
CHAPTER FIFTEEN

The Past and the Future

In looking back over the past five centuries, I am reminded of a comment made by an octogenarian friend. “Old age,” she said, “is like climbing a mountain. When you get to the top you’re out of breath and your legs are shaky—but the view is terrific!” This seems to me an apt analogy for the modern world. Over five centuries of development, the world system has been shaken by recurrent great power wars and stands, fragile, at the brink of a possible catastrophe—but from the late twentieth century we have a terrific view of the modern age.

That view is called history. For all the sudden developments of the twentieth century, the world today is still a product of its history.¹ In this chapter I will address the relevance of the historical development of the world system—including long waves and hegemony cycles—to the future of that system. I will look at the present from a “long cycle perspective”—a perspective grounded in an awareness of long-term cyclical dynamics as they have historically unfolded. This perspective offers new interpretive insights into contemporary issues, seeing present-day issues in their historical context, political issues in their economic context (and vice versa), and national issues in their global context.

PROJECTION AND PRECEDENT

In this chapter I look toward both the past and the future of the world system, to both future projection and historical precedent. Like the Roman god Janus, we need two faces looking in opposite directions, forward and backward. The two-faced Janus was the god of gates and doors and hence of *beginnings*. The development of the world system may be seen as a series of gateways stretched through the past, each representing a crisis, a transformation, and a new beginning. The past gateways are fixed, but there are many possible future gateways to choose among. The present is another beginning.

1. Fischer (1970:307) criticizes a contemporary “powerful current of popular thought which is not merely unhistorical but actively antihistorical as well. . . . Many of our contemporaries are extraordinarily reluctant to acknowledge the reality of past time and prior events, and stubbornly resistant to all arguments for the possibility or utility of historical knowledge.”

Future Projection

Some people think it is inherently deterministic to project long cycles into the future. I do not agree. This is more of the baggage carried by the long cycle field under the title of astrology, mysticism, and so on.

In my view, the past is determined but the future is uncertain. Nobody has unrestricted “free will” because all are partially constrained by physical forces as well as the choices of other human beings. But everyone has latitude for *choice*. In a world system containing many millions of people, the macro level of aggregate social patterns may be beyond any individual’s power to change. Nonetheless whole societies do make choices and change social patterns (that is what politics is all about), so even the macro-level social rules are only conventions, and not physically binding. Social rules can be manipulated, bent, and even rewritten.

All science seeks to understand the rules of the world we live in, not to show that those rules bind us but to open up new possibilities for liberating ourselves from them.² Long cycles are no different, in my view (except that our knowledge of them is cloudier, and our basis of action hence less reliable, than in the case of the natural sciences). Long cycles are a manifestation of certain deep-seated dynamics in world society. Our understanding of those dynamics will increase, not diminish, our freedom to choose a future we want.

If long cycles were mechanistic—if long cycle dynamics did not change and if the world system did not evolve—then my projection could be a prediction. But long cycles are not mechanistic or deterministic. They have evolved through several transitions over five hundred years, and that evolution has only recently reached a new and ill-defined era in which some of the regularities of the past have changed.³ Thus I am emphatically *not* making a prediction, much less engaging in prophecy!

The truth is that we all make projections of the future, consciously or unconsciously, all the time. My cyclical projection, however tentative and rough, challenges the assumptions of the more conventional projections. Most projections of world politics are based on either of two questionable assumptions. First is the assumption that the world will continue just as it is now—resulting in a *static* projection into the future. Second is the slightly more sophisticated assumption that the types and directions of change characteristic of the recent past will continue in the future. This second assumption results in a *linear* projection into the future.⁴ If in fact

2. As even Mao Tsetung ([1940] 1972:204) has said: “For the purpose of attaining freedom in society, man must use social science to understand and change society and carry out social revolution. For the purpose of attaining freedom in the world of nature, man must use natural science to understand, conquer and change nature and thus attain freedom from nature.”

3. Long cycles are particularly ill-suited to prediction, especially the prediction of hegemonic war. As Freeman and Job (1979:126) point out, “those analysts who persist in trying to forecast (predict) the ‘big event,’ e.g. the outbreak of total war . . . , proceed on very shaky ground” because only a few instances exist on which to base the projection. Second, the level of analysis is the world system, of which only one case exists, and this makes generalizations difficult (Freeman and Job 1979:132). Third, the length and scope of long cycles mean that significant evolutionary change can occur from one instance to the next.

4. A good example of the shortcomings of linear projection was provided by the expectation in the 1960s that sustained economic growth would continue unabated indefinitely.

there is a cyclical dynamic at work in the world system, then both of these types of projection will be seriously flawed. My *dynamic* projection, by contrast, is based on the assumption that long cycles will continue.

This provides a *baseline* projection from which to start a discussion, not a final statement about the future. It is an educated guess about the likely sequence and timing *if* past dynamics continue into the future. I offer it as a viable alternative perspective with which to temper the conventional wisdom rather than as an ultimate truth. My projection offers a way to think about our choices as a world society from a new baseline, a new context.

The basis of my projection will be to locate the present phase of the world system and find its rough directions and rates of change within the two-dimensional space defined by the long wave on one dimension and the hegemony cycle on the other. I will project first the long wave, then the hegemony cycle, and finally consider the two together. Here, more than ever, I must rely on adduction, striving for a plausible and consistent range of possibilities, not a definitive answer.

Projecting the Long Wave

The first task in projecting the long wave sequence is to locate the present in that sequence. The most recent upswing phase seems to have had roughly the following sequence:

- 1933 Upturn in production
- 1937 Upturn in great power war
- 1940 Upturn in prices
- 1968 Downturn in production
- 1975 Downturn in great power war
- 1980 Downturn in prices

The economic turning points have been discussed in chapter 11. To recap, around the late 1960s the world economy moved into a production downswing phase⁵ of slower and less stable growth, which had not ended by 1986. Inflation continued upward after 1968 until the price peak of 1980, since which point inflation has remained quite low.

The “war upswing” phase from about 1937 to 1975 requires some discussion now. The year 1937 marked the opening shots of World War II—Japan’s invasion of China (Barracough 1964)—while 1975 marked the end of the Vietnam War. The major war (World War II) came at the beginning of the phase and was followed by smaller wars (which, as noted above, is an anomalous pattern historically). Nonetheless the entire phase was a period both of continuous mobilization for great power war and of frequent great-power involvement in war, often directed consciously but obliquely at another great power. The major national economies remained on a “war

5. For which the Vietnam War bears some responsibility.

footing” throughout most of this period (see Melman 1974 on the “permanent war economy” in the United States).⁶

The use of military force by the great powers, especially the United States, declined sharply after 1975, with the coming of “detente” and U.S.-Chinese rapprochement in the mid-1970s. A few years, from the fall of Saigon in 1975 until the Soviet intervention in Afghanistan in 1979, were particularly free of great power involvement in international wars.⁷

Some people would be surprised at my description of the present as a war downswing. True, in the early 1980s, great power war activity and military spending increased somewhat, and within a four year period (1979–83) every member of the United Nations Security Council became involved in military combat beyond its borders—the USSR in Afghanistan, the United States in Grenada, China in Vietnam, Britain in the Falklands-Malvinas, and France in Chad. But these interventions were limited to the country’s immediate neighbor or to a “sphere of influence” not strongly contested by another superpower. So I see the present superpower maneuvering as essentially different, and less prone to actual great power war, than that of the cold war years in the 1950s and 1960s.⁸

But can present U.S. behavior really be seen as part of a war downswing phase in light of the Reagan administration’s military buildup in the United States? I believe so. While U.S. military spending is being pushed to new peacetime highs in absolute terms, it is still well below the levels of the 1950s and 1960s in terms of percentage of GNP, as shown in figure 15.1. And while President Reagan clearly would *like* to keep building up the military, it now (1987) looks as though the U.S. economy simply cannot support such a buildup and that the buildup of the early 1980s was a one-time feat accomplished at the price of a huge jump in the federal deficit. By 1986, Melman (p. 65) could argue that

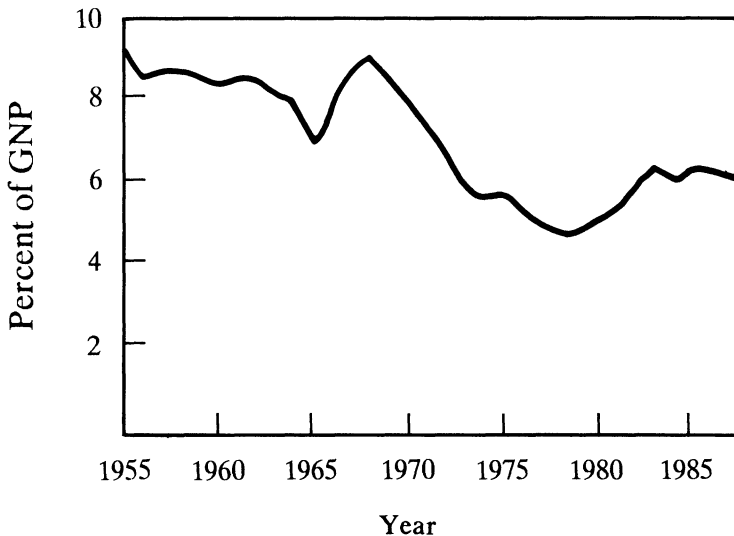
there is a growing awareness in Congress and among the public that the United States cannot have both guns and butter. The huge federal deficit, much of it stemming from the recent increase in the military budget, is creating serious problems for U.S.-based production in both domestic and foreign markets.

By 1986, Congress was mandating at least slight cuts, rather than continued rapid buildups, in real military spending—not because they opposed the buildup but because they did not want to pay for it.

6. The exception, Japan, was also the most successful in economic growth, probably because of its ability to keep military spending around 1% of GNP (compared to 5–10% of GNP in many core powers). The difference of a few percent of GNP being reinvested productively instead of wasted on the military could account for much of Japan’s higher growth rate.

7. The peace-making trip of President Anwar Sadat of Egypt to Jerusalem in 1977 seems to symbolize these years.

8. As this manuscript was being revised, in 1986, several new signs of the potentially peaceful character of the current period emerged. These include the Soviet peace initiatives and nuclear testing moratorium, the U.S. Congress’s near-passage of test-ban legislation, and the sweeping “almost” agreement of Gorbachev and Reagan in Reykjavik.

Figure 15.1. U.S. Defense Outlays as a Percent of GNP

Source: U.S. Department of Defense. Your Defense Budget, Fiscal Year 1987 (Washington, DC, 1986), p. 30.

Meanwhile, the growth of military spending in the Soviet Union also seems to have slowed down after about 1974. Recent reports from the Central Intelligence Agency and the Defense Intelligence Agency⁹ estimate that Soviet military spending, which grew by nearly 50 percent between 1965 and 1974,¹⁰ slowed to virtually no real growth from 1975 through at least 1981.¹¹

To summarize our present position with respect to the long wave, then, we are in a period of low and unstable production growth, reduced great power war activity, and low inflation. Looking to the future, the long wave sequence suggests an upturn in production growth,¹² followed by an upturn in great power war activity (war likelihood, propensity towards war?), followed by an upturn in prices.

The next point in the usual sequence would be an upturn in production growth. I do not see this turning point yet, especially in the U.S. economy, which is still the world's leading economy. The "recovery" of the U.S. economy in 1984 did not last. The United States has recently joined much of the third world in a massive debt

9. See *Boston Globe*, Mar. 31, 1986, p. 3.

10. That is, about 3% real annual growth, above the inflation rate of about 1%.

11. For 1982–1984, the "more comprehensive" CIA report estimates that this spending freeze continued, while the DIA estimates growth of 2–3% above inflation. See also *Christian Science Monitor*, July 30, 1987, p. 9, on "massive cuts" in China's military in the 1980s.

12. The production upturn will be distinguishable only after it has been sustained for some years, since only then can growth be called stable.

crisis. And I do not yet see a new leading economic sector emerging into strong growth—rather, the relevant sectors seem to be going through shake-downs and consolidations.¹³

The next leading sector might most plausibly be an information sector incorporating telecommunications,¹⁴ computers (electronic information processing) and perhaps biogenetics (control of biological information). This new leading sector does not yet seem to be in place.¹⁵ By the early 1990s, however, these new technologies may begin to settle into place. For what it is worth, a production upturn around the mid-1990s would mean a phase length of about twenty-five years since 1968. However, an upturn in the late 1990s or even the late 1980s would be about equally plausible.

Given a production upturn around the 1990s, the long wave sequence would suggest a war upswing phase beginning around the first decade after 2000 and lasting through sometime around the decade of the 2020s.¹⁶ The most plausible projection would then be something like this (rough dates):

1995–2020	Production upswing phase
2000/05–2025/30	War upswing phase
2010–2035	Price upswing phase

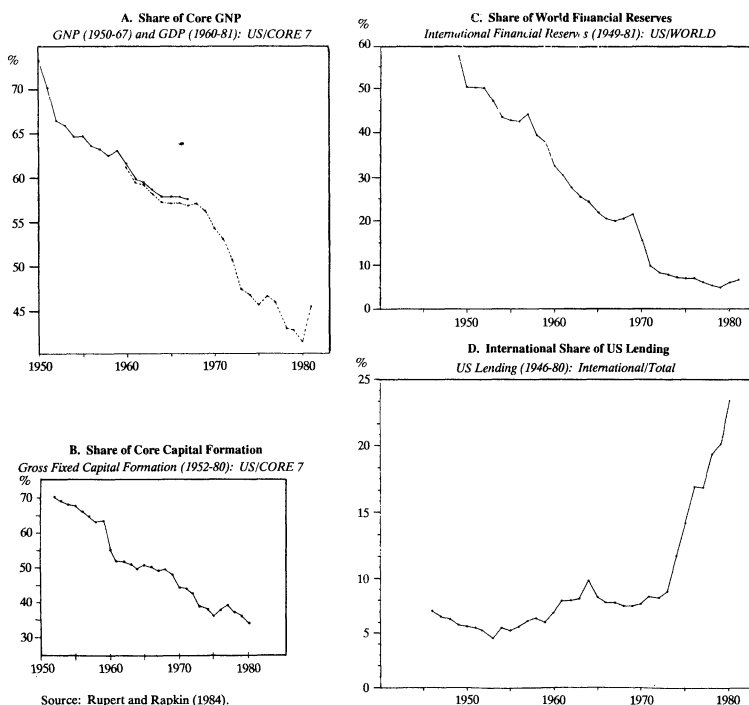
As a first approximation, I suggest the period around 2000 to 2030 as a “danger zone” for great power war. The greatest danger of war, in my opinion, will come later rather than earlier in this period. Unlike the upswing that *began* with World War II, there is no great unresolved issue of hegemony left over from the last upswing period. Instead, like the upswing that *ended* with World War I, there is a more gradual erosion of an existing hegemonic system and the rise of potential challengers to that hegemony (see below on declining hegemony). Given the exceptional costs of great power war in this era (see below), it seems that war would come only at the end of a long buildup with persistent pressure toward war. I consider most plausible a return to the pattern before the 1930s (to which World War II was an exception), in which great power wars peak toward the end of the upswing phase. This would put the highest danger of great power war sometime around the decade of the 2020s, or almost forty years in the future as of this writing.

13. The latest data as of 1987 show adjusted U.S. GNP growth of 3.0% in 1985 and 2.9% in 1986, following low growth in every year since 1980, except 1984 (election year?). Although the U.S. economy might just limp along until the next production upturn, I would not discount the possibility of a sharp deflationary jolt and reorganization before that time. If, as argued below, the most relevant precedent for the 1980s is the 1870s, then the equivalent of the great depression of the 1890s (deeper than that of the 1870s) would lie just ahead, before the production upturn.

14. “An obvious candidate for the next great leap forward is the telecommunications industry” (Kurz 1979:33).

15. Computers have become important in the core economies, but the most pervasive applications appear to be still some years in the future, and costs are still dropping sharply. Biogenetics for its part has just begun making products of significance and is mostly a promise of things to come.

16. Again, these dates could easily be shifted somewhat in either direction.

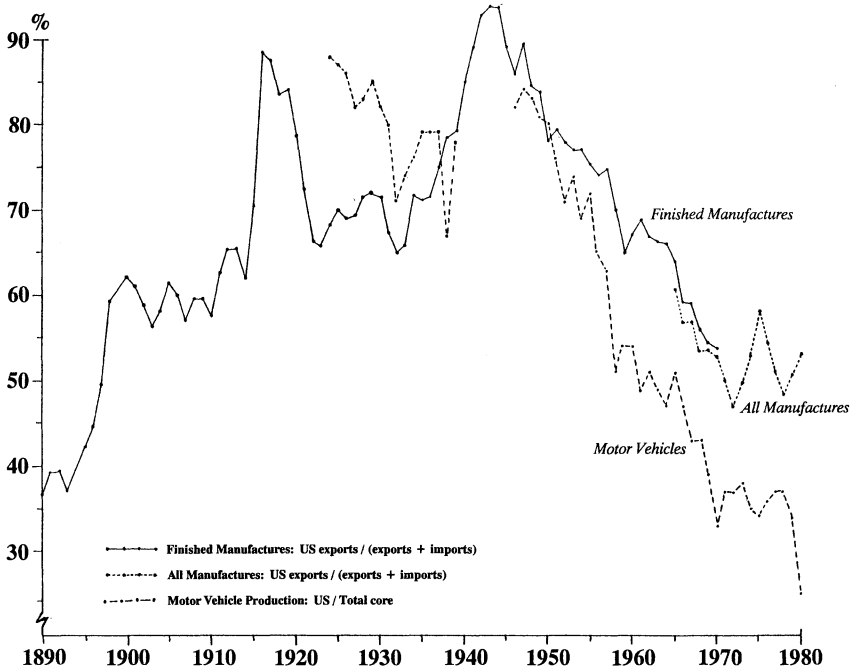
Figure 15.2. Indicators of Declining U.S. Hegemony

Projecting Hegemonic Decline

Moving from the long wave to the hegemony cycle, again the first task is to locate the present along the sequence of hegemonic decline. How far and how fast has American hegemony eroded in terms of both military and economic predominance?

The economic erosion is illustrated in figure 15.2. The U.S. share of core GNP fell from 70 percent to 40 percent, at an accelerating rate after 1970. Share of capital formation also fell from about 70 percent to 40 percent. The U.S. share of core production of motor vehicles, radio, and television, its share of world manufactured exports, and its share of world financial reserves all decreased substantially, while the ratio of U.S. imports to exports increased. Dawson and Rupert (1985:10) have graphed U.S. manufacturing exports and motor vehicle production (fig. 15.3). They express exports of manufactures relative to imports, creating “a measure capable of reflecting the production and exchange relations which inhere in hegemony” (Dawson and Rupert 1985:11). The decline of such an indicator, they argue, would show that “world markets for core production are being recaptured by competing core powers and . . . the domestic market of the hegemonic society is increasingly penetrated by its competitors” (p. 11). Such a decline occurs in the U.S. in the period 1945–80; a similar decline also occurs in the U.S. share of core motor vehicle

Figure 15.3. The Rise and Decline of U.S. Production Hegemony



Source: S. Dawson and M. Rupert, *Hegemony and the Dynamics of Core Periphery Relations*, paper presented to the International Studies Association, March, 1985.

production (“an indicator of the more purely productive aspect of hegemony,” according to Dawson and Rupert).

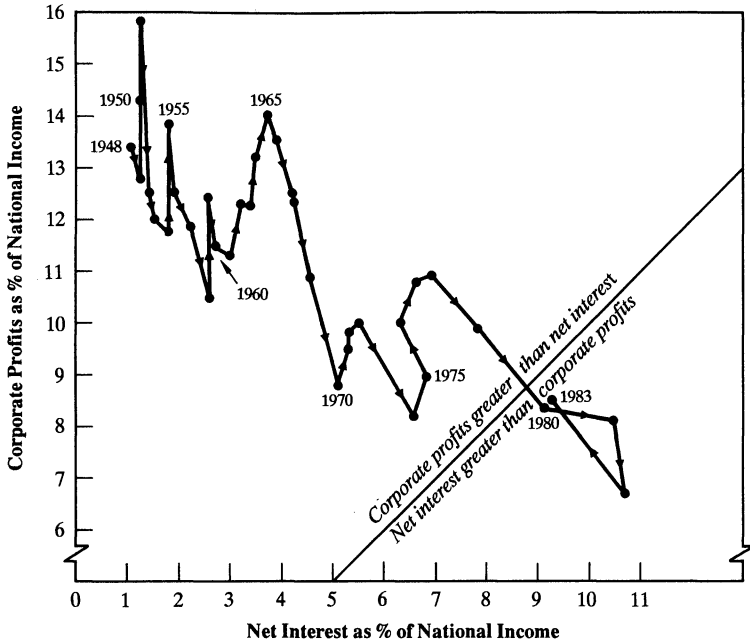
W. D. Burnham has graphed the decline of corporate profits relative to net interest rates in the United States from 1948 to 1983 (see figure 15.4). The decline in profits and rise in interest rates are particularly sharp from 1965 to 1970, and since 1980 net interest rates have been higher than profit rates.

Bergesen, Fernandez, and Sahoo (1986) evaluate U.S. hegemony in terms of the nationality of the fifty largest manufacturing corporations in the world (which they define as constituting “hegemonic production”) from 1956 to 1981.¹⁷ They categorize each company by industry and ask how many industries each leading country was active in at this top level. The United States declined from thirteen to seven such industries, while Europe remained constant at about six to seven, Japan rose from zero to three, and the “semi-periphery” rose from zero to one.

The U.S. military position has seen somewhat parallel decline. From total superiority in 1945, the United States went on to lose the war in Vietnam and accept a position equal with, not superior to, the Soviet Union in the nuclear standoff (SALT

17. See also Bergesen (1986).

Figure 15.4. U.S. Corporate Profits and Net Interest



Note: Graph represents both corporate profits and net interest as a percent of national income, for 1948-83. Data from National Income and Product Accounts.

Source: Courtesy of Walter Dean Burnham, M.I.T.

agreements). The United States, however, continues to be the strongest great power in terms of global-reach capabilities.

There are differing interpretations of how significant the decline in U.S. position has been. In sharp contrast with the scholars just discussed, President Reagan said in a recent interview that "I firmly believe that the United States is still in the upswing of the cycle" of rise and decline of empires. Furthermore, according to Reagan, "America . . . , which is unique in the world, could be the first exception to the historical rule" of decline.¹⁸

A more moderate position is that of Russett (1985), who argues that U.S. hegemony has declined, but not as far as is commonly believed. Between 1950 and 1983, according to Russett's data, the United States has maintained parity with the Soviet Union on military expenditures and has remained far ahead on GNP and manufacturing production.¹⁹ The U.S. share of the world economy has declined, but the United States remains the most powerful single country.

In these discussions of U.S. economic and military decline the different view-

18. Interview with Brazilian news magazine *Veja*, Oct. 5, 1986, quoted in *Los Angeles Times*, Oct. 6, 1986, p. 13.

19. He puts the Soviet Union in 1950 at 29% of the U.S. GNP and 24% of its manufacturing production. By 1983 the figures had risen, but only to 41% and 47%.

points seem to converge on some basic points even though interpretive conclusions vary. The U.S. position has declined from its post-World War II high (President Reagan's view notwithstanding), but the United States is still the single most powerful nation in the world. Some people focus on the decline, others on the continuing strength.

As American hegemony (slowly or rapidly) declines, is the Soviet Union ascending? The position of the Soviet Union has, since 1945, become much stronger. It recovered economically from utter devastation in World War II and has attained a position of rough parity with the United States in the strategic arms race.²⁰ Perhaps, with its larger size and greater remaining natural resources, the Soviet Union will overtake the United States in overall economic and military strength in the coming decades, but this is debatable. To some observers, the USSR seems far more concerned about securing its own borders than controlling the world.

Alker, Biersteker, and Inoguchi (1985:32–39) argue that the Soviet Union was never more than a regional hegemon and that as such it “reached its period of maximal extension between 1955 and 1965” and is now in decline. In their view, the U.S. policy of containment raised the costs of Soviet expansion (though possibly “the Soviet Union never intended to extend itself very far beyond its borders”). The USSR, they argue, has been able to end U.S. hegemony in the world system without being able to assert its own hegemony. Thus, “it appears we have entered a period of a global devolution of power, a period in which no single actor can dominate.”

Does declining U.S. hegemony imply that hegemonic war is imminent? I believe not. In the past, hegemonic decline has been a long, drawn-out process. The speed with which hegemony declines and the point in that process when hegemonic war might be triggered are indeterminate. What *can* be said is that we are moving toward the “weak hegemony” end of the spectrum and that this seems to increase the danger of hegemonic war.

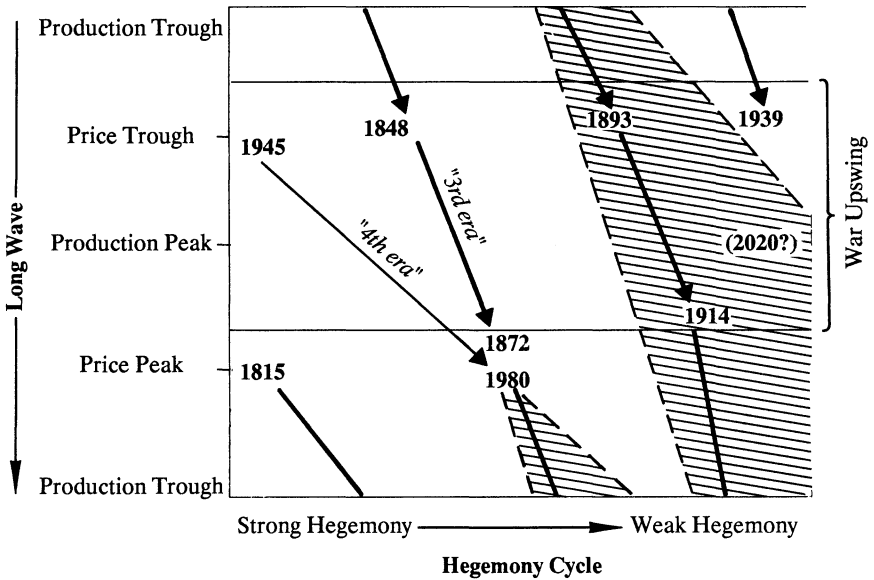
Two-Dimensional Cycle Time

I have now estimated the location and direction of change for both long waves and hegemony cycles. These may be combined using the two-dimensional space described in chapter 13. Figure 15.5 is a sketch of the path followed by the world system since 1815 in the space defined by the long wave on the vertical axis and the hegemony cycle on the horizontal axis.

Beginning in the lower left of the figure, 1815 ended a hegemonic war period and a price upswing and marked the emergence of strong hegemony. Hegemony eroded gradually through the following long wave (price trough in 1848, price peak in 1872) and then eroded somewhat more rapidly in the following long wave, ending in World War I. Hegemonic war was resumed near the outset of the next upswing (1939),

20. Lester Thurow (1986:15) finds American plans to “bankrupt” the Soviet Union through high defense spending absurd: “The Soviet economy may look cumbersome and inefficient from our vantage point, but if it did not collapse in the face of Hitler’s armies it is not going to collapse in the face of American military spending.”

Figure 15.5. Historical Path and Future Projection

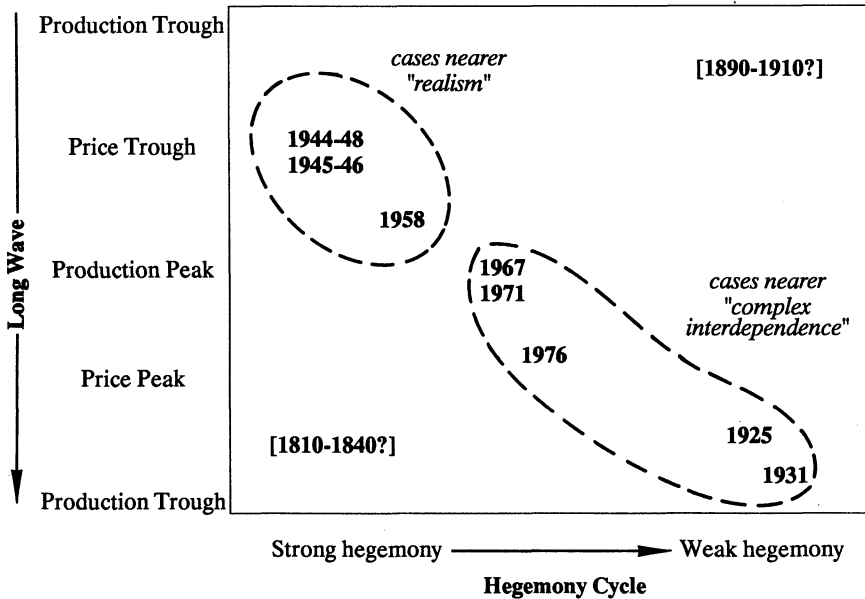


quickly restoring strong hegemony (1945, at left of figure) and ushering in the long 1940–80 price upswing. The erosion of hegemony here seems to have been faster than in the British case, so that the American hegemony of 1980 seems roughly similar to the British hegemony of 1872 (both price peaks). Since 1980 is early in the long wave “war downswing” phase, the danger period for great power war would not be expected for at least two decades.

After 1980, dotted lines indicate a widening region of plausible futures, depending on the continuing rate of hegemonic decline relative to long wave time. The upper dotted line indicates a continuing rapid decline in U.S. hegemony such that hegemonic war might be conceivable rather early in the next war upswing phase (2010?). The lower dotted line shows a slowed rate of decline in which the world system’s path might pass through the next war upswing phase without a hegemonic war (as happened under British hegemony in 1848–72).²¹ The danger of hegemonic war might then be put off until the next upswing, in the second half of the twenty-first century (by which time the nature of world politics might be very different). A middle path between these diverging possibilities would take us not far from the

21. Perhaps experiencing conventional wars of moderate scale instead. While such wars might be destructive regionally, they would leave intact the basic international power structure, including both superpowers.

Figure 15.6. Clustering of Keohane and Nye's Cases



1893–1914 precedent. The danger of hegemonic war would be high, especially late in the next war upswing, around 2020.

In addition to its utility in projecting long cycles into the future, two-dimensional cycle space may also be used as a new framework with which to reconceptualize theories of international relations. For example, Keohane and Nye (1977:28) argue that “realism” is giving way to “complex interdependence” among nations,²² making “the effects of military force . . . both costly and uncertain.”²³ Keohane and Nye see a trend in world politics over the past fifty years, with “the complex interdependence type . . . becoming increasingly relevant” (p. 161). The long cycle perspective suggests a reinterpretation of Keohane and Nye’s (p. 161) nine cases of change in international “regimes” concerning money or oceans.²⁴

22. As the more relevant ideal type in international relations. See also Rosecrance et al. (1982).

23. While military force is still central to issues of national survival, according to Keohane and Nye (1977:28–29), “employing force on one issue against an independent state with which one has a variety of relationships is likely to rupture mutually profitable relations on other issues. In other words, the use of force often has costly effects on nonsecurity goals.” They argue that “the recourse to force seems less likely now than at most times during the century before 1945.”

24. Modelski (1981:79) first suggested that a cyclical model “permits the use of both the ‘realist’ and the ‘complex interdependence’ [of Keohane and Nye] ideal types to elucidate successive phases of world politics.”

Four of the nine cases approximate conditions of “realism,” while five are closer to conditions of “complex interdependence,” according to Keohane and Nye. As figure 15.6 illustrates, these cases are clustered in terms of both the long wave and hegemony. Conditions of “realism” seem to predominate on the long wave production upswing and in conditions of strong hegemony, while conditions of “complex interdependence” predominate in the long wave production downswing phase and under weaker hegemony.²⁵ To sort out the effects of the long wave from those of hegemony, one would have to look more closely at the lower-left and upper-right quadrants in the figure, which would mean studying two earlier periods, around 1890–1910 and around 1810–40.²⁶ In any event, rather than seeing in complex interdependence the downfall of realism, the long cycle perspective suggests a return toward realism in a future phase.

Historical Precedent

The use of long cycles to project possibilities into the future may be strengthened by the use of appropriate historical precedents. In looking toward the future, we all draw precedents from the past by which we interpret events and estimate the probable effects of our actions. In the long cycle perspective, some precedents from the past are more appropriate than others to a particular situation. This is because some past periods structurally resemble the present, occupying a similar position in the cycle space of figure 15.5. The 1870s may have important lessons for the present that could not be gleaned from the 1960s—because while the 1960s are more recent, the 1870s occupy a more comparable position in cycle time (long wave downswing, declining hegemony).

Like future projection, the use of historical precedent is fraught with methodological pitfalls. Historian David Hackett Fischer (1970) includes “false analogy” among eleven common “fallacies” that underlie errors in historical scholarship. The misuses of analogy, according to Fischer (1970:258), can be divided into two groups: drawing inappropriate analogies and applying sound analogies inappropriately.²⁷ Despite Fischer’s warnings, historical analogies do play a major role in political debate and will continue to do so. The long cycle perspective can help to point up

25. This excludes the “pre-1920” ocean regime change, whose timing relative to the long wave is not clear. Inclusion of this case of “realism” in the upper right quadrant (around 1890–1910) would at least weakly imply that the long wave, rather than hegemony, is the factor correlating with the realism-complex interdependence dimension.

26. The period 1890–1910 is particularly interesting, since it parallels the period expected around 1990–2010 (see above).

27. “The fallacy of the perfect analogy” arises when a partial resemblance between two entities is extended to imply “an entire and exact correspondence” (p. 247). The “fallacy of prediction by analogy” arises when “analogy is used to anticipate future events—as it so often is, in the absence of anything better” (p. 257). Predictions based on analogies, according to Fischer, are “utterly untestable and inconclusive.” He suggests two alternative methods for looking to the future. First is to extrapolate trends (but I find this inadequate in view of cyclical dynamics, see above). Second, theoretical or conditional knowledge (“if-then” propositions) can be used to analyze possible futures.

clearly *inappropriate* analogies and to suggest more relevant historical precedents that might otherwise be overlooked.

The 1893–1914 Precedent

As seen in figure 15.5, the closest historical precedent for the present phase seems to be the period from 1872 to 1893. Both are long wave downswings. Both are phases of low great power war activity following costly wars of containment by the hegemonic power in the previous upswing phase period—Britain in the Crimean War and the United States in the Vietnam War. In both periods, an era of unhampered free trade gives way, as hegemony declines, to greater protectionism.

As for the early decades of the twenty-first century, the 1893–1914 period appears to be most relevant. In chapter 1, I mentioned that the present generation in the West remembers with particular sensitivity the “lessons of 1939”—that “appeasement” leads to war and therefore that armed strength and firmness will deter war.²⁸ But others feel that 1914 and not 1939 is the more relevant historical case for the present generation. The long cycle perspective makes the 1914 precedent particularly interesting.

Kahler (1979:374) argues for this “1914 analogy,” which he finds worthy of reexamination because of “the lingering strength of the ‘lessons’ of the 1930s in the United States and our national distance from the events of July 1914.”²⁹ My projection in two-dimensional cycle time supports a modified version of the 1914 analogy—the buildup to war in 1914 is a useful precedent not for the immediate future but for a period ten to fifty years in the future. My projection lies between that of Modelski, which sees the present phase as analogous to 1848–73,³⁰ and that of Kahler, which sees the present as analogous to the period just before 1914.

According to Kahler (pp. 375, 381–83), “the emerging pattern of superpower competition” at present resembles in certain ways the Anglo-German rivalry after the turn of the century. “Soviet fears of encirclement” by the United States and China parallel “the worst fears instilled in Wilhelmine Germany by the Franco-Russian alliance.” Present-day reliance on proxies and “clients” parallels the pre-1914 pattern “in which one or another of the Powers [could be] forced into a confrontation by a weaker state.” And “exacerbated dependence upon imported oil [has] shaped American strategy in the ‘arc of crisis’ to the model of classical British strategy in the region.”

But it is in the area of *deterrence* that the 1893–1914 period holds the most interesting precedents for the coming decades. Kahler (pp. 389–94) writes that “the 1914 analogy points to weaknesses in our dominant mode of thinking about relations

28. For a summary of the conservative argument for the 1930s as the parallel to the 1980s, and for Nazi Germany as parallel to the Soviet Union, see Karchner (1985).

29. On the 1914 analogy, see also Russett (1981) and Bergesen (1983b).

30. Modelski (1982:114) rejects the 1914 analogy but says that “we have even less use” for the 1939 analogy. Based on his dating (see chap. 6), Modelski considers the period since 1973 an upswing in which “the sources of experience for the decades of the 1980s and ‘90s are . . . between 1848 and 1873.”

with our adversaries, especially in deterrence theory (an image powerfully shaped by the supposed lessons of the 1930s).” One big difference between pre-1914 Europe and the present, according to Kahler, is that military forces in the former case “were not viewed as deterrents” but as instruments for fighting a war that many regarded as inevitable. However, Kahler notes that this difference is now eroding as some officials argue that a limited nuclear war is “winnable.” “Perhaps the possibility of nuclear war will continue to restrain . . . foreign adventures,” Kahler argues, but “the 1914 analogy hardly encourages complete reliance upon such restraint.”

Deterrence has a long history. Both the theory of deterrence and its critique were alive and well in the 1893–1914 period. Norman Angell (1914:201) wrote in January 1914: “Mr. Churchill lays it down as an axiom that the way to be sure of peace is to be so much stronger than your enemy that he dare not attack you. One wonders if the Germans will take his advice” (see also Angell 1910).

Indeed, the escalating costs and destructiveness of war were already being projected as science fiction as early as 1871, when Lord Lytton wrote about the awesome force Vril:

War between the Vril-discoverers ceased, for they brought the art of destruction to such perfection as to annul all superiority in numbers, discipline, or military skill. . . . If army met army, and both had command of this agency, it could be but to the annihilation of each. The age of war was therefore gone (p. 34).

For at least some thinkers in the 1893–1914 period, the rapidly escalating destructiveness of war meant that such a condition already existed. Bloch (1899)³¹ stresses what Edwin Mead (in the introduction to the English edition of Bloch’s book) calls “the destructiveness of modern warfare, with its frightful new weapons.” Bloch writes:

The dimensions of modern armaments and the organisation of society have rendered [war’s] prosecution an economic impossibility, and, finally, if any attempt were made to demonstrate the inaccuracy of my assertions by putting the matter to a test on a great scale, we should find the inevitable result in a catastrophe which would destroy all existing political organisations. Thus, the great war cannot be made, and any attempt to make it would result in suicide.³²

Bloch’s conclusions are based on a detailed quantitative study of economic and military aspects of modern war in a variety of countries. A great war, Bloch argues, would bog down for years in stalemate, with both sides stuck in their trenches; it

31. A founder of “peace research” before World War I (see Van Den Dungen 1983).

32. Before World War II, as well, a radical deterrence theory surfaced, though only as a minority opinion among mostly civilian rather than military leaders. This theory in its extreme form held that air power had made great war suicidal since “the chief cities of Europe could be destroyed almost completely in the first twenty-four hours of a war” through bombing and gas attacks (Quigley 1966:664). Quigley argues that this theory, despite being a “farfetched idea,” “played an important role in persuading the British and French peoples to accept the Munich Agreement.” The military advocates of “strategic bombing”—long range bombing of industrial and other civilian targets rather than battlefield targets—were “very influential” in the United States and Britain but not in France, Germany, or Russia, according to Quigley.

would ruin the economies of the contestants and result in loss of life on an unprecedented scale. All of this proved true. Bloch concludes that “war therefore has become impossible, except at the price of suicide” (p. xxxi); so a war cannot occur. This proved false: war occurred even though a number of major actors *did* in fact commit political suicide. Austria-Hungary, Czarist Russia, and Imperial Germany were destroyed, and even the European “winners,” France and Britain, lost their positions of power in the world order.

The 1893–1914 precedent also holds interesting lessons about economic interdependence—which is often thought of as a recent phenomenon.³³ Kahler (1979:393) notes that in 1914 “a world characterized by high economic interdependence, unparalleled prosperity, and relative openness still went to war.” Today, Kahler argues, economic linkages between the great powers are actually weaker than in 1914, due to constrained East-West trade, restricted migration, and the lack of “a unified international monetary system based upon London.” Thus “there is little reason to expect economic interdependence to prove a more serious barrier to the use of force by insecure nation-states than it did before 1914.”

As with deterrence, the interdependence argument can be found in the literature of the 1893–1914 period. A September 1913 writer, for example, argues that “peaceful settlement [of international conflicts] is being furthered by the recognition . . . that the world is a unit.” International flows of capital, foreign investment, and the international system of credit have created “an economic interweaving and interdependence of the nations that is without parallel in history. . . . The nations have become linked in an interweaving of interests so powerful that the successful functioning of each part depends upon the prosperity of every other part.” As a result, the author concludes, “war does not pay.”³⁴ Norman Angell, writing in January 1914, likewise argues that economic interdependence has made war “irrelevant to the end it has in view,” since war no longer benefits the winner (p. 197). All of this sounds rather like Keohane and Nye’s (1977) view of the 1970s; yet World War I broke out within a year of the above writings.

A final point of interest regarding historical precedent is that, repeatedly, war seems to have occurred in part as a result of preparations to avoid the *last* war. Europe fell into war in 1914 by following the precedent of 1871, which called for a quick offensive breakthrough (see chapter 14). Then in 1939 steps were taken to avoid another 1914, but these only hastened World War II.³⁵ Since 1945, the great powers have put in place, at staggering cost, the necessary mechanisms to deter another World War II. Each year \$435 billion—roughly half of all world military spending—is devoted specifically to “detering big power war in Europe” (Forsberg, Elias, and Goodman 1985:13).³⁶

33. See above discussion of Keohane and Nye (1977).

34. Quoted in Woods and Baltzly (1915:9–13).

35. Both deterrence and appeasement have failed historically. To rely on the 1939 analogy is to risk falling into 1914 again. But to rely on 1914 is to risk falling into another 1939.

36. The other half of world military spending breaks into four roughly equal parts: deterring U.S.-Soviet nuclear and conventional war, deterring big power war in the Far East, permitting large-scale big power intervention in the third world, and deterring or fighting wars within the third world.

To summarize, the long cycle perspective suggests alternative historical precedents with different “lessons” than the most recent precedents found in living memory.

FROM POWER POLITICS TO COMMON SECURITY

In figure 15.5, above, any estimate of how far American hegemony has declined and how rapidly it will decline can be only rough at best. Yet the general principle based on past experience remains: As hegemony declines, eventually hegemonic war occurs; while the rate of hegemonic decline may vary, hegemony is not restored except through hegemonic war. Thus a major question emerging from the long cycle perspective is, what happens as we approach the right-hand side of the figure, as hegemony weakens? Has the cycle of hegemonic war been broken? Or are forces at work that could break it before its next recurrence?

In the remainder of this chapter I will take up these questions from several angles. First, I will discuss the importance of power politics as an element of continuity in the hegemonic cycle. Then I will consider the potential role of nuclear weapons in changing the historical patterns of war and hegemony. Finally, I will suggest that trends toward a globalization of international politics could lay the basis for a new world order free of hegemonic war.

In the long term (but more like a hundred more years than a thousand, I would guess), a major transition seems to be taking place. The current generation sits atop a great divide between the past ten thousand years, in which war has played a central role in human civilization, and a “postwar” era of the future, marked by at least minimal global political stability.

Power Politics

The recurrence of great power war, in my view, grows out of the underlying practices of international politics in the core of the world system. Those practices are structured around the attempts of nation-states to gain power in the international system (or to prevent others from gaining power) through the use of military force. This aspect of world politics has been quite persistent over the past five centuries and indeed long before that.

The writings of Machiavelli, dating from the beginning of the five centuries under study, are still considered paradigmatic of power politics.³⁷ Richard Falk argues that Machiavelli best set forth the “modern world picture,” which “still dominates the thinking and behavior of virtually every political leader of the world” (Lifton and Falk 1982:240). Although nuclear weapons have changed reality, the Machiavellian

37. Meinecke (1957) and Giddens (1984:350–53) discuss Machiavellianism.

mode of thinking persists, resulting in what Falk calls “a desperate attempt to adapt the technology of mass destruction to the ongoing predominance . . . of the Machiavellian world picture” (p. 241).³⁸

The theoretical apologists for power politics are called “realists.”³⁹ Ashley (1985:19) criticizes “realism” for denying the existence of international community, for portraying international relations as an anarchic “space beyond the margins of community.” In fact, according to Ashley, there *is* an international community in which national leaders are the members and realism itself is the basis for community. Power-seeking national behavior, and “rituals of power,” define this world community and its practice.

Power politics is the predominant set of rules by which international politics is both played and interpreted. Great powers are compelled to adopt realist behavior if they are to survive in a realist environment, so realism reproduces itself. The United States, Soviet Union, and China are the three current great powers that joined the system most recently and from outside the traditional European system. Each was motivated by revolutionary aspirations reaching beyond power politics in the international realm, but each eventually was drawn into playing power politics. In the case of the United States, Woodrow Wilson’s idealism went down in flames. The USSR started out with high aspirations in 1917⁴⁰ but soon adopted realist behavior little different from other great powers. China, within a few decades of its revolution, became a power balancer, shifting towards the United States against the Soviet Union (its ideological comrade, but also a potentially threatening neighbor).⁴¹ Realism, then, is a code of behavior that both adapts the nation for survival in a “realist” international environment and simultaneously reproduces that environment around itself.

The balance-of-power system of realist international politics has, according to Morgenthau ([1948] 1967:198), prevented world domination for four centuries, but only at the price of recurrent warfare.

In a world whose moving force is the aspiration of sovereign nations for power, peace can be maintained only by two devices. One is . . . the balance of power. The other consists of normative limitations upon that struggle, in the forms of international law, international morality, and world public opinion. . . . Neither of these devices, as they operate today, is likely to keep the struggle for power indefinitely within peaceful bounds (p. 22).

38. Falk argues that the Machiavellian way of thinking obstructs humanity’s ability to overcome the nuclear threat and therefore must be removed. He suggests that a new, “holistic” alternative to Machiavellianism may be starting to emerge (p. 242).

39. The power-seeking behavior that underlies realism is summed up by Morgenthau ([1948] 1967: 202): “the desire to attain a maximum of power is universal.” International politics are defined in terms of sovereign nations pursuing their own national interests, and power is the ability to influence other nations in order to further one’s own interests.

40. Trotsky, on being made foreign minister, said he would issue a few proclamations supporting world revolution and then close up shop.

41. Japan is an unusual case; it has built itself up since 1945 as a world economic power but without commensurate military might. It is not clear, as of this writing, whether Japan will be able to maintain its different path or whether it will be forced back into remilitarization and a return to the rules of power politics.

The long cycle perspective suggests that a balance of power may be only a transitional and unstable phase of the hegemonic cycle. Every balance-of-power system in Europe degenerated into recurring great power wars and eventually hegemonic war. The two centuries after the balance-of-power system was enshrined at Westphalia contained the most regularly recurring war peaks (see chapter 11). Only the revival of strong hegemony after 1815 temporarily dampened the recurrence of great power war. But hegemony itself has always been temporary and has come about only as a result of hegemonic war.

Power politics underlies the long cycles of recurring war in crucial ways. As long as nations try to maximize power by any means, including force, two things will be true. First, economic surplus will continue to be diverted to war, with consequences including the fact that bigger wars will occur in periods of greater economic surplus. Second, changes in relative national power will continue to bring the eventual recurrence of hegemonic war.⁴²

Two ultimately contradictory tendencies are at work in global power politics—a tendency toward the recurrence of great power war and a tendency toward the ever-greater destructiveness of war. But great power war cannot continue to recur indefinitely while wars become exponentially more destructive.⁴³ Thus power politics has brought about its own obsolescence.⁴⁴

Nuclear Deterrence

The existence of nuclear weapons is widely considered to be the most important change in world politics distinguishing the current era from that before 1945. Throughout the previous few centuries, nation-states had developed within borders, forming a “hard shell” against attack; for insular powers (chiefly Britain and the United States), the oceans contributed to secure borders. Nuclear weapons deployed on missiles, however, have eliminated this hard shell and have exposed the strongest military powers, including the most insular ones, to devastating attacks anywhere in their homeland (Dehio [1948] 1962:281).⁴⁵ Nuclear weapons made offense much cheaper and defense essentially impossible. Thus only by threatening retaliation can attack be blunted. Each side builds up its forces in order to intimidate the other side from attacking.

42. Hegemonic war could only recur in the current era by “irrational” (even suicidal) acts of political leaders. But the most appropriate historical precedent, World War I, shows that such apparently self-defeating outcomes do occur.

43. Recent research on “nuclear winter” only confirms in the starkest terms that great power war has made itself obsolete.

44. In Modelski’s (1978:226) terms, “political innovations” are needed that would allow world leadership to be structured by means other than war. He argues that “we need not conclude that all global systems must inherently be subject to . . . a pattern of events that includes severe global war.” Long war cycles are “no more than an explication of the functioning of the global system we have known and experienced over the past few centuries” (p. 235). Alker, Biersteker, and Inoguchi (1985:1) go further and speak of a “transformative decline in the state system itself” marked by a drastic diminishing of “sovereignty.”

45. This trend started with airplanes, especially with the strategic bombing in World War II.

Some people think that nuclear weapons have changed the rules of power politics, since it is impossible to use force (except in limited doses) without risking unacceptable retaliation. From my perspective, nuclear war has not done away with power politics but is the culmination of power politics. While nuclear war has made changes in the rules of power politics *necessary*, those changes have not yet come about. We are thus in a curious (and dangerous) transition, waiting for the practice of world politics to catch up with changes in technology.

Nuclear weapons have not replaced but have complemented conventional weapons. Nuclear weapons are used not just to deter nuclear war but to deter all war between great powers (Forsberg 1985). Policymakers, especially in the West, have deliberately avoided a “firebreak” between conventional and nuclear war and instead have integrated forward-based nuclear weapons into all branches of the military. This makes the likelihood high that any great power war (in particular an East-West war in Europe) would lead to nuclear war. And by creating that likelihood, the West uses the threat of nuclear war to deter conventional war.⁴⁶

In theory, this system of extended deterrence minimizes the likelihood of any great power war. But unless the likelihood is zero, the system is flawed—because any great power war would be likely to escalate to nuclear weapons.⁴⁷

The question, then, is whether nuclear deterrence can be relied on to succeed indefinitely, as it seems to have in the past forty years, in preventing great power wars. That is, can the risk of great power war be kept all the way down to zero by means of nuclear deterrence? My answer, which is negative, contains four aspects:

1. Nuclear deterrence has not yet had to face the important test—how it performs in a period of economic upswing coupled with weakened hegemony. It will face that test around 2000–2030. In the first few decades after 1945, American hegemony was extremely strong, and while the great powers remained on a war footing throughout that upswing phase period, no serious challenge to hegemony was possible. In the last ten years, as American hegemony has declined, the long wave has passed into a war downswing phase. Thus the absence of great power war for forty years—which is proudly claimed by advocates of nuclear deterrence—may have little or nothing to do with nuclear deterrence. The period from 1816 to 1852 (nearly forty years) was also free of great power war.

2. Deterrence can fail in theory and has in practice. Deterrence theory rests on the assumption that nation-states will act rationally⁴⁸ in avoiding behavior that is self-

46. Such a system of extended deterrence, according to Forsberg (1985), is not likely to move toward “minimal deterrence” because of the fear that, by creating a “firebreak,” this would make great power conventional war more likely (and that such a conventional war could in turn jump the firebreak anyway and lead to nuclear war). Thus, Forsberg argues that conventional arms reductions and great power confidence-building measures must be undertaken in parallel with nuclear arms reductions. See also Forsberg, Elias, and Goodman (1985:12–16).

47. Thus deterrence remains unappealing to the average person in need of “security.” To quote an American teenager, “When my 11-year-old sister wakes up crying, it doesn’t do much good to say, ‘Don’t worry, Jenny, Reagan is building more bombs, so you don’t have to worry about a war’ ” (*Boston Globe*, June 22, 1983:3).

48. Rationality in the economic sense means acting in a way that maximizes the things one values—action consistent with desired outcomes.

destructive. This assumption is debatable. Levy (1983c) outlines a number of linkages between *misperception* and the outbreak of war. These include misperceptions of the adversary's capabilities, of the adversary's intentions, or of the likely reactions of third states whose intervention can critically alter the balance of forces. Jervis (1976) also stresses the role of misperception in international crises. In addition to misperception, other psychological influences can distort the rational analysis of the probable outcomes of alternative actions.⁴⁹

The most relevant historical precedent, the buildup before 1914, culminated with the failure of deterrence.⁵⁰ Nuclear weapons, certainly, are not comparable to the weaponry of World War I.⁵¹ But the psychology of deterrence was similar—a great war would lead to very severe costs. In 1914, those costs were miscalculated. It is true that before World War I, only a minority understood how devastating a great war would be, while at present a majority of people are aware of the danger.⁵² But these are matters of degree, and, as Kahler (1979) suggests, even these distinctions are being narrowed currently by strategies that underrate the destructiveness of nuclear war—war-winning strategies, first-strike force buildups, civilian defense programs, and/or “strategic defense” proposals. Can anyone say confidently that military and political leaders in the next four decades will accurately estimate the costs of great power war?

3. Although nuclear war has not occurred, the actual behavior of great powers in this era has not changed much despite the presence of nuclear weapons. It is power politics as usual. Organski and Kugler (1980) analyze the effect of superpower involvement on the war-or-peace outcomes of international conflicts using data from the post-1945 period. They ask, “have the rules governing conflict behavior between nations been drastically altered since the advent of the nuclear era? Popular credence argues that they have been largely, if not entirely, changed” (p. 2). Their analysis indicates that those rules have *not* changed: “The tendency to go to war increases as the likelihood of great-power involvement increases and as the possibility that

49. Jervis, Lebow, and Stein (1985) draw on psychological theory to explain the failures of deterrence in practice and suggest that nuclear deterrence may actually aggravate the likelihood of war. On the psychological critique of deterrence as vulnerable to “misperception,” see also Van Evera (1985). For a counterargument to the idea that war resulted from “miscalculation” in 1914, see Lynn-Jones (1985).

50. German chancellor Bethmann reportedly was asked, a few days after the outbreak of war in August 1914, why the war had started. “He threw up his hands and cried ‘If I only knew!’” (quoted in Snyder and Diesing 1977:549).

51. Consider Bloch's (1899:xviii) statement that “the possibility of firing half a dozen bullets without having to stop to reload has transformed the conditions of modern war.”

52. Thomson (1950:212), for instance, writes that “the careless optimism with which masses of people were able to contemplate a major European war served only to indicate their ignorance of what it would be like.” However, some awareness of the problem was reflected in the popular literature on the horrors of war that preceded World War I (for example, Lamszus, 1913, on the “human slaughter-house”). Increased awareness may not help. Lasswell (1935:248) argues that “the incessant repetition of the danger and horror of war strengthens the assumption of inevitability and to this extent preserves the expectation of violence.” Lasswell's (1935:247) observation that “the portrayal of the horrors of war is more dramatic than ever, yet preparations for war exceed overt preparations for peace” could be a description of the early 1980s. In fact, it referred to the early 1930s.

nuclear weapons may be used becomes more real. Why, then, is the opposite believed? It can only be from wishful thinking.” (p. 161). “In short, . . . what peace we have has not been imposed by a nuclear deterrent. . . . Nuclear countries may well fight each other with nuclear weapons one day, should their privileged position or the present international order be threatened” (p. 216).

4. Finally, the potentials of nuclear proliferation cannot be kept in rein indefinitely in a world governed by power politics. Eventually, more and more nations (and possibly nonnational entities) will obtain nuclear weapons, and this can only blur the current dividing line between conventional wars (raging all over the world) and nuclear wars (limited to great powers and hence more preventable). In the proliferation area, as with the overall prospects for war, the relative success of the past forty years does not necessarily imply continuing success in the next forty years.

Nuclear weapons have not brought about the end of power politics as a paradigm for international relations. As Adams (1985) writes:

The escalation of the power to destroy did not prevent the First World War. Neither did it prevent the Second. It is very unlikely that it will prevent a third. As in the first two cataclysms, it may postpone the catastrophe, while increasing the probability that it will be more nearly total. The problem of contemporary society is how to translate postponement into prevention.

Where, then, should long-term stability be sought in a world where deterrence is not permanently stable?

The Globalization of International Politics

Several trends in the current era have the potential to profoundly alter the dynamic of recurring war. Globalizing influences in international politics—including the advent of strategic intercontinental weapons, the information revolution, and the conquest of space—make both necessary and possible a shift to a new world order based on common security rather than power politics.

The Information Revolution

The information revolution may strongly affect the directions of world politics in the coming decades. Low-cost telecommunications are beginning to tie the planet together in a tightly woven web, laying the basis for the ultimate emergence of global entities that transcend national ones. The emergence of international organizations (including United Nations agencies and many others), of international scientific and technical communities, and of international business networks all point toward a developing pattern of global organization that will be greatly strengthened by continued advances in telecommunications and information processing.

The information revolution has begun to have specific and dramatic effects in the area of military techniques. Kurth (1979:34) suggests that, “Out of a massive telecommunications industry would issue the inventions and innovations for a new kind of weapons systems and military defense, of which existing ‘precision-guided

munitions,' 'smart bombs,' and 'automated battlefields' are only premonitions.' Deudney (1983:20) argues that the "militarization of . . . the electromagnetic spectrum" has created a "transparency revolution" allowing breakthroughs in both intelligence gathering and tactical targeting.⁵³ Thus, "Planetary-scale information systems bring the strategic competition between the superpowers to its least stable and most dangerous state. At the same time these systems make planetary-scale security possible for the first time in human history" (p. 21).

New information technologies may have potentials for revolutionizing conventional warfare in "peaceful" ways by allowing new concepts of defense to be realized.⁵⁴ Barnaby (1986) argues that new "smart" technologies have made tactical military defense much cheaper than offense. For example, a wire-guided shoulder-fired tow missile costing \$15,000 "has a high probability of destroying a main battle tank costing \$3 million or more." The tow missile has a range of nearly four kilometers compared to two kilometers for the tank. Likewise a \$250,000 antiship missile using its own radar to home in from up to seventy kilometers away, can destroy a major warship costing hundreds of millions of dollars. Antiaircraft missiles offer similar advantages, as the Afghan rebels have recently shown.

Thus, Barnaby suggests, the fifty thousand Warsaw Pact tanks and twenty thousand NATO tanks, lined up in Europe, are obsolete. Smart antitank missiles will be able to inflict utter devastation on advancing tanks at a relatively low cost in money and people. "The plain fact is that it is virtually impossible to hide some 60 tons of hot metal on the modern battlefield from the sensors of intelligent missiles." NATO's best strategy, according to Barnaby, would be a "non-provocative defense" based on a defense zone fifty kilometers deep along the one-thousand-kilometer East-West border. The zone would be saturated with smart weapons having virtually no offensive capabilities but overwhelming defensive capabilities. This kind of approach would both blunt the possibilities for conventional war and allow the West to stop using nuclear weapons to deter conventional war (extended deterrence). The idea of nonprovocative defense, although not yet fully developed, suggests that the information revolution may open up new possibilities for changing the rules of great power war.

Outer Space

The conquest of space will also contribute to the globalization of international politics in the next few decades. The exploration of space has been compared with the "voyages of discovery" of the Portuguese sailing ships around 1500. The coming fifty years may see an expansion of the world system comparable to the expansion of

53. The atmosphere, orbital space, and the ocean surface have been "illuminated" completely, while the ocean depths remain at least partially opaque, which is fortunate for deterrence because submarines provide a survivable second-strike capability (Deudney 1983:24).

54. These concepts go under the title of "defensive defense," "non-provocative defense," "alternative defense," and the like. Randall Forsberg's "alternative defense working group" (at the Institute for Defense and Disarmament Studies in Brookline, Mass.) is working in this field.

the European “world” five centuries ago. The expansion of civilization into space has proceeded at a remarkable pace in the three decades since the first satellite was orbited in the late 1950s.

In the next few decades, the move into space could complement the information revolution. The information revolution provides the microelectronics necessary for control in a space environment, while space provides the location for communication satellites and eventually for producing the silicon crystals that are the building blocks of electronics.

Space has crucial military uses, and this contributes (along with the information revolution) to the globalization of the military system. At present, the military uses of outer space are largely confined to the use of space satellites for surveillance and communications. It is not clear whether orbital space will be used as a base for weapons systems, as the U.S. government currently plans to do, or not. This is, I think, a critical decision that may profoundly affect the character of the dangerous 2000–2030 period. An arms race in space conjures up the worst precedents of the 1893–1914 period—the Anglo-German naval competition and the race for colonies in Africa.

At this writing the U.S. Strategic Defense Initiative (“star wars”) program, aimed at developing space weapons, is under fierce debate. It is the central bone of contention between the superpowers (October 1986 Reykjavík summit meeting) and the object of criticism from the mainstream of the U.S. scientific community on grounds of infeasibility and cost (Piel 1986). Nonetheless the budget is growing rapidly. Because of the centrality of this debate to the choices we are making about the 2000–2030 period, I will spend a few pages trying to sum up the structure of the argument as I see it.

First, let us consider the concept of hegemony in space. This would mean that one country had the ability to control space militarily, to destroy any satellite, weapon, or missile that the other side put into (or through) space. In contrast, the hegemonic country’s own satellites, weapons, and missiles would have free access to all of space. Orbital space borders on every nation and every city and is just two hundred miles away (and at the top of a strong energy gradient) from any point on earth (Deudney 1983). Thus, as Deudney (1983:17) argues, “effective control of space by one state would lead to planet-wide hegemony.”

This was not far from what some researchers into space weapons had in mind. Ten years ago, in the first unclassified article proposing a strategic defense system in space,⁵⁵ Hunter (1977:1–8) argued that lasers based in space can ultimately provide “an effective defense against even massive ballistic missile exchanges.”⁵⁶ But more importantly, “it is easily conceivable that such weapons can be used for tactical

55. Written by Maxwell Hunter of Lockheed after a decade of top-secret research on space-based laser weapons. The 1977 article was intended to stir up debate on a strategic defense system and succeeded in doing so (conversation with author).

56. Apparently the current thinking today is to put the lasers on the ground and reflect them off mirrors in space.

applications”—that is, against tanks, buildings, airplanes, or other targets on the ground. “When lasers are placed in space so that every location on this planet is placed continuously in the target area of a laser battle station,” wrote Hunter, “then one has a right to expect truly fundamental changes.” “This would be Pax Americana,” according to Hunter. And America is uniquely suited to win the race for hegemony in space, in Hunter’s opinion:⁵⁷

space forces . . . appear to have basic characteristics which are especially suited to the nature and evolving posture of the United States. We are the strongest nation on earth technically and economically but are having increasing . . . problems with the maintenance of overseas forces and base structures.

But whether or not the United States seizes this opportunity, someone will—so in Hunter’s view there is an imperative for the United States to act first: “If we were to do it when the opposition did not, it would give us commanding options compared to the current situation. If the enemy were to do it and we did not, it would totally negate our current strategic posture.” To use Dehio’s terms, true hegemony in space would provide the ultimate insularity—an insularity the United States lost when the Soviet Union deployed long-range nuclear missiles.

The view of star wars as a drive for general hegemony in space (rather than any particular plan of “strategic defense”) seems to be born out by some of the statements of U.S. military leaders in 1982–83:⁵⁸

“We do not have to stretch our imagination very far to see that the nation that controls space may control the world” (Edward C. Aldridge, Under Secretary of the Air Force).

“We should move into war-fighting capabilities—that is ground-to-space war-fighting capabilities, space-to-space, space-to-ground” (Gen. Robert T. Marsh, Commander, Air Force Systems Command).

“Space is the new high ground of battle” (Lt. Gen. Richard C. Henry, recently retired Deputy Commander of Air Force Space Command).

The United States established the Air Force Space Command in 1982 (operations began in 1985) to coordinate the military uses of space. Its commander, Gen. James V. Hartinger, stated that this “means that the Air Force is going operational in space.” It is U.S. policy to “vigorously pursue” systems to “project force in and from space” and to “wage war effectively” from space.⁵⁹ A June 1983 Air Force study calls for “space superiority” in order to “prevail” in a conflict on earth. And

57. Defense Advanced Research Projects Agency director Robert Cooper recently testified before Congress that “we are clearly ahead of the Soviets in overall space technology” (quoted in Center for Defense Information 1983).

58. These quotes and the information in the following paragraph are from Center for Defense Information (1983).

59. 1984–88 *Five Year Defense Guidance*, document of the U.S. Department of Defense (Center for Defense Information 1983).

the Air Force Space Master Plan through the year 2000 calls for a move toward "space combat" systems.⁶⁰

If the United States could restore and strengthen its hegemony in this way, wouldn't this be a good thing? Might this not halt the slide toward weakened hegemony that has, in the past, always ended in hegemonic war? This is the essence of the argument in favor of star wars, as I see it. The U.S. proponents want to try to return to strong U.S. hegemony, which would be more stable than the present rough bipolar parity.⁶¹ And the Soviet opposition to the program is essentially an opposition to the restoration of U.S. hegemony.

The question of whether restored U.S. hegemony would be desirable, however, is the wrong question. The point is that renewed U.S. hegemony imposed by military superiority is impossible. It is impossible because the invention of nuclear weapons has permanently changed the nature of great power war. One nuclear weapon can cause utterly unacceptable damage to a country, even a large one. Each side has tens of thousands of nuclear weapons deployed against each other with a large variety of delivery systems.⁶² In the event that a strategic defense system were constructed, the opposing side could defeat its purpose at much lower cost by increasing the number and variety of its delivery systems. Nuclear weapons can now be made small enough to fit in the trunk of a car, or on a speedboat or a small plane. Only a tiny fraction of the opposing superpower's nuclear arsenal needs to get through in order to devastate the country. Thus the strategic defense system cannot protect against inevitable catastrophic loss in the event of any all-out war.⁶³ But hegemony rests on the ability to survive and prevail in an all-out war (which backs up the threat of escalating use of force), and without that ability it is impossible to establish hegemony.⁶⁴

Thus, even if we accept that strengthened U.S. hegemony would be a good thing, that the Soviet Union is a potential challenger to U.S. hegemony, and that a hegemonic challenge would be very bad, it still does not follow that star wars is a good idea. Militarization of space will not restore hegemony. The challenge is to find an alternative to a hegemony imposed by military might.

The move into space may actually help provide that alternative, if the dangers of

60. Spectacular technological failures early in 1986 clearly set back the American drive into space, but their ramifications are not yet clear, except that future shuttle flights in the next few years will be exclusively (rather than just predominantly as planned) devoted to military payloads.

61. Since, from their point of view, the main threat to stability would be a challenge for world domination by the Soviet Union.

62. Only some of these are high-flying ballistic missiles, which a strategic defense system would defend against. Even some of the ballistic missiles would get through, since no one expects the system to work perfectly. The Center for Defense Information (1983) argues that space weapons cannot be defended effectively because "it is impossible to protect military resources fully from the effects of a nuclear explosion in space." With the space weapons of both sides vulnerable, these weapons "increase incentives for a first strike" in order to preserve military and communications capabilities in space.

63. Deudney (1985:272) concludes that space-based defenses cannot "restore the protective insularity that America once enjoyed."

64. The same conditions make it as impossible to successfully challenge and succeed to hegemony as to reestablish hegemony.

militarization of space can be avoided. Space has been a strong area for the creation of international regimes. International cooperation in space has been significant and conflict minimal.⁶⁵ Nuclear weapons are currently banned from space by treaty, and “strategic defense” systems are banned under the Anti-Ballistic Missile (ABM) treaty.⁶⁶ Furthermore, the sheer size of space may act as a kind of safety valve on superpower conflicts, especially those involving territorial or economic disputes.⁶⁷

One critical benefit of the conquest of space is an intangible one—the new awareness human beings have gained of the oneness of our planet. Only since the 1960s, when the first photographs showed earth as seen from space, has a “global perspective” become tangible. The promising aspects of the information revolution—in terms of connecting humanity in a global network—are enhanced by the move into space, beyond national borders. The global scope of space-based systems could someday strengthen new political structures at the world level.

Ultimately, space may hold potential for human habitation and economic production (O’Neill 1974; 1976, gives the optimistic view). Space has the important advantages of uninterrupted solar energy and a zero-gravity environment, which makes transportation, construction, and materials handling potentially very cheap⁶⁸ (fixed gravity environments can be created where desired by the revolution of large structures). Orbital space may be well suited to certain types of industrial and agricultural processes—particularly semiconductor and pharmaceutical manufacturing.⁶⁹ Space could become an important energy source, if solar collector satellites in geosynchronous orbit, beaming electricity to cities below, become economically feasible. Eventually food might even be grown in space, where conditions can be controlled and sunlight is plentiful. Someday orbital space colonies may ship food and energy “downstream” to earth in somewhat the manner that the ancient city received its food from peasants upstream (see chapter 1). Space could become the new “periphery” of the world system.

Thus space offers both dangers and opportunities, depending on what path is followed in developing its potentials. If cooperative space regimes become stronger,

65. Deudney (1985:290) advocates a strengthened push for peaceful cooperative ventures in space, especially in deep-space pioneering (which would commit both superpowers to a joint program of colonizing the moon, Mars, and nearby asteroids) and in “global habitability and information security” programs. He suggests (1985:278, 283) that “the space movement and the peace movement are natural—even if unrecognized—allies,” because “the extensive deployment of weapons in near space will foreclose whatever purely commercial space prospects exist.”

66. True, all these treaties and regimes may break down soon, but this cannot be assumed.

67. O’Neill (1974:36) suggests that the extension of “territory” into space may alleviate territorial conflicts on earth. I note that the “scramble for colonies” of the 1890s did not alleviate and may have exacerbated great power tensions. But maybe the problem before 1914 was just that available colonies ran out and the entire world was divided up. In space this would take much longer; geosynchronous orbit alone is many times larger than the earth’s surface.

68. Most materials will have to be obtained from the moon or elsewhere off earth, since escaping earth’s gravity is very expensive.

69. Silicon and gallium arsenide crystals can be grown with much greater purity and at lower cost in a zero-gravity vacuum environment. Furthermore, turning those crystals into integrated circuits now requires a \$100-million fabrication plant, about half the cost of which might eventually be saved by building in space (*Boston Globe*, Mar. 25, 1984:13).

space can be a positive force in changing the traditional rules of international power politics. If, however, the superpowers pursue a race for military hegemony in space, attempting to play out the traditional rules of power politics on an expanded scale, a dangerous period may become even more unstable.

International Regimes

If a global alternative to hegemony is to emerge, new structures at the international and global levels will need to be created. The proliferation of international regimes—tacit or explicit agreements among countries (based on shared norms and rules) governing the operation of the international system—is a hopeful trend in this direction.

Keohane (1984) advocates regimes as an alternative to hegemony. He argues that hegemony is unlikely to be restored soon, since hegemony emerges from global war, which is not an option in the nuclear age. Keohane thus asks, how can we have international cooperation without hegemony? Cooperation is defined as an adjustment process where an inherent harmony of interests is *not* present. International regimes, according to Keohane, can bring about such cooperation by changing the context in which states make self-interested decisions. Regimes help national governments reduce decision costs as well as uncertainty. Thus cooperation can emerge even when self-interested behavior is assumed, in Keohane's view. Regimes “*empower* governments rather than shackling them.”

In the current era many international regimes have emerged in areas ranging from security matters and spheres of influence to monetary finances, seabed resources, environmental protection, and outer space. Many functional regimes are organized around the agencies of the United Nations and other international organizations. These regimes and organizational networks can be seen either as transitional forms in moving toward a world government or as prototypes of a new order at the world level that falls short of world “government.” In either case, the development of international regimes moves in the direction of providing a stability to world politics that, in the past, only hegemony has provided.

Regimes may offer the United States opportunities to provide world leadership without hegemony. The strategy of actively seeking and promoting global structures to replace hegemony in an orderly way would be a wise move by a declining hegemon. By actively providing “leadership for peace,” the United States could ensure itself a major role in shaping a posthegemonic global order in which it would continue to be the most powerful single country. This is a “third way” in distinction from the strategies of seeking renewed military hegemony or withdrawing from world involvement. It is possible to learn from *both* 1914 and 1939.

Toward a New World Order

As the twenty-first century approaches, and we consider the alternative futures that lie before us, we should note the lasting truths that emerge from the historical study of war and economics. Wars cost money. Wars are infla-

tionary. Wars are bad for the economy except in rare cases. These statements apply, though less strongly, to the preparations for war as well as the actual fighting of wars.⁷⁰

The war system is, thus, a monkey on the back of the world's economy, in the sense that the expression is used to describe drug addiction.⁷¹ The world currently spends about \$900 billion each year on war and preparations for war (Forsberg, Elias, and Goodman 1985:5). And the security we buy for that sum is precious little, for one simple reason: War and the preparation for war cannot provide security in a globalized, nuclear-armed world. The only meaningful security today is common security (see Palme Commission 1982; Fine et al. 1985). We need to make the transition from a world order based around hegemony, hegemonic rivalry, deterrence, and war to one based on common security at the global level.

In closing, I would stress again the indeterminacy of the future. True, there is no possibility of returning to the past, continuing to live as in the past, or avoiding a transformation of the world system. But the nature of this transformation is not yet determined; it depends on the choices we make. Different futures arise from different assumptions and different strategies.⁷² There are an endless number of possible futures, desirable and undesirable.

The transition to a "postwar" world order—be it through global cooperation or global suicide—is inevitable. But how that transition occurs, and where it leads, is up to us to choose. The parting words of Moses come to mind:

I call heaven and earth to witness against you this day, that I have set before you life and death, the blessing and the curse; therefore choose life, that you may live, you and your seed (Deut. 30:19).

70. As I write this, the most recent publication in my hands parallels the most ancient on this point. Lester Thurow (1986) writes that "no defense spending can be justified on economic grounds. . . . The current military buildup is a drain on the future productivity of the American economy." Sun Tzu said much the same about China in 400 B.C.

71. The war system reminds me of a recent insurance advertisement in which King Kong is rampaging through a city, swatting at airplanes and the like. A young woman indignantly shouts at him from high in a skyscraper, "Who's gonna *pay* for this mess?"

72. Revolutionaries foresee the world's transformation into internationalist socialism, ending hegemonic cycles. Liberals dream of its transformation into world government or some other supernational world order, also ending hegemonic cycles. Conservatives can envision its transformation into global empire (the evil empire of their worst fears or a Pax Americana of their dreams), which would also end cycles of hegemony. More dialectically, the world system now holds the potential to transform itself through nuclear war (ending hegemony among other things)—a "negation" of long cycles in the most dialectical sense.