

# Is Development Uniquely Modern? Athens on the Doorstep

Josiah Ober and Barry R. Weingast  
ISNIE paper, June 2013

## Abstract

North/Wallis/Weingast (2009) define the problem of development as the transition from natural state to open access order and propose a theory of the natural state as a stable system. A small number of natural states develop by moving to "doorstep conditions" and then into the transition proper that led to open access orders in a few modern states. NWW's focus on early modern Europe gives the impression that the transition happened only once in human history and leaves the theory vulnerable to confounding variables of modernity, such as the industrial revolution, technological change, or colonialism. If the conditions predicted by the theory produced a similar result prior to modernity, the theory's robustness is supported. We consider ancient Athens as an out-of-sample test, showing that conditions similar to those NWW assert for early modern Europe held in Athens, and tests that support our claim. Changes in Athenian policy in the direction of open access are predicted and explained by reference to changing Athenian revenue demands, sources of revenue, and capacity for coercion.

## 1. Introduction

Is development a uniquely modern phenomenon? We know that some ancient rulers were wealthy and powerful, perhaps more so than Western European rulers at the beginning of modernity. But were their states developed? Existing economic and political approaches to development do not readily provide a way to answer this paper's question. In his influential early 20<sup>th</sup> century *Theory of Economic Development* (1934, German edition 1912) Joseph Schumpeter argued that development was a uniquely modern phenomenon, driven by the uniquely modern relationship between capital and entrepreneurs. Influential works of historical sociology (Polanyi 2001 [1944]) and ancient history

(Finley 1999 [1973]) subsequently claimed that there was a sharp distinction between ancient and modern economies.<sup>1</sup>

Contemporary economists define development as improvements in material and other circumstances (e.g., health) of the average person (Barro 1998, Acemoglu 2009). But nothing in economic theory suggests what levels of per capita income make a country developed. Mexico's per capita income today approximates that of the United States in 1950. But on many dimensions the United States was a developed country in 1950, and, on some of these dimensions, Mexico remains undeveloped today. Similarly, a few oil states, such as Qatar and the United Arab Emirates, combine huge oil revenues, and hence high per capita income, with a lack of development on other dimensions.

Political science fails to help insofar as political scientists have yet to devise a widely accepted definition of political development, let alone provide an acceptable theory. Huntington (1968) famously argued that development entailed creating political order, and claimed that the Soviet Union and the United States were equally developed because they both successfully provided order. But this conclusion elided huge and salient differences between the two political orders.

To address our question of whether development is a uniquely modern phenomenon, we draw on a new approach to political development. Cox, Weingast and North 2012 (CNW), drawing on North, Wallis, and Weingast 2009 (NWW), propose a new approach to the problem of defining and explaining political development – as separate from, but complementary to – economic

---

<sup>1</sup> On Finley's intellectual debt to Polanyi and probable use of Schumpeter, see Saller in progress. For an authoritative statement of recent scholarship on the ancient Greco-Roman economy, see Scheidel, Morris, and Saller 2007. Lyttkens 2012 is an up-to-date analysis of the ancient Athenian economy, by

development. This approach begins with the problem of violence. CNW show that the problem of violence is surprisingly frequent; the typical developing country experiences violent change in leadership once every seven to eight years.

Violence is therefore a first order of business for developing countries, and many of their decisions about structuring the polity, economy, and society reflect the need to limit violence. NWW argue that the principal means of limiting violence is through rent-creation. Rents induce groups with violence potential to cooperate by distributing rents to those with the power to disrupt the system. To maintain these rents, and thus deter the use of violence, developing countries must limit access to organizations in an effort to prevent competition in both the political and economic systems that risks dissipating rents. NWW call these limited access states “natural states” because they have been the dominant form of state organization in history and remain so today.<sup>2</sup>

Moreover, not just any distribution of rents will do; developing countries must distribute rents according to the *proportionality principle* whereby more powerful groups receive greater rents (CNW). The reason is the incentive compatibility constraint: more powerful groups need a greater share of rents to make them better off cooperating than fighting. In CNW’s terms, natural states create a “violence trap” in which the solution to violence is to manipulate the economy in a way that hinders growth. Accordingly, to be considered “developed” a state must have transcended the condition of the natural state by

---

<sup>2</sup> Gellner (1995,140), who calls these states closed societies, argues that they are “the normal social condition of mankind” throughout history and that developed or “open societies” are the exception that needs special explanation.

escaping the violence trap; it must have solved the problem of violence in a ways that allow for open access to organizations and thereby promote sustained economic growth.

Natural states lack central features of developed, open access societies. First, they are *personal* in that they treat different people differently based on criteria that irrelevant in developed states. In natural states, those with violence potential receive privileges in accord with their power; those without power receive no privileges. Natural states therefore treat different people differently based on the criterion of their personal power. In contrast, open access societies, which allow open access to organizations, are impersonal in that they grant similar rights to a diverse body of citizens, thereby limiting privileges based on power or other extraneous criteria.

Second, natural states must periodically adjust their institutions, policies, and distribution of rents. Adjustments are common following violent regime change. These adjustments imply that natural states lack *perpetuity* -- the idea that state institutions, policies, and privileges are independent of the current rulers of the state. Major new leaders, even those who come to power without violence, often unilaterally change the constitution; for example, Putin in Russia, Chavez in Venezuela, and Hitler in Nazi Germany. Finally, natural states lack *inclusiveness* in that their limited access explicitly excludes many people from the benefits conferred by the state, such as the right to form contractual organizations.

Following CNW, we define political development as a state that is impersonal, perpetual, and inclusive. Although at first this definition appears minimalist and hardly adequate to the definitional challenge, notice that major features of societies that have solved the violence problem in ways that allow for open access require these characteristics: These features include constitutional stability, a thriving market economy capable of sustaining long-term economic growth, rule of law, contract enforcement, and the ability – or state-capacity – to provide public goods. The definition of development as impersonality, perpetuity, and inclusiveness implies that developed states have a consolidated political control over violence that prevents violence among citizens and groups.

How then do societies make the transition from limited to open access, from undeveloped to developed states? NWW argue that completing the transition involves a state attaining three *doorstep conditions*, which are rule of law for elites, perpetuity for the state and organizations, and consolidated, political control over the sources of violence. Societies “on the doorstep” meet the first two conditions of development – impersonality and perpetuity, at least for elites – and they typically have incentives to begin the process of inclusiveness.

Questions naturally arise about this new approach to development, some of which can only be answered by looking in detail at historical cases. NWW used only modern cases as evidence and illustrations. This resort to a limited historical sample begged two closely related questions. First, if development is strictly a modern phenomenon, then could other aspects of modernity, not emphasized by the theory, cause development? If so, the association between

political institutions and development emphasized in NWW is spurious. Second and related, was any premodern society developed?

Gellner (1994, 1995) answers both questions decisively. He asserts that the modern transition from closed to open societies is historically unique, happening just once, beginning in the 18th century. In this century for the first time in history “commerce and production ... [took] over from predation and domination.” The transition was driven by “two other processes – the incipient Industrial revolution, leading to an entirely new method of production, and the Scientific Revolution, due to ensure an unending supply of innovation and an apparently unending exponential increase in production powers” (Gellner 1995,168). In short, the development of modern societies was the result of the Industrial and Scientific revolutions, and no premodern society was developed.

In this paper, we take a counter view. We study ancient Athens to test whether development was possible before the 18<sup>th</sup> century and its attendant revolutions. Because NWW/CNW develop their theory using modern cases, ancient Athens represents an out-of-sample test case, one not used to generate the insights of the theory. We demonstrate that, contra Gellner, ancient Athens made the transition from the natural state to a social order in which (to use Gellner’s terms) “commerce and production ... [took] over from predation and domination.” This demonstration yields two immediate conclusions: First, the hypothesis that development is uniquely a product of modernity is false. Second the out of sample test provides additional validation for the NWW/CNW framework.

A final advantage of our approach is that it explains the development puzzles, observed above, about Mexico and the rich oil states. Mexico today may have the same per capita income as the United States in 1950 and some of the rich oil states today have per capita incomes on the order of the United States, but they are rightly regarded as not developed because they fail to meet the criteria for political development of perpetuity, impersonality, and inclusion.

Our paper proceeds as follows. In the next section, we review the CNWW theory of political development. Section 3 follows with an introduction to ancient Athens. Section 4 shows that Athens met the doorstep conditions, while section 5 explains that it had gone beyond the doorstep conditions and was transitioning to an open access society proper. In section 6, we explain the transition to open access in ancient Athens. We explore ancient Greek explanations for open access in section 7. Our conclusions follow.

## **2. The Doorstep Conditions as the First Stage In the Transition to a Developed Society**

Understanding the problem of development requires taking into account two features of the developing country environment (CNW). The first is the prevalence of violence; the second is that developing countries experience shocks that potentially disrupt the mechanisms by which these states limit violence (Rodrick 1999). The first feature of the developing country environment involves statics that produce a stable equilibrium at a moment in time. The second feature involves dynamics or change over time and provides an

explanation for why developing countries regularly experience violence. We consider these problems in turn.

### **The Prevalence of Violence**

The main premise of NWW is that all states need to solve the problem of violence, but they do so in different ways.<sup>3</sup> As noted above, data in CNW reveal the surprising frequency with which even the richest developing countries qua natural states have to deal with violence. The manifest frequency of violent regime change in the developing world – once every seven to eight years – is sufficiently high that developing countries structure their political and economic institutions to lower the probability of violence. Were they to fail to do so, the frequency of violence would be even higher.

To create order and limit violence, natural states structure the polity and economy in ways that induce the powerful – i.e., those with violence potential – to cooperate rather than fight. They do so through rent-creation and distributing the rents to the powerful to induce them to cooperate. Natural states therefore face an imperative to limit access to organizations in economy, polity, and society; organizations allow those without power to compete away rents in the economy or to compete for power in the polity, potentially allowing these groups to challenge those in power. Natural states also limit social organizations as these organizations can readily be used for political purposes.

---

<sup>3</sup> North, Wallis, Webb, and Weingast (2012) apply this approach by studying a range of different types of natural states, suggesting how some become more sophisticated than others; and in particular, provide economic growth within the natural state framework.



Creating order requires that a series of incentive-compatibility constraints be satisfied, one for each individual or group with the power to disrupt the state if it is not satisfied. Further, CNW show that satisfying the various incentive-compatibility constraints must conform to the *proportionality principle*: because more powerful groups have higher expected values from fighting, inducing them to cooperate rather than fight requires that they receive higher benefits.

## **Shocks**

All states experience shocks (Rodrik 200\*) or shifts in “relative prices” broadly conceived (North 1981, 1990). Different groups with violence potential may grow differentially; technological change may advantage one group disproportionately; demographic change may imply one group gains power relative to another; minerals may be discovered; or trade shocks may differentially advantage groups with violence potential. The evidence in Rodrik (1999) and NWW (2009, ch 1) shows that most developing countries experience periods of sustained growth; and in these periods of growth, they on average grow faster than do developed countries. But developing countries also experience longer periods of negative growth than developed countries, and they shrink at a faster rate.

Sufficiently large shocks hold the potential to disrupt the existing natural state equilibrium. For example, the Philippines under Ferdinand Marcos’s marshal law (1972 - 1981) distributed rents from primary exports. When the prices for these exports fell sufficiently, the total rents shrank so much that

Marcos could no longer induce enough powerful groups to support him. Several groups switched allegiance to the opposition, allowing the latter to depose Marcos (Montinola 2012). Similarly, Lebanon gained independence following WWII and created a stable power-sharing arrangement among the three principle demographic groups (Maronite Christians, Sunni Muslims, and Shia Muslims) that maintained order. Over time, however, one group grew faster than the others and became sufficiently powerful to demand greater share of political power. Violence resulted in the form of a civil war lasting roughly from 1975 through 1990.

As one group (or set of groups) becomes more powerful, it is likely to demand a greater share of the benefits. This demand creates a bargaining problem among the powerful groups. To maintain order, these groups must adjust the distribution of rents to conform to the new distribution of power. As in all bargaining problems, however, several problems plague successful bargaining, including those of commitment and asymmetric information (Fearon 1995, Powell 1999). For example, if asymmetric information attends the shock, one group may believe it has become far stronger than the other group believes it to be. As Fearon (1995) demonstrated, such differential beliefs can lead to violence.

### **Implications of the Natural State Logic for Economic Development**

This framework yields a series of implications for natural states. First, they directly control the economy so as to create and distribute rents to the powerful.

Doing so means that these states must be personal: privileges are distributed according to power, so these societies cannot sustain impersonal policies that distributed benefits to those without power, thereby raising the probability of violence. Identity matters. Because public goods distribute benefits impersonally, natural states have a limited ability to provide them. Indeed, many natural states today have “public goods” programs whose language and intent appear to ostensibly similar programs in the open access orders; but on closer inspection, it becomes evident that these programs are another means of distributing rents. A similar logic explains why these states cannot support property rights, contract enforcement, or rule of law.

Second, the violence attending large shocks disrupts the natural state equilibrium. The shock provokes violence and results in major changes in the distribution of violence potential. Creating order in the new environment therefore requires correspondingly major adjustments in the distribution of privileges and rents. Adjustments in response to major shocks involve not just policy changes in regard to distribution, but other aspects of behavior. First, these adjustments often involve expropriation of wealth and privileges from elites who are now substantially less powerful; second, they often involve changes in the political system so as to support the new distribution of benefits. For these reasons, natural states lack perpetuity; violent changes in leadership often lead to changes in the structure of the polity and economy.

Third, natural states lack inclusion. The imperative to grant rents to the powerful creates a privileged elite that contrasts with the masses of subjects or

nominal citizens, who are often exploited. Expanding benefits to the masses lowers the resources available for privileges to the elite, again, risking violence. Moreover, because the bargaining arrangement is vulnerable to large shocks, the elite have short time horizons, so they will exploit all the more fiercely.

A final implication. As we have argued, to achieve cooperation and order, natural states create rents and manipulate markets; they limit access to organizations and limit competition in order to protect these rents; they fail to provide market-enhancing public goods; and they cannot sustain impersonal property rights or impersonal judicial systems. In all this, development economics sees the culprits as “market intervention” and “directly unproductive profit-seeking.” The observation that natural states create rents, manipulate the economy, and limit competition is correct, as far as it goes. But the emphasis on market intervention obscures the logic of the natural state’s behavior by focusing too much on symptoms while ignoring their deeper causes. The underlying problem with the economy is not intervention per se, as development economics asserts. Instead, intervention is a symptom of the larger problem, namely the threat of violence that motivates intervention. Moreover, in the face of distributed violence potential, rents are productive: they foster cooperation and order. Nonetheless natural states hinder long-term economic growth, through their control of markets and because the endemic threat of recurring violence makes many otherwise productive investments too risky and reduces time horizons which raises incentives for predation.

We end this subsection with the major conclusion, namely, that natural states as an equilibrium create a low- or no-growth problem that CNW call the “violence trap.” Put simply, the solution to the natural state’s problem of violence is manipulation of the economy in a manner so that it, at best, experiences low growth over time, despite spike periods of high growth. Many previous scholars have emphasized the importance of violence in state-building (Bates 2000, Tilly 1992). Yet these scholars miss the problem of distributed violence that drives the logic of the natural state and the underlying violence trap.

### **The transition to open access**

If the natural state equilibrium is characterized by the violence trap, how do states develop? Before addressing this question, we first make an observation consistent with the violence trap: becoming developed is extremely rare in history. The natural state has been the dominant form of social organization for most of recorded human history (NWW). Even today, the number of developed countries numbers at best between two dozen and thirty, between ten and fifteen percent of the total.

Escaping the violence trap requires a particular kind of change in the natural state environment that induces elites to cooperate without distributing rents. An obvious example is a sustained threat from another state such that elites will perish if they fail to cooperate. To illustrate, France experienced considerable instability between 1789 and 1870, including coups, violence, and on the order of ten different constitutions. The groups competing for power could

not strike a bargain fostering long-term cooperation. The humiliating defeat by a newly unified Germany dramatically changed the environment, giving elites incentives to cooperate as their only hope to survive the rising German threat. An example of a different environmental change in recent decades has been the ability of states on the periphery of Europe to join the EU. This offers the potential to natural state elites to make themselves better off, if they cooperate in making the changes necessary to join the EU, than if they remain in their natural state equilibrium and live off their rents. Adam Smith (1776 book III) made a similar argument with respect to the transition from feudalism to the commercial economy. The transition began with the opportunity to create new gains through long-distance trade. This opportunity fostered an alliance between the king and residents of towns, both of whom sought advantage over the local lords. This alliance allowed the towns to become independent and to grow rich through long-distance trade.

The first step in the transition out of the natural state violence trap toward an open access order is attaining the doorstep conditions: rule of law for elites; perpetuity for organizations and the state; and consolidated political control over violence. The transition proper occurs when elites have incentives to expand inclusion to incorporate the masses into this scheme, granting them true citizenship along with impersonal rights.

### **3. Athens in the Ancient Greek world**

The Greek world (“Hellas”) in the 4<sup>th</sup> century BCE – the age of Plato, Aristotle, and Demosthenes – was exceptional among premodern societies in

several salient ways: First Hellas was an extensive culture zone, made up of ca. 1000 independent (or quasi-independent) city-states (Hansen and Nielsen 2004). These states shared a language and other cultural attributes, including religion and ways of war. Although a number of city-states organized themselves into federal leagues (Mackil 2013), there was no over-arching sovereign ruler or singular, centralized political authority. Next, by 300 BCE the Greek world had experienced 500 years of sustained high (by premodern standards) economic growth. The population (ca. 7-10m persons) was comparatively dense (well in excess of agricultural carrying capacity, at least in central Greece), highly urbanized (ca. 30% of population living in towns of 5000 or more), and healthy – based on average age at death of adults (Hansen 2006, Morris 2004, Ober 2010b). The world of the city-states was also highly competitive; failure in inter-state competition fairly often led to loss of autonomy or even extermination (Ober 2008). At the same time, there was a high level of trade and political interaction among the city-states as well as between the city-states and non-Greek societies of Europe, Asia, and Africa. Inter-state transfer of goods, ideas, information, institutions, and technologies among the Greek states was facilitated by the common language and culture.

Athens stands out in this Greek world: Athens was a very large city-state of ca. 2500 km<sup>2</sup> with a population of ca. 250,000, and, by various measures, the highest performing of the Greek city-states from the early 5th to the later 4th century BCE (Ober 2008 chapter 2). Beginning in the late 6<sup>th</sup> century, and with only brief interruptions (in 411/0 and again in 404/3), Athens was governed by a

democracy. By far the best-documented of the Greek city-states, Athens was an innovator in the development of democratic institutions. By the end of the 4<sup>th</sup> century, democratic institutions had been adopted by perhaps half of the city-states (Teegarden in progress). In addition to its native population (ca. 30,000 adult male citizens and their families), 4<sup>th</sup>-century Athens supported many slaves (estimates of numbers vary widely: 80,000 is a common estimate) and a substantial population (probably in the range of 30,000) of resident foreigners and shorter-term visitors. Foreigners had many roles in the Athenian economy, but they were especially prominent in overseas trade. Trade was, in turn, an extremely important part of the 4th-century Athenian economy: the city-state was not self-sufficient in grain, and a very substantial part of public revenues were derived from indirect harbor taxes and from taxing the profits of trade in various indirect ways (Ober in progress).

The history of democratic Athens falls into three main periods: the late 6th and early 5th centuries, when democracy emerged in the context of elite competition and in the face of existential threats; the imperial mid to late 5<sup>th</sup> century; and the post-imperial 4<sup>th</sup> century. The Athenian economy experienced a serious setback at the end of the 5th century: Athens lost the 27-year Peloponnesian War; the state survived but was stripped of its imperial possessions and navy; democratic government was replaced by an oligarchy controlled by and loyal to the victorious Spartans. The oligarchy lasted several months before a counter-revolution re-established the democratic constitution. By the third quarter of the 4<sup>th</sup> century Athens was as wealthy as ever: public



infrastructure had been rebuilt; a record number of warships were ready for action; public revenues were at an all-time high; Athenian coinage was the standard form of exchange for much of the eastern Mediterranean; Piraeus, Athens' main port city, was the center of a Mediterranean-wide trade. Even a defeat in 338 BCE, at the hands of Philip and Alexander of Macedon, failed to depress the thriving Athenian economy. Public documents from 325 BCE show Athens was taking the leading role, as the preeminent Greek naval power, in efforts to suppress piracy in the Adriatic (Ober 2008).

The hypothesis of this paper is that some part of the background prosperity of 5<sup>th</sup> and 4<sup>th</sup> century Greece, and specifically the exceptional performance within the Greek ecology of 4th-century Athens, reflects the escape from the violence trap, the move past the relatively unproductive “closed or limited access” equilibrium of the natural state, to the doorstep conditions of perpetual organizations, central control of the military, and rule of law for elites. Moreover, in some ways Athens moved beyond the doorstep, to a social order characterized by open access – that is, to the level of development characterized by a handful of the most successful early modern and modern states. Athens expanded inclusion to a great many non-elites: to all native adult males, and, if incompletely, to foreigners and some slaves. This inclusion involved perpetual, impersonal rules and rights.

#### 4. Doorstep conditions

Before the later 6<sup>th</sup> century BCE, that is before the emergence of institutions capable of sustaining a democratic political order, the three doorstep conditions discussed by NWW and CNW -- centralized state control of military; impersonal, perpetually lived, public and private organizations; and rule of law for elites -- did not pertain in Athens, or anywhere else in the Greek world. Sixth-century Athens had no centralized control of military forces -- the state was defended by ad hoc coordination between powerful elites capable of mustering heavy-armed men, or equipping a warship. There may have been nominal leadership by individuals who held positions and titles of honor (later histories recorded the presence of officials with titles of "war leader" (*polemarchos*) and "ship masters" (*naukraroí*) but the scholarly consensus is that Athens had nothing like a national army or navy (Frost 1984). An early attempt by a lawgiver (Solon in 594 BCE) to establish something like perpetual and impersonal state institutions collapsed with the establishment in the mid-sixth-century of a tyranny: the authoritarian rule of Peisistratus and by his sons. The rule of the tyrants ended in a series of violent events, culminating in the Athenian Revolution of 508 BCE and the subsequent establishment of democracy (Raaflaub, Wallace, Ober 2007).

In the immediate aftermath of the revolution, all Athens-resident native males were declared citizens, and enrolled in ten new territorially-dispersed administrative units, conventionally called "tribes." Each tribe drew its membership from villages or neighborhoods in three geographically distinct parts

of Athens' territory (urban, inland, coastal). Athens' new democracy moved quickly to establish a consolidated, civilian controlled, military and perpetual and impersonal institutions; the Athenians moved somewhat more slowly in developing a secure rule of law. Among the first acts of the democracy was the formation of a national army, based on a mobilization of heavy-armed citizen-soldiers. The mobilization was to be carried out on the basis of standardized lists of citizens in 139 villages and neighborhoods of Athens (the "demes" – lists were kept by local officials: "demarchs").

The army was organized into 10 "tribal" battalions, each recruited from the demes in three different regions of Athenian territory – the intent was clearly to break down regional allegiances to local big men. The new Athenian army was commanded by 10 generals, elected annually by the whole of the citizenry: that is, by the native adult males of Athens, gathered in a public assembly. When, in the early fifth century BCE, a natural resource windfall made possible the construction of a much larger navy of oared galleys, the warships were constructed at the behest of the state, the rowers were paid by the state, and the navy, like the army, was commanded by elected generals. Annual elections of generals (and later of other military officials) ensured that the military remained under central, democratic control. The army and navy were, in essence, the citizenry under arms – and thus the citizens annually chose the military commanders who would lead them into combat. Moreover, the citizens were able and willing to depose very prominent military commanders who proved either incompetent or whose loyalty to the democratic state was suspect (for example,

the prominent 5<sup>th</sup>-century leaders Miltiades, Themistocles, Aristides, Pericles, and Alcibiades).

Among other institutions, the new democracy created a centrally important probouleutic (agenda-setting) "Council of 500." The Council was a geographically representative body of 500 citizens (50 from each tribe) chosen annually, and (by the mid-fifth century if not before) by lottery. A given citizen could serve no more than two, non-contiguous, annual terms on the Council. The Council set the agenda and made policy recommendations for regular meetings of the citizen assembly, reviewed magistrates before and after their term of service, and conducted much of the state's day-to-day business. It was in a meaningful sense the linchpin of Athenian government (Gomme 1951). The Council was designed from the beginning as a perpetual institution, and indeed it continued to exist throughout and past the democratic era. The impersonality of the Council was assured by the annual turnover of membership, term limits, and selection by lottery. The requirement that it be geographically representative (chosen according to deme and tribe) ensured that it was not dominated by territorially-based factions.

Before the late 5th century, Athenians made no distinction between fundamental law and ordinary legislation; the Athenian assembly could make or unmake laws by simple majority vote. Rule of law was most fully implemented in the 4th century, with a series of constitutional reforms that required that policy decisions of the citizen assembly (*psephismata*) conform to a body of written and accessible fundamental laws (*nomoi*). The fundamental laws could be revised

only by a complex process, requiring a preliminary vote by the assembly, a period of publication of proposed changes, and then a final decision, following a trial-like procedure (with public defenders assigned to speak in favor of the existing law) by a large (1500 person) jury-like body of Athenians over age 30. Although jurors in the Athenian lawcourts retained considerable discretion in matters of legal judgment (Lanni 2006), it is fair to say that in the 4th century Athens was ruled both democratically and according to the laws. Athenian laws employed ordinary language and were readily accessible to citizens in a public archive. Throughout the democratic period, any citizen could bring charges against another for criminal activity; judgment was by large bodies of citizens over age 30, who were chosen to serve on a given lawcourt through an elaborate lottery system aimed at preventing corruption (Hansen 1991).

### **5. Opening access at Athens**

In some important ways, Athens seems to have gone beyond the requirements of the doorstep conditions, to something approximating the conditions of a modern open access order. Central to this claim are observations of the Athenian extension of access and rights beyond the elite. We provide three fundamental examples of impersonal, perpetual, rule of law institutions extending not only beyond the traditional elite (i.e., wealthy, highly-educated aristocrats: Ober 1989) – but also beyond the extensive “citizen elite” of native, adult, males, namely: the law preventing humiliation and threats; extension of the law governing contracts in overseas trade to include non-citizens; and the provision

of market-enhancing public goods, as illustrated by the standards and regulations governing coinage and counterfeiting.

In the area of criminal law, the Athenians criminalized acts of *hubris*: that is, the willful humiliation of one individual by another by deed or word. The law was employed to ensure the defense of individual citizens' civic dignity, and thereby the equality of high standing among participatory citizens. Ensuring this defense was essential if Athenians were to govern itself democratically and if powerful elites were to be prevented from preying upon non-elites (Ober 2012). The *hubris* law is, however, remarkable in that it explicitly extended the ambit of legal immunity, beyond the ranks of participatory citizens, impersonally, to *all* residents of Athens: free or slave, male or female, adult or child. Citizens retained a monopoly on the right to initiate a criminal charge of *hubris*, but the law's protection was not limited to citizens. The fact that the broad scope of protection offered to non-citizens was cited in legal testimony (Demosthenes speech 21: *Against Meidias*; Ober 2000) points to Athenian self-consciousness about their own achievement in opening access to important legal immunities to non-elites.

In the mid 4th-century BCE, the section of the Athenian law code regulating enforcement of contracts for overseas trade was revised in ways that substantially opened access to legal dispute resolution at Athens to non-Athenians. The reform leveled, at least in principle, the legal playing field between citizens and non-citizens in contract disputes (Cohen 1973, Lanni 2006). In the restructured "commercial cases" (*dikai emporikai*) the procedural

rules now limited the legitimate basis of judicial judgment to the question of whether the terms of a written contract had been violated. This reform substantially reduced the discretion of the jurors (who remained Athenian citizens) to judge on the basis of arguments about litigants' origins, character, or their histories of public generosity or private misbehavior. Moreover, a contract violation case could now be initiated by a non-citizen: certainly by free foreigners and probably by slaves -- some of whom worked in banks and engaged in large scale financial transactions (Cohen 1992).

Meanwhile, the Athenian state elaborated its system of market regulation in ways that tended to lower information asymmetries between buyers and sellers in the Athenian marketplace. Notable among institutional innovations was establishment of two (one for each of the two primary Athenian markets) public "Approvers" of silver coinage. Athens, like most classical Greek states, minted silver coins in standard denominations – Athenian coins were nicknamed "owls," after the image of an owl stamped on each coin's reverse. Because of the great popularity of Athenian "owls" as a means of exchange in eastern Mediterranean markets, the "owls" were widely counterfeited (van Alfen 2005). The Athenian Approvers were publicly-provided market officials charged with detecting counterfeits. Sellers in the market offering goods in exchange for silver could demand that buyers present their coins to the Approver (whose office was located in the center of the market) before concluding the sale. "Bad" counterfeits (coins with sub-standard silver content) were confiscated; "good" counterfeits (correct weight and purity, but minted outside Athens) were returned to the buyer;

coins issued by the Athenian mint were “approved” – meaning that their acceptance by the seller was mandatory. The publicly displayed law governing the approval procedure makes it clear that the service was freely available to all traders in Athenian markets: to citizens, foreigners, and slaves alike (Stroud 1974, Ober 2008).

Athens went beyond the doorstep conditions toward open access by providing other central features of open access societies. Open access requires that the right to form publicly recognized civil associations be made widely available. Free expression of religion is a domain to which “outsiders” have historically been excluded from this right. Classical Athens had a rich infrastructure of civil associations, some of which performed important civic functions (Ismard 2010, Kierstead 2013). By the later 5th century, and continuing through the 4th century, associations of foreigners in Athens were granted official, perpetual charters that provided them with public land on which they could construct their own sanctuaries and where they were free to practice their religion as they pleased. An official document from 333 BCE records a state land-grant to a group of Athens-resident merchants from Citium on Cyprus for a sanctuary to be dedicated to Cyprian Aphrodite “just as also the Egyptians have built the sanctuary of Isis” (Ober 2008: 252). The mention in the document of the Egyptian Isis sanctuary as a precedent (evidently a recent one) suggests that the religious land grants were part of a recognized state policy.

Open access also applied to ideas, including ideas used to criticize the state. The establishment of philosophical schools – for example, those of Plato,



Isocrates, and Aristotle – which typically included both citizens and non-citizens among their memberships -- at once provides an example of open access in ideas as well as another well-documented example of the formation of perpetual and formal non-state associations (Kierstead 2013). The school of the rhetorician Isocrates apparently ended with his death, but the Academy and Lyceum, founded respectively by Plato and Aristotle, had very long histories. These schools were formal associations, with their own internal by-laws and elected officials (Lynch 1972). State toleration of the philosophical schools is especially noteworthy given the highly critical stance toward democracy taken by their founders (Ober 1998).

## **6. Explaining open access at Athens**

As Kierstead (2013) demonstrates, the development of ancient Athens, in the direction of open access, is not readily explained by the redistribution-based democratization models offered by Boix (2003) or Acemoglu and Robinson (2000, 2006). As we have seen, Athenian political and economic development came in three stages. The initial (late 6th century and through the early 5th century) period of democratization following the Revolution of 508 BCE was sparked by fierce intra-elite competition. When one of the elite competitors brought the masses into his coalition, the way might have seemed open to a predatory populist regime. Yet back-to-back existential military threats (Sparta, then Persia) created conditions in which only effective collaboration between all elite groups and the citizen masses could ensure the survival of Athens as a

community (Forsdyke 2005). That collaboration included the establishment of perpetual institutions and a state-controlled military. By the time the existential threat had receded, in the mid-fifth century, the Athens-led multi-state anti-Persian alliance had morphed into an Athenian empire, which in turn created a massive resource, in the form of imperial rents. Continued cooperation between masses and elites (notably in large-scale naval operations) ensured that all Athenians had an opportunity for predatory enrichment (Finley 1978).

The empire was lost in the course of the long the Peloponnesian War, which was followed by a brief, fierce, civil war. This was won by the masses; yet rather than retaliate against the elite losers, the victorious many declared an Amnesty and completed constitutional reforms establishing a hierarchy between constitutional law and policy made in the citizen assembly. The post-civil-war legal pact was made in the recognition that, in the face of threats from powerful rivals (Thebes and Sparta), continued civil strife would leave Athens vulnerable. The Athenians also recognized that, having lost the empire, the democracy could not be sustained without substantially increased state revenues from other sources. The most obvious, and least contentious, source of revenue was a port tax: This meant maximizing the volume of trade helped motivate the decision by the citizens to expand access to relevant institutions in ways that would be attractive to non-citizen traders.

Part of the explanation for the transition to open access rules at Athens can, therefore, be attributed to two interrelated conditions: first, the political

sociology of the citizen body – the fact that powerful elites and ordinary citizens shared in the regime -- and next, the fiscal requirements of democracy.

After 508 BCE, all adult male natives were citizens of Athens, with full civic rights (to vote, serve on juries, hold most public offices) regardless of their possession, or lack, of property. Athenian income inequality appears quite limited (Gini coefficient = ca. 0.40-0.45 based on the model in Ober in progress) when compared to other premodern societies (Milanovic, Lindert, and Wilson 2011). Real wages at Athens were surprisingly high by premodern standards (Scheidel 2010), and the state provided some features of a welfare “safety net” (Ober 2008). Yet the lack of a property qualification for citizenship nonetheless meant that some Athenians were much wealthier than others. In Athens, as in other societies ancient and modern, relative poverty was associated with weakness and vulnerability. The vulnerability of relatively poor citizens was problematic, in that, were they readily bullied or over-awed by the wealthy and powerful, political liberty and equality -- the very basis of the democratic order -- would likewise be compromised.

The law forbidding *hubris*, cited above (section 5) may therefore be explained, at least in part, by reference to Athenian democratic concern for protecting the civic standing of the weakest citizens. The working poor of Athens were not readily distinguished from foreigners or even from slaves. The wives and children of non-elite citizens would often have worked at occupations that exposed them to the view of, and potentially to the mistreatment by, the powerful. If arrogant elites developed the habit of humiliating foreigners, slaves, women, or

children, those habits might eventually reduce the poor working man to a condition in which he could not readily fulfill the role of a participatory citizen in a democratic community. The anti-hubris law, therefore, supported specific political considerations with the protection of the equal high standing of citizens that was necessary to maintain democracy. (Ober 2000, 2012).

The anti-*hubris* law was almost certainly in force in the fifth-century BCE (it is apparently referenced by the anonymous fifth-century writer dubbed “the Old Oligarch,” below section 7). Much of the rest of the evidence for opening access, beyond the base-line doorstep conditions, comes from the third period of Athenian democratic history, that falls between the end of the Peloponnesian War and the Macedonian crackdown: 403-322 BCE.

Various measures opening access can be, at least in part, explained as responses to the new economic and financial conditions faced by post-imperial Athens (Ober 2010a). During the imperial era (ca. 470-405 BCE) Athens had employed superior military power to extract rents, in the form of tribute and other remunerative taxes and imposts, from an extensive Aegean empire (Morris 2009). After they lost the empire and regained democracy, Athenians confronted the difficult question of how to pay for government, defense, and social welfare. That Athens succeeded in doing so is evident: the democracy was stable throughout the period in question; fortifications, dockyards, and warships were built; important new public buildings were erected; the “safety-net” of government-supported social welfare was expanded.

The 4th-century Athenian state raised revenues from various sources, but indirect taxes on trade were, by all accounts, especially important (Ober, in progress; Pritchard 2012, Lyttkens 2012). Institutional innovations appear to be essential in ensuring that trade remained robust and thus that taxes on trade could sustain essential state services. Athens benefitted from an exceptionally fine natural harbor at Piraeus, but the long history of Piraeus from the archaic period through early modernity shows that the harbor was often a backwater. Clearly a good location alone was insufficient to generate flourishing trade; the right sort of state intervention was necessary in order for Piraeus to be the center of Aegean trade (Carugati in progress). A number of the 4th-century access-opening innovations of the Athenian state, discussed in section 5, above, were directly beneficial to citizens, and especially to non-citizens, involved in overseas trade: The legal reform of “commercial cases” and the land-grants to the traders religious sanctuaries are particularly clear cases in point.

Other reforms, for example the establishment of the “Approvers” of silver coins, by reducing information asymmetries and assuring equitable access to valuable public institutions, lowered transaction costs for all persons involved in exchanges in Athenian markets. The net effect of Athenian investment in infrastructure valuable to and accessible to all residents and visitors to Athens, and institutional innovations opening access and lowering transaction costs, helped to make Athens a relatively more desirable location for Greek and non-Greek traders. It seems undeniable that increasingly open access contributed to the growing strength of the Athenian economy. While it remains impossible to

quantify the economic value of Athenian open access, it seems reasonable to postulate that the performance of the Athenian state in the post-Peloponnesian War era would have been substantially worse had the Athenians, counterfactually, moved to restrict access to valuable public institutions and to forbid the establishment of new non-state civil associations.

### **7. Ancient Greek theories of open access**

If we may plausibly associate early moves in the direction of open access at Athens with an initial rational concern to protect the high level of civic dignity that was essential to sustain democracy, and explain the 4th-century development of open access by reference to Athens' diminished capacity for predatory rent-extraction and persistent fiscal requirements, the question remains: Did ancient Athenians themselves conceive of a social order predicated on open access to institutions as something conceptually distinct from the social order typical of "closed access" natural states? Did they perceive a causal relationship between access and state performance? Was there, in short, anything resembling a "theory of development and social orders" in the classical Greek world that might, at least hypothetically, have influenced policy in Athens and other city-states?

The answer seems to be yes: Several classical Greek political theorists clearly recognized that, by the later 5<sup>th</sup> century BCE the Athenian social order was distinctively different from other social orders in that it offered much wider access to institutions; these writers also saw that opening access to institutions

could be positively correlated with state performance and they had theories for explaining the correlation.

A short pamphlet written by “the Old Oligarch,” an anonymous Athenian writer of the third quarter of the fifth century BCE, explains the working of democracy. The Old Oligarch’s imagined reader is a non-Athenian aristocrat who regards Athens’ democracy as the inherently inferior political rule of inferior people – the poor, ill-educated, uncultured masses of non-elite citizens – and therefore the reader supposes democracy is an altogether inferior regime. The Old Oligarch shares his imagined reader’s moral disdain for the Athenian citizenry, but he explains that, when the masses designed and enforced democratic rules, they acted self-consciously and rationally in their own collective interest. The Old Oligarch emphasizes the primary military role played by the lower classes in the Athenian navy, and that the navy was the essential tool of imperial resource extraction and thus the main source of Athens’ strength.

The Old Oligarch notes that the masses control key institutions of the state: assembly and lawcourt, lucrative offices, and the Council (Pseudo-Xenophon, *Constitution of the Athenians* sections 1.2-3, 1.6, 3.2). The people’s capacity to secure compliance to the regime on the part of elites is based on their collective capacity to enforce collective judgments through these institutions. He also points out that the masses ensured for themselves access to cultural resources formerly monopolized by the elite: He mentions that because sacrifices, shrines, banquets, temples, gymnasia, and baths were now public “the rabble has more enjoyment of these things than does the wealthy elite” (2.10). All

of this, he assures his reader, is self-conscious and in the collective self-interest of the many: were the elite, counterfactually, to be in charge they would establish laws in their own interest, forbid non-elite citizens rights of free speech and assembly, and “as a result of these excellent measures the people would immediately be enslaved” (1.9).

But the Old Oligarch also recognizes that Athenian elites were not simply in thrall to the many; he notes that some persons who were “not by inborn nature democrats,” yet nonetheless were “genuinely on the side of the democratic regime” (2.19-20). The Old Oligarch criticizes this behavior as arising from moral depravity, suggesting that some elites believed that it was easier to hide wickedness in a democracy than it an oligarchy. Yet, put simply, the Old Oligarch saw that Athens became far stronger and wealthier by expanding the privileges of citizenship to the masses—and offers his readers clear evidence that at least some Athenian elites recognized that the expansion benefitted elites as well.

As noted above (section 6), the Old Oligarch observes that at Athens (and, by implication, *not* at non-democratic states with which his imagined reader is familiar) slaves and foreigners were accorded protection against insulting violence: At Athens one may not strike a slave or a foreigner. The reason he offers is that at Athens, lower-class citizens were indistinguishable from slaves or foreigners, and so the law, enforced by the mass of citizens in their own interest, forbids striking slavers and foreigners in order to protect citizens. He then adds a specifically economic reason for this law: well-to-do slaves, engaged in commerce, will not be good stewards of resources if they live in fear of



mistreatment -- and thus their masters will be denied a share of the profits: “for this reason we [Athenians] have set up equality between slaves and freemen and between resident foreigners and citizens” (1.10-12). He (somewhat redundantly) underlines the point: “The city needs resident foreigners in view of the many different trades and the fleet. Accordingly, then, we have rationally set up a similar equality for the resident foreigners” (1.13).

While Athens depended economically on the presence of foreigners in the imperial fifth century (when the Old Oligarch was writing), as we have seen that dependence was redoubled in the post-imperial fourth century. A mid-fourth-century pamphlet entitled *Revenues*, by the Athenian polymath, Xenophon, makes this explicit. Xenophon argues that Athens should and could increase its tax revenues by making the city even more desirable to foreigners, and thereby increase “imports and exports, sales, rents, and customs” (Xenophon, *Revenues* 3.5). Among other measures, Xenophon emphasizes the value of open and fair access to public institutions: He urges that state officials responsible for adjudicating disputes over commercial exchanges be given prizes when they produce especially just and prompt settlements (3.3), noting that this remedy would cost nothing beyond “benevolent legislation and regulations” (1.6). But he also recommends substantial state capital investment in infrastructure – in hotels, mercantile halls, an increased stock of available houses, and shops in both Piraeus and in the central city. These “would be an ornament to the state, and at the same time the sources of considerable revenue” (3.12-13). To what extent Xenophon’s proposals were influenced by, or influential upon, actual policy is

unknown, but he clearly had a grasp of the relationship between open access, the incentives of foreign traders, and the value of increased trade to the Athenian state.

Finally, texts by Plato and Aristotle offer indirect confirmation that the classical Greeks had theorized the relationship between opening access – at least to the level of the doorstep conditions, the incentives of elites and non-elites, regime stability, and state performance. Plato and Aristotle were each, in principle hostile to opening access to institutions, liberties, and equality to non-elites and outsiders. They each associated open access with democracy – and especially with democracy at Athens. Plato and Aristotle were also, however, deeply opposed to highly personalized “natural states” – they characterized authoritarian regimes (tyrannies and *dunasteiai*) as the least desirable forms of political order. Much of Greek political philosophy was devoted to the problem of discovering general principles of “good order” (*eunomia*) that would allow the development of a stable, high-performing, but non-democratic constitutional order – a just and good state that would be capable of defending itself against hostile rivals and would not be subject to devolving quickly into an unjust, low-performing natural state.

Plato’s fundamental organizing principle of justice in the design of Calliopolis, the ideal community described in his *Republic*, is that each individual resident “minds his own business” – that is, each is to stay strictly within his or her own domain of activity and does not meddle in the affairs of others: this principle of justice is what ultimately produces the specialized Guardian class of

professional warriors and the tiny ruling class of philosopher kings. Yet Plato also specifies that a wide variety of essential economic roles must be represented at Callipolis, including traders. Plato was highly ambivalent about written law, but it is clear that his ideal state is structured according to clearly understood and carefully maintained procedural and substantive rules that benefitted all residents. The principle that Callipolis must robustly promote the welfare of *all* of its diverse residents, rather than the welfare of elites at the expense of others, is strongly and repeatedly asserted. But how will this be possible in light of the proportionality principle? The Guardians of Callipolis constitute a special military caste with a monopoly on the effective use of violence. Plato clearly recognizes the threat that this monopoly poses to the “welfare of all”: much of the *Republic* concerns the special education and institutions that are meant to align the incentives of the Guardians and ultimately of the Philosopher-Kings with the principle of “welfare of all.” The key point is that Plato clearly recognized the relevant issues, even if his solution seems questionable today.

In the *Politics* Aristotle sought to combine ideal theory, aimed a community in which the welfare of all will be advanced, with practical recommendations for stabilizing existing regimes. Like Plato, he saw violence, especially when associated with regime change, as a primary problem that any decent regime must confront. He points out that oligarchies were less stable than democracies, because they restricted access to the rights of citizenship. Aristotle was specifically concerned with the problem of perpetuity, noting that both the laws and the makeup of military forces must be properly aligned with the actual

distribution of political power within the regime (i.e., what we call the proportionality principle). His specification that, in a well-ordered regime, all citizens would take an active part in ruling and would be ruled over “in turns” captures both aspects of impersonality and perpetuity. Aristotle’s practical suggestions for regime stabilization focus on how institutions could be designed to reduce the opportunity of the dominant group (whether elites or masses) to exploit others.

## **8. Conclusions**

We opened this essay by asking whether economic development is a phenomenon uniquely identified with modernity. We argue that the answer is no. In support of that conclusion we demonstrated that ancient Athens was developed, when measured by the criteria of NWW/CNW.

We come to this conclusion as follows. Our theoretical section focuses on the meaning of political development. CNW model the problem of development as a violence trap, showing that the needs of natural states to control internal violence effectively traps large parts of the populations of those states in a condition in which they are systematically vulnerable to domination and expropriation by elites. The trap implies that development is not a continuous or incremental process. Because the violence trap is an equilibrium, it is stable. Developing countries qua natural states may get richer, at least for a time, but most fail to develop in the sense that they escape the violence trap with its built-in tendency to low growth in the long run. Escaping the violence trap requires a

set of non-incremental changes involving attaining the three doorstep conditions: rule of law for elites; perpetuity for the state and organizations; and consolidated political control over violence and the military.

We draw on NWW to set out three related criteria about what it means to be politically developed. The criteria are, in addition to perpetuity, impersonality and inclusion. Although these criteria are minimal, we argue that they are necessary conditions for the principal institutions associated with development, namely, secure property rights, vibrant markets reflecting considerable specialization and exchange, rule of law and contract enforcement, and public goods provision. Moreover, these institutions cannot arise without consolidated political control over the military and violence more broadly.

We then provide an in-depth understanding of ancient Athens to show that this case meets the doorstep conditions and development criteria. The paper first demonstrates that ancient Athens had attained the doorstep conditions and thus had crossed the development threshold separating limited access orders from open access orders.

Ancient Athens had sustained long-term growth, from the sixth through the fourth centuries BCE. By the end of this period, it seems very probable that the Greek world was the most developed region of the Mediterranean world and Athens was the highest-performing state of Greece. Prior to the late 6th century BCE, Athens was a natural state governed by ad hoc coalitions of powerful elites with distributed violence potential and hence an absence of impersonality and perpetuity. In the late 6th century, however, the rule of tyrants and dynasts ended

with the Athenian revolution of 508 BCE and the establishment of democracy. At this time, all Athens-resident native males were declared citizens. Over the course of the next century political control over violence was established, as was rule of law for all citizens.

In the fourth century BCE, Athenians went beyond the doorstep conditions, moving substantially toward a stable, open access order. We provide three examples of how Athens extended impersonal, perpetual, rule of law institutions beyond the elite: the law against humiliation and threats by elites toward non-elites, including non-citizens; extension of the law of contracts to non-citizens; and the provision of market-enhancing public goods, such as port facilities and standards regulations governing coinage and counterfeiting. A major motivation for these extensions involved maintaining Athens as the premier port and entrepôt of the ancient Greek world. Sustaining a wide range of rights for traders, for example, made Athens an attractive place to trade relative to other Greek trading centers. Athenians had strong incentives to maintain these institutions; failing to do so would cause Athens to lose its competitive advantage as the premier Greek port.

Our demonstration that ancient Athens met the doorstep conditions and had established many of the central features of an open access order has several implications. The discussion shows that Athens had escaped the violence trap and was a developed society. It therefore demonstrates that economic development is not exclusively a modern phenomenon or part of modernity itself. Finally, as an out of sample test, this case provides additional

validity for the NWW framework, which was developed by studying the modern cases of the “first movers,” England, France, and the United States.

### Works cited

Acemoglu, Daron. 2009. *Introduction to Modern Economic Growth*. Princeton: Princeton University Press.

Barro, Robert J. 1998. *Determinants of Economic Growth: A Cross-Country Empirical Study*. Cambridge, Mass.: M.I.T. Press.

Bates, Robert H. 2001. *Prosperity & Violence: The Political Economy of Development*. New York: W.W. Norton.

Boix, Carles. 2003. *Democracy and redistribution*. Cambridge: Cambridge University Press.

Carugati, Federica. In progress. “Shock-driven democracy: the threats of civil war and limited resources in the aftermath of the Peloponnesian War.” Working paper.

Cohen, Edward E. 1973. *Ancient Athenian maritime courts*. Princeton, N.J.: Princeton University Press.

Cohen, Edward E. 1992. *Athenian economy and society: A banking perspective*. Princeton, N.J.: Princeton University Press.

Cox, Gary W., Douglass C. North, and Barry R. Weingast. 2013. “The Violence Trap: A Political-Economic Approach to the Problems of Development.” Working Paper, Hoover Institution, Stanford University

Fearon, James. 1995. "Rationalist Explanations for War." *International Organization* 49(Summer): 379-414.

Finley, M. I. 1978. “The Fifth-century Athenian Empire: A Balance Sheet.” Pp. 103-26, 306-10 in *Imperialism in the Ancient World*, edited by P. D. A. Garnsey, C. R. Whittaker. Cambridge: Cambridge University Press.

Finley, M. I. 1999 [1973]. *The ancient economy*. Berkeley: University of California Press.

Forsdyke, Sara. 2005. *Exile, Ostracism, and Democracy: The Politics of Expulsion in Ancient Greece*. Princeton: Princeton University Press.

- Frost, Frank J. 1984. "The Athenian military before Cleisthenes." *Historia*. 33:283-294.
- Gellner, Ernest. 1994. *Conditions of Liberty: Civil society and Its Rivals*. New York: Alan Lane.
- Gellner, Ernest. 1995. *Anthropology and Politics: Revolutions in the Sacred Grove*. Oxford: Oxford University Press.
- Gomme, A.W. 1951. "The Working of the Athenian Democracy." *History*. 36:12-28.
- Hansen, Mogens Herman. 1991. *The Athenian democracy in the age of Demosthenes: Structure, principles, and ideology*. Oxford: B. Blackwell.
- Hansen, Mogens Herman. 2006. *The shotgun method : the demography of the ancient Greek city-state culture*. Columbia: University of Missouri Press.
- Hansen, Mogens Herman and Thomas Heine Nielsen. 2004. *An inventory of archaic and classical poleis*. Oxford: Oxford University Press.
- Ismard, Paulin. 2010. *La cité des réseaux. Athènes et ses associations, VIe-IVe siècle avt. J.-C.* Paris.
- Kierstead, James. 2013. "A community of communities: Associations and democracy in classical Athens." PhD Dissertation. Classics, Stanford University.
- Lanni, Adriaan M. 2006. *Law and Justice in the Courts of Classical Athens*. Cambridge: Cambridge University Press.
- Lynch, John Patrick. 1972. *Aristotle's school; a study of a Greek educational institution*. Berkeley,: University of California Press.
- Lyttkens, Carl Hampus. 2012. *Economic Analysis of Institutional Change in Ancient Greece: Politics, Taxation and Rational Behaviour*. Routledge.
- Mackil, Emily. 2013. *Creating a Common Polity: Religion, Economy, and Politics in the Making of the Greek Koinon*. University of California Press.
- Milanovic, Branko, Peter H. Lindert, and Jeffrey G. Williamson. 2011. "Pre-Industrial Inequality\*." *The Economic Journal*. 121 (551):255-272.
- Montinola, Gabriella R. 2012. "Change and Continuity in a Limited Access Order: The Philippines." in Douglass C. North, John Joseph Wallis, Steven B. Webb, and Barry R. Weingast. *In the Shadow of Violence: The Problem of Development*



*for Limited Access Order Societies*. Cambridge: Cambridge University Press.

Morris, Ian. 2004. "Economic Growth in Ancient Greece." *Journal of Institutional and Theoretical Economics*. 160 (4):709-742.

Morris, Ian. 2009. "The Greater Athenian State." Pp. 99-177 in *The Dynamics of Ancient Empires*, edited by Ian Morris and Walter Scheidel. Oxford: Oxford University Press.

North, Douglass Cecil, John Joseph Wallis, and Barry R. Weingast. 2009. *Violence and Social Orders. A conceptual framework for interpreting recorded human history*. Cambridge: Cambridge University Press.

North, Douglass C., John Joseph Wallis, Steven B. Webb, and Barry R. Weingast. 2012. *In the Shadow of Violence: The Problem of Development for Limited Access Order Societies*. Cambridge: Cambridge University Press.

Ober, Josiah. 1989. *Mass and elite in democratic Athens: Rhetoric, ideology, and the power of the people*. Princeton, N.J.: Princeton University Press.

Ober, Josiah. 2000. "Quasi-rights: Participatory citizenship and negative liberties in democratic Athens." *Social Philosophy & Policy*. 17 (1):27-61.

Ober, Josiah. 2008. *Democracy and knowledge : innovation and learning in classical Athens*. Princeton: Princeton University Press.

Ober, Josiah. 2010a. "The instrumental value of others and institutional change: An Athenian case study." Pp. 156-178 in *Valuing Others in Classical Antiquity*, edited by Ineke Sluiter and Ralph Rosen. Leiden: Brill.

Ober, Josiah. 2010b. "Wealthy Hellas." *Transactions of the American Philological Association*. 140:241-286.

Ober, Josiah. 2012. "Democracy's dignity." *American Political Science Review*. 106.4:827-846.

Ober, Josiah. In progress. "Fiscal policy in classical Athens." in *Fiscal Regimes and Political Economy of Early States*, edited by Walter Scheidel and Andrew Monson.

Polanyi, Karl. 2001 [1944]. *The great transformation : the political and economic origins of our time*. Boston, Mass.: Beacon Press.

Powell, Robert. 1999. *In the Shadow of Power: States and Strategies in International Politics*. Princeton: Princeton University Press

Pritchard, David. 2012. "Costing festivals and war: Spending priorities of the Athenian democracy." *Historia*. 61:18-65.

Raaflaub, Kurt, Josiah Ober, and Robert W. Wallace. 2007. *The Origins of Democracy in Ancient Greece*. Berkeley and Los Angeles: University of California Press.

Rodrik, Dani. 1999. "Where did all the Growth Go? External Shocks, Social Conflict and Growth Collapses." *J. of Economic Growth*. 4: 385-412.

Saller, Richard P. 2013. "The young Moses Finley and the discipline of economics." in *Moses Finley and Politics*, edited by William V. Harris.

Scheidel, Walter. 2010. "Real wages in early economies: Evidence for living standards from 1800 BCE to 1300 CE." *Journal of the Social and Economic History of the Orient*. 53:425-462.

Scheidel, Walter, Ian Morris, and Richard P. Saller, ed. 2007. *The Cambridge Economic History of the Greco-Roman World*. Cambridge: Cambridge University Press.

Schumpeter, Joseph A. 1934. *The theory of economic development. An inquiry into profits, capital, credit, interest, and the business cycle*. Cambridge, Mass.: Harvard University Press.

Smith, Adam. 1776 [1981]. *An Inquiry into the Nature and Causes of The Wealth of Nations*. R.H. Campbell, A.S. Skinner, and W.B. Todd, eds., Indianapolis: Liberty Fund;

Stroud, Ronald S. 1974. "An Athenian Law on Silver Coinage." *Hesperia*. 157-188.

Teegarden, David. 2014. *Death to Tyrants! Ancient Greek Democracy and the Struggle against Tyranny*. Princeton: Princeton University Press.

Tilly, Charles. 1992. *Coercion, Capital, and European States, AD 990-1992*. Revised ed. Cambridge, Mass: Blackwell.

van Alfen, Peter G. 2005. "Problems in Ancient Imitative and Counterfeit Coinage." Pp. 322-354 in *Making, Moving, and Managing: The New World of Ancient Economics, 323-31 B.C.*, edited by Zofia Archibald, John Davies, and Vincent Gabrielsen. Oxford: Oxbow.