

Hegemony and Bifurcation Points in World History*

Terry Boswell
Department of Sociology
Emory University
Atlanta GA 30322 USA
e-mail: tbos@ssmain.ss.emory.edu
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ABSTRACT

Examination of the rise and fall of hegemony over the last 500 years reveals that each lasts about 100 years, with another 100 year period between hegemony that is characterized by rough balance among shifting powers and frequent major wars. Can the future differ from the long established pattern? Theories that causally link hegemony to uneven development succeed in explaining the perennial rise and fall of world leaders, but fail to explain the persistence of a leader who has become hegemonic. The explanation given here is the establishment of institutional inertia in the world order, which slows the diffusion of innovations, but also restrains the adoption of subsequent changes. An analytic model describes the cycle of hegemony as the historically and politically contingent interaction of long term trends in the world-system. Recently, hegemony has come into interaction with the cumulative trends of market commodification, decolonization, and democratization. This has produced a rise in independent nations and decline of imperial states worldwide. In the conclusion, we speculate on how these new developments make possible such events as a multi-state hegemony, a shared world polity, and a democratic world government.

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HEGEMONY AND BIFURCATION POINTS IN WORLD HISTORY

The cycle of hegemony has repeated itself three times since 1492, giving the world a Dutch, British, and now declining US hegemonies. Theoretical models (Chase-Dunn and Rubinson 1977; Hopkins and Wallerstein 1979), historical narratives (Wallerstein 1974, 1980, 1989; Kennedy 1989), and statistical analyses (Modelski and Thompson 1988; Boswell

and Sweat 1991) portray the cycle of hegemony as a fixed dynamic inherent to the world-system. Can we expect the future to be any different?

To understand the future of hegemony, we need first to build a model of how hegemony has developed. The model developed here, based on a synthesis of past research, explains the cyclic nature of world leadership as resulting from the interaction of three systemic trends --- interstate political competition, world market integration, and uneven economic development. A world leader becomes hegemonic when the institutional order it enforces builds an inertia into the otherwise chaotic movement of the system. Hegemony is a period of relative peace and order in a system that is inherently competitive, dynamic and uneven.

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Theories, models, tables and statistics are put together here to tell where we have been, and if nothing changed, where we would be going. In the final section, I turn to recent developments that offer potentials for changing the system. A significant change has already taken place, one little noticed in previous theories because its source are trends not previously important to understanding hegemony. Those trends are proletarianization, democratization, and decolonization, the cumulative effects of which are weighing on the usual machinations of the capitalist world-system. The interaction of these trends with existing ones, which is only recently occurring, has the potential to fundamentally alter the cycle.

A Synthesis of Systemic Theories

There are two major systemic theories of the rise and fall of world dominating powers, long cycle theory of world leaders (Modelski and Thompson 1988, forthcoming) and world-economy theory of hegemony (Wallerstein 1979, 1980, 1984, 1989; Chase-Dunn 1989, and Rubinson 1977). In previous research comparing world leaders and hegemonies, I have emphasized the differences in theories (Boswell and Sweat

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1991; Misra and Boswell 1992). Recent developments, both theoretical and empirical, however have brought the theories closer together in terms of causal arguments. What were competing theories can now be reformulated, I argue, as complementary arguments in a synthesis of approaches.

Hegemony refers to a state's preponderance over the world-economy. What we find historically is a series of "revolutions" in production, which cluster geographically. The mercantile revolution was centered in the Netherlands; the industrial revolution was concentrated in Britain, and mass assembly line production, the so-called second industrial revolution, was centered in the US.

In Modelski and Thompson's original version of long

cycle theory (1988), world leaders are states that emerge from a global war with an overwhelming military advantage (over 50% of total sea power). This preponderance of naval power enables leaders to define and defend the world order. However, in their forthcoming work, they explain that the source of leadership is economic. States rise because they rule a country with a concentration of leading economic sectors. Leading sectors also play a central role in many world-economy approaches to hegemony, providing a causal link between theories.

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Modelski and Thompson (forthcoming) methodically lay out over a 500 year period the major innovations, the geographic concentrations of leading economic sectors, and the consequential rise and fall of world leaders. A cluster of major innovations that are both organizational and technical changes can cause a growth spurt in a sector of the economy, the diffusion of which lifts the entire system into a K-wave expansion for the next 20-30 years. K-waves, or long waves, are extended periods of expansion and stagnation, lasting about 40-60 years altogether. The expansion is caused by a cluster of basic innovations that create a new leading sector; stagnation ensues when the innovations are widely diffused and markets for new applications are saturated. The search for and implementation of innovative methods occurs during the stagnant phase, when traditional methods are faltering.(1) The point for understanding hegemony is that it is now agreed that the geographic concentration of leading sectors is the motor that drives both cycles of world leadership and of hegemony.

In world-economy theory, the rise and fall of states results from uneven economic development. There are two interacting yet contradictory principles of uneven

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development, the *advantages of backwardness* and the *multiplier effect* of resource expansion, that guide the mobility of economic innovation and thus the rise and decline on states.(2) First, the "advantage of backwardness" is such that the clustering of economic innovations occurs most often and most profitably in areas that were somewhat left out of the previous application of an innovation in production. As elaborated below, this is due to institutional inertia and high fixed investment in the previously leading sectors. As a result, there is a pressure or tendency for the next 'revolution' in production to be concentrated somewhere else, giving us a mobile pattern of rise and decline. At the same time, however, an innovation driven expansion in one sector has a multiplier effect on the rest of the economy, generating resources for further development. One long term expansion will lay down the infrastructure and provide the resources for the next. As a result, we historically find that the geographic clustering

of k-wave expansions occurs in pairs. Why only pairs? By the time of the second expansion, institutional inertia and the depreciation costs of aging infrastructure have cumulated to the extent that the advantages of backwardness outweigh the benefits of prior resource expansion.

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Table 1 combines world-system theory with the new long cycle approach to leading sectors, in order to distill the key set of causal factors from the detailed historical narratives in these and related studies (see tabular sources). The table provides a list of economic long waves by type and price measure, along with associated leading economic sectors and selected accumulation innovations developed during a long stagnation, where the subsequent economic expansion was concentrated, and consequently, what states became world leaders and hegemonies.

The pattern of paired geographic concentration of k-waves producing a world leader, first described by Modelski and Thompson (forthcoming), can clearly be found in Table 1. In the first pair, there is a shift from Portugal to a shared concentration with neighboring Spain. There was also a prior K-wave (ca. 1480s) centered in Portugal, according to Modelski and Thompson (forthcoming), which was fueled by expansion in N. Africa and the exploitation of Guinea gold. Afterward, the pattern is largely one where the first wave in the pair tends to be less concentrated, including 2-3 countries, while the more exclusive second wave produces a world leader among the competitors.

In the second pair, a general expansion in the Low

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Countries becomes centered in the Netherlands in the second wave; the third pair goes from the Americas in general to primarily English colonies; the fourth pair has both waves centered in the U.K., but industrialization was nearly as high in France during the first wave; the fifth pair is also both centered in the U.S., but again, during the first wave the U.S. is not far ahead of Germany in concentration; and finally, what is the beginning of the 6th pair sees a concentration led by both Japan and the US.

Exceptions are possible, such as the repeating British leadership, once mainly due to its colonial success, and the second time from being the center of the industrial revolution. Also, the last wave may be the least concentrated development of new sectors. The development of information industries spans nearly all of the core, making the major distinction between core and periphery, rather than between core states each with its own imperially-associated colonial periphery.

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Table 1. Economic Sources of World Leadership and Hegemony:
K-Waves, Leading Sectors, and Concentrations: 1495-1974

K-Wave Period	Price Change	Leading Sectors/ Innovations	Geographic Concentration	World Leaders/ Hegemonies
1496-S	2.73	Direct Spice Trade	Portugal	
1509-E	2.80	Exploration Voyages		
1529-S	-2.18	American Silver	Spain/	Portugal 1517-
1539-E	3.25	Colonial Conquests	Portugal	1541
				#Hapsburgs 1526-
1559-S	3.28*	Baltic Trade	Low	1556
1575-E	2.95*	"fluyt" ships	Countries	
				#(Spain 1594-7)
1595-S	-0.75	Asian Trade	Neth.	United 1609-
1621-E	0.68	East India Co.		Neth. 1635
				United 1621-
1650-S	-0.59	Atlantic Trade	American	Neth. 1655
1689-E	-0.28	Slave Plantations	Colonies	
1720-S	0.53*	Colonial Trades	English	United 1714-
1747-E	1.09	Colonial Expansion	Colonies	Kingdom 1739
1762-S	0.52	Cotton Textiles	United	
1790-E	3.52	Industrialization	Kingdom (France)	
1814-S	-0.55	Railroads	United	United 1816-
1848-E	0.81	Wage/Factory System	Kingdom	Kingdom 1849
				United 1850-
1872-S	-1.95	Steel; Chemicals	United	Kingdom 1873
1893-E	2.06	Mass Production	States (Germany)	
1917-S	-3.46	Autos; Air; Electric	United	
1940-E	4.40	Multi-Corporation	States	U. S. 1945-1974
				U. S. 1945-1974
1968-S	n.a.	Information Industry Flexible Special- ization	Japan/ U.S. (?)	

Key: Type of economic period: E = Expansion period;
S = Stagnation period;

* The direction of the annual average price change does not correspond with the type of wave. In general, the 18th century has seen the least history and analysis of world-systemic dynamics.

The United Hapsburgs was an attempted imperial/Catholic world polity rather than an hegemony. It was based more on imperial coercive dominance and cultural imposition than on hegemonic economic dependence and cultural isomorphism. After the redivision of the Hapsburg domains, Spain managed a relative sea power superiority above 50%, but it was too brief to constitute systemic leadership.

Sources: Long Waves: Goldstein (1988); Price Change: percent annual average change during the period for in all 26 price series from 9 core countries found in Goldstein (1985, Appendix I p.436-7); Leading sectors: Modelski and Thompson (forthcoming), Rostow (1978)

[American silver added based on Misra and Boswell 1992]. The timing of waves and sectors differs frequently but usually in small amounts and is variable at the margins in any case. Accumulation Innovations: Boswell (1987, see his tabular citations); additions extrapolated from Modelski and Thompson (forthcoming) and Misra and Boswell 1992. World leaders, periods of peak concentration only: Modelski and Thompson (forthcoming); Hegemony, mature periods only: Hopkins and Wallerstein (1979), with adjustments prior to 1700 from Misra and Boswell (1992). See also Kann 1974; Holsti 1991.

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The convergence in causal arguments has eliminated some of the distinction in the two theories, but it has opened the possibility of combining the two theories into a new synthesis. My intent is not simply to merge one theory into the other; leaders and hegemonies are still distinct categories.⁽³⁾ Rather, I seek to explain the relationship between economic and military dominance.

To do so, we turn that relationship into a variable. Historically, it is possible to have military leaders that are not hegemonies. All hegemonies have also been leaders, with the sole exception of the United Hapsburgs, whose dominance was more coercive and imperial than hegemonic precisely because they were not economic innovators.

The key question is: When does a world leader translate its military dominance into a lasting economic hegemony? Two consecutive k-wave concentrations appear to be necessary for producing the resources for a state to become a world leader (Modelski and Thompson forthcoming). Generally, leaders become hegemonic during the expansion phase of the second wave, such that world leadership is necessary, although not sufficient, for hegemony. A state may have dominant sea power and even a concentration of leading sectors, but not translate it into hegemony over the world economy. Two world leaders listed in Table 1, Portugal in 1517-41 and

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Britain in 1714-39, had the dominant navy and a concentration of the most important economic sectors, but were never hegemonic over the entire system.⁽⁴⁾

To address the question of turning leadership into hegemony one needs to explain why, once established, hegemony lasts for such extended periods (averaging around 50 years). That is, most theories and histories of hegemony are about rise and fall, but they leave out persistence in between, both the staying power of a hegemon and the persistence of a rough balance after a hegemon has fallen. A theory of institutional inertia is developed here, which claims, following the physical analogy, that once a hegemon is ensconced, it tends to stay dominant over the system, or if no hegemon is present, that the system will stay in a rough balance. If the balance is shifted in some direction, however, it will trend in that direction until met by an opposing force. Staying with the physical analogy, I label the points where a trend in hegemony shifts from one direction to another "bifurcation points."⁽⁵⁾

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The Political Economy of Institutional Inertia

While leaders may contend for hegemony, the military outcomes of that contention, and the institutionalization of a subsequent peace, are necessary for success. In Table 2, one finds again the list of waves, world leaders and world hegemonies, with the rise and fall phases of the hegemonic cycle added (i.e., ascent, victory, maturity, and decline). We also now find the associated global wars and world orders. Global wars are those major conflicts within the core in which the issue of hegemony is at stake (Levy 1985). Although wars in the core are unlikely when a country is fully hegemonic, major wars are more likely during a K-wave expansion when countries have the resources for a lengthy and expensive war (Boswell and Sweat 1988). As such, those global wars that lead to a hegemony are to some extent paired with the relevant k-waves, but there is no set pattern found in all cases.(6)

"World orders" are the agreed upon and normative rules of international relations, the major principles of which are represented in a treaty or pact among the major core powers (Holsti 1992). A related term, "world polity," is used by the institutionalist branch of world-system studies for a

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similar concept (Meyer 1987; Thomas et. al. 1987; Boli 1994). It is applied here only to the Hapsburg/Catholic case. Both concepts refer to the rules, norms, and organizations in international relations that emerge through interaction, but which may be infused by a hegemon whose interests are served by compliance with the order.

The concepts of world order and polity differ in emphasis, however, and the contrast is useful for explaining both. World polity has a greater emphasis on shared culture and its institutionalization in international organizations (both governmental IGOs and nongovernmental INGOs), while world order has a greater realist emphasis on formal agreements of imposed or common geopolitical interests, in which the world order is a public good. A world polity implies shared values that may or may not correspond with economic interests, and which are enforced through international organizations that have at least some coercive power. A world order implies common economic interests that may or may not correspond to individual cultural values, and which are followed out of self-interest with little external enforcement. Although the difference between consensual and instrumental agreement is only one of emphasis, the difference is occasionally useful, such as

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distinguishing the Catholic world polity of 16th century from the world order of realpolitik between sovereign states

in the 17th century. In the concluding chapter, the distinction returns as we speculate on whether a new world polity (such as the World Trade Organization) is replacing the declining world order of American hegemony and whether it can do it without a global war.

Table 2: Political Sources of Hegemony: K-Waves, World Leaders, Hegemony, Global Wars and World Orders: 1495-1974

K-Wave Period	World Leader	Hegemonic Cycle Phases	Global Wars World Order
1496-S 1509-E	1517 Portugal	1492-A 1519-V	Italian Wars (1494-1517/25) #Catholic Polity, 1519
1529-S 1539-E	1541	1526-M #Hapsburgs	
1559-S 1575-E	#(Spain 1594-7)	1556-D 1575-A	Dutch Indep./Armada (1585- -1609)
1595-S 1621-E	1609 U.N. 1635	1609-V 1621-M Netherlands	Thirty Years War (1618-1648) Interstate Sovereignty, 1648
1650-S 1689-E		1655-D 1667-C	War of Louis XIV (1672-78) League of Augsburg (1688-97) Spanish Succession (1701-13)
1720-S 1747-E	1714 U.K. 1739		Balance of Power, 1714 Jenkins Ear/Austrian Suc. (1739-1748)
1762-S 1790-E		1789-A	Seven Years' War (1755-1763) Rev. Wars/Napoleonic (1792- -1815)
1814-S 1848-E	1816 1849	1815-V 1850-M U. Kingdom	Concert of Europe, 1815
1872-S 1893-E		1873-D 1897-A	
1917-S 1940-E		1918-V 1945-M	The Great War (WWI) (1914-18) League of Nations, 1918 World War II (1939-1945)
1968-S 1990s-E?	U.S. 1974	U. States 1974-D	NATO/United Nations, 1945 World Trade Org. / INGOs?

Key: Type of economic period E = Expansion period
S = Stagnation period

Hegemon	Phase of hegemon
U.H. = United Hapsburgs*	A = ascent
U.N. = United Netherlands	V = victory
U.K. = United Kingdom	M = maturity
U.S. = United States	D = decline
	C = competitive

The United Hapsburgs was an attempted imperial/Catholic world polity rather than an hegemony. It was based more on imperial coercive dominance and cultural imposition than on hegemonic economic dependence and cultural isomorphism. After the redivision of the Hapsburg domains, Spain managed a relative sea power superiority above 50%, but it was too brief to constitute systemic leadership.

Sources:

Long Waves: Goldstein (1988). World leaders: Modelski and Thompson (forthcoming). Hegemony: Hopkins and Wallerstein (1979) >1700; <1700, Misra and Boswell (1992). Global Wars: Levy (1985), Italian wars from Modelski and Thompson (1988). World Orders: Holsti (1991), except for 1516.

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Previous research has yet to offer a theory for why some world leaders expanded to a point where they became hegemonic, while others passed comparatively quickly. Why does hegemony last? Or from the opposite point of view, what prevents others from quickly emulating the innovations of the world leader, thus restoring a rough balance in a short time? In fact, the principle of uneven development suggests that others will emulate the innovators, and that those who are somewhat behind have the advantage -- this is what drives hegemonic decline. We are left with a theoretical model that expects the periodic rise of leaders, but also expects that they should soon decline with a shift in economic concentration someplace else. The history of the system supports this model, -- some leaders fade without becoming hegemonies -- but the history also tells us that for long periods something prevents the equalizing process from working, and instead we get a persistent hegemony.

Interactions in the modern world-system are regulated by two subsystems, a world market of competing producers and an interstate system of competing polities. In a market, a pattern of short term fluctuations but long term equilibrium is unexceptional. To the extent that a market is competitive, then economic actors will shift constantly for

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lower costs and higher profits. An innovation in the system will give the innovator an advantage, which can be a huge advantage, but which should be short lived. Long periods of rough balance among producers, with shifts in economic dominance every few years, are thus relatively easy to explain from the point of view of market economics. For instance, we entered a period of rough balance in the 1980s and 90s in which the US still has the largest share of the world economy, but is no longer hegemonic. Models of dynamism and organization have shifted during this time between Germany, Japan, the European Union, and China, but none has broached the position of world leader and, while all are competitors, none is yet the obvious heir apparent. As

we become familiar with a parade of trend-setters over an enduring rough equilibrium in the last 20 years, the previous stability of American hegemony appears ever more remarkable, as well as antiquated. We can guess about which states best fit the emerging trends in the system, and I will make my guess in the conclusion, but the main point is that we have entered a period of volatility around a rough balance and growing equality among core states.

Looking only at market relations makes a persistent hegemony a disturbing paradox of inertia in an inherently

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dynamic system. Inertia enters the system through politics. That is, the economic actors at the global level are firms and states with institutional and coercive sources of resource accumulation, rather than just market ones.

Firms invest capital and employ labor for lengthy projects that gain a return only over the long term (mortgages easily run 40 years, for instance). More importantly, once a firm has invested heavily in a production process, it has a strong vested interest (literally) in maintenance of the conditions under which that investment is profitable. Employing an accumulation innovation that could kick off a new wave of expansion requires that competing firms throughout a country and then the world make a sequence of major investments in a similar process or technology.

Organizational isomorphism drives all these firms to adopt similar institutional structures, even for those firms that do not directly benefit from the innovation but must interact with the ones that do. As a result, capitalist owners of firms have a common source for action despite lacking intentional coordination. These interests and actions are institutionalized in the form of rules and patterns of resource allocation that are relatively independent from the life cycle of owners. A standard

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finding in organizational sociology is that the larger and more bureaucratic a firm, the more resistant it is to change.

Institutional inertia also works in the opposite direction, against further innovation. In global terms, the institutions designed to implement accumulation innovations then become impediments to further innovation. The greater the concentration of leading sectors, the longer it takes for innovations to diffuse, but also, the greater the impediments to further innovation. Capitalist development is always uneven, flowing fastest where unhindered by institutional entrenchment. The entrenchment that slows decline also impedes innovative growth.

Turning to the interstate system, states are both facilitators of firm actions and economic actors in their own right. States have an institutionalized interest in maintaining a "business climate" of high profitability, and unlike firms, they have administrative and coercive

resources to realize their interests. Without further elaboration of organization theory, it should be apparent that administrative and coercive allocation of resources will be much more inertia laden than market allocation. States respond to the world market and global

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interdependence with attempts to control exchanges and decide disputes to their benefit (including the benefit of their internal economic elites). Coercive action for states includes war and imperialism, but also the less flashy forms such as embargoes, threats, taxes and tariffs. Political isomorphism, backed by coercion as well as coordination, remains in force until it is met by a countervailing power.

Whether a world order lasts then depends on how much it contradicts the interests of particular core states, versus how much it serves their common interests. Sovereignty, for instance, despite being ill-defined and elusive, has since 1648 been the groundwork premise of all subsequent world orders for core states, and since 1960, for all states.

Our histories of hegemony point out that rise corresponds with global war, especially where the hegemon is relatively insulated from the wartime destruction that undermines its competitors. Global war in this capacity is both a sifter, distinguishing among competitors for what in the short run are noneconomic reasons, and an accelerator, hastening the bifurcation from a rough balance to an oscillation between balance and leadership. The oscillation settles into hegemony if the world leader can impose a lasting world order.

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The treaty that marks the initiation of a new world order is perhaps the best single indicator that a bifurcation in international relations has occurred. The terms of the treaty itself are less important than the fact that, because a world leader has emerged from the global war with overwhelming military and economic power, a new world order will be enforced. In so doing, the leader reconfigures the patterns of exchange and security to its benefit, setting up the potential requirements for hegemony. The military capacity of a hegemon is thus a critical determinant of its staying power, such as the protection of global shipping lines described by Modelski and Thompson (forthcoming, 1988). However, this too is a double edged sword. Military over-extension is a prime source of economic decline, as described in Kennedy's account (1989).

The translation of world leadership into hegemony thus results from the conjuncture of world leadership with two interrelated but distinct events: a global war that destroys competitors and a new world order in which the rules, norms and institutions are skewed such that the leader's interests are the common interest. If hegemony is achieved, its length depends on the size and balance of institutional inertia, such as the state's military reach and the balance of

protecting global transactions versus military over-

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extension. As decline results from the cumulative effect of institutional inertia, it is essentially inevitable. And as development is uneven, a cycle of world leaders is also essentially inherent to the system (as it has been working). The translation of leadership into hegemony, however, is conjunctural and political. The cycle of hegemony is neither necessary nor set in its periodicity. From a different point of view, even with the system operating normally, change is possible and its source is political.

Trends, Interactions and Cycles

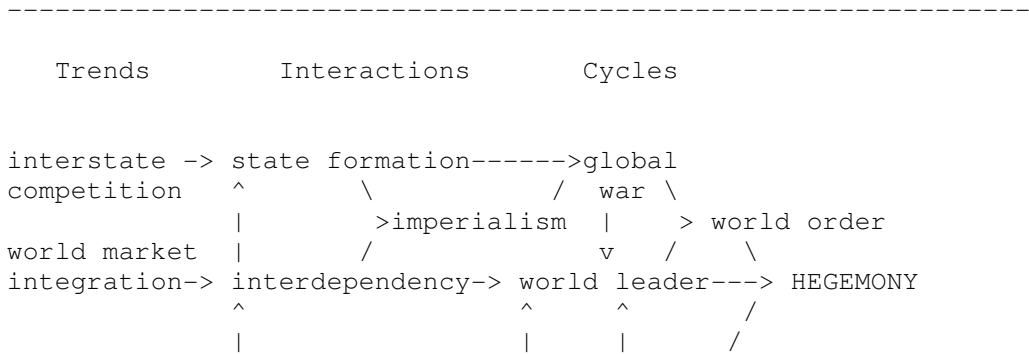
At times the theory seems lost in the particular histories, or the differences in theories seem to meld away in the historical accounts. The solution to such ambiguity is to construct an analytical model of cause and effect.

The model developed here combines elements of long cycle and world-economy approaches into a unified theory. In this model, cycles are explained as the interaction of trends. As discussed above, the cycle of hegemony and war results from the interaction of three long term trends: state formation, economic interdependence, and uneven development. In Figure 1, the causal pathways for each trend, their

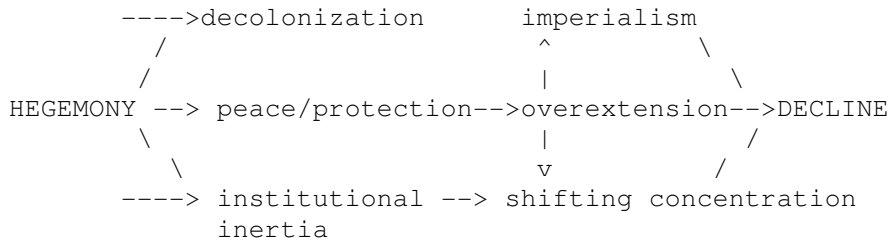
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interactions and resulting cycles are displayed as a formal analytic model. Going across the rows, interstate competition drives state formation as polities are forced to develop militarized states to compete with other states. The growing integration of the world economy brings new societies into competition, and requires that all global actors have recognizable and even similar institutions to enable interaction. The combination of integration and uneven development results in an unequal interdependence, in which the core states regulate exchange with peripheral ones through imperial means. Imperialism has been the political cement between core and periphery.

Figure 1. Hegemonic Cycle resulting from the Interaction of Global Trends



uneven development -----> K-waves -> shifting concentration



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Conflicts over imperial spheres lead to wars, which become major wars when a long K-wave expansion provides the resources, and then become global wars when the shifting economic balance creates a multi-polarity among the core states. A world leader emerges from the global war to forge a new world order for regulating international relations and distributing imperial obligations. If competitors are largely devastated by the war, and if the new world order skews relations so that expansion of the leader is in the common good of most core states, then during the next economic expansion leadership is translated into hegemony over the system. The "ifs" are the historically contingent institutional and political factors.

The trends continue, however, and the hegemon's lifespan is limited. Its resilience depends in particular on preventing the world order from breaking back down into imperial regulation of competing spheres. It thus benefits from decolonization of competing empires (but not its own). Maintaining the world order also requires the hegemon to extend its military reach over long distance transactions. However, other traders benefit from the world order without paying the military costs, leading eventually to an over-extension by the hegemon. Decline sets in when the lead

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shifts to a new economic sector, but the over-extended hegemon is entrenched in decaying industries.

The analytical model in Figure 1 is intended to explain the systemic causal processes involved in hegemony that are common to all cases. A partial statistical analysis of the model using time-series regression is presented in the appendix.

Theoretical models refine historical processes into their necessary and sufficient causes. Historical explanations for the rise or fall of each hegemon also include a great mass of particular history, contingent events, and random occurrence -- the highlights of which are summarized in Tables 1 and 2. As such, models lose the narrative history that is often important for full understanding of the causal processes and for making convincing arguments in selecting one process over contenders. On the other hand, lack of analytical rigor allows historical explanations to ooze into unique

particularities, preventing the synthesis proposed here. A solution is to combine analytical and narrative approaches. Space prevents a new interpretive narration here, for which we have substituted the historical outlines in tables one and two. Readers can also turn to a multitude of explicitly

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historical accounts of each country. The model, tables, theory and discussion takes us up through the maturation of American hegemony in the post-war period. But what is next?

The Future of Hegemony

Academics are often reluctant to speculate or predict; our primary job is to explain and educate. Extrapolations from explanations of what happened before leads to a mechanical notion of history that belies the importance of new or cumulative developments. Also, while theories may explain when social conflicts or contingent actions can have more or less influence on the course of history, their outcome cannot be entirely predicted by definition.

World-system theory, for instance, suggests a greater volatility during periods of economic stagnation and when a hegemony is absent. Having entered such a period, the value to social movements of making predictions about structural developments increases dramatically. A good example is the revolutions of 1989, which world-system theory could have predicted, and which some hinted at but failed to proclaim.⁽⁷⁾ With that license, I will make two types of speculations, one based on a simple, even mechanical

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repetition of the cycle, following mainly the US example, and a contrasting second one that emphasizes new developments and possible alternatives.

A repetition of the cycle would include the following 10 steps (to which are added some speculative dates):

1. (1995-2010s) The US will continue its relative decline while the next K-wave expansion, perhaps beginning now, is concentrated in competing powers;
2. (2010s-20s) Interdependence yet imperial rivalry among a multipolar core leads to anarchic political conflicts, one of which spirals into a global war among combatants with ample military resources;
3. (2020s) Peace resumes when resources, including human ones, are exhausted, except for those of a relatively unscathed world leader who emerges with a preponderance of military power;
4. (2010s-30s) War costs produce inflation despite declines in employment, which along with market

saturation for past leading economic sectors, leads to a stagnant and erratic economy;

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5. (2030s-70s) Innovation jumps the system into a renewed K-wave expansion, concentrated in the world leader;
6. (2030s-40s) Resources are again available for a political conflict to become a global war, if the leader cannot enforce the world order;
7. (2040s) The victorious combatants agree to a common world order to govern global transactions, with enforcement and benefits falling first to the world leader;
8. (2040s-60s) Dependence on and institutionalization of the world order makes the leader into a hegemon over the system, who manages over a "golden age" of peace and prosperity;
9. (2070s-2090s) The k-wave economic expansion comes to an end due to emulation of innovations, infrastructural decline, and saturation of easy markets leads to a long stagnation;

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10. (2080s-2090s) The hegemon declines relative to rising competitors, who free-ride on the hegemon's enforcement of the world order and whose institutions are not fettered by concentration in the now relatively declining economic sectors -- bringing us back to #1.

While there will be unforeseen variations and particular events, three past hegemonies have followed a version of these ten steps. The systemic trends in Figure 1 that produced the cycle have not diminished in importance or intensity. If there is an alternative future, it will have to come from trends, processes or events that have not heretofore been crucial in determining the history of global wars and world leaders. Such trends exist in the form of proletarianization, democratization and decolonization, which have grown dramatically in importance over the last 50 years.

The Rise of Nations and Decline of States

These trends originate with the cumulative expansion of commodification -- the transformation of all relations into monetized market exchanges. The most important form of

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commodification has been proletarianization, the making of

labor relations into wage relations. Commodification in interaction with state formation has led to the rise in the number of sovereign nations, and since WWII, the decline in size and imperial reach of states. In Figure 2, we revise the model displayed above in Figure 1 to include relatively recent changes in the cycle of hegemony and possible future changes. The trends listed in Figure 1 are repeated at the bottom of the new figure, which adds the new trends at the top and possible future developments to the far right (in brackets []).

The key differences with the past, as displayed in Figure 2, are the following: abolition of colonization, disassembling of imperial multinational states, proliferation of nation states, and democratization of states in the core and much of the semi-periphery. Huge imperial states have broken into literally hundreds of nations: the British Empire broke apart in a series of steps in the 1940s and 50s, the French Empire ended in the 1960s; Portuguese in the 70s, and the Soviet Union unraveled in the 1990s. As a result, imperial regulation of international exchange has been replaced with a "world polity" regulation. More precisely, the world order of

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sovereign nation-states in the core has spread to the entire decolonized periphery. Order has been turned into the early stages of world polity by the massive proliferation of international organizations and the growing standardization of global exchanges (see Boli 1994 on the growth of the world polity).

This in turn opens the possibility of alternative paths to hegemony, and even of a transformation of the system to include a world government. Of course, it is also possible, and perhaps probable, that these changes are temporary, and that the past cycle of imperialism, hegemony and war will again repeat itself in devastating fashion. The possibilities of changing the system are slim, but there are nonetheless greater possibilities now than in the previous century. We have reached a bifurcation point in world history.

Let us explore the trends and changes by tracing them in Figure 2, then return to the question of alternatives and possibilities. This figure includes the trends presented earlier and adds new developments.

The additions start with commodification, which, like the other trends of the world-economy, results from the expanding accumulation process inherent to capitalism. The expansion of

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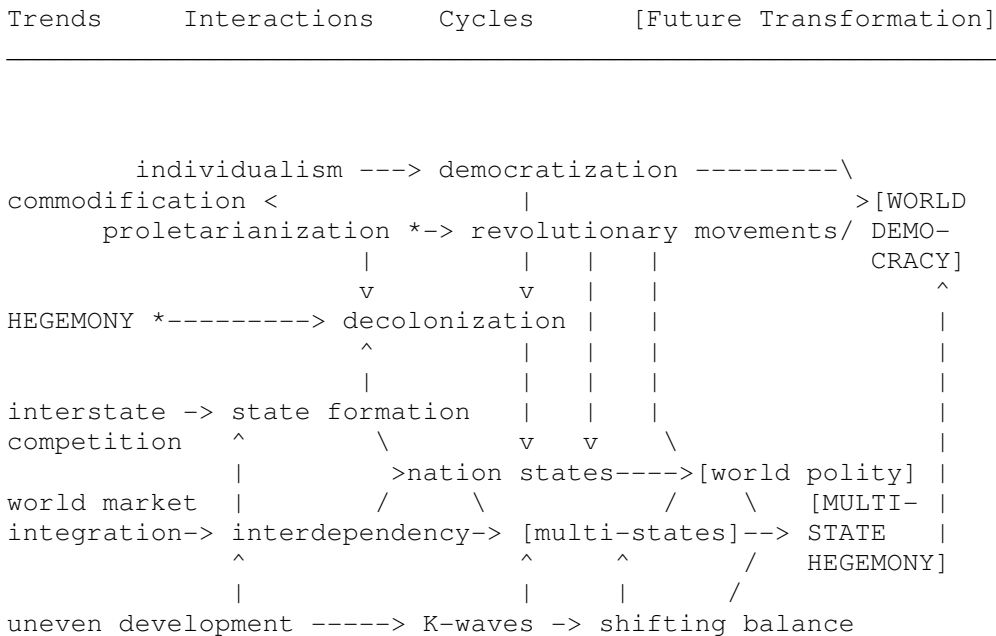
market relations overlaps with all the other trends, and indeed one could consider commodification and world integration to be inseparable. However, commodification has particular effects that are at least analytically useful to consider independently. Proletarianization, or the commodification of labor relations into wage labor, is the most important outcome. While labor markets have long existed, the proletariat has only included

the bulk of the core population since the 19th century and it is yet to be the majority in the periphery.

Another result of commodification is individualism. This is not an automatic outcome. Rather, as Max Weber lamented, monetized markets undermine traditional authority, including religious, familial, nobility, caste, ethnic, and other nonpecuniary ties. What is left is the instrumental interactions of individuals. Thus commodification does not directly encourage individualism; instead, it undermines any nonmarket relationship between individuals.

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Figure 2. World Polity resulting from the Interaction of Global Trends and the Possibility of a Democratic World Government.



*----> Indicates effects of k-waves are also important, which cannot be graphed here.

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Taken together, individualism undermines traditional authority, while proletarianization fosters a class with a common interest in democracy and a growing size and resource mobilization capable of implementing it through revolutionary movements (Boswell and Dixon 1993, 1990). An impressive recent study by Ruschemeyer, Stephens, and Stephens (1992) thoroughly documents that the working class has been the central actor in democratization throughout the world (as opposed to earlier studies who credited the bourgeoisie for democracy by considering "democratic" those

republics that left the bulk of the population disenfranchised). We would not want to reduce revolutionary movements and democratization to these two trends, but they are key causes and the central global ones.

Decolonization is also a process with numerous antecedents, but where global processes play central roles. Colonial conquest by expanding core states served to force commodification onto peoples that were previously external to the system. As such, colonization was hastened during K-wave downturns, when states use coercive means to replace failing markets, and receded during expansions (Boswell 1989). However, coercion adds less value as markets spread and industrialization makes traditional

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colonial production an increasingly small part of the world total. Colonization eventually became irrelevant for the purposes of labor extraction, and the vast unused labor reserves it forced into existence instead became a drag on the world economy. Most of that "drag" was due to the revolutionary resistance of colonial populations to their subordination. Once the great source of "primitive accumulation," after WWII colonialism probably cost industrial core powers more in administrative and military spending than they received in coerced unequal exchange. Dependency would produce high profits in the "free" market, making coerced exchange increasingly irrational.

As the most productive producers, hegemony have historically supported decolonization (other than their own colonies) because they profit most from trade unhindered by imperial regulation. The cyclic combination of US hegemony and a massive K-wave economic expansion during in the post-WWII period raised resources to liberation movements and made colonial wars increasingly costly, to the extent that decolonization became irreversible. While nationalism has its own sources that predate the post-war expansion, the explosion of national states after the war is unprecedented.

The break-up of empires has continued with the dissolution of multinational states, such as the USSR and Yugoslavia.

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How different this was from the pre-war period. The greatest number of colonies ever were held in 1939 and expansion by the core powers became a zero-sum war.

With decolonization has come a marked upturn in the pace and degree of world integration. This is usually explained by reference to technological changes in transportation and communication. The contribution of decolonization has also been important in replacing administrative relations with market ones, and in dissolving imperial market barriers to the world market. Capital mobility to the low-wage periphery, always a feature of capitalism, has tremendously accelerated as political impediments have been removed and technology has become more

portable. Growing integration of the world economy has, in turn, a contradictory effect on states, encouraging them to both shrink yet expand at the same time. States are shrinking down to nations but multi-state governments are expanding.

On the one hand, transnational capital shifts the political focus to international relations, where only sovereign states are recognized actors. This rule of the world order was established most forcefully in the Thirty Years War. But it had only applied to a handful of core

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states, which outside the core were, ironically, colonial empires. From about 1648 to 1948, the core and the periphery had strikingly different politics, what we might call nation-state politics versus class-nation politics.

In the core, states were identified with particular nations, although each contained subordinate ethnic groups. Each vied with competing nation-states for leadership and hegemony over the system. Classes within those states fought over political power and economic distribution. The empires defined themselves as nation-states in their intra-core relations and battles, and as empires in their rule over almost all of the periphery.

In the periphery, nations would, at best, be represented as provinces. As colonies of core imperialism, politics in the periphery often fused class and national conflicts over economic and political independence. While the class-nations of the colonial periphery largely won the conflict for political independence, thus becoming nation-states, they lost the war for economic independence, having become thoroughly monetized, specialized, dependent, and otherwise incorporated into the world market.

World integration makes increasingly irrelevant any authority that stands between the nation and the world

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market. This fuels national independence movements, as each ethnic group finds their interests are increasingly difficult to represent domestically. Every nationality needs a state to operate at the global level. Military dominance of national minorities or neo-colonies by dominant states or ethnic groups now pays fewer benefits as well. As a result, the geographic size of states is shrinking down to the size of nations. States ruling over multiple nations will continue to break-up for the foreseeable future. New peripheral states now mimic the rules of what was the core world order of nation states. This order is now world wide in the geographic as well as the multicultural sense of the term "world."

On the other hand, and at the same time, world integration also fuels multi-state government. Most prominent are the European Union (EU), and its North American offspring (NAFTA). However this is also true of a geometric rise in the number of international organizations,

both governmental (IGOs) and nongovernmental (INGOs) (Boli 1994). The rise of international organization follows a basic principle of contracts in markets. Any voluntary contract requires pre-contractual agreements on definitions and standards, and post-contractual third party negotiation,

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adjudication and enforcement. This has been the function of the world order, to which core states have only acceded peacefully for long periods when the world order was infused by a hegemon.

American hegemony is breaking down, and is being replaced by a world polity of international organizations and shared norms of liberal individualism. The phenomenal growth in INGOs largely serves the "pre-contractual" function, while the IGOs are haltingly being driven to become the "post" third party enforcers. The greater the number of states and decline of multi-national states (empires), the greater the need for multi-state authorities to adjudicate conflicts, guarantee standards and otherwise regulate exchanges.

Multi-state organization benefits transnational capital in particular, by reducing trading costs and setting standards across borders. The EU is bringing lower costs and increased consumption throughout Europe, and NAFTA appears to be headed in the same direction. It also eases the shift of capital to lower cost suppliers and lower wage labor. What of labor?

There are benefits, eventually, from lower consumer prices and from jobs increases in the resulting economic expansion.

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However, the shifts and losses of jobs often outweigh benefits, at least for existing generations. Most importantly, without a voice in the world polity, labor is unable to guarantee that the benefits of economic expansion will not be hoarded by capital. Resolving the environmental and social detriments of economic development will also increasingly be a global question. Labor, environmentalists, women and other progressive groups find themselves in an almost 19th century situation of needing enfranchisement. The movement for a voice in international governmental institutions will be for the 21st century what the democratization and decolonization movements were for the 19th and 20th centuries.

From Multi-State to World State

Three multi-state governmental organizations are emerging to dominate the world economy -- the European Union (EU), the North American Free Trade Association (NAFTA), and the Asian Free Trade Area (AFTA). As just these three polities will regulate the vast bulk of the world-economy, a common standard among them essentially sets a global standard. Yet none of the three is hegemonic over other two. This creates an unprecedented opportunity for international social

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movements, and for transnational capital, to have worldwide political effects.

The multiplicity of competing imperial states has always been a savior of capitalism. Competition among states prevented consolidation into a world empire in the struggle of capital against the nobility and against labor. It also disintegrated attempts at building a socialist world-system or even maintaining an international socialist movement.

If multi-state governments become the central political actors in the core of the world-system, then the problem of coordination will be at its lowest ebb in world history. The multi-state organizations exist and a steady increase in their importance seems likely, although not inevitable. A multi-state world government follows from the same trend of world economic integration but political fracturing into nations. No one doubts a continuation of world market integration and increasing power of IGOs such as the World Trade Organization (WTO). What of states? There are as many as 3000 ethnic nations with geographic identities, which if only 20% achieve statehood, it would triple the number of states. The smaller and more specialized each nation state, the greater the benefits of multi-state government.

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Continuation of this trend relies on at least the three following assumptions:

1. democratization restrains the militarism and imperialism of states, preventing global war;
2. state formation continues to produce sovereign nations rather than imperial colonies or large assimilated cultures;
3. uneven development without the inertia of colonialism shifts leading sectors between states before any can establish a long-term hegemony.

Of the three assumptions, democratization is the most important. The latter two depend on it, as does world peace versus wartime devastation. Historically, core democracies have not fought one another (Russett 1993). Electoral democracy restrains the autonomy and risk-taking of state leaders, makes leaders justify wars (especially long ones), creates an incentive to expand social spending (thus restraining military spending), and reduces the ability of capitalists to translate their particular interests into imperial state interests. Democratic opponents are more difficult to demonize and will change governments within a

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short time. Of course, democracies may deteriorate into dictatorships (i.e., Germany in the 1930's) or may suffer a majority tyranny (i.e., the former Yugoslavian states). The constraints are not deterministic, but they have proven powerful in the past.

Note however, that while the core states are now all essentially democratic, the multi-state polities are only indirectly representative (the largely powerless European Parliament notwithstanding). International governmental organizations now serve as boards of directors for ruling states. While war between states has declined with democratization, the probability of war between multi-state governments increases as the latter grow stronger, yet remain undemocratic (Chase-Dunn and Podobnik 1995). For democratization to continue to restrain states, social movements must push for the consent of the governed to the global level.

Finally, the move toward world government (whether democratic or not) will probably require the initiative of a world leader. Other sources of support -- social movements or revolutions -- are important and even critical, but they need to become transnational actors to be efficacious globally (i.e., a world party, rather than a collection of national parties). If

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uneven development concentrates the leading economic sectors in a multi-state world leader, the leader would benefit most from a world government that is designed to enforce its version of "free" trade. The leader could then become hegemonic by institutionalizing its advantages in the world government, thus creating the possibility of hegemony without a global war. This would be a major change in the form of hegemony, but not necessarily a change in the cycle and would surely not, by itself, transform the system. For that to happen, the world government would need to become a democratic institution rather than a hegemonic instrument.

Whether a world government becomes an instrument for hegemony, or becomes an institution for transforming the capitalist world-system, depends on whether the world government can be democratized. Here we have a chain of possible events, from democratization of states, to democratization of multi-state governments, to global democracy.

Of the existing and potential multi-state coalitions, one has a greater propensity to support democratization than the other two. This one is Europe. The European Union has the only institutional framework for multi-state democracy, and has the strongest and most organized working class to

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fight for it -- the two ingredients key to democratization in the past. Europe also has the most extensive social welfare system, and thus the most to lose from competition by low-wage workers in authoritarian states. European workers, and their capitalists, would gain from the rise in wages and

welfare elsewhere brought by global democracy. Even if led by Europe, any movement for a democratic world government would need to be coordinated transnationally by global social movements, and possibly a world party.

Is the European Union the most likely next world leader? It has several advantages and innovations. Many systemic theorists point to Japan's concentration of leading economic sectors as making it best poised to contend for world leadership during the second wave. If global war returns, as a homogeneous island country, Japan is also relatively insulated from at least conventional land war. Without a global war to decimate competitors, however, Japan would need to develop a multi-state framework in order to compete (it may need such a framework even with a war, including to fight it).

The EU's most important innovation is its multi-state framework, which places it in the best position to develop common world standards and expand interstate regulations

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(Bornschiefer 1994). NAFTA is a poor copy, unable to include the multi-state governance structure due to the previous sunk investment in US hegemony. Although trade pacts exist in Asia, none compare to the EU or even NAFTA in regulating contracts. This may prove an advantage of "backwardness" in the long run, but that is not clear now. "Greater China," made up of China, Taiwan, Hong Kong, and overseas Chinese, is perhaps an alternative multi-state form (Weede 1995). But China also houses a huge impoverished peasantry that will consume the benefits of its high growth for decades before reaching European standards of living. Without Japan, China is not a contender, and vice versa, but Japan is not part of "Greater China."

Europe also has its own advantage of backwardness, in that assembly line production was less developed than in the US, thus aiding transition to flexible production in some cases. It also has a cultural advantage in that past European imperialism has produced shared languages and cultural institutions throughout the world. While American hegemony has long passed Europe in cultural popularity, past imperialism over the Americas means that there is a relatively strong affinity between cultures. Ironically, the lack of imperialism beyond the region, along with a distinct alphabet, hurts Japan and China in this regard

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(Bornschiefer 1995). On the other hand, European companies have fared poorly in marketing technical innovations, where Japan has the lead. Nor has Europe been able to project its military power to enforce a world polity, a role held nearly exclusively by the US. By most counts, the US is also still far ahead on most economic indicators and a relative equalization is still far off. A new hegemon or a world

government, if either one occurs, is perhaps 50 years away.

Conclusion: The World Polity Revisited?

Compared to past phases, the world-system now most resembles the early 1500s, when a previous world polity reigned over Europe. Enforcement of the then-Catholic polity was taken up by the largest economic and military actor, then the Hapsburgs/Spain and now the US. But the world leader in terms of innovation was Portugal, which was too small and tied to the old Catholic polity to become hegemonic -- a fate now held by Japan. Leadership shifted to the Netherlands, whose organizational and technical innovations led the way to world hegemony when Spain was finally defeated.

Dutch hegemony required a major revolution and two global wars, but it was the key turning point in securing

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the transition to a capitalist world-system. I have cast the EU in the role of the United Netherlands. Of all the current contenders, it has the greatest possibility of leading the world to another transition, this time to global democracy. I would not guess that the probability of such an event in the next 50 years is high. It is less likely in the next 50 years, I would guess, than a global war. The point is, more than at any time in the past, the possibility exists.

APPENDIX

Time-Series Regression of Hegemony Model

We can analyze a portion of the analytical model through a time-series regression, presented in Table 3. Not surprisingly, data are lacking for much of the model, but we can analyze several key relations. This type of analysis cannot fully test the theory, not only because of limited data, but also because not all the causal relations are directly amenable to a regression analysis (i.e., some relations are not explicitly linear or quantitative, thus requiring that we use dummy codes or other substitutes that

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add error to the estimates). Nor is all the variation due to general causal processes. Amid that mass of particulars, the elemental forces of common causal process, while critical for the dynamics of history, may explain little of the detail. Nevertheless, statistical analysis is appropriate for examining our claims that a systemic process of hegemony exists along with the historical particularities of each case. While evidence is provided in the historical tables, the claim benefits from confirmation by evidence of extensive cross-case comparison. If no support is found, the model should be seriously questioned.

The dependent variable (SEAHEG) is designed to measure when world leaders can translate their power into economic hegemony. I constructed it by taking the interaction of Modelski and Thompson's (1988) naval measure of world leadership with data on the cycle of hegemony. This and all other measures are defined in the tabular notes. They utilize the best long term data available at this time for world-systemic research (see the referenced sources for further discussion of the data or methods). Based on the model displayed in Figure 1, the regression equation includes the following expected determinants of hegemony (all lagged 5 years):

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1. Past levels of world leadership in terms of sea power concentration (L5SEA);
2. Major war intensity (L5INT), to measure the effects of wars at all times;
3. The interaction of war and sea power concentration (L5SEAWAR), which measures the effects of war when sea power is concentrated;
4. Long economic waves (L5WAVEG), to indicate shifts in the concentration of leading economic sectors;
5. The extent of decolonization (L5CTERM), which indicates a decline in imperial regulation of international relations, allowing for an increase in hegemonic regulation;
6. Year as a control for linear trending, which controls for the extraordinarily high sea power of the US.

The combination of the first three variables attempts to measure the process of war and leadership. If a rising leader goes into a war, hegemony is more likely, but war undermines a hegemon in decline. Thus the interaction (L5SEAWAR) is expected to have a positive effect, while wars at other times (L5GINT) will be negative (one net of the other). The other three determinants are expected to have positive effects.

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Table 3: Time Series Regression of Sea Power Concentration modified by Hegemonic Level (SEAHEG), 1500-1975

Estimate of Autocorrelation Coefficient:

Rho .96

Standard Error of Rho .01

Prais-Winsten Estimates:

Multiple R .21 R-Squared .05

AR1 Adj. R-Squared .03 Standard Error .05

[OLS Adj. R-Squared .58 (not corrected for AR1)]

Durbin-Watson 2.00

Analysis of Variance:	DF	Sum of Squares	Mean Square
Regression	6	.05	.01
Residuals	467	1.12	.002

Variables in the Equation:

	B	SEB	BETA	T	SIG T
L5SEA	.12	.051	.11	2.32	.02
L5GINT	-.00001	.000005	-.22	-1.87	.06
L5SEAWAR	.00004	.000013	.33	2.82	.01
L5WAVEG	.48	.337	.06	1.42	.16
YEAR	.0002	.00036	.03	.62	.53
L5CTERM	.002	.0009	.12	2.64	.01
CONSTANT	-.24	.622	.	-.38	.70

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Variable Definitions and Sources:

- SEAHEG = SEACON * HEGEMON Interaction variable designed to measure when world leaders with a high concentration of sea power can translate that power into economic hegemony.
- SEACON = Sea Power Concentration Index (Modelski and Thompson 1988). This is a annual measure of "world leaders" based on the concentration of naval strength for the great powers, producing 5 peak concentrations that correspond to periods of world leadership (Portugal, United Netherlands, United Kingdom 1, United Kingdom 2, United States), four of which reach hegemony over the system (Hapsburgs; U.N.; U.K.2; U.S.).
- HEGEMON = Coding of the hegemonic cycle wherein hegemonic maturity = 1.0; victory = .75; decline = .50; ascent = .25; and competitive = .10 (see Table 2 for cycle dates).
- L5SEA = SEACON, 5 year lag.
- YEAR = Years, which controls for any strictly linear trending.
- L5GINT = Intensity of major wars (intensity is battle deaths divided by population; major wars are those with a great power on each side) (Levy 1983); 5 year lag.
- L5SEAWAR= L5SEA * L5GINT Interaction term measures effect of war when sea power is high and vice versa.
- L5CTERM = Annual number of overseas colonies liberated or otherwise terminated as a separate colonial polity (some were incorporated into other colonies, dissolved, or otherwise lost, but after 1776, almost all terminated colonies become independent states). (Bergesen and Schoenberg 1980; Boswell 1989), 5 year lag.
- L5WAVEG = Long Waves of economic expansion and contraction, weighted by the average change in available price series, data found on table 2 (price series and dates from Goldstein, 1988), 5 year lag.

Discussion

As the theoretical model expects, the results show significant effects in the expected direction for each of the determinants. Included on the table are two different adjusted R-squares, one of .58 from an OLS regression, and a .03 when the regression is corrected for autocorrelated errors (the coefficients are from the corrected equation). Correcting for autocorrelated errors in time-series regression mainly involves a partial differencing from past values of the dependent variable ($\rho = .96$). Most of the variation in sea power is due to trending, so what is left to explain is annual variation, which is the part most influenced by particular, contingent or random processes and least by systemic processes, as is reflected in the drop in the R-square. However, as the systemic variables are lagged 5 years, they are also determinants of up to 5 years of lagged versions of the dependent variable. Thus the actual variation explained probably falls somewhere between the two estimates listed. As such, this is a quite conservative test of the model and what is most important is whether the relationships are still significant under these conditions.

More troublesome is the measure of hegemony. The novel variable construction has the advantage of allowing us to use a linear model to explain a cyclic process. The disadvantage is that while sea power concentration is an excellent measure of world leadership, we have only "dummy codes" for the hegemonic cycle, so this is a less than ideal dependent variable.

What if we just look at unmodified SEACON and HEGEMON variables in otherwise identical equations? For SEACON, the regression shows similar results except that long waves are no longer significant; for HEGEMON, it only shows long waves and decolonization as significant (results available from the author on request). These two results seem to indicate the military focus of leadership and economic import for hegemony.

Finally, I also examined an alternative model that included an independent variable designed to measure inertia in the system. The variable was created by generating a random number for each year, then turning it into a 20 year moving average. The inertia variable was significant, but had no substantive effect on the other equations. As a random variable alone is unrelated to the dependent variable, the significance of the inertia variable is simply reflecting the slow trending in the system.

1. The particular inventions may have occurred earlier, however. Space does not permit details on the theory of k-waves, also called Kondratieffs and long waves, which is well known to most readers in any case. See Boswell (1987) for my interpretation.
2. Alternatively, the combination of two contradictory tendencies could be seen as one dialectical principle.
3. For instance, Modelski emphatically denies that he ever intended for Portugal to be considered a hegemon (public comments at the International Studies Assoc. Convention, Washington DC, 1994, in the session, "On Growth, Innovation, and War").
4. While Portugal was the lead innovator in the early 1500s, the Hapsburg dynasty ruled over so much of the Euro-American territory and economy that Portuguese expansion was limited no matter how much more productive it was. With the ascension of Charles V to emperor in 1519, the Hapsburg empire included Spain (and Spanish America) in the west, the Netherlands in the north, and the Holy Roman Empire in central Europe. Imperial integration was built around the common interest of subduing the Turks in the east and the French (and later the Dutch and English) in the west, and

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through the Counter Reformation, in (re-)establishing the Catholic world polity. After division in 1556, both dynastic and polity enforcement in the west fell to Spain, which waged near continual war for the next 100 years. While Spanish economic power peaked in the 1550s, its relative naval power peaked in 1594-7 in a classic example of military over-extension (Modelski and Thompson 1988; Kennedy 1989).

In Britain's 18th century case, the world order of 1714 followed an inconclusive global war, the purpose of which was to prevent French hegemony -- the French were attempting to forge a dynastic union with Spain. The peace was designed to restore the Westphalian dynastic balance of power of 1648. As such, post-war British expansion challenged rather than reinforced the international structure of power. Peace was therefore short lived. Britain had sea power superiority, but its competitors had not been devastated during the war. Economically, the leading sectors were primarily in colonial goods, and thus British leadership was due more to its colonial empire than to the superior efficiency of its industry or trade.

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5. The term, "bifurcation points," comes from chaos theory, a now-popular theory of dynamic systems. I claim no specialty in the field, but it provides stimulating new analogies to world-systemic dynamics. According to Stinchcombe, analogies across disciplines are the principle source of theoretical innovations and insights in scientific fields. I find that making analogies from the chaos theory to dialectical theories of economic development provides new insights on the workings of the world-system. In particular, we had not explained bifurcation points or

the source of what seemed to be inertia-laden systems. Bifurcation has been used to describe several different types of divisions. Here it is used to describe the point at which a system in equilibrium begins to oscillate. The analogy is that the rise and fall of hegemonies is an oscillation in the system.

6. The Dutch and American cases have global wars at the end of their first wave expansion and at the beginning of their second, and both become hegemonic during the second expansion. They differ in that the Dutch emerged as a world leader with a lasting naval superiority after its first global war, while the US did not become an unmatched military leader until its second global war (despite its brief post-WWI military superiority). The UK does not have a second global war that divides leadership from hegemony, perhaps because it had a prior leadership.

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7. Three predictions perhaps deserve the name. In 1982, Chase-Dunn (1982) explained that the socialist states had not left the capitalist world-system, nor had they constructed a self-reproducing alternative system. Instead, state socialism was better understood as a political program to improve a country's standing within the system. He suggested that they would become more like other capitalist countries over time, but he did not offer a time frame or predict the revolutions of 1989. Arrighi, Hopkins and Wallerstein (1990), in a collection of papers written during the 1980s, explicitly predicted that the decline of US hegemony would have a mirror effect on the East, with the implications of a break-up of the Soviet bloc. However, they too failed to offer a timeframe or to predict revolutions. Boswell and Peters (1990), writing in the summer of 1989 about the revolts in Poland and China, predicted that they would spread to other state socialist countries (a prediction that became an outcome by the time of publication, see their footnote #1). They also hinted that ethnic nationalism would break-up Yugoslavia and the Soviet Union. While they predicted revolts, their proximity to the events makes it less surprising and even then, they did not predict that the other states would fall so quickly.

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