**SCALE AND COMPLEXITY IN POLITICAL ECONOMY**

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Abstract

We demonstrate how the fundamentals of network science can transform thinking about global history and economic development. We show where popular linear approaches to institutional formation such as Acemoglu and Robinson’s Narrow Corridor fail to capture the vast complexity of nonlinear systems. Our contrasting interpretations rely on a far more comprehensive understanding of endogenous mechanisms of social change, the importance of network connectivity, the variability created by scaling systems to ever-larger sizes, and more generally the relationship of the system’s parts to the whole. We apply the logic of complex systems scale to understand the divergence of China and Europe with implications for liberal models of the state and society

## 1. Introduction

With their rediscovery of global history, political economists have found a new medium in which to deploy the kinds of equilibrium models that proved useful for solving the “allocation problem” in resource economics. That solution, in which a balance of supply and demand determines the allocation of goods and services, has become formalized into what can be called “economic theory.”[[1]](#footnote-1) But the core question of political economy, the formation of institutions, is not so easily formalized. In their equilibrium models, political economists are looking for new pairs of variables they can bring into balance to explain such concepts as the origins of democracy and dictatorships, of bourgeois values or of fascism, or such epochs as the industrial revolution. Instead of supply and demand, they consider the “clashes” of other causal factors, for example, bourgeois vs. feudal, markets vs. states, or networks vs hierarchies. And in *The Narrow Corridor*, economist Daron Acemoğlu and political scientist James Robinson continue this tradition with a bold claim: that liberty springs from a delicate balance of power between state and society.

*The Narrow Corridor* is a massive effort—it comes in at an impressive 542 pages—to adapt the standard equilibrium framework to questions of long-term historical change. And it does provide a number of useful insights into the self-imposed societal impediments to liberty. But any and all sweeping binary categories, including state vs. society, provide a simplistic representation of the complexity, heterogeneity, nonlinearity, and connectivity of long-lived historical regimes. In fact, the very mechanism that determines the equilibrium is far from evident. As this paper will show, Acemoğlu and Robinson’s argument is over-weighted toward the notion of public assembly, rather than contracts, as the driver of modern democratic society. Not only do they ignore some of the most important cultural movements and institutions in premodern European history, but their bias is Western, even as their topic is global. They wring conclusions from sources whose authors argue to form different points. Their “narrow corridor” is an equilibrium system that lacks clearly defined operational variables, Their “Red Queen” change mechanism seems to have sprung like Athena fully formed from the head of Zeus. They rely too heavily on path dependence (with little option for reversion, bifurcation, or abrupt transformation) and hardly at all on the many interdependencies, feedback loops, and change processes found in complex systems, of which state and society are just a part. They neglect completely the effects of international (exogenous) events. They assume a brick-by-brick institutional scale-up from village assembly to kingdom, ignoring that the democratic assemblies of villages cannot sustain a complex social structure like a kingdom. And they fail to grasp that the interdependencies of variables and the whole mean that while the whole can arise from the parts and also influence the parts, it cannot be explained solely by those parts, and certainly not just by dichotomous parts.

We will contrast their effort with another study of global economic history, *Network Origins of the Global Economy*, by one of us, Hilton Root. Both books attempt to understand the present by looking at the past. Both set out from the same place, a dissatisfaction with current models of global change and share a common motivation: to explain the deviation of global political economy from the “end of history” paradigm. Both exhibit a preference for explanations of long-term change that emphasize institutional development rather than human capital, culture, or geography. Both see the rise of the liberal West as exceptional and far from inevitable, rather than natural and preordained. Yet underneath this shared interest in the role of institutions reside differences concerning the very mechanisms of change, the importance of connectivity, how a system reacts when its size is altered, and, more generally, the relationship of the system’s parts to the whole. [[2]](#footnote-2)

As background, Section 2 explores the shared motivation to re-examine global history. This is followed by a discussion of the operational utility of the key variables—state, society, liberty and democracy— designated in *The Narrow Corridor.* These have different meanings in different historical contexts, and the failure to clearly operationalize them results in a number of factual inaccuracies. In Section 3, we discuss the two different interpretations of the key institutional attributions of European liberties. *The Narrow Corridor* emphasizes the right to assemble, while *Network Origins* identifies the right to contract. Section 4 explores the underlying analytical predispositions used in depicting the relationships of the variables and how they change over time. For example, neglecting the whole and its influence on the parts omits international relations and the transnational connectivity that held Europe together. Section 5 suggests an alternative way to scale empires, nations and states and an alternative conceptual framework for understanding long-term economic change based upon complexity and network science in which we develop an understanding of how the system as a whole operates. Wholes can arise from the parts, and they can also influence the parts, but they cannot be explained solely by the parts, even dichotomous parts. Our key insight is developed here: “A kingdom is not a village assembly scaled up. A society is not built brick by brick until a full edifice stands.” For the structure to be functional, there must be connectivity. Section 5 wraps up with a look at emerging topics in global political economy.

Our primary claim is that to understand system endurance, e.g., how cultural and historical assemblages like Europe and China survive millennia, we must be able to depict how they become a complex multilevel assemblage capable of coordinating many functions, such as succession, the transfer of property, or the mobilization of revenue and arms. There must be interconnectivity across subunits to enable complex systems to function smoothly, and for essential functions to occur at the right place and time. Thus, the key question concerning the formation of long-lived social institutions—empires, kingdoms, or states—must address how connectivity emerges among the nodes. This makes it imperative for political economists to be aware of the structural properties of networks, both in their historical and contemporary representations, and to incorporate this understanding into any analysis of them.

## 2. Background: Revisiting the Rise of the West—Why Now?

Why is there, once again, an impassioned return to history in the study of economic development? The twenty-first century opened with events that have shattered past certainties about the trends shaping global political economy. When the Cold War ended, it seemed reasonable to presume that global society was headed toward an inevitable convergence of open markets governed by liberal polities (Fukuyama 1989)⁠.[[3]](#footnote-3) This presumption is being reconsidered, with many critics suggesting that it may have been misleading. First, 9/11 revealed the zones of chaotic lawlessness and violence that Robert Kaplan had identified as early as 1994, but which had been ignored (Kaplan 1994).[[4]](#footnote-4) The twenty-first century has been marked not only by a challenge to such liberal values as the free movement of goods and people, but also by the undermining in many societies of even more fundamental liberal values, such as free speech and rights of assembly. Many nations that democratized in the post-Cold War era have become mired in corruption and a breakdown of the rule of law (Aydin-Düzgit et al. 2019). Although the gains made by liberalism of the late twentieth century have not been totally reversed, current trends would suggest that we are far from Francis Fukuyama’s end of history.

Furthermore, the idea that increased prosperity and education inevitably lead societies to more pluralistic institutions needs revisiting. The ideals of liberal democracy as the sole viable model of government are eroding. As more emerging economies follow the example that China set for rapid economic and geopolitical expansion, the challenge to the presumed universality of the West’s experience becomes apparent.[[5]](#footnote-5) Rethinking global history is one way to better grasp the challenge of a rising China and other impending changes in global order.

## 2.1 Acemoğlu and Robinson: *The Narrow Corridor*

The ways and reasons that countries transform into prosperous, stable, well-governed, law-abiding, democratic, and free societies have occupied scholars Daron Acemoğlu and James Robinson for years. Their new book, *The Narrow Corridor*, pushes beyond prior efforts by focusing on liberty: how and why human societies have achieved or failed to achieve it, and why liberty is rare in history and rare today. The book considers a wide range of case studies to ask how liberty flourishes in some states but falls to authoritarianism or anarchy in others, and how once acquired it can thrive, despite new threats. Their simple answer is, it is hard. Their deep answer is that institutions are critical; institutions help strike the balance of power in the constant struggle between state and society, creating a “narrow corridor” through which liberty and prosperity are achieved.

Their approach differs from the tradition that pits civil society and the state as incompatible opposites in the struggle for individual rights. They emphasize instead that “liberty originates from a delicate balance of power between state and society” (Acemoğlu and Robinson 2019, 11)⁠. “Both state and society must be strong. A strong state is needed to control violence, enforce laws, and provide public services. … A strong, mobilized society is needed to control and shackle the strong state” and it is secured when institutions make states and society work together (xv–xvi)⁠. The importance of this cooperation is a message they illustrate throughout the book’s with dozens of historical examples.

## 2.2 Divergent Development Paths

Acemoğlu and Robinson rely on a simple diagram (fig. 1) to explain divergent development paths among nations (2019, 63)⁠. On the horizontal axis is the power of society in terms of its norms, practices, and institutions, especially when it comes to coordinating its actions. Norms can often serve as constraints against political hierarchy but can also oppress the freedom of weaker groups and individuals.

On the vertical axis is the power of the state and its institutions, which combine the power of political and economic elites (65)⁠. The “narrow corridor” forges a balance of power that opens the way for the emergence of a “shackled Leviathan” and the gradual flourishing of liberty, but the opening is narrow, which explains why liberty is rare in history and rare today.





CORRECTIONS TO MAKEAbove, in figure text, Acemoğlu. Also don’t italicize year, and delete page number. Single-pace the two lines.

Power of the state

Power of society

Tiv of West Africa

Most premodern polities start somewhere near the bottom left, with neither powerful states nor powerful societies. The three arrows that emanate from this point trace the divergent development paths of state and society, and their relations over time. One typical path shown in the figure begins where society is more powerful than the state and can stymie the emergence of powerful centralized state institutions⁠. In this case, designated the “Absent Leviathan,” the all-powerful state is largely absent because of society’s norms against political hierarchy. These same norms, however, can be a cage that prevents members of the society from enjoying liberty. A balance of state and society is key, and this requires a mechanism to govern the underlying forces, which Acemoğlu and Robinson call the “Red Queen.” More states will move into the corridor, into balance, as institutions improve and increase.

## 3. The Variables Must be Clearly Defined to Be Operational:

One obstacle Acemoğlu and Robinson must confront is that liberty, rights, freedom, and democracy do not address the same phenomena across different centuries or for different regions. One cannot assume that these concepts possess more or less the same meaning for, say, the Arabian peninsula in the sixth and seventh centuries CE, Britain during the Glorious Revolution, or China today. One reason for the difference in meanings is that the balance between the public and private distribution of power differs between societies and even within the same society over time. The terms themselves take on different meanings in different contexts created by social, economic, and political upheavals and transformations. Liberty, for example, during the Middle Ages referred to the rights of cities and other corporate groups rather than to the general population; and during the early phases of industrialization, liberty denoted protecting the private property and the voting rights of the property-owning gentry. Today liberty conveys a broader set of values, which includes, for instance, the equality of ethnic/sexual minorities, press freedom, local autonomy, etc. In fact, Acemoğlu and Robinson refer to gender equality as part of their definition of liberty, although it has no resonance with debates of earlier centuries (xvi−xvii).

One of their key claims is that state and society are distinct phenomena. Although the topic is relatively unfamiliar in economics, a long tradition exists in political science of trying to disentangle the relationship of state and society, defining and operationalizing terms like *power*, *state*, and *liberty*. But having evolved with a multiplicity of other variables, including nationalism and war, political scientists have been prevented from prying out state and society as discreet phenomena (Herbst 1990; Smith 1991)⁠. Both are hitched to each other and to everything else in the polity, and in many complex patterns of interaction. This is why political scientists express less certainty than do Acemoğlu and Robinson about where society ends and the state begins, and generally agree that it is inaccurate to consider state and society to be comprised of discrete building blocks.

All this suggests that operationalizing the state vs. society dichotomy is far more problematic than the notion they advocate in *The Narrow Corridor*, and risks an unnecessary over-reification of the change mechanism. The boundary that separates state and society is permeable—the one flows into the other. For example, Acemoğlu and Robinson define the vertical axis as combining the “state” power of political and economic elites, but it is difficult to see how those elites are not also part of the horizontal axis, that designates the “power of society,” especially when we consider that conflicts among elites determine both the effectiveness of state institutions and, often, the very survival of those institutions and their ability to resist onslaught.

Acemoğlu and Robinson go much further still and see a consistent linkage between the strength of civil society (embracing local communities, open government, and town hall meetings, as well as demonstrations) and government efficiency and democratic rule. In this regard, they proclaim affinity for the camp of neo-Tocquevillian scholars, like Harvard’s Robert Putnam, who refer to non-governmental organizations as a part of civil society and argue for a causal relationship between the strength of civil society and the promotion of democratic rules, regulation, and governance (500).[[6]](#footnote-6) Nevertheless, Acemoğlu and Robinson add a commentary not found with other neo-Tocquevillians. They also assert that a strong civil society, in the absence of a countervailing state, has the potential to form a “cage of norms” that can pose a great impediment to liberty. The “cage of norms” scheme illustrated by their treatment of India’s caste system, offers insights that can contribute to refining the neo-Tocquevillian paradigm.

Yet comparative political scientists have shown, in the many notable examples they catalog, that with the exception of some particular cases, causation does not travel the route Acemoğlu and Robinson envisage. More generally, certain limitations concerning the neo-Tocquevillian school are now widely acknowledged. Much recent research has shown that strong civil society organization does not denote more democracy. It can also serve as a tool for autocratic states. For example, Berman’s study of the sociopolitical trajectory of the Weimar Republic (1997)⁠ shows that National Socialists (forerunner of the Nazi Party) utilized civil society organizations (CSOs) to reach German citizens during the 1920s and the 1930s. Berman argues that the rise in the number of CSOs abetted the totalitarian polity. A comparative investigation of Italian regions conflicted with Putman’s findings as well, and demonstrated a positive correlation between regions with high civil society activity and the surge of Mussolini’s fascist party during the 1920s (Tarrow 1996)⁠.

In a study of the post-communist Eastern European countries during the 1990s, Kopecký and Mudde find civil society associations organizing around ultra-nationalist and neo-fascist ideals (2003)⁠. The spread of anti-immigrant, xenophobic, sexist, and homophobic ideas is correlated with the strength of groups in the civil society organizations, prompting the idea of “uncivil” society in which illiberal forces were mobilized via civil society organization (Kotkin and Gross 2010)⁠. “Government-organized non-governmental organizations'' (GONGOs) have been utilized especially by Middle Eastern regimes to legitimize authoritarian rule by creating their own “civil society” (Heydemann 2007)⁠. Even authoritarian states enjoy a complementary relationship with civil society and draw support and legitimacy from that relationship.

In East Asia’s former tiger economies exemplified by South Korea, a conflict occurs within the civil society that actually impedes progress toward liberty. A weak civil society, the legacy of authoritarian rule, is not organized to influence government decision making. However, business is very well organized to influence government. The small, disorganized middle class, often dependent on the state, is not powerful enough to influence policies; as a result, the distribution of power is dominated by concentrated wealth, diminishing state effectiveness. Furthermore, the high cost of political campaigns makes candidates dependent on the wealthy few. In return, those big contributors want favors, not polices from which everyone benefits. This kind of conflict cannot be categorized in terms of a state vs. society dichotomy (Dore and Jackson 2019). It echoes patterns found in Old Regime Europe and illustrates why attributing only uniquely “positive” contributions of (civil) society to freedoms and liberties is indefensible. Probing the origins of the French Revolution, Tocqueville found that the monarchy propped up village assemblies, but this did not make society freer. To the contrary, in Old Regime France, a state strength correlated with reinforcement of the role of village assemblies as a means of circumventing the political control of the landed nobility over the peasantry.[[7]](#footnote-7) In other words, the relationship between state and society was triadic, not dyadic; it involved kings, lords, and peasants. Similarly, in Britain in the centuries following the Norman invasion, the common law was promoted in local juries to give the crown leverage over the great landlords.

Historian David Bien (2015) shows that, paradoxically, during the Old Regime in France, noble privilege and state modernization often went hand in hand. The proliferation of privileged groups, such as guilds and tax-exempt nobles, often thought to have been the financial ruin of the Bourbon monarchy, were allowed to expand so the centralizing state could borrow from them. Bien’s research suggests another paradox: the habits of democracy generally considered by historians to have developed in opposition to the privileges of corporate groups could develop within these bodies and be transferred to the wider society once the Revolution removed the barriers separating the privileged orders from the rest of society. The spread of democracy in France reverses the sequence proposed by Acemoğlu and Robinson. Boris Frankel, likewise emphasizes that the struggle for democracy and participation occurs within state institutions and is not only a contest of state vs. society (1983, 82–106)⁠.

The emerging view from comparative political studies, that we will expand on using insights from complexity science, is that the state is the politically organized part of society, structured to protect and promote the interests of society, which is much more than the state; and that collaboration with the state does not always move society toward more democracy. Causality can run in multiple directions and is the result of multiple variables interacting. State and society are intertwined in many complex ways. State and society are not dichotomous; instead, they constitute a single and intricately intertwined variable interacting with many other variables. A state without a society cannot exist, although a society can exist without a state. Acemoğlu and Robinson’s conceptual framework on the balance between state power and civil society fails to address any academic tradition in the literature directly, is not readily operationalized and is prone to definitional controversies (2019, 182–90)⁠.

## 3.1 The European Origins of Liberty

An important area of difference between *The* *Narrow Corridor* and *Network Origins* concerns the interpretation of Europe’s Germanic and Roman heritage. Both agree that a confluence of Roman and Germanic practices played a critical role in forging Europe’s unique cultural heritage. Acemoğlu and Robinson attribute the rise of liberalism in Western Europe to the combination of Roman institutions with the remnants of ancient Germanic assemblies. This account of Europe’s movement into the “narrow corridor” romanticizes the notion of “the takeover of Europe at the end of the fifth century by democratically organized tribal societies centered on assemblies and norms of consensual decision making” (153).

In *Network Origins* the Germanic legacy that matters most is feudalism—it defined the bonds among the European elites and shaped the subsequent balance of power between royals and the aristocracy. Feudalism played a persistent role in formation of Europe’s unique political institutions and was the essence of the kinds of network pathways that were to characterize the makeup of authority structures. It played a far greater role than primitive “democratic assemblies,” for which there is little evidence in the sources that Acemoğlu and Robinson cite. Assemblies can be found in the vestiges of many societies around the globe and were not unique to early Germanic culture. Let’s review two sources.

Historians of Europe generally attribute the origins of democratic “assemblies” to the Greeks, not to early Germanic societies, as Acemoğlu and Robinson claim. The origin of Greek democracy often resides in the army, where citizen-soldiers gathered together to receive orders from their leaders. The “democratic assemblies” in Germanic society on which Acemoğlu and Robinson build their theory had little real power, since the decisions about war or peace and tactics were made by the tribal chiefs and other clan elders (Hirst 2009, 69).

Furthermore, historians of early European society generally emphasize the lasting legacy of feudalism on the relationship between state and society. Feudal monarchs depended upon the allegiance of great landowners, who passed down their properties by kinship ties. This power enabled the lords to defy or ignore monarchs. The king could call the knights and nobles to wage war, but that force could be used against the king, making it difficult for a king to bring the great families of the realm to heel. Since the lords had bargaining power, what was truly unique in the European case were the oaths of allegiance that involved mutual responsibility, forming an implicit contract between ruler and ruled that continued to play a role in formation of state authority throughout European history (Hirst 2009, 83).

Historian Chris Wickham’s books on medieval Europe and the Roman legacy are the only sources that corroborate Acemoğlu and Robinson’s claims. But his interpretations diverge from theirs. Wickham writes in *Medieval Europe* (2016) that the societies of ancient Germanic Europe, including Norway, Iceland, England, and Poland, included early tribal assemblies. He explains that early states were not kingdoms, but rather tribes; that peasants were relatively independent; and that therefore assembly politics were a crucial feature in 600−1000 AD. Kings, where they existed, deferred to assemblies quite often, particularly in Sweden and Norway (82), two cases not cited by Acemoğlu and Robinson. However, he also emphasizes the relative independence of the peasantry, explaining that elites did not influence northern Europe as much as we think, especially not as landowning elites, and particularly not in Scandinavia (83). While superficially this supports Acemoğlu and Robinson’s claims, it does not address how the village assemblies transitioned over time into democratic institutions. Instead, tribal assemblies were makeshift political institutions that were born out of necessity and tight kinship ties. These assemblies eventually died out, and when they resurfaced in the eighteenth century, they were re-created by kings to serve as the basis of village administration to weaken the lords’ control over the peasantry.[[8]](#footnote-8) The part of civil society that kings feared was the nobility, not the village assemblies. Where the assertive dynastic stance of the European aristocracy was a source of resistance to the expansion of central state authority, kings frequently enlisted village assemblies to counterbalance the power of local lords.

In *The Inheritance of Rome: Illuminating the Dark Ages 400−1000*, Wickham outlines the importance of ancient Roman institutions at a time that 90 percent or more of the population of Europe lived in villages that were hardly egalitarian communities, even if they did not have lords, and even if large landowners were marginal or absent. A complex pecking order existed in which peasants were divided between owners and tenants, and between richer and poorer owners. He reports a free/unfree dividing line, separating people who had legal rights—who could bring cases in public law courts, engage in local decision making, and perform duties, such as army service—from people who had none. Finally, Wickham highlights early feudal relationships, which Acemoğlu and Robinson ignore.

3.2 Size Matters, Scale and the Laws of Growth

The assertion that participatory village assemblies are the hearth of the West’s unique democratic heritage is based on a linear and discredited conception of what in physics is referred to as scaling, or how a system reacts when its size changes.[[9]](#footnote-9) In physics it is understood that as things grow larger, their properties will continue to change. If an elephant had the same leg proportions as a lizard or a mouse, it would collapse under its own weight. In an analogous fashion, the same participatory norms that enable a village or a clan to be governed will fail when applied to a kingdom or a state. Acemoğlu and Robinson assume there are no effects to scaling up, but this conflicts with what we know about complex systems: At each scale, different rules are likely to apply. Democratic assemblies of villages lack the complex social structure to support a kingdom. This is where the crucial role of feudalism comes in—it was essential to the scaling up of connectivity among fragmented feudal landscapes into kingdoms built upon dynastic marriages among royal families whose lineages traced back to early Germanic descent. And from these kingdoms were formed the modern states of Europe.

Social systems scale nonlinearly. Moreover, what is relevant at one scale is not relevant at another and vice versa. The fundamental units of social organization do not appreciably change with size or complexity of the whole. To create a nation state or empire, we do not have to reinvent the format of the lower-level organizations any more than engineers have to reinvent the faucets or the electrical outlets when designing a skyscraper. And how villages are organized may not matter very much if we are concerned with the longevity of kingdoms or empires.

Both Acemoğlu and Robinson, and Root cite Marc Bloch and his work *Feudal Society: Social Classes and Political Organization* (1964), but Acemoğlu and Robinson miss the most important meaning of Bloch’s classic work, which emphasizes the importance of feudalism on the permanent social and political structure in Europe that shapes the relationship between the state and society to this day. Bloch relates the long trajectory from lasting insecurity and conflict to the re-concentration of authority in kingdoms and territorial principles that finally gave them shape (271). Kingdoms are not village assemblies scaled up. They depend on bonds among the warrior elites.

Bloch declares that the originality of feudalism lay in the emphasis it placed on the idea of a pact capable of binding the rulers; in this way, oppressive as it may have been to the poor, “it has in truth bequeathed to our Western civilization something with which we still live” (1964, 452). The feudal bond among the governing class left a lasting idea of the social contract and obligations to state—democracy derives from the oath of fealty that established reciprocal obligations. This oath, not village assemblies, is the foundation of Europe’s “narrow corridor.” In sum, Acemoğlu and Robinson’s omission of feudalism and its lasting impact on the relationship between rulers and the people is shortsighted, and makes their analysis of the rise of Western Europe incomplete. The feudal bond much more concretely than village assemblies influenced the emergence of democracy in Europe.

**In the transition literature, it is widely recognized that elite-led rather than bottom-up movements are likely to be stable.** As an alternative to Acemoğlu and Robinson’s view that order building in Europe is a bottom-up process, in *Violence and Social Orders* (2009), Douglass North, John Joseph Wallis, and Barry Weingast argue that stability of postmodern European society evolved from compacts among elites to protect their privileges, which they came to view as liberties (2009). For a theory of liberal development to be plausible, they argue, it must either be consistent with elite interests or explain how non-elites were able to overcome elite resistance. Elites do not cede power or wealth voluntarily, yet their individual privileges evolved into generalized rights for entire classes, and those rights spread over time in ways that provided immediate advantage to elites, but which over the long term drifted downward, diluting their dominance.

## 3.3 The Change Mechanism

Acemoğlu and Robinson’s early contributions to institutional analysis describe change process in terms of equilibrium dynamics. In *The Narrow Corridor*, they take equilibria analytics to another level by introducing the “Red Queen” (40–42). This is equilibrium thinking on steroids, and is heralded by them as being capable of explaining anything. “The Red Queen effect refers to a situation where you have to keep on running just to maintain your position” (41). But as the all-purpose mediator of state/society relations, it is metaphoric and unstructured; they are explaining institutional transformation in literary rather than quantitative terms. The near-perfect equilibrium between the state and society, the one that opens the door to liberty, is their “narrow corridor,” which symbolizes a condition in which neither state nor society is dominant. Both are strong and must therefore find ways to work together—but it is unclear how the process begins. It’s easy to start an analysis of equilibrium when we know what is already in the setup, but how were the elements that constitute the structure of state and society selected in the first place? What are the mechanisms that govern the formation of that structure? Are there higher-order interactions that we need to be aware of, and whence do they arise? We will argue later that the setup, the arena of contestation and cooperation between state and society, requires innovations in connectivity that transform large-world systems into small-world systems.

Additionally, the Red Queen analogy appears to leave no room for attaining balance once either state or society becomes dominant. The interaction Acemoğlu and Robinson describe is unidirectional. In the case of a strong society in a weak state, “the state and elites are too weak relative to society’s norms against political hierarchy ... society will try to cripple the power of elites and undercut political hierarchy, so the power of state-like entities declines further, and the Absent Leviathan gets established even more firmly” (65). Conversely, in strong states with weak civil societies, “the arrows travel toward yet higher levels of state power. In the meantime, the power of society gets eroded as society finds itself no match of the state. This tendency is exacerbated as the Despotic Leviathan works to emasculate society so that it remains unshackled” (65). Once state and society are out of balance, once either Alice or the Red Queen pulls ahead in the race, Acemoğlu and Robinson’s metaphor leaves little room for a return to parity. They assert that “path dependence coexists with occasional transitions from one type of path to another” but then note that such “coexistence is particularly true for societies *in the corridor* [emphasis added] because the balance between state and society is fragile and can easily break if society ceases to be vigilant or the state lets its capabilities atrophy” (67). It follows then that their model does not describe a path from either Shackled or Absent Leviathan into the “narrow corridor.”

The model provides a useful descriptive tool for looking at a state in a particular moment, but it provides no mechanism for balancing state and society if one gains ascendency over the other. If strong states will use their strength to suppress civil society, and strong societies will use their strength to resist the development of the state, then once out of balance, a state should remain out of balance. If the Despotic Leviathan and “cage of norms” behave as described, then we would expect the number of states within the “narrow corridor” to decline over time as some states move out of equilibrium and exit the corridor to right or left, while few states would ever be able to enter the corridor. In fact, the number of states in the corridor would increase, albeit in fits and starts.

Historical regimes are a class far from equilibrium systems. Knowledge, practices, and norms fluctuate continually; negotiation and contestation are continual. With multiple variables interacting in an environment that is open to continuous feedback, efforts to distinguish what is exogenous from what is endogenous can be futile. Change processes do not all occur on the same time scale. Moreover, brief patterns of change and long patterns of stability observed in social systems need not denote equilibrium. **There are antecedent conditions that determine whether a critical juncture that resets the equilibrium will result in a legacy of enduring institutions.** When a major change in a system’s global properties arises, sometimes suddenly, from small, local-level variations, the agent responses can produce emergent outcomes.[[10]](#footnote-10) Even minor local events or modifications in the controlling variables can engender forceful movements for change, as we will see in the next example, where a small change in beliefs that underpinned the Reformation of the sixteenth century.

The Reformation can be viewed as a critical juncture that re-established the equilibrium between Church and society, but that relationship was far from stable long before the critical juncture transpired. Several significant, already long-existing religious and social currents made Luther’s dissenting position possible. First, there was a signal change in Christian piety and self-understanding in the centuries prior to Luther, when a fifth-century discussion of what determines whether one goes to Heaven or Hell became the central question of the tradition. Thinking this to have always been true of Christianity, modern Christians rarely date the signal aspect of this change and its importance in the debates of the Reformation. Martin Luther, the causal agent of so much liberal historiography of the Church, may be better understood as a reflection and servant of his time rather than a creator of it. Remarkably, the Reformation, a milestone in the development of state and society relations in European history, does not receive a single mention in *The Narrow Corridor*.

## 3.4 External Effects and International Relations

There is no room for international relations in *The Narrow Corridor*. As mentioned earlier, the emergence of liberties and freedoms relies on the so-called “Red Queen” effect, which is induced by endogenous processes or forces in the struggle for power between state and society (72−3). The model assumes a closed world; but states exist in “state systems” and derive much of their identity, including notions of liberties and freedoms, from the system-level qualities that flourish through regional and global systems of international relations.

Sometimes it’s not the institutional structure of a particular regime that is decisive, but the relevant context of the larger system in which a particular state is entwined. Many forces that result in domestic policy change are induced by external pressures; this is because states are parts of larger wholes, and this limits the Red Queen effect. Let us return to a topic that is central to Acemoğlu and Robinson’s analysis, the spread of democracy. Can we explain West Germany’s democratic transition without referring to its defeat in World War II and its occupation by Allied powers? Indeed, we must look to the external environment to understand the reconstruction of democracy in West Germany after World War II. Earlier in European history, the external environment—meaning the continent’s various kingdoms—united in support of one another to prevent breakaway republics from forming. External forces also dimmed the prospects of secular democracy in the Middle East during the Cold War as regional leaders played one side against the other by offering policy concessions that would have been difficult for democratically selected leaders to offer. Even now in that region, the balance between authoritarian and democratization processes reflects shifting geopolitical alignments as leaders broker offers of support to find the one that most benefits the ruling coalition. Throughout the Cold War and again today, the embrace of democratic governance by regime leaders in South Korea, Taiwan, the Philippines, and Mexico were in part driven by a different logic, albeit externally imposed, their complete dependence on economic and security alliances with the United States (Root, 2008; Levitsky and Way 2010). The structural policies of the European Union have been critical to the promotion of democracy in post-socialist countries during the 1990s and 2000s.

To whatever extent international networks can redistribute power within states and globally, the Red Queen effect is constrained. Another way to understand this constraint is to consider that the Red Queen lives in the construct of a dyadic world; the fortunes of one determine the fortunes of the other. However, the building blocks of long-lived historical regimes are comprised of many possible interconnected linkages or relationships. Far more deterministic in social history are triads, when a third node alters both of the other nodes and changes the relationship between them. The relationship between king, nobility, and peasantry in Old Regime France and England are examples we have already mentioned. The nodes of any single triad within a network can simultaneously be parts of other triads, formed by any three linked nodes. Changes in each node can change the other nodes attached to it, so any triad is always in flux with no possible equilibrium. Clearly, the Red Queen notion of historical dynamics does not include all the vertices and edges that represent the full set of possible linkages among agents. This is one of the reasons why the progress of human society cannot be divided into binary antagonisms, such as the opposition of state and society, markets and states, or networks vs. hierarchies. It is also why we cannot hope to explain long-term institutional change without considering the relevance to international relations of wars, conflicts, and alliances among states, the consequences of this for regime types, and the levels of freedoms within states.

## 4. Multilevel Network Effects

In this section we address deep conceptual questions about how social systems form and obtain their structure over time. Network theory leads us to identify **strong interconnectivities** that transcends national boundaries, which is why **episodes of major discontinuous institutional and cultural change, such as the Renaissance, the Reformation, or the Enlightenment, spread from city to city across the continent.** Europe possessed metaphorical continent-wide information networks, or “broadband,” that sped up the continent’s cultural evolution. Among the two most important were the hierarchy of Church fathers and the interconnected networks of royal families that spanned the entire continent and formed a global network of information and communication that held the kingdoms of Christendom together; they were to the body politic what, generally speaking, neural networks are to the body.[[11]](#footnote-11)

4.1 Scaling Historical Regimes

Secondary networks also crisscrossed the continent, but with a smaller role to play in maintaining the stability of the whole. Elite members of the European nobility often maintained longstanding regional ties. For example, landed aristocratic dynasties and merchant dynasties, especially the members of diaspora minorities like the Huguenots or Jews, frequently intermarried and formed bridges between states. The Jesuits functioned like a Europe-wide information network in their role as confessors to the high and mighty; the faculty of law schools disseminated ideas from one regional center to another; the printing press enabled heretical sects to reach coreligionists spread throughout the continent, England, and eventually into the New World. These bottom-up networks could facilitate the long-term cultural evolution of the continent as a whole by enhancing each group’s adaptiveness to changes in the larger environment. Mention of such interconnectivities is absent from *The Narrow Corridor*, which does not mention Europe’s royal families and scarcely refers to the Church.

In Acemoğlu and Robinson, again, the formation of institutions is depicted as a linear aggregation of the parts, i.e., the scaling of primitive village participation into full-fledged democratic societies that protect individual rights and liberties. We maintain that it is not enough to find the lowest possible level, and then to presume that higher-level processes arise from lower-level ones; in complex systems the whole influences the parts, and a complete analysis must integrate not only how the parts influence one another and the whole, but also how the whole influences the parts.[[12]](#footnote-12) Historically, this scaling up was accomplished by developing webs of communication through hubs that connected all levels of society rather than the layering of one primitive assembly upon another. Long-enduring civilizations, states, or societies require wiring across space time and across social groups. For the structure to be functional, there must be connectivity. The long-term survival or resilience of the whole depends upon hierarchical bridging and the creation of networks that can manage system-wide feedback, transporting information across all scales, and enabling interconnectedness and interdependency throughout the system. When these fail, the system disaggregates.

In sum, *Network Origins* fundamentally contrasts with the *Narrow Corridor* in its recognition that the singular design challenge of large and complex socioeconomic organizations is the need for communication networks that reach across the entire system. In the *Network Origins* model, connectivity is pivotal to the analysis of change. The flow of “information” is essential for the processes of social transformation and continuity in historical regimes of long duration. These regimes are of a universal class whose structures comprise many differing patterns of intersections but which share one fundamental property: they are giant webs of communication in which, at some fundamental level, every node is processing “information” from the other nodes that form the system.

Today the importance of digital technologies has made us aware of how control of information is inextricably linked to the broader national interest, regime survival, and international standing. Yet more than a millennium ago, a world sparsely governed by state officials on the ground could be woven together by common beliefs and symbols that represented the unity of the collective whole. Long-lasting historical regimes endured because of their ability to connect the parts—the hamlets, villages, and townships—and coordinate activities among them, no matter how remote or sparsely administered, through a global network of information sharing that enabled a collective memory and sense of common identity. Information in the form of shared myths and beliefs knitted people together, allowing patterns of connection that covered a wide range of social phenomena, including collective action, status, cohesion, morality, norms, markets, and trust.[[13]](#footnote-13)

4.2 Making the World Smaller via System-Wide Communication

Thus far we have said that the variability that results from scaling social order is misrepresented *The Narrow Corridor*. Here is a critical idea about the process of social transformation that is largely counterintuitive: The theoretical “large world” that can be described as tribal, isolated, and self-sufficient, connected by nothing more than kinship ties, must be transformed into a theoretical “small world,” in which kinship ties are superseded by social, cultural, and institutional linkages. The distinction between the two worlds is that the path lengths from one node to another in the latter are quite long and few, and can provide a path from every node in the system to every other node. In the former, the paths are short and numerous. Village communities would no doubt have remained in a world where little progress ever happens if not for the interconnectivity of the elite clans. In a large world without bridging, there will few connections across the entire system to enable collective action on a meaningful scale. Thus there will be little systemic change, and what occurs will be minuscule.

The large world can support only limited communication, so most information travels locally, and the influence of any particular node on any other is local. Let us say we have 10 billion people in a single network. If we treat it as a large world projected on a two-dimensional space (∝=\_1\_/\_2\_), then the average path length, the distance between any two nodes, can be estimated to be 100,000 (huge). Meanwhile in a small world, the average path length is log(10 billion) = 10. In a large world, change remains within the community where it first occurs because there are few channels to transmit change between communities.

This transformative “shortening” of path lengths can occur through many candidate dynamical processes, but generally it occurs through the self-organization of individual nodes (actors) that bridge disparate clusters of a large network, thereby shortening the distance that information must travel from one community to another. This “shortening phenomenon makes it more probable that new information, social norms, and cultural practices are transferred from one entity to another. The model, while empirically discovered by Travers and Milgram (1977), was explained by Watts and Strogatz (1998).[[14]](#footnote-14) The process is more commonly known as bridging, and the nodes that take on this community-spanning role are called bridge nodes.

Once trade and ruling networks form, the large world becomes smaller, enabled by the building of institutions, norms and common beliefs. Viewing the creation of social order over time as a transition from a large to a small world opens up new horizons for our interpretation of history and raises a second question, that of structure. And here we find an irony: the same small-world networks that account for the formation of regimes can also allow for higher-level order to emerge. Different network structures can endow the whole with different global properties. A contrast of network formation of East and West will illustrate how the structure of global networks can vary the impact this has on the system’s behavior and the system’s propensity for innovation and longevity.

## 4.3 Network Structure and Differences between China and the West

Understanding how patterns of growth arose in complex social systems of the past has much to teach us about current global trends. A different network logic shaped the relationships between rulers and elites in Europe, and those in China, where the system had developed its own small-world connectivity, enabling it to create a giant whole out of many disparate parts. But unlike Europe, China was unified under a single emperor. Instead of marriage alliances among powerful members of the landed nobility, the web that transformed information dissemination across the Chinese system depended upon civil servants, the mandarins. These career bureaucrats also had a religious and ideological role, and their ability to communicate was based on a common Confucian curriculum, and a common written language.

China’s imperial dynasties consistently resembled a star-shaped network, characterized by the degree of centrality of the central node. In a star network, information can spread quickly through the central node to all parts of the network; there are also cutoff mechanisms throughout the system that can help or restrict information dissemination across different parts. Star-shaped systems are also more prone to catastrophic failures and can descend into chaos when the central node is destroyed, causing the entire network to collapse. In imperial China, the mandarins controlled the flow of information from the regions to the center, while the emperor, the central node, controlled the flow of information across the vast empire. There were deliberate limits placed on lateral connectivity. New nodes were created by the allocation of resources through a central source. This had the advantage of conserving resources used to grow the network, but it also stifled heterogeneity and commercial competition, since the emperor restricted the lateral dissemination of resources as well as ideas.

Since mostly Western regimes end up in the narrow corridor, this would seem to classify the rise of the West, with its emphasis on personal liberty, as the standard of progress in the world (Acemoğlu and Robinson 2019, xii). Of course, the rise of East Asia also represents a huge portion of human progress, defined as health, literacy and economic well-being as well as law and order and the ability to plan and execute large scale projects. Acemoğlu and Robinson pay little attention to how these historically different design characteristics arose or what function they served, yet they are willing to predict not only which system will win but how East and West systems might eventually be blended together. Their conclusions about China’s future prospects mirror those of Fukuyama, and are largely negative (67, 201-236). This is surprising because from the book’s outset, the authors dispute Fukuyama’s contention that history will end with “an unabashed victory of economic and political liberalism.” Yet they share his belief that liberal governments and markets alone are compatible with complex modern societies, and that authoritarian regimes are doomed to fail because their structural weaknesses will prevent them from keeping pace with rapid technological development. China’s emphasis of the “rights of the state” over the rights of individuals, they assert in an echo of Fukuyama, will cause the government to lose legitimacy among citizens as they gain increasing access to information.

Although the structure of the Chinese small-world imperial network was vulnerable to the disruption of its central node, this weakness of past regimes does not necessarily foretell the future of China’s current assemblage. For one thing, China has now become a basin of attraction in the region and an example for other developing nations whose rulers do not wish to be bound by Western aid constraints. Digitally sophisticated autocracies (as well as corporate data platforms) may even gain unanticipated advantages over democratic regimes that depend on a more distributed structure for their information processing ability (Harari, Yuval Noah. 2018). To the extent that a small number of elites will make decisions on behalf of their populations, crush dissent, and amass vast power, China’s model of global order may be unattractive to people in the West. But its remarkable economic performance over the past four decades makes its model appealing to leaders and populations that value cultural autonomy and seek to limit *external* (presumably Western) rule and influence.

How technological change will shape the next stage of history will depend on its interplay with network structure, as both East and West seek to mold the flow of information and to control the hubs that are the primary sources of dissemination. The liberalization of information has sustained grassroots movements like the Arab Spring, #metoo, and the full spectrum of political, religious, and community-interest populism. But there is also a countercurrent that poses a strong challenge to the liberal order, as states, corporate power centers, and malevolent actors find ways to weaponize information (and disinformation) (Farrell & Newman, 2019). Clearly, history has not ended, yet *The Narrow Corridor* postulates that the important relationships and technologies that will shape the future of liberty are already known. They provide an unpersuasive guarantee that history or technology is working to ensure the survival of liberal societies.

## 5. Conclusion: Emerging Topics in Global Political Economy

Acemoğlu and Robinson provide an appealing model for those hoping to promote liberal societies. Its appeal lies in its very simplicity. However, their key variables are without clear definitions and do not refer to the same phenomena across space and time. Without clearly defining the limits of such key concepts as liberty, rights, freedom, and democracy—and indeed state and society—it is impossible to operationalize them conceptually or to provide concrete policy prescriptions.

A further impediment to policy relevance is their notion that change is driven by a single dichotomous variable, the state/society relationship, and that if the state is illiberal because it is too strong, then civil society must work to strengthen itself. Or that if civil society creates a “cage of norms,” then the state must work to strengthen its institutions at the expense of civil society. Or that once the two reach equilibrium, both must work to maintain their path along the narrow corridor. This is no policy solution. There is no single dichotomous variable at play, and no clear way to determine when they are in balance. Because the state and civil society are intertwined in a web of sometimes invisible connections, working to strengthen civil society might create balance, or it might completely destabilize the state, reversing the power relationships. Strengthening state capacity to balance a strong traditional society can easily overshoot the mark and replace an Absent Leviathan with a Despotic Leviathan.

Acemoğlu and Robinson’s dyadic model cannot account for multidirectional change over time and across space, but network theory can. In network science and complex systems analysis, we have new and essential tools to understand the structures and evolution of social order that will influence evolving power relationships. Differences in network structure, in how the connecting pathways spread information, will continue to have fundamental impacts on developmental processes, as well as important implications for future global conflict and cooperation. Being able to describe the emergence of new network structures based on changing relationships between nodes within the system and on inputs from outside the system can help us to understand which actions are likely to be system preserving and to foresee system-wide effects, even those that are not anticipated by the actors that implement them.

In complex systems, the structure of the whole influences the parts even as the evolution of the parts and their shifting interrelations recast the structure of the whole. This model is far more powerful for understanding what has happened, but it does not provide policy makers with a simple formula for engineering change or predicting the future. Instead, it describes how structure influences behavior by identifying the stability principles of the system and how feedback loops operate among and between agents in the system. As a result, it can help us to narrow the range of reform options to those that actually have a chance of providing system managers with meaningful alternatives. This approach can also help policy makers distinguish the mechanisms that are humanly devised from the self-reinforcing features of structure. It can help us to better understand how changes to a part of a system will affect its overall performance, making us better prepared for the risks of a hyperconnected world.

We are fortunate to live in a relatively peaceful time to think about whether the future lie in the liberal West, or are East and West destined to blend together as a global culture? Communities at every level of political organization, from the very local to the national and transnational, have a range of governance options to choose from that will shape the principles of interaction and the future trajectory of liberty in the world. But just how peaceful the future might be is uncertain. Our greatest challenge will be to overcome linear thinking that can cause a crisis of systemic severity.

As the global economy becomes more highly coupled, and its components more intricately woven, we are more likely to face deceivingly simple events that will not scale in a linear manner, but may trigger massive shifts. Such events, a global pandemic or an ecological meltdown, often advertised as impossibly unpredictable black swans, are actually grey rhinos, large and dangerous, but predictable and predicted. If we fail to grasp the nonlinear dynamics of how complex systems scale, we will we will fail to build necessary resilience into the system and actually multiply the risks we face. Should a black swan event appear in our future, like a meteor falling from the heavens, network structure will still circumscribe our options, making it all the more imperative to understand the network origins of the global economy.

## References

Acemoğlu, Daron, and James A. Robinson. 2019. *The Narrow Corridor: States, Societies, and the Fate of Liberty*. New York: Penguin Press.

Aydin-Düzgit, Senem, Tom Gerald Daly, Ken Godfrey, Staffan I. Lindberg, Anna Lührmann, Tsveta Petrova, and Richard Youngs. 2019. *Post–Cold War Democratic Declines: The Third Wave of Autocratization*. <https://carnegieeurope.eu/2019/06/27/post-cold-war-democratic-declines-third-wave-of-autocratization-pub-79378>.

Bavel, Bas Van. 2016. *The Invisible Hand?: How Market Economies Have Emerged and Declined since AD 500*. First edition. Oxford: University Press.

Beinhocker, Eric D. 2008. *The Origin of Wealth: The Radical Remaking of Economics and What It Means for Business and Society*. Reprint. Boston, Mass: Harvard Business School Press.

Berman, Sheri. 1997. “Civil Society and the Collapse of the Weimar Republic.” *World Politics* 49 (3): 401–429.

Bien, David D. 2014. *Interpreting the Ancien Régime*: David Bien. Edited by Rafe Blaufarb, Michael Scott Christofferson, and Darrin M. McMahon. Oxford: Voltaire Foundation.

Bloch, Marc. 1964. *Feudal Society*. Chicago: University of Chicago Press.

Bossenga, Gail. 1991. *The Politics of Privilege: Old Regime and Revolution in Lille*. New York: Cambridge University Press.

Davies, Stephen. 2019. *Wealth Explosion: The Nature and Origins of Modernity*. Brighton: Edward Everett Root.

Diamond, Jared M. 2019. *Upheaval: Turning Points for Nations in Crisis*. First edition. New York: Little, Brown and Company.

Dore, Giovanna Maria Dora, and Karl D. Jackson. 2019. “Problems of Measurement of the Relationship Between Civil Society and Democracy When Using Survey Data*.” Social Indicators Research*, December. <https://doi.org/10.1007/s11205-019-02235-4>.

Duindam, Jeroen. 2015. “Dynasty and Elites: From Early Modern Europe to Late Imperial China.” In *Dynastic Identity in Early Modern Europe Rulers, Aristocrats and the Formation of Identity*, edited by Liesbeth Geevers and Mirella Marini. New York, New York: Routledge.

Farrell, Henry, and Abraham L. Newman. 2019. “Weaponized Interdependence: How Global Economic Networks Shape State Coercion.” *International Security* 44 (1): 42–79. <https://doi.org/10.1162/isec_a_00351>.

Ferguson, Niall. 2017. “The False Prophecy of Hyperconnection.” Foreign Affairs 96 (5): 13.

Frankel, Boris. 1983. *Beyond the State? Dominant Theories and Socialist Strategies*. Contemporary Social Theory. London: Macmillan.

Fukuyama, Francis. 1989. “The End of History?” *The National Interest*, no. 16: 3–18.

———. 2011. *The Origins of Political Order: From Prehuman Times to the French Revolution*. 1st ed. New York: Farrar, Straus and Giroux.

———. 2014. *Political Order and Political Decay: From the Industrial Revolution to the Globalization of Democracy*. First edition. New York: Farrar, Straus and Giroux.

Furet, François. 1978. Penser la Révolution française. Bibliotheque des Histoires. Paris: Gallimard.

Harari, Yuval Noah. 2014. Sapiens: A Brief History of Humankind. First U.S. New York: Harper.

———. 2018. “Why Technology Favors Tyranny.” *Atlantic*, October 2018.

Herbst, Jeffrey. 1990. “War and the State in Africa.” *International Security* 14 (4): 117–39. <https://doi.org/10.2307/2538753>.

Hexter, J. H. 1961. *Reappraisals in History*. London: Longmans.

Heydemann, Steven. 2007. “Upgrading Authoritarianism in the Arab World.” The Brookings Institution. <http://search.proquest.com/docview/1820750805/?pq-origsite=primo>.

Hirst, J. B. 2018. *The Shortest History of Europe*.

Huntington, Samuel P. 1996. *The Clash of Civilizations and the Remaking of World Order*. New York: Simon & Schuster.

Kaplan, Robert D. 1994. “Coming Anarchy: How Scarcity, Crime, Overpopulation, Tribalism, and Disease Are Rapidly Destroying the Social Fabric of Our Planet.” *Atlantic*, February 1994. Gale In Context: Opposing Viewpoints.

Kopecký, Petr, and Cas Mudde, eds. 2003. *Uncivil Society? Contentious Politics in Post-Communist Europe. Routledge Studies in Extremism & Democracy*. London ; New York: Routledge.

Kotkin, Stephen, and Jan Tomasz Gross. 2010. *Uncivil Society: 1989 and the Implosion of the Communist Establishment*.

Levitsky, Steven, and Lucan Way. 2010. *Competitive Authoritarianism: Hybrid Regimes after the Cold War. Problems of International Politics*. New York: Cambridge University Press.

* Maitland, Frederick. [*The Constitutional History of England,*](https://archive.org/stream/constitutionalh00mait#page/n7/mode/2up) Cambridge University Press, 1909 [1st Pub. 1908].
* [*Equity. Also the Forms of Action at Common Law*](https://archive.org/stream/equityalsoformso00mait#page/n5/mode/2up), Edited by A.H. Chaytor and W.J. Whittaker, Cambridge University Press, 1910.

Morris, Ian. 2010. *Why the West Rules-- for Now: The Patterns of History, and What They Reveal about the Future*. 1st ed. New York: Farrar, Straus and Giroux.

North, Douglass C., John Joseph Wallis, and Barry R. Weingast. 2009. *Violence and Social Orders: A Conceptual Framework for Interpreting Recorded Human History*. Cambridge ; New York: Cambridge University Press.

Putnam, Robert D., Robert Leonardi, and Raffaella Y. Nanetti. 1994. *Making Democracy Work: Civic Traditions in Modern Italy*. 1st ed. Princeton: Princeton University Press.

Root, Hilton L. 2008. *Alliance Curse: How America Lost the Third World. Washington*, D.C: Brookings Institution Press.

———. 2013. *Dynamics among Nations: The Evolution of Legitimacy and Development in Modern States*. Cambridge, Massachusetts: The MIT Press.

———. 2020. *Network Origins of the Global Economy: East vs.West in a Complex System Perspective*. Cambridge University Press.

Scheidel, Walter. 2019. *Escape from Rome: The Failure of Empire and the Road to Prosperity*. Princeton: Princeton University Press.

Smith, Anthony D. 1991. *National Identity*. Reno: University of Nevada Press.

Tarrow, Sidney. 1996. “Making Social Science Work Across Space and Time: A Critical Reflection on Robert Putnam’s Making Democracy Work.” *The American Political Science Review* 90 (2): 389–397.

Travers, Jeffrey, and Stanley Milgram. 1969. “An Experimental Study of the Small World Problem.” *Sociometry* 32 (4): 425–43. <https://doi.org/10.2307/2786545>.

Watts, Duncan J., and Steven H. Strogatz. 1998. “Collective Dynamics of ‘Small-World’ Networks.” *Nature* 393 (6684): 440–42. <https://doi.org/10.1038/30918>.

Wickham, Chris. 2016. *Medieval Europe*. Yale University Press.

Wickham, Chris 2009. *Inheritance of Rome*. Penguin

1. See Brian Arthur’s preface to *Network Origins of the Global Economy* (xv-xvii). [↑](#footnote-ref-1)
2. Social scientists that draw on the natural sciences, where the trend is toward increasing recognition of complexity include: Adler 2019; B. W. Arthur 2009; B. Arthur 2014; Axelrod 1997; Barabasi 2003 ; Beinhocker 2006; Benaiuti 2014; Colander and Kupers 2014; Doyle 2000; Easley and Kleinberg 2010; Edmonds 2009; Farrell and Newman 2019; Foley 1994; Foster 2005; 2011; Gilbert 2020; Golub and Jackson 2010; Homer-Dixon 2006; Johnson 2013; Maoz 2012; Miller and Page 2007; Morcol 2012; Newman 2003; Oatley et al. 2013; Ormerod 2012; Padgett 2012; Ramo 2009; Simon 1969; Simon and Simon 1962; Vargo and Akaka 2012; Vega-Redondo 2007; D. J. Watts 1999; 2003; D. Watts 2004 ). [↑](#footnote-ref-2)
3. In 1989, Francis Fukuyama predicted the “end of history,” with countries converging to the political and economic institutions of the United States, what he called “an unabashed victory of economic and political liberalism.” [↑](#footnote-ref-3)
4. Pessimism about how will history will end surfaced in Robert Kaplan’s 1994 article “The Coming Anarchy,” that illustrates the chaotic lawlessness and violence of West Africa, enumerating issues like disease, overpopulation, unprovoked crime, refugee migrations, private armies, security firms, and international drug cartels. He argues that West Africa provides an introduction to the issues soon to confront our civilization, avowing it “is becoming the symbol of anarchy”. [↑](#footnote-ref-4)
5. In “Why Technology Favors Tyranny,” Yuval Noah Harari predicts that advances in artificial intelligence are ﻿﻿heralding the rise of “digital dictatorships,” where governments will be able to monitor, control, and even dictate the way citizens interact, communicate, and think (2018). [↑](#footnote-ref-5)
6. Examples are Putnam 2001; Putnam, Leonardi, and Nanetti 1994. [↑](#footnote-ref-6)
7. State power is responsible for the persistence of Old Regime communal and corporatist institutions at the village level in H. Root (1985), and in towns in G. Bossenga (1991). [↑](#footnote-ref-7)
8. Throughout European history there are examples of state power being responsible for the persistence of communal institutions of the village and town. The king was the enabler and promoter of the common law in England. Maitland points out how it was used to strengthen communities (1909). In France, kings reinforced corporatist institutions, such as guilds, tax farmers, and village assemblies, making individuals members responsible for collective debts, a practice that was common during the Roman Empire. [↑](#footnote-ref-8)
9. The procedure of measuring objects on a continuum by indicating a sequence of numbers is called scaling. An accessible introduction to the topic is West (2018). [↑](#footnote-ref-9)
10. Emergence is a property of an ensemble not possessed by the parts on their own but resulting from interaction in a wider whole.  [↑](#footnote-ref-10)
11. Royal lineages gained power because of the density of their connections with other royals; those that possessed many connections, in turn, attracted other families. [↑](#footnote-ref-11)
12. *Dynamics Among Nations* explores the implications for global political economy of integrating top-down as well as bottom-up explanations of long-term change (Root 2013). [↑](#footnote-ref-12)
13. Historical identity can be maintained by cognitive symbolism, such as shared myths, narratives, and traditions that constitute who is in a group and how it relates to others. These shared beliefs can be a form of information that can include legends and fantasy, even if they are neither functional nor useful. [↑](#footnote-ref-13)
14. In Barabasi and Albert’s model, two characteristics of scale-free networks are essential: growth and preferential attachment. Growth occurs as new nodes connect to existing nodes; following the preferential attachment rule, there will be a power-law degree distribution, suggesting that most nodes have few neighbors, but that some (hubs) will have many connections.  [↑](#footnote-ref-14)