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## The World-Cultural Origins of Revolutionary Waves

*Five Centuries of European Contention*

*The existence of revolutionary waves is a well-known feature of history. This study contends that revolutionary waves are best understood as systemic phenomena occurring during periods of rapid world-cultural expansion. Rapid expansion and deeper penetration of cultural linkages is theorized to generate contradiction between idealized models and local political practices, empower oppositions, and fracture elites, resulting in waves of revolution. The theoretical logic is illustrated with the example of the Atlantic Revolutions. Multivariate analyses examine the correspondence among a new indicator of world culture, additional systemic processes, and revolutionary waves across five centuries of European history. Results suggest that the occurrence of revolutionary waves is positively associated with relatively rapid world-cultural growth and hegemonic decline, as indicated by periods of hegemonic warfare.*

It has long been recognized that revolutions come in waves, particularly those that are the most transformative (e.g., Merriman 1938; Arrighi et al. 1989; Goldstone 1991, 2001, 2002; Tilly 1993; Markoff 1995, 1996; Katz 1997; Tarrow 1998; Kurzman 2008). Historical accounts of revolution and revolutionary waves often stress the commonality of ideological claims and the forces of cultural change across national boundaries as an explanation of their origins (e.g., Palmer 1954, 1959; Godechot 1965; Bailyn 1967; Sewell 1985, 1996; Wuthnow 1989; Chartier 1991; Sharman 2003). On the other hand, sociological explanations of revolution and revolutionary waves tend to place their

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origins in cross-national structural processes, for instance, as war, economic pressure, and demographic change challenge state stability (e.g., Goldfrank 1979; Skocpol 1979; Boswell and Dixon 1990, 1993; Goldstone 1991; Tilly 1993; Arrighi and Silver 1999; Foran 2005; Hung 2009) or as contention diffuses across societies from an initial event (e.g., Tarrow 1993, 1998; Markoff 1995, 1996; Katz 1997).

This study adds to previous research by seeking to unify the sociological structural perspective and the historical cultural account of revolutionary waves in two assertions: (1) revolutionary waves are transnational events of a states system as a whole, and (2) revolutionary waves are profoundly cultural events, as they involve alternative ideals of political order. As such, this study argues that the occurrence of revolutionary waves corresponds to the relatively rapid growth of world culture at a systemic level. Specifically, emergent models of governance, authority, and political practice can undercut the legitimacy of regimes, empower substate oppositions, and challenge elite cohesion, sparking waves of revolution.

Revolutions and revolutionary waves are different from coups or other power grabs, because they include alternate ideas and ideologies of political action and authority. Thus political *mentalités* exogenous to any one society can have a crucial role in provoking a cycle of revolt (Goldstone 2002). Changing views of governance and the role of the state in society can provide both a resource and a rationale for revolutionaries, whether they seek to carry out emergent models or to resist them and promote existing or alternative forms. In either case, when ideas are shaped by broad cultural changes, the events of one society become relevant to another as local problems become understood in universal, transnational terms. Thus the growth of a global culture can promote the linkage of multiple mobilizations into a distinct wave of contention.

To investigate this proposition, care must be taken on two fronts. First, possible systemic origins of revolution that are distinct from localized conditions must be isolated. Second, data on revolutionary waves as systemic, not cross-national, phenomena are required and should be analyzed accordingly. Local and national contexts do clearly shape the dynamics of a revolution, but the focus here is on the independent effects of extranational processes. To accomplish this, I first offer a conceptualization of revolutionary waves that helps point the way toward a systematic analysis. I then detail how processes of global cultural change may promote the formation of a revo-

lutionary wave, specifically drawing on the neo-institutional perspective of world polity theory and outlining alternative views on the role of world economy and hegemonic power. These sociological accounts of the international system are, in a sense, highly Western, developed theoretically and investigated empirically in the context of European history and the spread of Euro-American dominance across the globe. This study thus focuses on revolution in Europe itself as an exploration of the proposed theory. First, an illustration of the theoretical logic is presented in the case of the Atlantic Revolutions from 1768 to 1803. Second, drawing on data gathered on revolutions over 500 years of European history, I analyze the effects of systemic processes using multivariate regression models and discuss the implications for a cultural and structural account of revolutionary waves.

### Conceptualizing Revolutionary Waves

A key issue for theorizing revolutionary waves is how best to conceptualize them. In particular, the answers to two questions are needed: (1) what counts as revolutionary, and (2) how can the events of a wave be discerned across time and space? To answer the first question, many scholars follow Theda Skocpol (1979) in viewing a revolution as an uprising from below that creates a lasting transformation of state and social structures—in other words, a social revolution. However, as has often been noted, this definition precludes the possibility of a failed mobilization as well as other forms of transformation that are accomplished from above (see Trumberger 1978) or through ballots rather than bullets (see Foran 2005). For example, if we saw a revolutionary wave as a collection of successful revolutions, the classic revolutionary wave of 1848 might not be included. The year 1848 involved urban uprisings (e.g., Paris), interstate warfare (e.g., Italy), and establishment from above of representative bodies (e.g., Germany and Denmark) but no successful social revolution. Furthermore, if we saw a revolutionary wave as only violent uprisings from below, we may have to exclude the collapse of communism in 1989, given that some of its transitions were not accomplished by violence. This is unsatisfactory.

It is thus necessary to separate the success of a revolution from its onset. Charles Tilly (1993: 10), in particular, proposes that revolutionary outcomes can be considered different from revolutionary situations, the latter occurring when “two or more blocs make effective, incompatible claims to control

the state, or to be the state.” This conceptualization of dual power allows for a much broader view of events that can be considered revolutionary. Rather than only focus on the completed overthrow of a state, we can include some political revolutions, civil wars, rural rebellions, urban insurrections, dynastic struggles, religious and communal conflicts, and so on. If contenders threaten to supplant a regime and command the loyalty of “a significant segment of the citizenry” (*ibid.*), then we may consider it revolutionary. The concept “revolutionary” thus denotes the potential for a transfer of power that would lead to social or political transformation rather than a realized potential or a particular sort of political program. In short, we can bring 1848 and 1989 back into the study of revolutionary waves.

To answer the second question, we must develop a conceptualization with which to discern the revolutionary waves from the revolutionary water. In any given period, there may be a number of concurrent revolutions and revolutionary situations. But these may be isolated from each other, occurring independently and for independent reasons. Thus a rise in political instability within a time period, what is sometimes called a cycle of revolt or a protest cycle (see Goldstone 1991; Tarrow 1993, 1998), does not necessarily make a conceptually distinct phenomenon. The concurrent timing of events by itself is not enough. Rather, revolutionary waves are unique as they link the mobilizations of multiple societies. Therefore some accounts of revolutionary waves have stressed diffusion as a causal factor in their formation. Diffusion may be based on utilitarian concerns. For example, a revolutionary state could sponsor or provide resources for mobilizations in other societies (Katz 1997). Or the contenders of one society could draw inspiration from another and copy their innovative forms of mobilization, what Sidney Tarrow (1993, 1998) calls modular collective action. On the other hand, linkage could be more interactional. For instance, diffusion could come from an evolving cross-national repertoire of contention created as elites, movements, and countermovements interact (Markoff 1995, 1996). Or discursive communities could shape the ideological claims of related mobilizations (Wuthnow 1989).

No matter the form of linkage, it can be treated as a signifier of a revolutionary wave. Rather than treat diffusion as causal, it may be seen as a positive feedback loop in mobilization (see Biggs 2003) and thus a criterion for determining what events count as part of a wave.<sup>1</sup> This also allows a flexible answer to questions of timing. A wave’s duration and the time between mobi-

lizations may vary considerably and are likely connected to the historical context. So those events that are directly linked, whether through resources, tactics, or ideologies, may be part of the same wave over any reasonable period of time. Yet while events may create lasting legacies for mobilization, subsidence and lack of direct linkage can allow us to discern separate revolutionary waves. In short, this study conceptualizes revolutionary waves as transnational, ideological, linked, and coherent sets of intra- and international revolutionary situations occurring in a discernible temporal period.

### **World Culture and Revolutionary Waves**

Expanding linkages among states, institutions, and subnational actors can lead to the growth of a world culture where no one power controls the international system (Meyer et al. 1997). The world is thus “stateless,” with global norms and institutions enforced by cultural perceptions. Nation-states adopt transnationally prescribed forms or risk losing their legitimacy in the international system. This has direct effects on the structure and practice of governance. In the contemporary period, states sign international treaties, join international organizations, and create new ministries in line with world scripts in diverse areas (Boli and Thomas 1997; Meyer 2000). The growth of the world polity also has direct effects on subnational movements. Global civil society has been found to generate ethnic mobilization (Tsutsui 2004) and participation in human rights movements (Tsutsui and Wotipka 2004), and it is argued to be a primary resource for transnational movements (Tarrow 2001). In short, the world polity is culturally constructed in that it concerns scripts of action and models of organization and has a content that is often political, affecting both regimes and movements.

Previous research suggests that contradiction between emerging conceptions of political action and existing political structures is a motivating factor in revolution (e.g., Johnson 1966; Sewell 1985, 1996). For instance, crises preceding the French Revolution were heightened by “the disintegration of the absolutist synthesis and the development of a radical Enlightenment program” (Sewell 1985: 67). I argue that rapid change and expansion of world culture constitute one systemic process that can create such contradiction. As world culture expands, it becomes more formalized and prescribes forms and types of political action ever more forcefully (Meyer 2000), even if loose coupling of formal structures and actual practice does occur (e.g.,

Hafner-Burton et al. 2008). Expansion here refers to the increasing density and depth of international linkages as well as increasing breadth across more societies. On the one hand, expanding world culture integrates new areas into its networks, introducing contradiction between legitimate scripts and traditional practice. On the other hand, expanding world culture penetrates more deeply into its constituent polities, calling actual practice into question. Thus global civil society can have direct effects on subnational mobilization, independent of effects on regimes (Hafner-Burton and Tsutsui 2005). Over time, social systems that integrate more fully into world society and adopt transnationally prescribed practices will reduce incongruence. The result would therefore be decreasing revolutionary contention for the most integrated societies. Slower changes to idealized world scripts allow for at least partial incorporation of emergent political practices and modes of governance, but rapid changes challenge regimes to keep pace. Tension between the local and the global is thus sensitive to both the degree and the rate of expansion in world culture.

Furthermore, revolutionary waves are profoundly cultural events. Participants in revolutionary waves know and make conscious reference to the ideology motivating them, and their ideas rarely know national borders. The diffusion of contention is also more likely to occur where there is a common world culture that views its constituent polities as part of one universal whole. In short, revolutionary waves are affected by the growth and penetration of world culture.

In a recent example of this process, the Color Revolutions of Serbia, Georgia, Ukraine, and Kyrgyzstan have relied on world-cultural norms. While the diffusion of a model of collective action has played a role (Beissinger 2007), each uprising has depended on legitimate world-cultural scripts of the rule of law and democracy under a constitution. Each has also been undertaken with the assistance of foreign and international organizations committed to promoting democratic ideals, such as the Open Society Institute and the National Endowment for Democracy. In an interesting parallel, the “first” period of globalization in the latter half of the nineteenth century also was followed by constitutional and republican revolutions in Russia in 1905, the Ottoman Empire in 1908, Mexico in 1910, and China in 1911, with a crucial role for ideas and intellectuals in the revolutions’ spread (Sohrabi 2002; Kurzman and Leahey 2004; Kurzman 2008).

In addition to the general legitimating and delegitimizing effects of

transnational models and scripts, I also propose that two subsidiary mechanisms link world-cultural change and waves of revolution. First, changing world-cultural models impact mobilization by constructing individuals as political actors (Meyer and Jepperson 2000). Faced with contradiction and tension in the social world, individuals are authorized by world-cultural scripts to carry out new political practices. The mobilization of empowered oppositional movements is thus one logical consequence of the growth of world society. Second, the expansion of world culture affects elites. A consistent finding is that the onset of revolution depends on schisms among elites (e.g., Tilly 1978; Skocpol 1979; Goldstone 1991; Goodwin 2001; Foran 2005). For instance, elite consensus on the use of force allows state repression of mobilization to be effective and successful. But rapid cultural change can fracture elite consensus through the evolution of new ideologies: “Ideational change undermines the legitimacy of the elite in their own eyes and thus erodes their willingness to employ force to hold on to power in the manner strategic actors ‘ought’ to do” (Sharman 2003: 2). Thus, during times of world-cultural expansion, regimes face increasing challenges to their legitimacy in the form of both empowered oppositions and factionalized elites.

Why world culture generates ideologies and uncertainties that empower opponents rather than solely legitimate the status quo is an important question. There appears to be no single satisfactory answer. A partial solution, however, is to consider the ideological content of the world polity itself. In the modern period, world-cultural norms regard individuals as equals endowed with inalienable human rights and capable of political action. There is also a strong component of progressivism: the course of human society is to change for the better over time rather than stand still in a traditional form. These ideas are at least as old as Enlightenment philosophy and likely have roots much farther back in European history, perhaps even predating the rationalizing role of the Reformation (see Hazard 1953; Meyer and Jepperson 2000; Jepperson 2002; Gorski 2003). World culture may thus provide more support for transformative and revolutionary ideologies based on agency than static ideals that defend existing regimes. In addition, the nature of ideology and ideas themselves may have a role to play. Randall Collins (1998) concludes that new ideas arise out of networks of thinkers who disagree and debate vigorously. Ideas thus emerge dialectically where narratives that stand in opposition to one another are more likely to thrive. If this is true, then transformative revolutionary ideology may be a product of the ideational

process itself. Revolution and counterrevolution need each other and arise simultaneously. Ideational change can therefore support both proactive contention in line with world-cultural forms and reactive contention that stands in contrast to the norms of world culture. This dialectical nature of modernizing and antimodernizing practices is a well-known feature of contemporary globalization (e.g., Barber 1995; Eisenstadt 1999). In either case, it seems that world culture generates revolutionary ideals and movements rather than only blind support for existing regimes. Theoretically this need not be the only outcome, but historically it certainly has been a prominent one.

In sum, the dynamic tension between world-cultural norms and nation-state governance is a fundamental process in the international system. Rapid expansion of world culture creates contradiction between universal ideals and local practices, which empowers oppositional movements and challenges elite cohesion. But other systemic processes may also have a bearing on revolutionary waves. The sociology of revolution often includes downturns in the world economy as a systemic cycle that may lead to state breakdown (e.g., Goldfrank 1979; Skocpol 1979; Goldstone 1991; Foran 2005). Other approaches have examined how economic changes and crises can create political instability, particularly rural rebellions (Davies 1962; Chirot and Ragin 1975; Paige 1975; Wallerstein 1980; Boswell and Dixon 1990, 1993). Another view stresses the role of hegemony and great-power conflict. Hegemony can bring stability to an international system (Modelski 1978, 1987; Wallerstein 1980, 1983; Gilpin 1981) or in periods of decline make mobilization more likely, particularly in the periphery (Arrighi and Silver 1999; Bergesen and Lizardo 2004).

All in all, these systemic processes are highly interrelated. For instance, Joshua Goldstein (1985, 1988) finds that economic cycles affect the size of wars, while Terry Boswell and Mike Sweat (1991) find a direct relationship to war intensity. Great-power realpolitik and war have also been found to be subject to the world polity and shifts in institutional forms (Hironaka 2005; Wimmer and Min 2006). Theories of hegemony and power in the international system rely on economic factors (e.g., Hopkins and Wallerstein 1982; Modelski and Morgan 1985), and world culture is postulated to grow more rapidly in times of economic expansion (e.g., Meyer et al. 1997). Furthermore, hegemony has been found to have cultural effects (e.g., Kiser and Drass 1987), and hegemony support free trade, which allows more rapid diffusion of world-cultural norms and ideologies (Krasner 1976). Without claiming



that one type of cycle precedes the other, we may conclude that economic underpinnings are necessary for global power, that world culture may suggest the forms and constraints of hegemony, and that the exercise of world power might transform both cultures and economies. We recognize hegemonic decline or the delegitimation of global leadership as revolutions indicate the coming instability in the international system, and economic crises appear even more acute when contentious mobilization results.

As previously mentioned, theories and empirical substantiations of economic cycles, hegemony, and world culture have primarily been developed through the study of European history. Appraisals of world economic cycles, particularly in the early modern world, rely on European price data, hegemony and global leaders have been European powers, and world polity theory charts the rise and spread of European ideals across the globe. Thus to understand in detail how these processes act in concert to produce the potential for revolution and revolutionary waves, I turn to analysis of contention in Europe. I begin with an illustrative consideration of the Atlantic Revolutions.

### **Contention in the Atlantic Revolutions**

In the late eighteenth century the states and empires of Europe were wracked by uprisings, revolutions, and wars. While much research on this era of contention has focused on specific events, such as American independence or the French Revolution, the period was in all senses a revolutionary wave. States had to contend with a relatively new form of contention, the popular crowd, in which civil disturbances quickly became riots and riots sometimes revolutions (Rudé 1981 [1964]). The adoption in Geneva in 1768 of Jean-Jacques Rousseau's ideas of political participation and equality among citizens fueled a sea change in political thinking. By 1775 the American Revolution had begun. In the following years Ireland, Switzerland, and the Low Countries experienced significant rebellions. Soon contention reached the core of the European system in France. The subsequent revolution ensured that the Atlantic wave would continue and magnify, spreading throughout Europe and then to the colonies of the weakest empires, Spain and Portugal, not completely subsiding until after Mexican independence in 1821.

There is disagreement about the exact beginning and end of the Atlantic revolutionary wave. Jacques Godechot (1965) deems 1768 as the beginning of the era's revolutions, that mass uprisings in Europe ended with Napoléon's

ascension to power in 1799, and that the entire wave was over by 1825. R. R. Palmer (1954, 1959) sees similar historical boundaries but dates them slightly differently: the wave's start was signaled by the major publications of Rousseau in 1763 and the Stamp Act uprising in America in 1765 and the wave's end in the triumph of Napoléon and the start of great-power war in 1800 or 1801. Others, arguing for a later end point, extend the wave to include slave revolts in the Caribbean and the wars of independence in Latin America (Markoff 1996; Silver and Slater 1999). It is clear, however, that by the late 1760s the Atlantic world was already experiencing instability and that by the turn of the century popular revolt from below had ceased in Europe with the last event, the insurrection of the United Irishmen, over in 1803. No matter the exact dates, this era was in all senses a "revolution of the West" (Palmer 1954).

The international system of the time displays many of the possible systemic origins of revolutionary waves. The world economy was in a period of downturn lasting from 1762 to 1790 (Goldstein 1988). The end of the Seven Years' War in 1763 had brought with it a general economic depression that strained the finances of European regimes (Skocpol 1979; Silver and Slater 1999). Depression also impacted demography, with the population of Europe still rising and falling with economic and agricultural fortune in a Malthusian manner throughout the eighteenth century (Godechot 1965). The nature of the world economy was also shifting dramatically. The importance of Atlantic trade had surpassed that of the older Mediterranean routes and arguably had led to increased urbanization, the creation of a new merchant bourgeoisie, and a rise in industrial wage labor (Hobsbawm 1962; Godechot 1965; Acemoglu et al. 2005).

On the political side of the international system, the great-power wars of the mid-eighteenth century had produced a victor in Britain and reduced France's colonial influence in the Americas and India. Even so, the British-led international system set up in the 1713 Treaty of Utrecht had begun to fray (Modelski 1978). In fact, the French Revolution and the resulting Napoleonic Wars marked the next period of hegemonic struggle. Whether we view this time as the decline of British leadership, as does George Modelski, or as a period of rivalry preceding the establishment of hegemony, as does Immanuel Wallerstein (1983), it is clear that the international order was politically unstable as revolution in the American colonies approached.

The culturally expansive character of the time is also apparent. The

Atlantic world of the late eighteenth century was relatively small and getting smaller with every passing year. By 1760 transportation times had fallen across western Europe (Kiser and Kane 2001). Communication was not only faster but more regular, with systematic postal service established in many places (Hobsbawm 1962). Science and the arts were also flourishing. By the turn of the century, Italian operas met with acclaim in all the capitals of Europe, and literature from Russia and America began to find audiences across the Continent (*ibid.*). Literacy, partly promoted by state-building regimes, was on the rise, allowing for the quicker spread and penetration of ideas and cultural practices (Markoff 1986; Chartier 1991). On the philosophical side, universality was the order of the day. The philosophers of the eighteenth century came from “various countries of the West, but they felt themselves to be cosmopolitans and wrote for the world” (Godechot 1965: 19). It is thus fitting to speak of Europe and the Americas at this time as one international system, the Atlantic world, with a common world culture connected by trade and the forces of the world economy under a cohesive if not always stable international political arrangement.

I have argued that revolutionary waves correspond to rapid expansions in world culture. I propose that this operates through the creation of contradiction between world models of governance and local practices, which in turn motivates mobilization as subnational actors are empowered as agents of change and elite cohesion is fractured. These processes are apparent in the Atlantic Revolutions. First, it is indicative of the shared sense of world culture that the debates and ideas of the day were constructed in universal terms. Rousseau’s views of equality and citizenship were not policy solutions for the Genevese only; they were statements of universal rights. Enlightenment ideals were “more than mere rebellious opinions. They derived from centuries of European thought, and they applied to the actual conditions of the day” (Palmer 1954: 4). Paul Hazard’s (1953) survey of European philosophy suggests that the ideational basis for the Enlightenment was fully in place by the end of the seventeenth century, a century before the revolutions that were to carry out its precepts. It is well known that universalism is part and parcel of the revolutionary rhetoric of the time, as seen in the American Declaration of Independence and the French Declaration of the Rights of Man and Citizen. In both documents, rights are held to be inalienable, commonly shared, and located in individuals. But it is less well known that even the counterrevolution was constructed in universal terms. Palmer (1959: 27)

observes that Edmund Burke thought that “the Virginians were very much like the Poles.” Burke’s defense of monarchy in *Reflections on the Revolution in France* held up British constitutionalism as a model for other nations. A society’s inherited political structure was important but only if moderated by jurisprudence and the “collected reason of the ages” of civilizations past and present (Gottschalk 1956: 419). Even the counterrevolutionaries believed that national tradition was to be commonly constructed across the Atlantic world. Rhetoric of progress and tradition thus arose simultaneously out of a common history and culture as reactions to “eighteenth-century forces against which revolution was itself a reaction” (Palmer 1959: 22).

Given a universal cultural discourse rooted in notions of individuals as rational and equal, it is little surprise that Enlightenment philosophy challenged the regimes of Europe. The rapid emergence of this world culture created uncertainty and contradiction in existing political arrangements. For continental Europe, the dominant model of political authority at the time was the absolutist regime (Anderson 1974) ruling over a nascent nation-state with one people united by common culture and language (Anderson 1991). But the actual structure of political authority was far from ideal. Feudal rulers, possessions of the Catholic Church, and colonial empires persisted alongside growing Enlightenment ideals of political participation and the emergence of democratic rights in countries such as Britain. The further uncertainty created by rapid changes to economic and social systems allowed new ideas to spread even more quickly (Godechot 1965). Bernard Bailyn (1967) goes so far as to deem the American Revolution an ideological struggle.

By 1770 Enlightenment philosophy had carried the day in a sense (Palmer 1954). The elites themselves became cultural agents, participating in Parisian salons and engaging in the philosophical debates of the day. Michael Mann (1993: 190) finds that at least 23 percent of the members of the French National Convention in 1790 had written a philosophical, cultural, or scientific treatise. Among the leading factions of the revolution, this rate jumps to over 50 percent. Thus the exclusion from existing political structures of whole groups of people who were newly constituted by philosophy as individuals with universal rights emerged as a central challenge (Rudé 1981 [1964]; Markoff 1996; Silver and Slater 1999). In the face of disturbances from below, an enlightened nobility had little choice but to fracture. For instance, John Markoff (1988) finds that the greatest schisms in the French elite occurred in urban areas, which were also the primary sites

of Enlightenment intellectual networks and the stage for the opening act of the French Revolution. Overall, elite cohesion and unity broke down in the ancien régime in the face of revolutionary mobilization, with some arguing for tradition and others arguing for conciliation. While this is certainly a partial product of economic challenges, it is also apparent that elite reformers found motivation and justification in the cultural discourse of the Atlantic world.

It is also worth noting that the revolutionary ideas of the time did not originate at the periphery of the European system. Enlightenment ideals were the hallmark of British hegemony and found their most radical expression in the salons of France. World culture, as practiced in the core of the international system, may thus be the source of revolutionary ideologies. For instance, while the wars and revolutions of Latin American independence certainly had their roots in the breakdown of the Spanish Empire and the diffusion of Bolivarian claims, the contention was justified by Enlightenment ideals of universal individual rights rather than by some other ideology. Karen A. Rasler and William R. Thompson (1983) note that hegemonic victory includes the material roots of its demise, and this may be true of culture as well. Political ideals promoted by a country's global leadership can be stability's undoing as legitimate ideologies empower substate action against the system. The common observation that for France the Revolution began in America is probably true. And it is also true that for America the Revolution began in Europe.

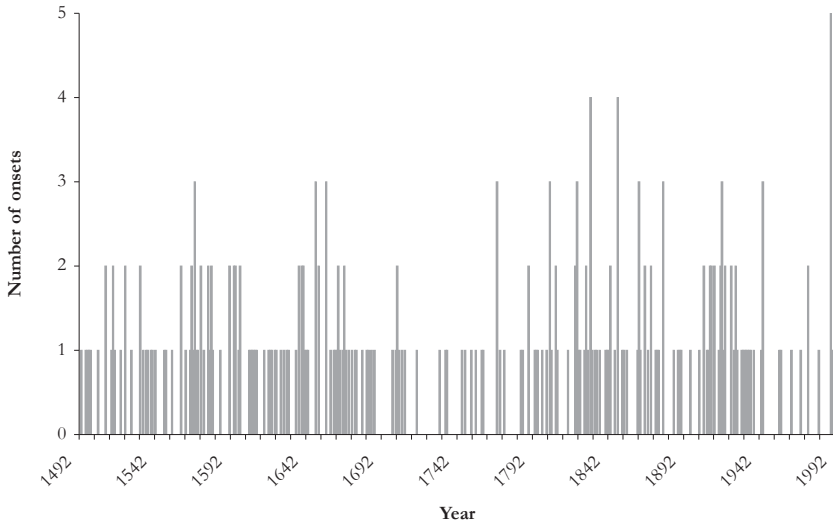
The purpose of this brief illustration is not to retrace the extensive histories of the era but to highlight some of the systemic processes that shaped the Atlantic Revolutions. The picture here is of Europe and the Atlantic world as one system sharing one culture, world economy, and political structure. The entire system was thus vulnerable to any challenge to an existing regime, and revolt in one place quickly became revolt in another. Though it is only one example, the evidence indicates that world economic downswings, hegemonic decline, and growing world culture increase the likelihood of a revolutionary wave. On the cultural side, the Atlantic Revolutions also suggest support for mechanisms of contradiction in social and political structures that generate empowered oppositions from below and fracture elite unity. To examine the role of systemic factors rigorously, however, requires systematic data on revolution.

## Data on Revolutionary Situations in Europe

The *longue durée* of cycles is crucial to any analysis of the international system. Long-term, large-scale data help identify the effect of systemic processes that may not be evident in shorter time spans. While systematic data on revolutions before the nineteenth century are hard to come by, one source is Tilly's (1993) event catalog of "revolutionary situations" in six regions of Europe from 1492 to 1992. Again, a revolutionary situation differs from a revolutionary outcome in that it involves effective, competing claims to state authority rather than the success of an accomplished revolution. The broader view of contention is helpful for this study. I have argued that a revolutionary wave includes revolutions, to be sure, but also related contentious events that may not always succeed. The data thus allow for a fuller appraisal of waves than a list of revolutions narrowly defined would.

Tilly identifies 256 revolutionary situations in the Low Countries, Iberia, the British Isles, Hungary and the Balkans, the Russian states, and the French states. Tilly's appraisal, unfortunately, excludes the "dorsal spine" of Europe, most notably the German states. This does have implications for the use of these data, which could be accounted for by alternate methods of analysis, as described in the appendix. Figure 1 presents the contours of the onsets of revolutionary situations. As we might expect, spikes in ongoing contention parallel some of the revolutionary waves that are well known: for instance, the Atlantic Revolutions of the late eighteenth century, the Revolutions of 1848, and the fall of communism beginning in 1989.

However, spikes in revolutionary activity are not necessarily distinct revolutionary waves. Rather, they may indicate concurrent but unrelated state breakdowns or unorganized periods of political instability. I thus examine Tilly's list of revolutionary situations through historical and secondary accounts to identify those revolutionary situations that can be considered part of a revolutionary wave. As discussed previously, a common view of revolutionary waves is to identify how they are linked, either practically or ideologically. While it is possible to imagine a number of forms of direct and indirect linkage between mobilizations, I rely on three types that previous diffusion accounts have stressed: (1) evidence for direct ideological inspiration or related articulation across events, for example, discursive communities (Wuthnow 1989); (2) direct instigation or sponsorship from one mobilizing group to another (e.g., Katz 1997); and (3) tactical diffusion through modular collective action and evolving cross-national repertoires (e.g., Mar-



**Figure 1** Number of onsets of revolutionary situations for six regions of Europe by year, 1492–1992 ( $N = 256$ )

Source: Tilly 1993.

koff 1996; Tarrow 1998). If there is evidence for one or more of these forms of linkage between two or more revolutionary situations in two or more societies within a decade of each other, then the events are coded as part of a revolutionary wave. These criteria yield 12 revolutionary waves that encompass 56 revolutionary situations in Europe between 1492 and 1992. Table 1 presents the events and waves coded, and the appendix gives further coding details, including a brief summary of each revolutionary wave.

There is a noteworthy trend in this appraisal of revolutionary waves. For early modern Europe, only two distinct waves of revolution meet the criteria I have laid out: one occurring primarily in the 1560s and related to the Second Reformation and another occurring in the 1620s, during the beginning of the Thirty Years' War. Yet there are numerous peasant uprisings, wars of religion, and regional rebellions throughout this time. (In fact, over 100 revolutionary situations in the data occur before 1700.) For instance, Wayne te Brake (1998) sees a cycle of protest occurring between 1520 and 1540, and both Roger Bigelow Merriman (1938) and Jack A. Goldstone (1991) see the mid-seventeenth century as a time of revolt. Yet the evidence for direct linkage between these temporally concurrent mobilizations is limited: there

**Table 1** Revolutionary situations coded as revolutionary waves, 1492–1992 (*N* = 56)

Revolutionary situation	Years	Revolutionary wave	
Revolt of the Netherlands	1566–1609	Calvinist I/Second Reformation	
Second War of Religion in France	1567–68		
Third War of Religion in France	1568–69		
Radical Calvinist seizures in Low Countries	1618	Calvinist II/Thirty Years' War	
Huguenot wars in France	1621–22		
Huguenot wars in France	1625		
Huguenot wars in France	1627–30	Atlantic Revolutions	
Pugachev Revolt	1773–75		
Dutch Patriot Revolution	1785–87		
French Revolution	1789–99		
Brabant Revolution	1789–90		
War with France and beginning of Latin American rebellions in Spain	1793–1814		
Polish rebellion	1794–95		
Batavian Revolution	1795–98	Greek War of Independence	
Insurrection of United Irishmen	1798–1803		
Independence war in Greece	1821–31		
Independence war in Moldavia	1821–24	Revolutions of 1830	
Independence war in Crete	1821–25		
July Revolution	1830		
Belgian Revolution	1830–33		
Polish rebellion	1830–31		
French Revolution	1848		Revolutions of 1848
Independence war in Moldavia	1848		
Revolution in Hungary	1848–49		
Revolution in Wallachia	1848–49		
Coup of Louis-Napoléon	1851		
Insurrection in Bosnia, Herzegovina, and Bulgaria	1875–78	Balkan Crisis of 1875	
Independence war in Bosnia	1878		
Independence war in Thessaly	1878		
Independence war in Crete	1878	Democratic revolutions	
Russian Revolution of 1905	1905		
Young Turk Revolution	1908–9		
October 5 Revolution in Portugal	1910		
Albanian insurrection	1910		
Independence war in Albania	1912		
Easter Rebellion	1916		World War I
Russian Revolution	1917		



**Table 1** (continued)

Revolutionary situation	Years	Revolutionary wave
Russian Civil War	1917–21	
Revolution in Hungary	1918–19	
Royalist uprising in Portugal	1919	
Civil war in Ireland	1919–23	
Overthrow of Stamboliski	1923	
May 28, 1926, coup d'état in Portugal	1926	Fascism
Spanish Civil War	1936–39	
Yugoslav antifascist resistance	1943–45	World War II
Greek Civil War	1944–49	
Soviet takeovers in Eastern Europe	1944–49	
Resistance and liberation in France	1944–45	
Overthrow of communism in Albania	1989–91	1989 and collapse of communism
Overthrow of communism in Bulgaria	1989–91	
Overthrow of communism in Hungary	1989–91	
Overthrow of communism in Romania	1989–91	
Overthrow of communism in Yugoslavia	1989–91	
Separation of republics in USSR	1990–91	
Civil war in Yugoslavia	1991–95	

Note: The names of revolutionary situations are paraphrased from Tilly 1993.

appears to be no cross-national inspiration among the peasant rebellions of the early 1500s (see Brustein and Levi 1987; Freedman 1993), and the breakdowns of early modern regimes in the mid-seventeenth century do not appear to have been diffusively linked to each other (see Nexon 2009).

Yet from the Atlantic Revolutions on, revolutionary waves occur more frequently and include more events, even as the overall rate of revolutionary situations declines in Europe. One interpretation of this could be that revolutions are a peculiar problem of modern nation-states (see Goodwin 2001). However, I believe that this pattern suggests the underlying argument of this study: without a transnational, universalizing logic that can organize the problems of one society into the problems of an entire international system, mobilizations are more likely to remain local or national. The early modern regimes may have faced similar (and even simultaneous) crises of authority, religion, and feudalism, but they did so primarily by themselves. As religious legitimations of authority gave way to the secular rationales of the modern world, more bases of political action emerged, and more types of ideological

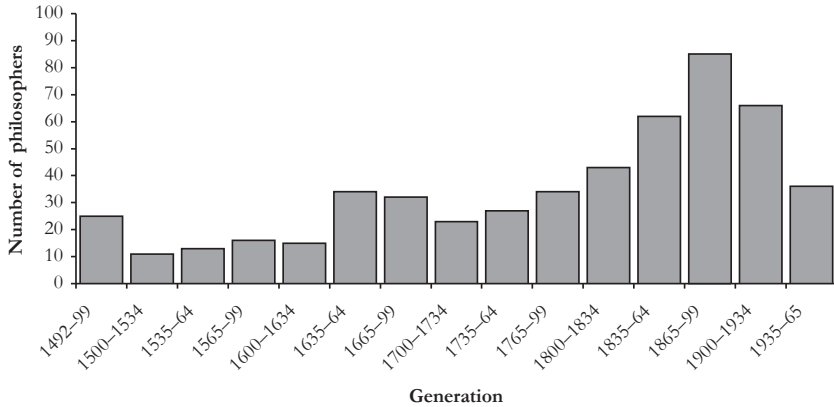
justification could be given, and these increasingly took a more universalistic tone. Hence over time we see an increasing rate of the transformation of local mobilizations into linked and self-conscious revolutionary waves with more diverse ideologies. In the early modern world, it appears that only the rationalizing Calvinist “disciplinary revolution” (see Gorski 2003) may have provided a sufficient basis for revolutionary waves across multiple societies.

This appraisal of 56 revolutionary wave events is used as the basis for dependent variables in the analyses that follow. The details of independent variables that can operationalize the processes of world culture and other systemic processes also follow.

### Data on World Culture in Europe

Measuring changes in world culture over so many centuries is empirically difficult. Previous research has found numerous good measurements for the twentieth century, such as international organizations and treaties (see, e.g., Boli and Thomas 1997). Unfortunately, no similar measurements are available for the long time period that is conceptually crucial to the analysis undertaken here. Ideally, an indicator of world culture would be as far removed from other systemic cycles as possible so that its independent effect can be best estimated. For instance, Edgar Kiser and Kriss A. Drass (1987) use book publications as one indicator of cultural change. Even better as indicators of shared culture and exchange might be translations of books, performances of foreign music or theater, or the volume and speed of international correspondence. However, such information is not readily available for analysis over the last five centuries.<sup>2</sup> A possible solution to this problem may be found if we consider two dimensions of culture. First, culture is discursive in that it can be discussed and shared among individuals (see Wuthnow 1989). Second, culture is institutional, housed in the routines and symbols of social institutions and structures (see Friedland and Alford 1991). I draw on indicators of each of these aspects of culture to construct an index of world-cultural change in Europe for the last five centuries.

One indicator of the growth of discursive world culture and civil society is the existence of international epistemic communities that share universal ideas and forge cultural linkages across national boundaries (see, e.g., Koo 2007). A possible proxy for the growth of international epistemic communities comes from Collins’s (1998) research on the history of philosophical dis-



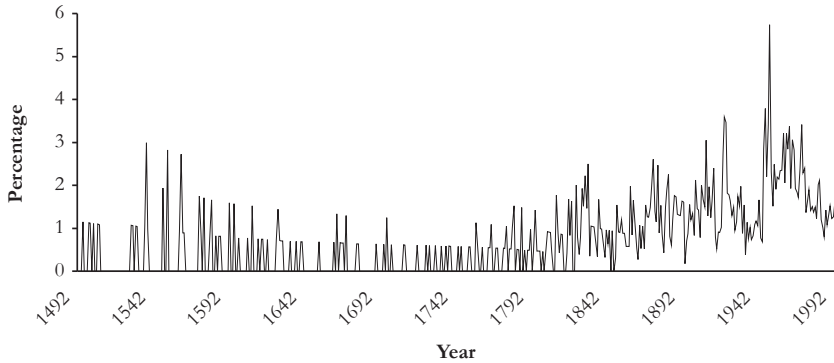
**Figure 2** Number of philosophers in Europe by generation of primary activity, 1492–1965 ( $N = 521$ )

Source: Collins 1998.

course. Collins provides detailed listings of active philosophers in Europe by generation, allowing an approximation of the number of individuals engaged at this pinnacle of cultural exchange. I do not argue that philosophical discourse creates revolution; rather, the discourse is indicative of intellectual communities engaged in cross-national cultural exchange. The number of philosophers active thus can be seen as a rough proxy for the relative strength of world-cultural discourse in a time period. Figure 2 presents the 521 European philosophers sorted by generation of primary activity from 1492 to 1965.

While Collins's appraisal of philosophers is exhaustive, it may have an element of teleology. We are more likely to remember and include the contributions of minor philosophers from the more recent past than those of similar stature from five hundred years ago. I therefore compile several alternative transformations of the base number of philosophers (see the appendix). However, none of these weighted measures substantially change the results of any analysis. Thus for simplicity's sake I maintain the raw number of philosophers by generation as one proxy for world culture.

The second possible indicator of world culture is the foundation of universities. Previous research has established the connection between education and the growth of the world polity (e.g., Schofer and Meyer 2005), which in the modern period creates the technical elites partly responsible for the spread of transnational norms and institutions. In earlier eras, universities have also served as incubators of new, universal ideas. For example, dur-



**Figure 3** Foundations of new universities as a percentage of prior foundations by year, 1492–1992

Source: Riddle 1993.

ing the Reformation university-based training by Martin Luther and others helped establish the theology of the emerging Protestant clergy. From previous research the number of world universities by year since 1050 is available (Riddle 1993; Schofer and Meyer 2005). World universities are defined as institutions clearly chartered as universities, excluding technical and vocational schools. Phyllis Riddle (1993) finds that university establishments are not directly related to population growth, which suggests that the indicator is not just a proxy for demographic change.<sup>3</sup> For earlier centuries, the vast majority of these universities' foundations occur in Europe and by the twentieth century throughout the world. This parallels the spread of European ideals and control throughout the world over the five centuries under consideration in this analysis and is similar to the other systemic indicators detailed in the following section.

I calculate a foundation rate of universities as new foundations per year as a percentage of all previous foundations, presented in figure 3. The resulting foundation rate is highly similar to the number of philosophers active in a generation, and they are significantly and positively correlated at the  $p < .001$  level. This is not surprising, particularly as philosophers increasingly become housed in universities in the modern era. However, foundation rates do not take into account the closure of universities, potentially introducing bias into the measure.

To help account for the individual limitations of the two proxies, I compile the number of philosophers by generation and foundation rate of univer-

sities into a two-item index by standardizing their values and summing the result. Further coding details and alternatives are described in the appendix. The resulting index is conceptually more robust than the raw value of either indicator, which individually do yield mostly similar results to the analyses discussed below. Also, even though the overall trend is toward more integration, the index is sensitive to the relative expansion and contraction of world culture overall rather than just national penetration, which I have argued is crucial for mobilization. I thus deem the index to be a suggestive indicator of the spread of world culture over the last 500 years.

### **Data on Other Systemic Processes in Europe**

Previous research on systemic cycles, including economy, hegemony, great-power war, and military capability, has yielded a number of competing indicators that could be used for analysis. For the purposes of this investigation, these indicators can be considered controls that stand in for the alternative perspectives on the link between the international system and revolution. Each measure discussed below is derived from previous work on the international system.

#### **World Economic Cycles**

The most complete synthesis of data on world economic cycles comes from Goldstein (1985, 1988). Using data drawn from multiple sources on prices and production primarily in Europe, Goldstein (1988) finds empirical support for a base-dating scheme of economic upswings and downswings from 1495 to 1967. An alternative indicator is Goldstein's (1985) data on change in prices over each economic upswing and downswing as standardized by Boswell and Sweat (1991). Comparing price data to the dummy coding of economic upswing/downswing reveals little difference in the analyses conducted. I thus use Goldstein's (1988) dummy coding of economic downswings.

#### **Hegemony**

Hegemony has the largest number of competing indicators of any systemic process. Wallerstein (1983) proposes three eras of hegemony based on economic and military supremacy. Terence Hopkins and Wallerstein (1982) also

argue for paired economic and hegemonic phase cycles, which include periods of hegemonic ascent, victory, maturity, and decline. Modelski's work on long cycles of global leadership also has proposed two indicators. First, Modelski and William R. Thompson (1988) compile a measurement of the concentration in hegemonic naval power by counting warships of the great powers since 1495. Second, Modelski (1978) details a cycle of formative conflict leading to world power, followed by delegitimation and deconcentration of leadership in the international system.

Of all these indicators, a Wallersteinian world-systemic view of the hegemony of European powers seems to correspond most closely with the onset of revolutionary situations and revolutionary waves. I rely on two dummy variables. The first represents the role of hegemony: the three periods of hegemony as proposed by Wallerstein (1983) for 1625–72 (Dutch), 1815–73 (British), and 1945–67 (American). The second accounts for periods of hegemonic decline. Using Jack S. Levy's (1985) summary and synthesis of theories of hegemony and war, I dummy-code the three periods of Wallerstein's hegemonic warfare, which is the nadir of hegemonic power: 1619–49, 1793–1816, and 1915–46. None of the alternative indicators yielded consistently significant results (and, in most cases, not even significant model-fit statistics). Thus the three-era hegemony coding and periods of hegemonic war represent the best, if not the most precise, statistical case for these concepts.

### Great-Power War

Finally, the effect of great-power war on revolutionary waves is an important issue and common to various interpretations of revolution. Historically, we know that great-power war may occur as a consequence of revolution—say, the Napoleonic Wars—and that revolution can be a consequence of international warfare, for example, the nationalist and communist mobilizations following World Wars I and II.

To control for this possible effect, I use Levy's (1983) account of great-power war. Excluding wars that did not directly involve a European power yields 115 great-power wars since 1495, coded here by their year of onset. Levy also estimates the intensity of war calculated as battle deaths of the great powers per million European inhabitants. I adopt this measure by calculating the total intensity of ongoing great-power wars in a year and then, as

is convention, take the natural log to account for the skew of the large number of casualties in World Wars I and II.

The preceding three sections have detailed the basis for multivariate analyses of the relationship of revolutions and revolutionary waves to world-cultural change, world economic cycles, hegemonic power, and war across almost 500 years of European history. While the measurements may not be as precise as a smaller time period or comparative case studies would yield, they do allow for a systematic, long-term examination that can be suggestive of the role that systemic factors play in revolutionary waves. The methods and results of this analysis are described in the next section.

## Results of Multivariate Analyses of Revolutionary Waves and Systemic Processes

### Method

I conduct multivariate analyses of the effects of systemic processes on revolutionary waves where the unit of analysis is the year. The primary set of models is estimated using Poisson regression, where the dependent variable is the number of wave revolutionary situations that began in a year (see table 2). As a further check on these results, I estimate, using multinomial logistic regression, the effects of systemic processes on a categorical coding of whether a year included the onset of a wave revolutionary situation, the onset of a nonwave revolutionary situation, or no onset (see table A1). The appendix provides additional detail of the coding and results for these secondary models.

Whereas prior discussion referenced the contours of all events from 1492 to 1992, multivariate analyses are limited to 1495–1965 due to unavailable data on some of the explanatory variables, yielding an  $N$  of 471 years.<sup>4</sup> Furthermore, the analysis is confined to mobilizations in Europe itself, as the events of other regions are not present in the data. All independent variables used in the multivariate models are also lagged one year.<sup>5</sup> Table 2 presents the results of four models. Model 1 examines the role of great-power war and economic cycles in revolutionary waves, similar to the expectations of classic state breakdown theory. Model 2 includes the role of hegemony and hegemonic decline, as suggested by a world-systems theory of revolutionary waves. Model 3 examines the primary argument of this study: the corre-

**Table 2** Results of multivariate Poisson regression (robust standard errors) of lagged systemic indicators ( $t - 1$ ) for onsets of wave revolutionary situations in Europe by year, 1495–1965 ( $N = 471$ )

	Model 1	Model 2	Model 3	Model 4
War onset	-0.019 (0.279)	0.007 (0.266)	-0.087 (0.285)	-0.026 (0.282)
War intensity (ln)	0.058 (0.073)	0.023 (0.061)	0.167* (0.071)	0.114 (0.066)
Economic downswing	0.463 (0.365)	0.660 (0.448)	0.654 (0.334)	0.636 (0.431)
Hegemony	—	-0.050 (0.580)	—	-0.118 (0.589)
Hegemonic war period	—	1.303*** (0.312)	—	0.813* (0.375)
World culture index	—	—	0.462*** (0.103)	0.388** (0.122)
Constant	-2.371*** (0.487)	-2.471*** (0.379)	-3.056*** (0.565)	-2.959*** (0.438)
Degrees of freedom	3	5	4	6
Wald chi-square	2.17	27.14***	28.08***	61.32***
Log pseudo-likelihood	-172.47	-164.18	-158.08	-154.98

Note: Robust standard errors are in parentheses.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

spondence between world culture and revolutionary waves. Finally, model 4 looks at all of the independent variables used. Given the constraints of the data employed, the roughness of dummy codings, and the resulting model-fit statistics, these results should be taken as suggestive of correspondence rather than as definitive statements of causality. While this is an important caveat, the suggestions of these models are striking.

## Results and Discussion

The first model estimated using Poisson regression is the effect of world economy and great-power war on revolutionary waves (see model 1, table 2). Interestingly, these factors, so prominent in prior theorizing, have no significant effects on the onset of revolutionary wave events. Goodness-of-fit statistics also indicate that the economy-war model is not particularly explanatory;



in fact the model chi-square is not even significant. There are, however, some suggestions of statistical significance for economic cycles and great-power-war intensity in the secondary analyses conducted (see models 4 and 8–10, table A1). The most notable effect in the secondary analyses is years of non-wave revolutionary situations as compared to years of no revolution (model 10, table A1), which suggests that singular revolutions may come when there is economic stress. However, the lack of agreement with the primary Poisson regressions estimated imply that economic theories alone are not good predictors of revolutionary waves. It may be that what matters is not the fact of war or economic depression but how these are subjectively experienced by a population (see Foran 2005).<sup>6</sup> As previously discussed, economy and war have great theoretical importance to other systemic cycles and so are kept as controls in the other models estimated.

Next, a model that includes the indicators of world-systems analysis, periods of hegemony and periods of hegemonic warfare, is estimated using Poisson regression (see model 2, table 2). The results indicate two primary findings. First, there is not a statistically significant role for periods of hegemony in revolutionary waves, though the coefficient suggests the expected negative relationship. The secondary analyses do, however, imply limited support for the role of hegemony in curbing revolutionary waves (see model 6, table A1). Seemingly paradoxical, there may also be a positive relationship between hegemony and nonwave revolutionary situations (see model 4, table A1). But periods of hegemony are also times when other powers are relatively weak, perhaps making nonhegemonic states more susceptible to state breakdown. In any case, the results overall do not suggest a significant role for hegemonic stability in reducing the likelihood of revolutionary waves.

The second primary finding of model 2 is that periods of hegemonic warfare are positively and significantly related to the onset of wave revolutionary situations. The model-fit statistics also indicate that this is a significant explanatory effect. This result is borne out in the secondary analyses as well (see models 5–6, table A1). It is interesting that there is such a strong relationship between periods of hegemonic warfare and revolutionary waves, given the lack of effect of Levy's more precise great-power-war indicators. But as discussed above, hegemonic warfare is likely an indirect indicator of the deepest point of hegemonic decline. Hegemonic conflict is not just a matter of raw great-power politics but also a time of competing visions of the

international system. During such times, alternate ideas of political organization may be more likely to thrive and be incorporated into revolutionary waves.

Finally, the primary argument of this study, that expanding world culture makes revolutionary waves more likely, is examined using Poisson regressions in models 3 and 4 in table 2. The results indicate strong support for this proposition. In model 3 the world culture index is positively and highly significantly related to the onset of revolutionary wave events. Fit statistics also show that this effect is not marginal; in fact it is better fitting than the model of world-systems indicators. This result is replicated in the multinomial logistic regression models that provide a conjoint analysis of different types of revolutionary situations (see models 8 and 9, table A1). In contrast, the results of the secondary analyses show no relationship between world culture and nonwave revolutions, which is not surprising (see model 7, table A1). Singular revolutions are more likely to be a product of local conditions, including state breakdown, than revolutionary waves that result from broad cultural changes. In fact, the results of model 10, table A1, suggest that world culture may even reduce the occurrence of nonwave revolutions, indicating perhaps that local events are less likely to be understood in more global and universal terms during periods of world-cultural stagnation.

Most important, the world culture index maintains its significant positive effect on revolutionary waves even when the indicators of hegemony and hegemonic warfare are introduced (see model 4, table 2, as well as the secondary analyses of models 11 and 12, table A1). In fact, the addition of the world culture index consistently reduces the effect of periods of hegemonic war. This is quite notable. For revolutionary waves, culture matters, no matter the currents of war, economy, political rivalry, and hegemonic power.

The models estimated also allow for some reflection on the mechanisms by which systemic processes impact revolution. I proposed that both the rate and the degree of world-cultural expansion create revolutionary waves, as the depth of penetration and spread of cultural linkages create contradiction. Thus rapid change yields more mobilization than slow change, and over time incorporation of world-cultural practices will reduce revolutionary contention. The data seem to bear this out. First, the world culture indicator is sensitive to relative change in expansion from year to year. The significant effects of the index suggest that the pace of change does have an effect. Second, throughout the last five centuries Europe has had a declining rate

of the number of revolutionary situations, indicated by the negative constant in all models estimated. As Europe has formed the core of the modern world polity, it has had the time to adopt world-cultural scripts and adapt to changing forms of governance and political action. It is also noteworthy that the most recent contentious waves in Europe, such as the fall of communism in 1989 or the Color Revolutions, take on democratic claims and forms clearly informed by world-cultural models. The world culture index reflects this trend toward more integration over time. In contrast, over the last five centuries the world economy has had constant ups and downs, and hegemony has come and gone. Without additional mechanisms, economic- and hegemonic-cycle views have difficulty accounting for the declining rate of revolution in the core. This suggests that world culture is a better-fitting, and perhaps more parsimonious, explanation of revolutionary waves.

In sum, the results of multivariate analyses suggest that world economic downturns, great-power-war onsets and intensity, and hegemonic stability are not related by themselves to the occurrence of revolutionary waves. Hegemonic warfare, perhaps suggesting hegemonic decline, does make revolutionary waves more likely. Most notably, as the level of world culture more rapidly expands, so does the probability of revolutionary waves. This indicates that theories of hegemonic decline and expanding world culture have the most import for understanding revolutionary waves, while economic explanations alone have marginal utility.

## Conclusions

Given that many revolutions are such highly local events, dependent on the capacity of states and their oppositions, it is striking that there is correspondence between the conditions of the international system and their occurrence in both waves and nonwaves. Specifically, this study has tried to provide a theory of revolutionary waves that can unify cultural and structural perspectives. First, I have argued that revolutionary waves are events of an entire international system. Second, I have contended that revolutionary waves are cultural events. As such, revolutionary waves correspond to the growth of world culture at a systemic level.

There are some limitations to the conclusions that may be drawn from this study. The necessary reliance on rough proxies of systemic factors over five centuries rather than more precise data means that the statistical results

should be taken to be suggestive of correspondence rather than definitive statements of causality. I also postulated that world culture empowers oppositional mobilization and challenges elite cohesion. With the data analyzed at the level of the system, these two mechanisms cannot be systematically evaluated and remain areas for further research. With these caveats, I conclude that revolutionary waves tend to occur when there is a relatively rapid expansion of world culture and hegemonic decline. This indicates that revolutionary contention can be the result of delegitimation of an international order, particularly when world culture suggests alternate forms of political organization than those currently practiced. Revolutionary waves are thus not only an expression of changing practices but also events that contribute to the institutionalization of new models of governance.

It is worth noting that the indicator of world culture employed in this study precedes the development of the modern world society. I do not seek to claim that there was a world polity in full operation in the Europe of 1500, with transnational institutions and a global civil society. Rather, the cultural component of our contemporary world has its roots much farther back than some analyses have examined. For at least the last five centuries of European history, cultural ideals have been constructed universally, and discourse has taken place internationally. I have taken one step in this study to account for this and to extend our empirical consideration back in time.

In short, revolutionary waves are events of whole cultural systems, and it is fitting to analyze them as such. Local structures of governance, capabilities for repression and co-optation, the ability of political systems to absorb opposition, tactical innovation, and the formation of coalitions and networks do affect the occurrence and path of revolution. Yet it is likely that these local and proximate conditions interact with systemic processes to create revolutionary waves. Future research on revolutionary waves thus should continue to include relevant systemic processes. Finally, the ideological component of revolutions also has a part to play. In some ways, revolutions are not revolutions until their participants name them so. Cultural constructions of transformative ideologies thus may be central to the function and perhaps the origin of revolutionary waves. Further research should continue to confront the ideological facet of revolutions and how it operates from within a polity and from without. While theories of the international system can point us to the patterns that matter, they alone cannot and should not be the entire story.

## Appendix

In addition to the analyses presented, I also examined the effects of alternative transformations of the data and different indicators. Details of coding procedures and comparative analyses are presented below.

### Data on Revolutionary Situations

Revolutionary waves are coded from Tilly's (1993: 74, 82, 94, 114, 151, 203) list of revolutionary situations in Europe in his tables 3.2, 3.3, 3.4, 4.2, 5.4, and 6.2. From these tables a summary was disaggregated into separate events if events of two or more societies were represented, yielding 256 revolutionary situations between 1492 and 1992. Waves were coded if two or more linked revolutionary situations occurred in two or more societies within a decade of each other. Linkage was determined by an examination of each event and secondary accounts of them (see summaries below) with evidence for one or more of the following criteria: direct ideological inspiration or related articulation, direct instigation from one mobilization to another, or diffusion through modular collective action or evolving cross-national repertoires. These criteria yield 12 revolutionary waves encompassing 56 revolutionary situations (see table 1) with 35 years of onsets. Below is a brief summary of each wave.

**Calvinist I/Second Reformation.** The 1560s saw a revolutionary wave beginning with the outbreak of iconoclasm and the subsequent Revolt of the Netherlands, which also sparked the resumption of religious conflict in France (Wuthnow 1989; te Brake 1998; Gorski 2003; Nexon 2009). The wave is coded on the side of caution, seeing the later French Wars of Religion as a continuation of the crisis in the French state rather than as an extension of the wave itself.

**Calvinist II/Thirty Years' War.** The beginning of the Thirty Years' War in the Bohemian Revolt was accompanied by renewed religious struggle in the Netherlands and France and was particularly impacted by Calvinist militancy (te Brake 1998; Nexon 2009). While the Thirty Years' War also saw subsequent later rebellions, especially in Spanish Hapsburg lands, the wave is coded to be limited to the linked conflicts that occurred primarily in the

1620s. One could also consider both the Second Reformation and the Thirty Years' War as one century-long wave of revolution, though the coding would not affect the analyses presented.

**Atlantic Revolutions.** The Enlightenment revolutions of the latter eighteenth century are commonly seen as a revolutionary wave (Palmer 1954, 1959; Godechot 1965; Wuthnow 1989). The coding follows Godechot's (1965) survey that dates the wave's mass uprisings from 1768 to 1799, making the first event in Tilly's list of revolutionary situations the Russian Pugachev Revolt of 1773 and the last the insurrection of the United Irishmen, beginning in 1798.

**Greek War of Independence.** While the Ottoman Empire saw numerous internal cycles of political instability (Tilly 1993; see also Barkey 2008), the Greek War of Independence is notable as a revolutionary wave both for its nationalism, framed in Enlightenment terms, and for the diffusion of its repertoire across the region.

**Revolutions of 1830.** Events beginning in 1830 are commonly seen as a revolutionary wave, as the July Revolution in France inspired similar uprisings in Belgium and Poland (Tilly 1993).

**Revolutions of 1848.** The revolutions of 1848 have often been considered the advent of modern revolutionary waves that rely on modular collective action (Tarrow 1998) or, in world-systems terms, the first world revolution (Arrighi et al. 1989). In the coding, the coup of Louis-Napoléon in 1851 is included as the last event of the wave.

**Balkan Crisis of 1875.** The multiple uprisings of 1875, particularly in Bulgaria, helped spark the Russo-Turkish War of 1877 and further rebellions in Ottoman lands (Tilly 1993). The wave is notable for marking the end of unrivaled British hegemony as Otto von Bismarck hosted the Congress of Berlin, which sought to reorganize the national boundaries of the Balkans (Wallerstein 1983).

**Democratic revolutions.** The democratic, constitutional revolutions of the early twentieth century can be seen as a wave both for ideological inspi-

ration and linkage and for possible modular collective action (Sohrabi 2002; Kurzman and Leahey 2004; Kurzman 2008). The coding includes the events of Albania due to their relationship to the Young Turk Revolution of 1908.

**World War I.** The revolutionary situations that accompanied and followed World War I can be characterized as having similar ideological bases in movements that sought “Wilsonian” national sovereignty, often related to antimonarchal and/or democratic movements (Tilly 1993; Kurzman 2008).

**Fascism.** World War I also inspired antidemocratic national movements, most notably fascism. While fascism could be considered politically “reactionary” (but see Mann 2004), it did yield at least two revolutionary situations in Portugal’s 1926 coup and the Spanish Civil War.

**World War II.** Like World War I, World War II also instigated a revolutionary wave, as mobilized groups sought to throw off foreign occupation and then fought against each other, continuing revolutionary situations, with communist groups often being one contending party. While it would not change the coding for Poisson or multinomial regression models, it is possible also to view the preceding three revolutionary waves as one long wave of revolution, counterrevolution, and war from 1914 until the establishment of American hegemony in 1945.

**1989 and the collapse of communism.** The year 1989 and the subsequent revolutionary situations in Eastern Europe and the Soviet Union are commonly viewed as one wave that includes both ideological bases and the diffusion through exposure and modular collective action (Tilly 1993; Goodwin 2001).

For comparison, I also examined more conservative and more liberal codings of wave events. On the most conservative side, I selected only those revolutions that are classically viewed as a part of waves, that is, the Atlantic Revolutions, the Revolutions of 1830, the Revolutions of 1848, post–World War I nationalist uprisings, post–World War II nationalist uprisings, and the collapse of communism in 1989. The more liberal assessment included all wavelike events, such as the numerous rebellions against Ottoman authority in southeastern Europe and additional wars of religion in the early modern world. Neither the more liberal nor the more conservative coding substan-

tially changed the direction or significance of results in any of the analyses presented compared to the initial coding. Thus I use the above list of 12 revolutionary waves as the best possible representation of wave events in Tilly's event catalog. The remaining 200 revolutionary situations are coded as non-wave events for use in other multivariate models estimated.

### Data on World Culture

The world culture index is generated by combining two indicators, the number of philosophers active in a generation and a foundation rate of world universities. The number and generation of philosophers is culled from figures 9.7, 10.1, 11.1, 12.1, 12.2, 13.1, 13.2, 13.8, and 14.1 and appendix 3 in Collins 1998: 498, 527, 607, 624, 673, 690, 710–11, 740, 759, 938–46. The university foundation rate is calculated from Riddle 1993 as the new foundations per year as a percentage of all prior foundations. The index has a Cronbach's alpha of 0.613, which indicates that the two indicators are measuring the same underlying dynamic of world culture. While the alpha is not particularly high, we do know theoretically that the two indicators are related.

To account for possible biases in the world culture indicators, transformations of the data were considered. For philosophers, alternative measurements examined were the number of major philosophers only (per Collins 1998), the number of major philosophers and their direct students, the number of philosophers connected to a major philosopher in a network, and the interaction of the number of major philosophers and the number of all philosophers. For university foundation rates, I considered the raw number of foundations per year and a 10-year prior moving average of the university foundations as a percentage of previous foundations. None of these substantially changed the resulting analyses. In addition, using the index items separately in the primary Poisson regressions estimated bore similar results to the index.

### Additional Systemic Models Estimated

For comparison to the main multivariate results presented, I also estimated additional systemic models. Table A1 examines an alternative coding of revolutionary waves in which the year of the onset of a revolutionary situation is



coded categorically according to whether or not it belonged to a revolutionary wave, yielding 33 years of revolutionary wave onsets, 150 years of nonwave onsets, and 288 years of no onsets between 1495 and 1965. This model has some advantages over the Poisson regressions, as it allows conjoint analysis of revolutionary wave situations and nonwave revolutionary situations and is less sensitive to missing cases or other variations in coding the dependent variable. The results, however, are strikingly similar to those presented in table 2. An economy-war model of revolutionary waves is not very predictive, given the goodness-of-fit statistics (models 1–3, table A1). For a world-systems model, hegemonic war still has the most significant effect, though periods of hegemony may curb revolutionary waves (models 4–6, table A1). Most crucially, world culture maintains its significant and positive relationship with revolutionary waves, whether compared to years of nonwave revolutionary situations or to years with no events at all (models 7–9, table A1). This result is maintained even when hegemony variables are introduced (models 10–12, table A1), replicating the results of the primary Poisson regressions presented in the text. In sum, these additional models back up the results presented in table 2 and suggest additional puzzles, such as the role of hegemony in nonwave revolutionary situations, that future efforts could examine.

In addition, I considered the effect of population change on revolution in a combined economy-war-demography model. I calculated the percentage change in total European population using estimates from De Vries 1984 and Maddison 2003 updated in 2007. Angus Maddison's estimates are based on more reliable census data from 1820 on and in previous years are benchmark estimates every 100 years. Jan De Vries's estimates of European population are lower, but the percentage change is similar to Maddison's and available in 50-year increments. I thus calculated a yearly population change percentage using De Vries's estimates until 1820 and Maddison's thereafter. The resulting indicator had no significant effect on revolution or revolutionary waves in any multivariate model estimated. Even in a separate analysis using only the more reliable data from 1820 on, there were no significant effects of population change. I thus excluded the population change indicator from the final analyses.

**Table A1** Results of multinomial logistic regression (standard errors) of lagged systemic indicators ( $t - 1$ ) for years with different onsets of revolutionary situations, 1495–1965 ( $N = 471$ )

	Economy war (models 1–3)			World systems (models 4–6)		
	Nonwave vs. none	Wave vs. none	Wave vs. nonwave	Nonwave vs. none	Wave vs. none	Wave vs. nonwave
War onset	-0.086 (0.204)	-0.014 (0.345)	0.072 (0.365)	-0.102 (0.208)	0.072 (0.346)	0.174 (0.366)
War intensity (ln)	-0.004 (0.030)	0.060 (0.057)	0.064 (0.059)	-0.003 (0.031)	-0.002 (0.060)	0.001 (0.062)
Economic downswing	0.413 (0.212)	0.431 (0.389)	0.018 (0.407)	0.503* (0.217)	0.565 (0.445)	0.061 (0.462)
Hegemony	—	—	—	0.477* (0.228)	-0.618 (0.521)	-1.096* (0.531)
Hegemonic war period	—	—	—	0.383 (0.286)	1.833*** (0.407)	1.449** (0.428)
World culture index	—	—	—	—	—	—
Constant	-0.412* (0.183)	-2.284*** (0.370)	-1.872*** (0.381)	-0.577** (0.203)	-2.321*** (0.371)	-1.744*** (0.383)
Degrees of freedom	6			10		
Model chi-square	6.13			32.66***		

	World culture (models 7-9)		All indicators (models 10-12)	
	Nonwave vs. none	Wave vs. nonwave	Nonwave vs. none	Wave vs. nonwave
War onset	-0.083 (0.204)	-0.055 (0.359)	-0.098 (0.208)	0.074 (0.360)
War intensity (ln)	-0.030 (0.035)	0.168** (0.063)	-0.048 (0.037)	0.077 (0.068)
Economic downswing	0.363 (0.215)	0.643 (0.401)	0.437* (0.220)	0.569 (0.442)
Hegemony	—	—	0.624*** (0.240)	-0.642 (0.527)
Hegemonic war period	—	—	0.514 (0.295)	1.439** (0.437)
World culture index	-0.106 (0.073)	0.430*** (0.119)	-0.189* (0.081)	0.318* (0.130)
Constant	-0.319 (0.195)	-2.910*** (0.426)	-0.468* (0.209)	-2.722*** (0.422)
Degrees of freedom	8		12	
Model chi-square	23.64**		47.13***	

Note: Standard errors are in parentheses.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

## Notes

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- 1 Related to the perspective of this study, diffusion may depend on wider social conditions and cultural interpretations that view emergent practices as relevant beyond the site of their origin (see Strang and Meyer 1993).
- 2 Future efforts could add data along these lines to the index detailed in the appendix.
- 3 A separate measurement of population change has no significant effect in any model estimated and is thus excluded from the final analysis. See the appendix for details.
- 4 Indicators for world economic cycles and great-power wars are available only from 1495 on, and data on philosophers are available only to 1965.
- 5 Five- and 10-year lags of independent variables were also analyzed but bore similar results to the 1-year lags. One-year lags are common in previous research, and extending the lag farther back in time is problematic for dummy indicators that already include an inductive appraisal of a cycle's temporality.
- 6 An alternative theory of economic effects is the J-curve of revolution. However, a dummy indicator of the 10 years following a shift from world economic upswing to downswing also has no significant effect in any model analyzed, and fit statistics indicate that this indicator is even less explanatory than the economic cycle dummy coding.

## References

- Acemoglu, Daron, Simon Johnson, and James Robinson (2005) "The rise of Europe: Atlantic trade, institutional change, and economic growth." *American Economic Review* 95: 546–79.
- Anderson, Benedict (1991) *Imagined Communities*. London: Verso.
- Anderson, Perry (1974) *Lineages of the Absolutist State*. London: Verso.
- Arrighi, Giovanni, and Beverly J. Silver (1999) *Chaos and Governance in the Modern World System*. Minneapolis: University of Minnesota Press.
- Arrighi, Giovanni, Immanuel Wallerstein, and Terence K. Hopkins (1989) *Antisystemic Movements*. New York: Verso.
- Bailyn, Bernard (1967) *The Ideological Origins of the American Revolution*. Cambridge, MA: Belknap Press of Harvard University Press.
- Barber, Benjamin R. (1995) *Jihad vs. McWorld: How Globalism and Tribalism Are Reshaping the World*. New York: Times Books.
- Barkey, Karen (2008) *Empire of Difference: The Ottomans in Comparative Perspective*. New York: Cambridge University Press.
- Beissinger, Mark R. (2007) "Structure and example in modular political phenomena: The diffusion of Bulldozer/Rose/Orange/Tulip revolutions." *Perspectives on Politics* 5: 259–76.

- Bergesen, Albert J., and Omar Lizardo (2004) "International terrorism and the world system." *Sociological Theory* 22: 38–52.
- Biggs, Michael (2003) "Positive feedback in collective mobilization: The American strike wave of 1886." *Theory and Society* 32: 217–54.
- Boli, John, and George M. Thomas (1997) "World culture in the world polity: A century of international non-governmental organization." *American Sociological Review* 62: 171–90.
- Boswell, Terry, and William J. Dixon (1990) "Dependency and rebellion: A cross-national analysis." *American Sociological Review* 55: 540–59.
- (1993) "Marx's theory of rebellion: A cross-national analysis of class exploitation, economic development, and violent revolt." *American Sociological Review* 58: 681–702.
- Boswell, Terry, and Mike Sweat (1991) "Hegemony, long waves, and major wars: A time series analysis of systemic dynamics, 1496–1967." *International Studies Quarterly* 35: 123–49.
- Brustein, William, and Margaret Levi (1987) "The geography of rebellion: Rulers, rebels, and regions, 1500 to 1700." *Theory and Society* 16: 467–95.
- Chartier, Roger (1991) *The Cultural Origins of the French Revolution*. Durham, NC: Duke University Press.
- Chirot, Daniel, and Charles Ragin (1975) "The market, tradition, and peasant rebellion: The case of Romania in 1907." *American Sociological Review* 40: 428–44.
- Collins, Randall (1998) *The Sociology of Philosophies: A Global Theory of Intellectual Change*. Cambridge, MA: Harvard University Press.
- Davies, James C. (1962) "Toward a theory of revolution." *American Sociological Review* 27: 5–19.
- De Vries, Jan (1984) *European Urbanization, 1500–1800*. Cambridge, MA: Harvard University Press.
- Eisenstadt, S. N. (1999) *Fundamentalism, Sectarianism, and Revolution: The Jacobin Dimension of Modernity*. Cambridge: Cambridge University Press.
- Foran, John (2005) *Taking Power: On the Origins of Third World Revolutions*. Cambridge: Cambridge University Press.
- Freedman, Paul (1993) "The German and Catalan peasant revolts." *American Historical Review* 98: 39–54.
- Friedland, Roger, and Robert Alford (1991) "Bringing society back in: Symbols, practices, and institutional contradictions," in W. Powell and P. DiMaggio (eds.) *The New Institutionalism in Organizational Analysis*. Chicago: University of Chicago Press: 232–66.
- Gilpin, Robert (1981) *War and Change in World Politics*. Cambridge: Cambridge University Press.
- Godechot, Jacques (1965) *France and the Atlantic Revolution of the Eighteenth Century, 1770–1799*. New York: Free Press.
- Goldfrank, Walter L. (1979) "Theories of revolution and revolution without theory." *Theory and Society* 7: 135–65.

- Goldstein, Joshua (1985) "Kondratieff waves as war cycles." *International Studies Quarterly* 29: 411–44.
- (1988) *Long Cycles: Prosperity and War in the Modern Age*. New Haven, CT: Yale University Press.
- Goldstone, Jack A. (1991) *Revolution and Rebellion in the Early Modern World*. Berkeley: University of California Press.
- (2001) "Toward a fourth generation of revolutionary theory." *Annual Review of Political Science* 4: 139–87.
- (2002) "The *longue durée* and cycles of revolt in European history," in J. Marino (ed.) *Early Modern History and the Social Sciences*. Kirksville, MO: Truman State University Press: 169–87.
- Goodwin, Jeff (2001) *No Other Way Out: States and Revolutionary Movements, 1945–1991*. New York: Cambridge University Press.
- Gorski, Philip (2003) *The Disciplinary Revolution: Calvinism and the Rise of the State in Early Modern Europe*. Chicago: University of Chicago Press.
- Gottschalk, Louis (1956) "Reflections on Burke's *Reflections on the French Revolution*." *Proceedings of the American Philosophical Society* 100: 417–29.
- Hafner-Burton, Emilie M., and Kiyoteru Tsutsui (2005) "Human rights in a globalizing world: The paradox of empty promises." *American Journal of Sociology* 110: 1373–1411.
- Hafner-Burton, Emilie M., Kiyoteru Tsutsui, and John W. Meyer (2008) "International human rights law and the politics of legitimation: Repressive states and human rights treaties." *International Sociology* 23: 115–41.
- Hazard, Paul (1953) *The European Mind (1680–1715)*. London: Hollis and Carter.
- Hironaka, Ann (2005) *Neverending Wars: The International Community, Weak States, and the Perpetuation of Civil War*. Cambridge, MA: Harvard University Press.
- Hobsbawm, Eric J. (1962) *The Age of Revolution: Europe, 1789–1848*. London: Weidenfeld and Nicolson.
- Hopkins, Terence, and Immanuel Wallerstein (1982) "Cyclical rhythms and secular trends of the capitalist world-economy: Some premises, hypotheses, and questions," in Terence Hopkins and Immanuel Wallerstein (eds.) *World-Systems Analysis: Theory and Methodology*. Beverly Hills, CA: Sage: 104–20.
- Hung, Ho-fung (2009) "Cultural strategies and the political economy of protest in mid-Qing China, 1740–1839." *Social Science History* 33: 75–115.
- Jepperson, Ronald L. (2002) "Political modernities: Disentangling two underlying dimensions of institutional differentiation." *Sociological Theory* 20: 61–85.
- Johnson, Chalmers (1966) *Revolutionary Change*. Boston: Little, Brown.
- Katz, Mark (1997) *Revolutions and Revolutionary Waves*. New York: St. Martin's.
- Kiser, Edgar, and Kriss A. Drass (1987) "Changes in the core of the world-system and the production of utopian literature in Great Britain and the United States, 1883–1975." *American Sociological Review* 52: 286–93.
- Kiser, Edgar, and Joshua Kane (2001) "Revolution and state structure: The bureaucrat-

- zation of tax administration in early modern England and France." *American Journal of Sociology* 107: 183–223.
- Koo, Jeong-Woo (2007) "The origins of the public sphere and civil society: Private academies and petitions in Korea, 1506–1800." *Social Science History* 31: 381–409.
- Krasner, Stephen D. (1976) "State power and the structure of international trade." *World Politics* 28: 317–47.
- Kurzman, Charles (2008) *Democracy Denied, 1905–1915: Intellectuals and the Fate of Democracy*. Cambridge, MA: Harvard University Press.
- Kurzman, Charles, and Erin Leahey (2004) "Intellectuals and democratization, 1905–1912 and 1989–1996." *American Journal of Sociology* 109: 937–86.
- Levy, Jack S. (1983) *War in the Modern Great Power System, 1495–1975*. Lexington: University Press of Kentucky.
- (1985) "Theories of general war." *World Politics* 37: 344–74.
- Maddison, Angus (2003) *The World Economy: Historical Statistics*. Paris: Development Centre, Organisation for Economic Co-operation and Development.
- Mann, Michael (1993) *The Sources of Social Power. Vol. 2, The Rise of Classes and Nation-States, 1760–1914*. Cambridge: Cambridge University Press.
- (2004) *Fascists*. New York: Cambridge University Press.
- Markoff, John (1986) "Literacy and revolt: Some empirical notes on 1789 in France." *American Journal of Sociology* 92: 323–49.
- (1988) "Allies and opponents: Nobility and Third Estate in the spring of 1789." *American Sociological Review* 53: 477–96.
- (1995) "The great wave of democracy in historical perspective." *Western Societies Occasional Paper*, no. 34. Ithaca, NY: Cornell University.
- (1996) *Waves of Democracy: Social Movements and Political Change*. Thousand Oaks, CA: Pine Forge.
- Merriman, Roger Bigelow (1938) *Six Contemporaneous Revolutions*. Oxford: Clarendon.
- Meyer, John W. (2000) "Globalization: Sources and effects on national states and societies." *International Sociology* 15: 233–48.
- Meyer, John W., John Boli, George Thomas, and Francisco Ramirez (1997) "World society and the nation-state." *American Journal of Sociology* 103: 144–81.
- Meyer, John W., and Ronald L. Jepperson (2000) "The 'actors' of modern society: The cultural construction of social agency." *Sociological Theory* 18: 100–120.
- Modelski, George (1978) "The long cycle of global politics and the nation-state." *Comparative Studies in Society and History* 20: 214–35.
- (1987) *Long Cycles in World Politics*. Seattle: University of Washington Press.
- Modelski, George, and Patrick M. Morgan (1985) "Understanding global war." *Journal of Conflict Resolution* 29: 391–417.
- Modelski, George, and William R. Thompson (1988) *Seapower in Global Politics, 1494–1993*. Seattle: University of Washington Press.
- Nexon, Daniel H. (2009) *The Struggle for Power in Early Modern Europe: Religious Conflict, Dynastic Empires, and International Change*. Princeton, NJ: Princeton University Press.

- Paige, Jeffery (1975) *Agrarian Revolution*. New York: Free Press.
- Palmer, R. R. (1954) "The world revolution of the West: 1763–1801." *Political Science Quarterly* 69: 1–14.
- (1959) *The Age of the Democratic Revolution*. Princeton, NJ: Princeton University Press.
- Rasler, Karen A., and William R. Thompson (1983) "Global wars, public debts, and the long cycle." *World Politics* 35: 489–516.
- Riddle, Phyllis (1993) "Political authority and university formation in Europe, 1200–1800." *Sociological Perspectives* 36: 45–62.
- Rudé, George (1981 [1964]) *The Crowd in History: A Study of Popular Disturbances in France and England, 1730–1848*. London: Lawrence and Wishart.
- Schofer, Evan, and John W. Meyer (2005) "The worldwide expansion of higher education in the twentieth century." *American Sociological Review* 70: 898–920.
- Sewell, William H., Jr. (1985) "Ideologies and social revolutions: Reflections on the French case." *Journal of Modern History* 57: 57–85.
- (1996) "Historical events as transformations of structures: Inventing revolution at the Bastille." *Theory and Society* 25: 841–81.
- Sharman, J. C. (2003) "Culture, strategy, and state-centered explanations of revolution, 1789 and 1989." *Social Science History* 27: 1–24.
- Silver, Beverly J., and Eric Slater (1999) "The social origins of world hegemonies," in G. Arrighi and B. J. Silver (eds.) *Chaos and Governance in the Modern World System*. Minneapolis: University of Minnesota Press: 151–216.
- Skocpol, Theda (1979) *States and Social Revolutions*. Cambridge: Cambridge University Press.
- Sohrabi, Nader (2002) "Global waves, local actors: What the Young Turks knew about other revolutions and why it mattered." *Comparative Studies in Society and History* 44: 45–79.
- Strang, David, and John W. Meyer (1993) "Institutional conditions for diffusion." *Theory and Society* 22: 487–511.
- Tarrow, Sidney (1993) "Cycles of collective action: Between moments of madness and the repertoire of contention." *Social Science History* 17: 281–307.
- (1998) *Power in Movement: Social Movements and Contentious Politics*. Cambridge: Cambridge University Press.
- (2001) "Transnational politics: Contention and institutions in international politics." *Annual Review of Political Science* 4: 1–20.
- te Brake, Wayne (1998) *Shaping History: Ordinary People in European Politics, 1500–1700*. Berkeley: University of California Press.
- Tilly, Charles (1978) *From Mobilization to Revolution*. New York: Random House.
- (1993) *European Revolutions, 1492–1992*. Cambridge: Blackwell.
- Trimberger, Ellen Kay (1978) *Revolution from Above*. New Brunswick, NJ: Transaction.
- Tsutsui, Kiyoteru (2004) "Global civil society and ethnic social movements in the contemporary world." *Sociological Forum* 19: 63–87.
- Tsutsui, Kiyoteru, and Christine Min Wotipka (2004) "Global civil society and the inter-



- national human rights movement: Citizen participation in human rights international nongovernmental organizations." *Social Forces* 83: 587–620.
- Wallerstein, Immanuel (1980) *The Modern World System*. Vol. 2, *Mercantilism and the Consolidation of the European World Economy*. San Diego, CA: Academic.
- (1983) "The three instances of hegemony in the history of the capitalist world economy." *International Journal of Comparative Sociology* 24: 100–108.
- Wimmer, Andreas, and Brian Min (2006) "From empire to nation-state: Explaining wars in the modern world, 1816–2001." *American Sociological Review* 71: 867–97.
- Wuthnow, Robert (1989) *Communities of Discourse: Ideology and Social Structure in the Reformation, the Enlightenment, and European Socialism*. Cambridge, MA: Harvard University Press.