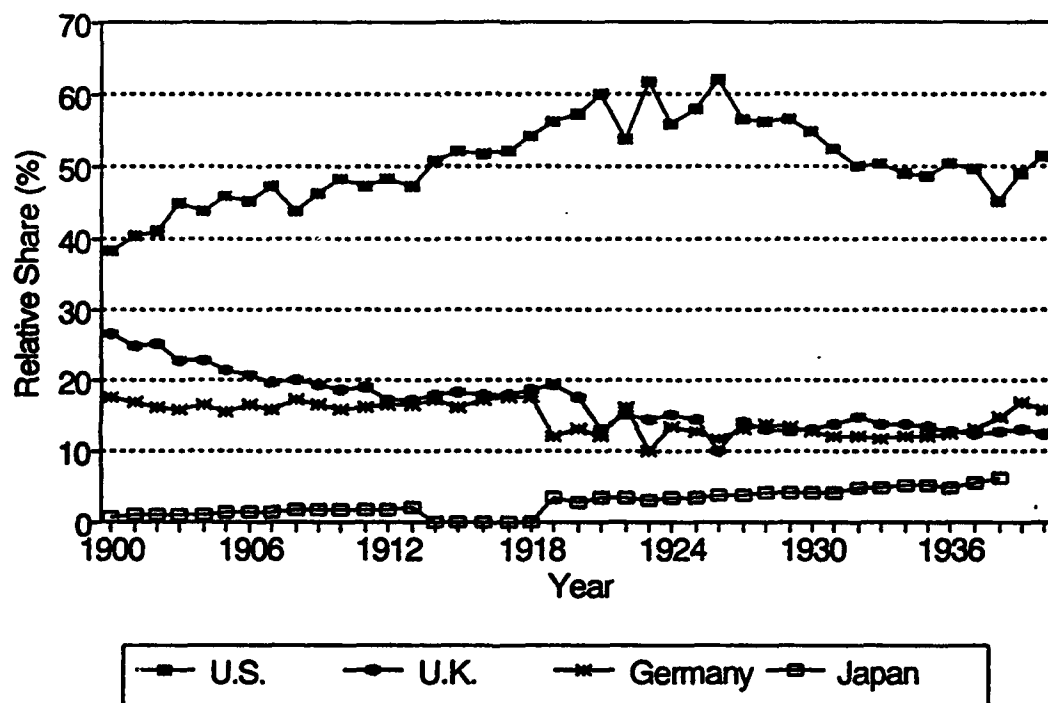


FIGURE 12: ENERGY CONSUMPTION

Energy Consumption 1946-1985

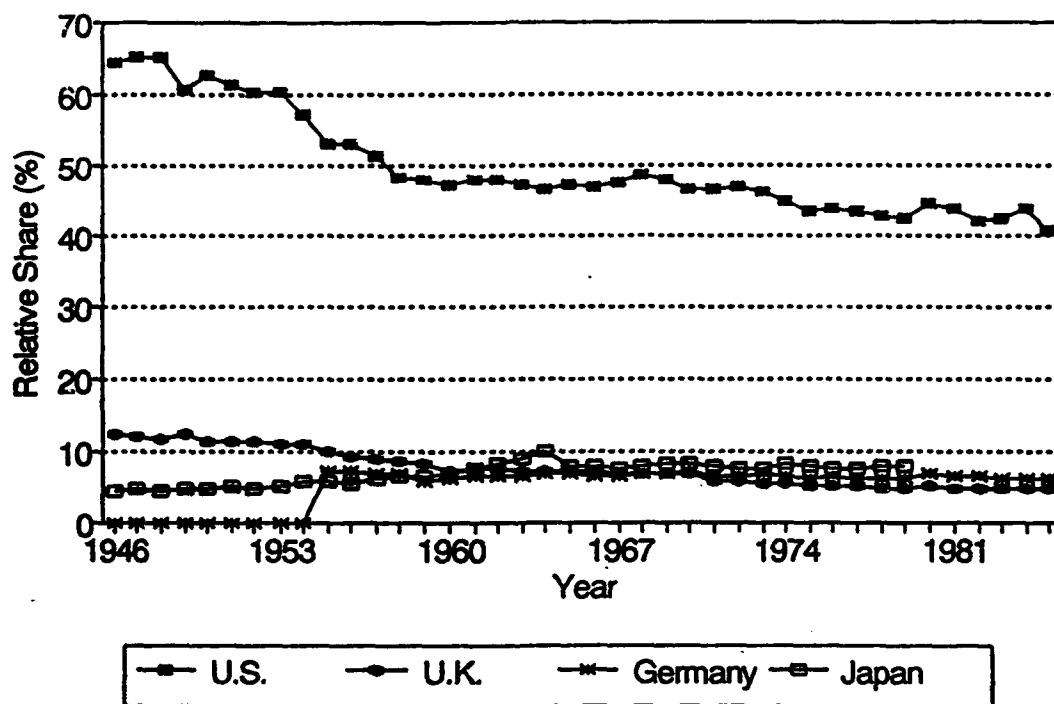


FIGURE 13: ENERGY CONSUMPTION

World Manufacturing Output 1800-1913

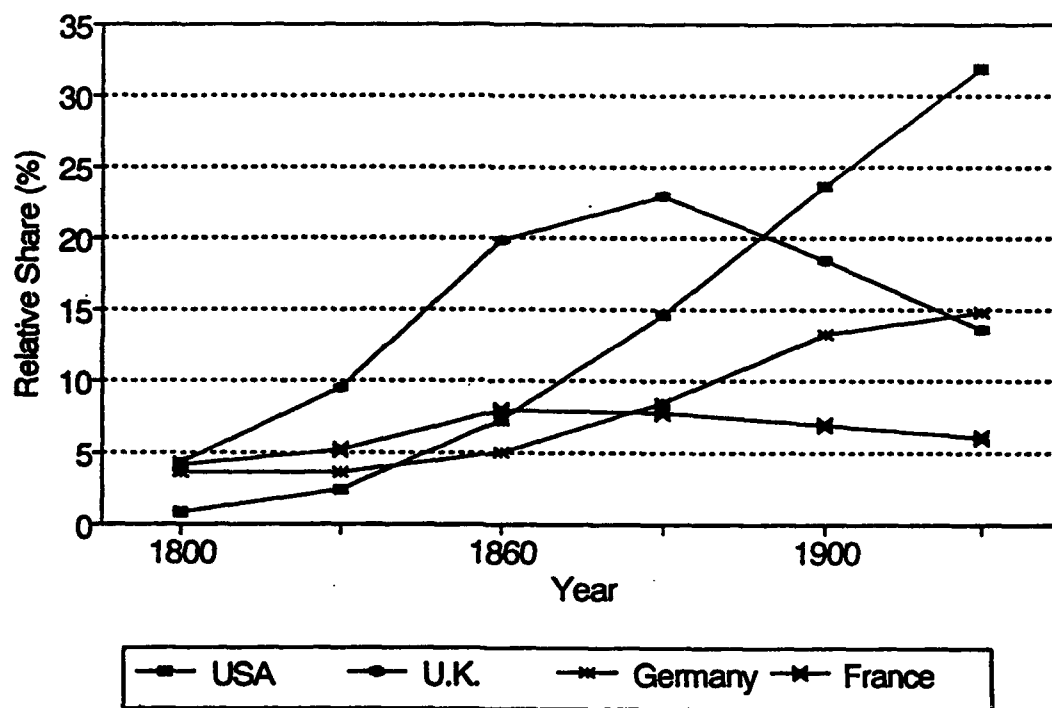


FIGURE 14: WORLD MANUFACTURING OUTPUT

Global Sea Power 1890-1945

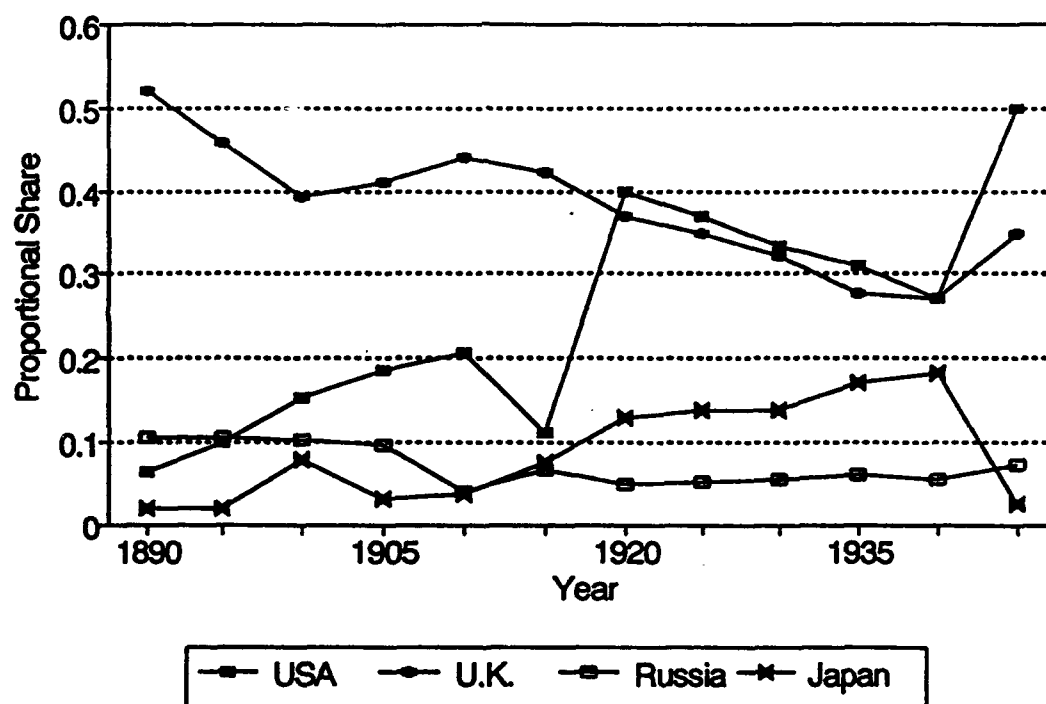


FIGURE 15: GLOBAL SEA POWER

Military Expenditures 1816-1880

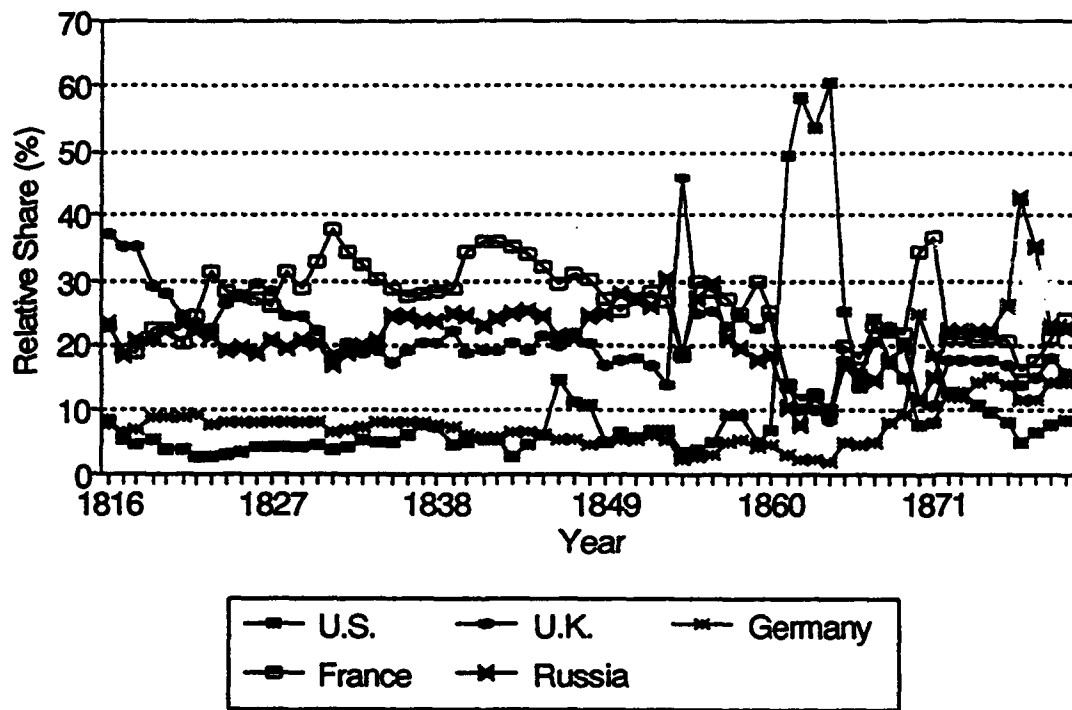


FIGURE 16: MILITARY EXPENDITURES

Military Expenditures 1880-1940

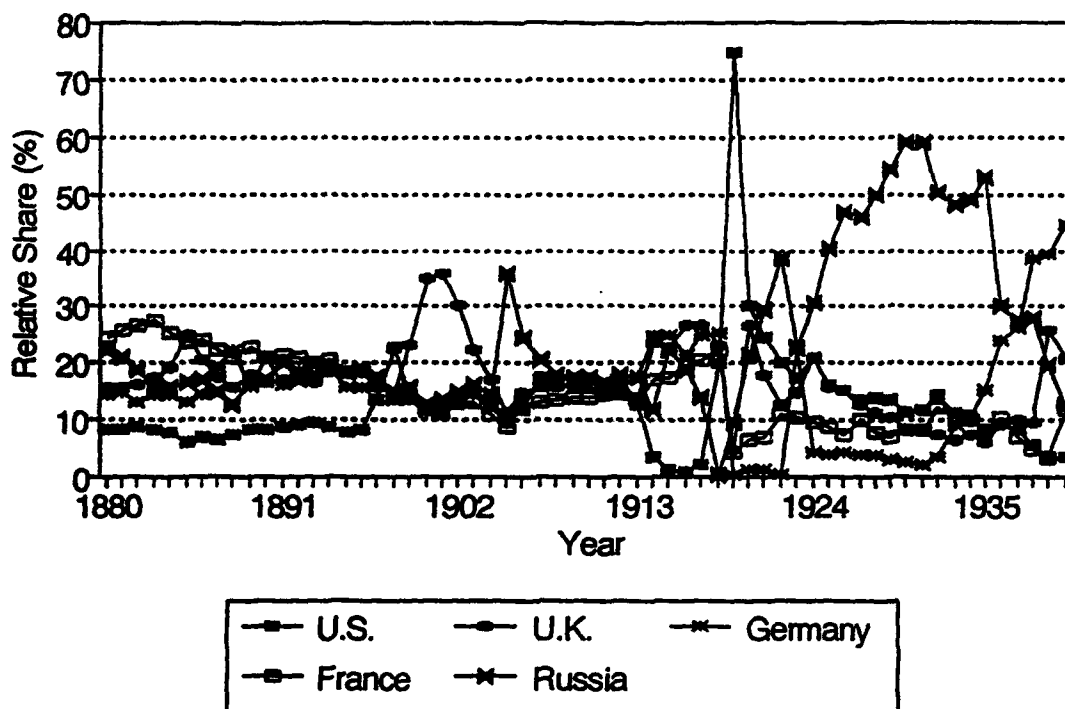


FIGURE 17: MILITARY EXPENDITURES

Military Expenditures

1946-1985

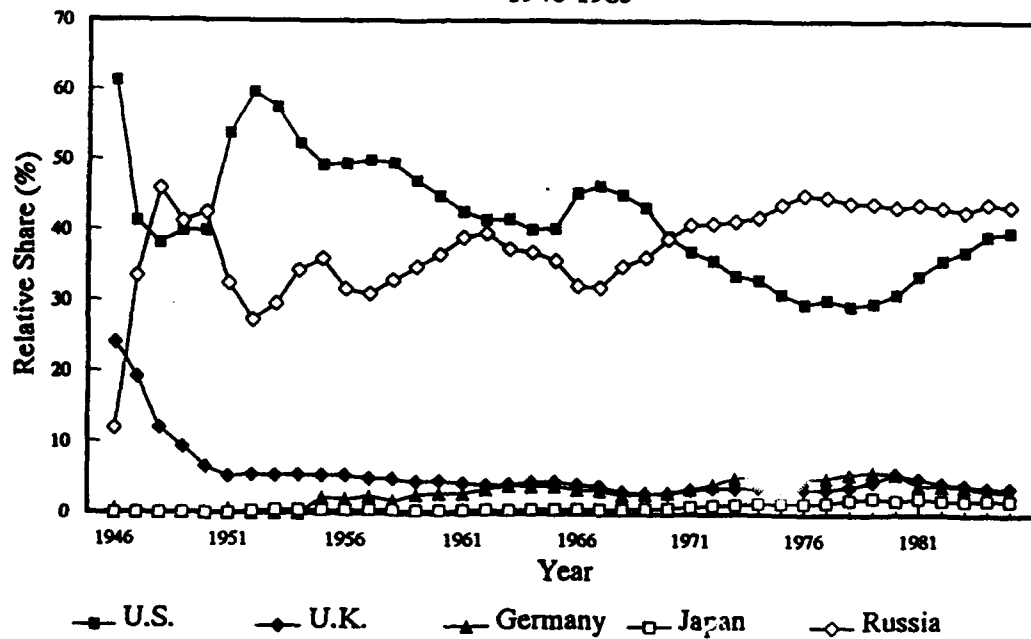


FIGURE 18: MILITARY EXPENDITURES

Military Personnel 1816-1880

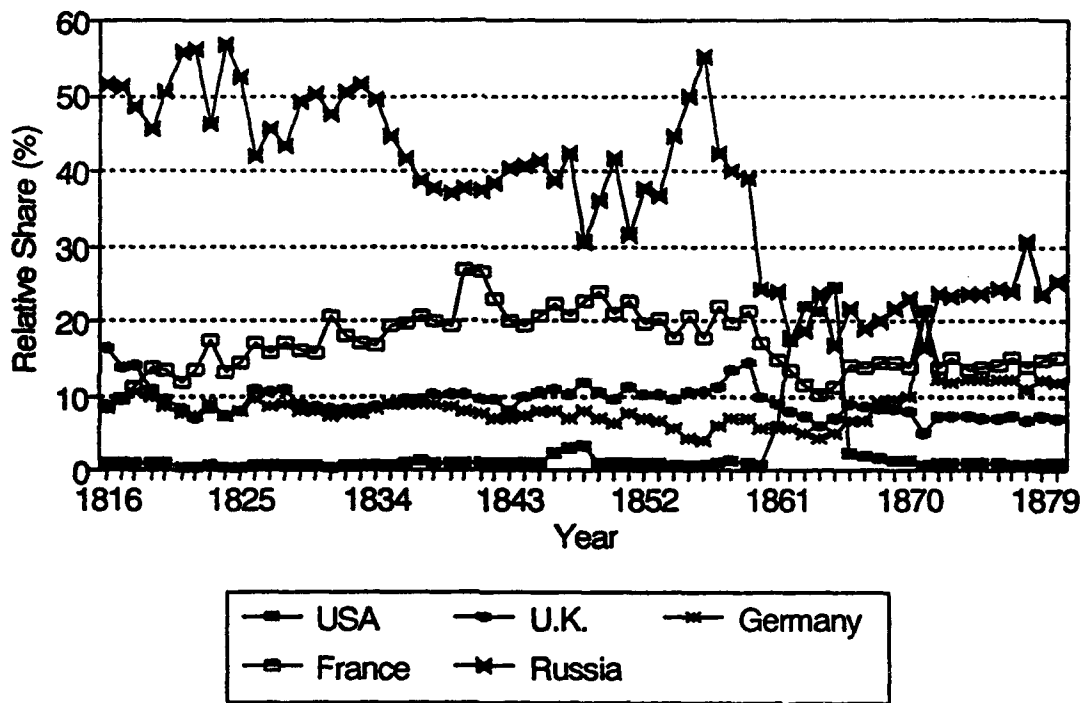


FIGURE 19: MILITARY PERSONNEL

Military Personnel 1880-1940

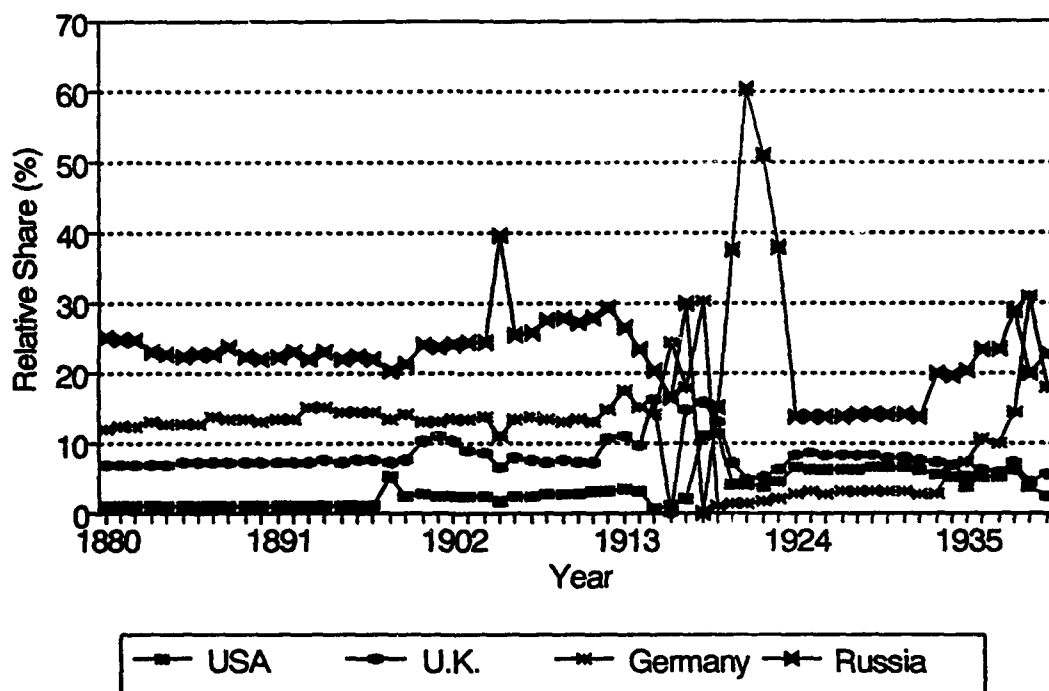


FIGURE 20: MILITARY PERSONNEL

Military Personnel 1946-1985

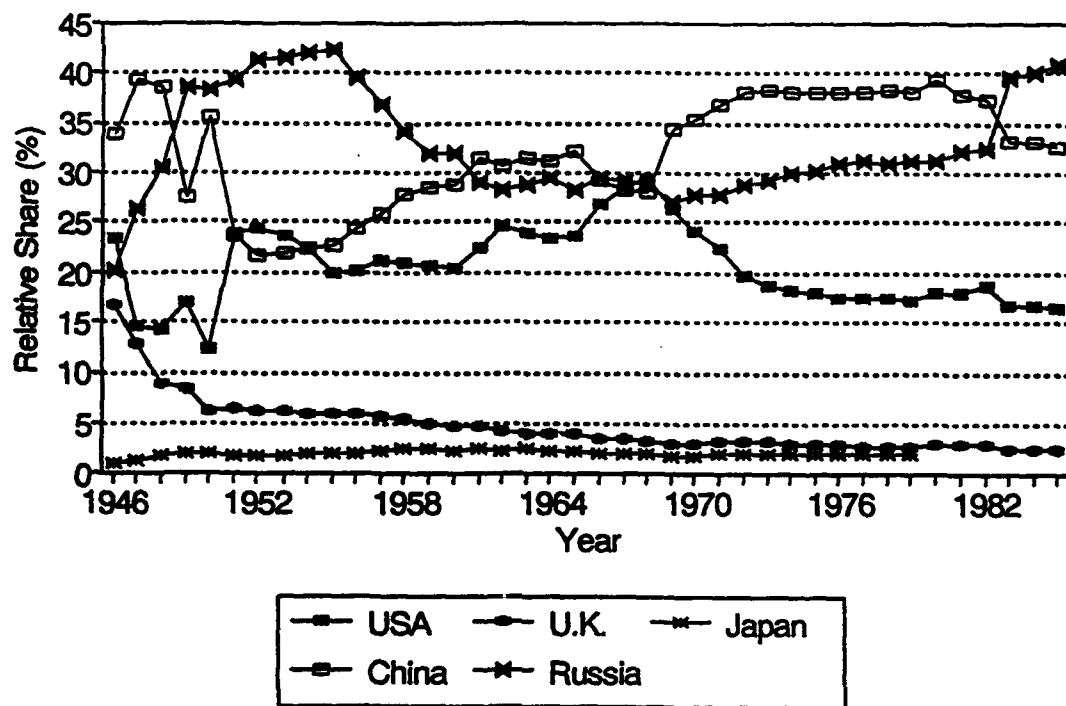


FIGURE 21: MILITARY PERSONNEL

Growth rate in Leading Sectors 1910-1980

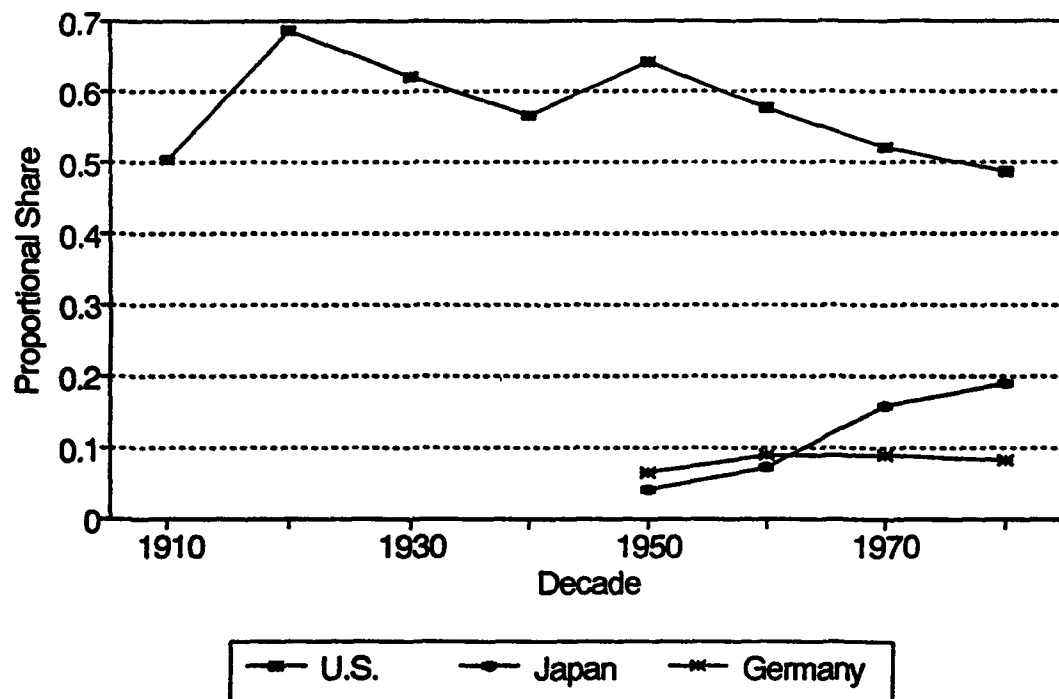


FIGURE 22: LEADING SECTORS' GROWTH RATES

LIST OF REFERENCES

- Bairoch, P. (1976) "Europe's Gross National Product: 1800-1975," Journal of European Economic History (5: 273-340).
- _____. (1982) "International Industrialization Levels from 1750 to 1980," Journal of European Economic History (11: 269-333).
- Berger, T. (1993) "From Sword to Chrysanthemum," International Security (vol 17, #4).
- Boswell, T., and M. Sweat (1991) "Hegemony, Long Waves, and Major Wars: A Time Series Analysis of Systemic Dynamics, 1496-1967," International Studies Quarterly (35: 123-149).
- Choucri, N., and R. North (1975) Nations in Conflict. San Francisco: W.H. Freeman and Company.
- Choucri, N., R. North, S. Yamakage (1992) The Challenge of Japan Before World War II and After. London: Routledge.
- Craddock, A. (1994) "The Hegemonic Use of Force" paper prepared for the 1994 International Studies Association Conference, Washington, D.C.
- Gilpin, R. (1981) War & Change in World Politics. Cambridge: Cambridge University Press.
- Goldstein, J. (1988) Long Cycles. New Haven: Yale University Press.
- Goldstein, J., D. Rapkin (1991) "After Insularity: Hegemony and the Future World Order" Futures (23: 935-959).
- Ikenberry, G.J. (1989) "Rethinking the Origins of American Hegemony" Political Science Quarterly (104: 375-400).
- Kennedy, P. (1987) The Rise and Fall of the Great Powers.

New York: Random House.

Keohane, R. (1984) After Hegemony. Princeton: Princeton University Press.

Kindleberger, C. (1973) The World in Depression, 1929-1939. Berkeley: University of California Press.

Lake, D. (1993) "Leadership, Hegemony, and the International Economy: Naked Emperor or Tattered Monarch with Potential?" International Studies Quarterly (37: 459-489).

Maddison, A. (1991) Dynamic Forces in Capitalist Development. Oxford: Oxford University Press.

Maul, H. (1990) "Germany and Japan" Foreign Affairs (vol 69, #5: 91-106).

Modelski, G. (1983) "Long Cycles of World Leadership" In Contending Approaches to World System Analysis, edited by William Thompson. Beverly Hills: Sage Publications.

_____. (1987) Long Cycles in World Politics. Seattle: University of Washington Press.

Modelski, G., and W. Thompson (1988) Seapower in Global Politics, 1494-1993. Seattle: University of Washington Press.

Nye, J. (1992) "Coping With Japan" Foreign Policy (number 89, Winter 1992-1993: 96-115).

Pollins, B. (1992) "International Order, Cycles, and Armed Conflict, 1816-1976" paper delivered at the 33rd Annual Meeting of International Studies Organization, Atlanta, Georgia, March 31 - April 4.

_____. (1993) "Governance in the Age of Global Capital" paper distributed in Political Science 753 (Winter 1994). Columbus: The Mershon Center.

Rapkin, D. (1987) "World Leadership" In Exploring Long Cycles, edited by George Modelski, pp.129-157. Boulder: Lynne Reinner.

_____. (1990) "The Contested Concept of Hegemonic Leadership" In World Leadership & Hegemony, edited by David Rapkin, pp. 1-19. Boulder: Lynne Reinner.

- Rosecrance R., and J. Taw (1990) "Japan and the Theory of International Leadership" World Politics (42: 184-209).
- Russett, B. (1985) "The Mysterious Case of Vanishing Hegemony; or, Is Mark Twain Really Dead?" International Organization (39: 207-231).
- Snidal, D. (1985) "The Limits of Hegemonic Stability Theory" International Organization (39: 579-614).
- Spiezio, K. (1990) "British Hegemony and Major Power War, 1815-1939: An Empirical Test of Gilpin's Model of Hegemonic Governance" International Studies Quarterly (34: 165-181).
- Stein, A. (1984) "The Hegemon's Dilemma: G.B., U.S., and the International Economic Order" International Organization (38: 355-386).
- Thompson, W. (1990) "Long Waves, Technological Innovation and Relative Decline" International Organization (44: 201-233).
- Wallerstein, I. (1984) "Three Instances of Hegemony in the History of World Economy" International Journal of Comparative Sociology (vol 24,1-2: 100-108).