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**Morality, institutions and economic growth:**

**Lessons from ancient Greece***

By

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**Abstract**

We show that the character and the morality of citizens are important ingredients of economic growth because they go hand in hand with the great institutions of private property, democracy, and free markets. Our approach enables us to establish this result by reference to the structure and performance of the ancient economies of Athens and Sparta during the period 490-338 BC. Athens grew vastly wealthier than Sparta essentially because its institutions were optimally adjusted to confront the basic scarcity of grains, whereas the institutions of Sparta were optimally adjusted to sustain its military supremacy. However, in both cases there emerged systems of morality, which secured the operating efficiency of their institutions. Therefore, poor countries in search of potent strategies for rapid economic growth should not just try to emulate the institutions of economically advanced countries. At the same time, they should put the emphasis of their efforts to setting up *agoge* systems, so as to infuse into the character of their citizens compatible "ethos". For, without the latter, no matter how successfully they adapt the institutions of democracy and free markets, rapid economic growth will be inhibited from the lack of an environment of generalized morality. In this regard, the ideal type model of *agoge* is the one that prevailed in ancient Athens 25 centuries ago.

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(From a dialogue between Pope Benedict XIV and Voltaire somewhere in the grateful memory of mankind)

……...

Voltaire: I still think that philosophers can dispense with morality.

Pope Benedict XIV: How naïve you are. Are children capable of philosophy? Can children reason? Society is based upon morality, morality is based upon character, character is formed in childhood and youth long before reason can be a guide. We must infuse morality into the individual when he is young and malleable; then it may be strong enough to withstand his individualistic impulses, even his individualistic reasoning. I am afraid you began to think too soon. The intellect is constitutional individualist, and when it is uncontrolled by morality it can tear society to pieces.

……...

Durant and Durant, (1967), *The Story of Civilization, The Age of Voltaire*, vol. 9, 791.

## 1. Introduction

Thinking and policy advice about questions relating to economic development have changed dramatically over the last 50 years. In the two decades following World War II economists thought, and policy advisors from international organizations suggested to poor countries, that the quickest road to development was to save and invest, in order to accumulate modern and hence more productive capital, to educate their labor force, so as to meet the demand for various skills that accompanies industrialization, to give emphasis to exportable goods, so as to alleviate the deficits in the balance of payments, etc. But the results were not encouraging. The industries they established became dormant and inefficient behind the tall walls of protection from international competition. The educational systems they set up to train their citizens, led to misalignments with demanded skills, whereas many of their better minds emigrated to advance countries in search of better opportunities; and in general, as certain authors have noted,[1] the biggest beneficiaries of these development strategies may have been the high-priced consultants who recommended them.

Thus, in view of the persistence of poverty in many parts of the world and the inability of prevailing growth theory to provide effective policy guidance, economists turned to the hypothesis that the culprit to blame was geography. Admittedly since it determines the climate, the resource endowments, the incidence of diseases and the ecology, geography should influence the technology of a country as well as the incentives of its citizens. But given that policy

[1] For a critique of the failure of neoclassical growth theory and policy to help many countries to escape from their poverty trap, see, for example, Krueger (1993).

makers cannot exercise meaningful control over these variables, the *geography hypothesis* presented a gloomy outlook for many countries located in disadvantaged regions, and provoked researchers into looking for more efficient development strategies in other directions. This search led to the realization that poor countries lack better markets, more educated people, and more modern capital, because they do not have well defined systems of property rights, the rule of law is lax, the freedom of exchange is restricted, etc. Thus, by attributing the differences in living standards between rich and poor nations to these fundamental causes, researchers proposed the so-called *institutions hypothesis*.[2]

Tests of this hypothesis have shown that institutions do matter for economic growth. But in as much as the results from these tests provide considerable and encouraging evidence, the establishment of effective institutions is not an easy undertaking. This is so because the choices of desirable forms of institutions and the degree of their effectiveness have been found more recently to depend on various context specific factors, that arise from differences not only in geography but also in historical developments, political economy circumstances and other initial conditions. Still, from the research by Platteau (1994), Yaffey (1998), Fehr and Schmidt (1999) and others, it turns out that there are certain fundamental context invariant processes that contribute positively, either by improving the quality of life per se, or by facilitating the establishment and the functioning of wealth enhancing institutions. One of them being *morality* that Pope Benedict XIV stressed in the captioned passage from his imaginary discussion with Voltaire. So for us it is fascinating to add to this literature by looking at the difference that morality made to the distinctly disparate levels of wealth that the classical Athens and Sparta reached at the peak of their power.

With this agenda in mind, our plan is to characterize the nature of the relationship between morality and growth promoting institutions by drawing on the case of ancient Greece. By doing so, it is our hope that a clear picture of the fundamental differences between Athens and Sparta will emerge, which will explain in a convincing manner why only Athens became the main economic power in classical antiquity. This endeavor is undertaken in the next three sections. In particular, in Section 2 we present a brief account of what we know with relative certainty about the stylized features pertaining to the economies of the two city-states during the 150 year period from the victory of Greeks in Marathon against the Persians in 490 to 430 BC., i.e. the year that Sparta attacked Athens thus starting the Peloponnesian War, and from then to 338 during which the economic growth in the two city-states decelerated (Isager and

[2] Hodgson (1988) gives an early list of authors and writings that contributed to the foundation of the school of *Institutional Economics*.

Hansen, 1975, 52-5). In Section 3 we attempt to answer the following questions: a) the economy of Athens was organized according to a proto-capitalistic market system, whereas that of Sparta had all the characteristics of a centrally administered economy. Did this fundamental difference influence their economic performance? b) Aside from the differences in their economic organization, the two city-states differed also in the moral norms that prevailed among their citizens. Which were their main differences? c) Significant differences were also observed in the processes for infusing moral norms to their citizens, as well as in the institutions for monitoring moral behavior and discouraging transgressions. To what extent might these differences in moral norms be attributed to the differences in the organization of the respective economies? Then, in Section 4 we turn to the lessons that we can derive from the above discussion, and, finally, Section 5 contains a synopsis of our conclusions.

## 2. The stylized features of the two economies

From Aristotle's *Politics* and *The Athenian Constitution* in antiquity, to Fustel des Coulages (1866), Glotz (1928), Finley (1981) and numerous other writers, we have come to know how the city, i.e. the Greek *Polis*, evolved through association and symbiosis. The first unit was the household (*oikos*), which comprised all those who sat to eat in the same table and preyed to the same god. As the household multiplied, the descendants who lived in the same area and accepted the authority of the eldest male of the original family formed a village, i.e. the Greek *Kome*. Finally, by willful and at times coercive association, many villages that were located in a geographically homogeneous but naturally delimited area formed a city-state. Initially, the families that made up the city-state maintained their primordial rights and obliged their members to work for the families' interests. But as family ties loosened up and individuals got liberated, the powers of the city-state increased at the expense of the families that constituted it. Thus the city-state established its authority and started to pursue objectives that were construed to be in the interest of all citizens, irrespective of the families to which they belonged. This was the second stage in the development of city-states and it was followed by a third one in which happened exactly what Pope Benedict XIV answered to Voltaire. That is, the excesses of individualism after the end of the Peloponnesian War tore apart the social fabric of city-states and thus made them easy targets to the forces of king Philip of Macedonia, who in 338 BC unified all Greek city-states into one large state under his reign.

The size of city-states was small. Generally, they covered an area not exceeding the limits of a contemporary municipality. But Athens and Sparta stretched over exceptionally large areas. In particular, as mentioned by Glotz (1928, 34), when Sparta added to Laconia the

region of Messinea in the middle of the 7th century BC it became the first power in Greece, because it controlled a land of 8.400 square kilometers, whereas when Athens added to its territory the island of Salamis and the district of Oropos in the 6th century BC, it extended over an area of 2.650 square kilometers. Moreover, as documented by Fleck and Hansen (2006) the fertility of soil in Sparta was far superior to that of Athens, so it enjoyed a significant comparative advantage in agriculture because more grain could be produced there with less effort and investment.

In order to understand the political and social environment in which the two economies were embedded, a few brief remarks are in order regarding the size and the structure of their population, as well as the nature of their governments and the objectives under which they were governed. Population estimates are extremely inaccurate. But a simple average of the estimates mentioned by Amemiya (2006, Part I, 58-9) points to a population for Athens in 430 BC of about 300000, consisting of 180000 citizens, 50000 *metics* and 70000 *private slaves*, whereas from the estimates quoted by Andreades (1933, 65, ft.2) for Sparta its population in the same period was about 250000, composed of 15000 citizens or *Homoioi* (*Ὅμοιοι*), 80000 *Perioikoi* (*Περίοικοι*) and 155000 *public slaves* or *Helots* (*Είλωτες*).

The systems of government of the two city-states differed significantly. After the age of revolution 750-650 BC, and under the leadership of some insightful politicians, Athens was organized politically on the basis of certain fundamental principles, which remain until now the basis of democracy. As Pericles proudly declared in his epitaph, these principles were the following: (a) the government of Athens was in the hands, not of the few, but of many (i.e. the majority principle); (b) in legal affairs all citizens were equal for the settlement of their private disputes (the principle of equality before the law); (c) with respect to the importance of each citizen to the city-state, public honors were conferred not because a citizen belonged to a particular class, but because of personal merits (the principle of meritocracy), and (d) there prevailed freedom from suspicion of one another in the pursuit of every-day life (the principle of personal liberty) (Thucydides, II, 34). In more recent years these principles and democracy that was founded on them have proved positive in sustaining economic development (Feld and Savior, 1997) and preventing extreme inequality in the distribution of wealth (Gradstein and Milanovic, 2002).

In Sparta the government was in the hands of few. At the top was the senate or *Gerousia*, which consisted of two hereditary kings and 28 nobles over 60 years of age who were elected for life. This body had mostly consultative and judiciary powers. But it participated also in the determination of the subjects that were introduced in the popular assembly or *Apella*. The *Apella* was made up of all citizens above 30 years of age and was presided over

by 5 Ephors, who were elected for one year. However, as the citizens in the *Apella* could only accept or reject by voice, without discussing the recommendations that were brought in front of them, the real rulers of Sparta were the Ephors. For this reason, Aristotle (*Politics*, 1270b, 10-30) argued that the system by which Sparta was governed seemed to be an oligarchy. Thus, since they were not consulted in what they considered to be the crucial affairs of their city, the citizens in Sparta were not politically active.

Finally, with respect to the objectives of their governments, Athens was governed to maximize the wealth and the eternal glory of the city in an environment of self-restrained individual liberty, whereas Sparta was governed as if its survival was constantly threatened by other cities and thus had to live under a permanent state of siege, where, of course, the liberties of individuals and their well-being did not matter. With the above in mind, we turn now to the stylized features of the two economies.

### 2.1 The economy of Athens

The ideal type structure of the Athenian economy could be reasonably conceived to consist of four sectors. These were: a) the public sector, which included the military; b) the private sector, comprising the sub-sectors of production, distribution and money and banking; c) the import-export sector with its supporting capabilities of shipping, insurance and warehousing; and d) the system of *agoge* (*αγωγή*) for the upbringing of young Athenians and maintaining their ethos through life. As we will explain shortly, the Athenian system of *agoge* differed fundamentally from that of Sparta because it operated differently and had totally different tenets. But for now we shall focus briefly on the other sectors.

#### 2.1.1 The public sector

In 483 BC, i.e. shortly after its victory in Marathon in 490 BC, Athens discovered productive silver mines in Laureion. With the help of the funds from this source and on the advice of Themistocles the government embarked on a shipbuilding program to defend the city from Persians (Herodotus, VII, 144; Aristotle, *The Athenian Constitution*, XXII, 7).[3] So when the Persians defeated Leonidas in Thermopylai in 480 BC and became a real threat, Athens was fully prepared for the victorious naval battle in the straits of Salamis. Capitalizing on that victory, Athens started to plan for its defense on a more strategic basis and for this purpose it organized the so-called *Delian League* with headquarters first

[3] From the same source of funds the government built the port of Piraeus with its fortified walls and the road that connected it to the center of the city. For an analysis of the institution of *trierarchy* on the military strength of Athens, see Kyriazis and Zouboulakis (2004).

on the island of Delos and later on in Athens. Around 467 BC the league comprised 200 city-states that contributed ships and/or money for their common defense. Some writers have argued that the Athenian governments of the period took advantage of the tributes paid by the participating city-states and that the wealth and the glory of Athens would not have been possible without these funds. But as French (1964, 92-3, 96-7) has shown, Athens absorbed tremendous costs in leading this alliance and, in addition, when the funds of the *Delian League* were merged around 440 BC (Blamire, 2001, 99), she had already attained a high rate of growth in terms of living standards and population (French, 1964, 136-7). Thus, in our view, the city had become rich through manufacturing, shipping and other export-import activities well before the alliance was established, as well as because to a great extent the citizens themselves covered the cost of their armory during military expeditions.[4]

In any case, in addition to the tributes from its allies and the income from the Laureion mines, the Athenian government received revenues and contributions from several other sources. In particular, at one time or another, during the period under consideration, additional revenues and contributions came from: a) income taxes paid by rich citizens;[5] b) duties, such as the one on metics called *Metoikion*;[6] in times of war metics were also required to pay a special income tax and it is mentioned (Isocrates, *Trapeziticus*, 41) that they regarded it as a honorable obligation to share in the cost of the city's wars; c) rents from public lands; d) court fees, fines and confiscations of property after due process; e) spoils acquired from victories in wars ); f) donations, and g) provisions by citizens and metics, according to their wealth, of public services called *Liturgies,* like the construction and maintenance of warships, the writing and the performance of theatrical plays, financing of festivals, etc. (Thucydides, VII, 91).

Turning to public expenditures (see Aristotle, *The Athenian Constitution*, L-L.1, Salmon, 1999, 156-7), the Athenian state: a) financed partly the cost of arm services; b) built infrastructure and monuments that decorated the city; c) compensated officials who were chosen by lottery to serve in the assembly, the council and the courts; d) paid for the services of public officers who worked as *agoranomoi* and *metronomoi,* monitoring respec-

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[4] Andreades (1933, 389-92; Amemiya, 2006, Part II, 130) estimates that in the period 454-433 BC the total amount of tributes received by Athens from its allies amounted approximately to 370 Talents per annum.

[5] In Athens, citizens who had annual income corresponding to the value of 500, 300, and 200 *Medimnoi* paid direct taxes. Contos and Baloglou (1995) estimate that total revenues from this tax amounted to 3600 Talents per annum. In addition, the citizens who belonged to the above income classes had particular financial obligations when participating in the wars of the city. For example, those in the income class of 500 Medimnoi finance a *trireme*, whereas those with incomes less than 200 *Medimnoi* were exempt from direct taxes but when enlisted they did menial and auxiliary tasks such as rowing in a *trireme*. For an extended analysis see Ostwald (1995).

[6] According to the computations presented by Amemiya (2006, part II, 136), the annual revenues from this source amounted to 75 Talents.

tively the quality and the weight of goods sold in the market, *dokimastai*, assessing the purity of coins, *sitophylakes,* inspecting the quality and fair price of products from grain and barley, and *emporiou epimelitai*, supervising the import and export trade at the port of Piraeus; e) granted pensions to disabled who could not earn enough income to live on their own; f) maintained and educated up to the age of 18 all orphans from parents killed in wars, etc.

From the above it follows that essentially the state in Athens performed all the tasks that are carried out by contemporary governments. It contributed to the maintenance of military forces. It constructed infrastructure. It provided the necessary bureaucracy for the functioning of the government and the courts. It supervised the markets, but without controlling administratively the prices of goods and services, and even provided welfare support for the citizens in need.

### 2.1.2 The private sector

The Athenians, despite some philosophical arguments against vulgar works and employments, mostly advanced after the Peloponnesian War, did not turn against labor as a source of wealth. Moreover, many citizens, particularly from the poor and middle classes, did work for others and were also involved in farming, trade and other business activities. That they did so we know from Demosthenes (*Against Eubulides*, 35) who says "…do not scorn the needy (their poverty is misfortune enough), and scorn still less, those who choose to engage in trade and get their living by honest means." So, given that all elected in state functions served only for a limited time,[7] it seems reasonable to surmise that the majority of male adults citizens during peace times practiced income earning activities of some form or another. Their range and nature are described briefly below.

#### 2.1.2.1 Production

The production sector of the Athenian economy in the 5$^{th}$ century BC consisted of mining, agriculture, including animal husbandry, and manufacturing. Dominant among the three was agriculture. But mining and manufacturing expanded rapidly and contributed significantly to the wealth of Athens. Their stylized features were the following.

#### Mining

When the new heading of silver was discovered in the mines of Laureion and its operation started in 483 BC, Herodotus (VII, 144) informs us that the revenues of Athens in-

[7] Aristotle (*Politics,* 1317b, 20-5), while presenting the fundamental bases of democracy (having in mind the Athenian democracy), stressed how important it was that "no office be held twice, or more than a few times, by the same person".

creased significantly. Unfortunately, the historical sources do not give us details about how the mines were leased, what was the role of the city, or how silver was extracted from the ore. But from the comment by Aeschylus (*Persians*, 240), the testimonies by Herodotus (Ibid.) and Thucydides (VII, 91), and a joke by Aristophanes (*Knights*, 362) we can conclude with relative certainty that the mines were an exceptional source of wealth for both the city and the individuals. Andreades (1933, 339) estimates that around 450 BC state revenues from the Laureion mines amounted to 50-100 Talents. However, according to the evidence cited by Amemiya (2006, part II, 137-8), in addition to the leases, the miners had to pay 10% tax on their total output of silver, the value of which amounted to about 1000 Talents. Hence, the estimation by other authors that state revenues from mines amounted to 160 Talents is quite reasonable.

As to the scale of mining operations we have only the information that, when Spartans occupied Decelea in 413 BC, there escaped 20.000 slaves who worked mostly in the mines. After this event, the treasury of the city lost its main source of revenue and it was forced to utilize the gold from the statues of Parthenon to finance the war effort during the rest of the Peloponnesian War until the defeat of Athens in 404 BC.

***Agriculture***

The arable land of Attica was devoted predominantly to the production of wheat and barley. The productivity of land used for wheat was roughly half of that cultivated with barley, and this explains perhaps why wheat was produced only in as little as one fourth of the cultivated areas. But the consensus is that Athens experienced permanently significant deficits in the production of grains, which had to be covered with imports (Isager and Hansen, 1975, 20-9; Amemiya, 2006, part II, 104-5). Perhaps this explains why Athenians attached the importance in agriculture emphasized by Xenophon from whom we learn that: "It has been nobly said that husbandry is the mother and nurse of the other arts. For when husbandry flourishes, all the other arts are in good fettle; but whenever the land is compelled to lie waste, the other arts of landsmen and mariners alike well-nigh perish" (Xenophon, *Oeconomicus,* v.17).

Husbandly, on the other hand, flourished by raising goats, sheep, oxen, horses, swine and other animals. Xenophon mentions the importance of this activity in at least two occasions. The first is in his (*Memorabilia*, IV.3.10) where Socrates says: "For what creature reaps so many benefits as man from goats and sheep and horses and oxen and asses and the other animals. He owes more to them, in my opinion, than to the fruits of the earth. At least they are not less valuable to him for food and commerce," whereas the second instance is in his (*Oeconomicus*, VII.20, XX.23) where he emphasizes the combination of husbandry with

farming. From data scattered here and there we know that the production of milk and wool was the prime goal of the owners of flocks of sheep and goats and that the demand of Athenians was more or less met by local producers, even though sheep, goats, swine and cattle were also brought to the market from neighboring areas (Amemiya, 2006, part II, 113).

Agriculture was organized mostly in small lots owned by citizens. Metics were not allowed to own land but they could rent farms and cultivate them for their own account.[8] Cultivation was performed as a family activity but there were also large farms using good numbers of slaves.

***Manufacturing***

It has been established that many citizens and *metics* in Athens pursued manufacturing activities and became quite wealthy. According to Xenophon, by: "…manufacturing one of these commodities, namely groats, Nausicydes, keeps not only himself and his family, but large herds of swine and cattle as well, and has so much to spare that he often undertakes costly public duties; that Cyrebus feeds his whole family well and lives in luxury by baking bread, Demeas of Collytus by making capes, Menon by making cloaks; and most of the Megarians make a good living out of smocks" (*Memorabilia*, II.VII.6). Or, for another piece of evidence regarding the growth of manufacturing during the period under consideration, manufacturers of just about everything one can think of are represented in the a list of 170 occupations cited by Harris (2002, 88-99). Hence, all indications are that manufacturing aimed not only for covering local consumption but generating exports as well (Isager and Hansen, 1975, 38-42).

Particularly active in this sector were manufacturers from the class of *metics*. *Metics* were admitted in Athens by the time of Solon (Plutarch, *Solon*, 22, 24; Stanley, 1999, 228) because of their special knowledge in certain important industrial activities such as armory, shipbuilding, pottery, ornaments, etc. The majority of metics were entrepreneurs or trained metal workers and potters (Isager and Hansen, 1975, 70-3). Aside from farming, their entrepreneurial activities were concentrated in small-scale industrial enterprises. An example is that of Kephalus, who was the father of orator Lysias. Kephalus had been invited by Pericles from Syracuse in order to bring to the city his special knowledge and experience in shield production as well as his capital (Lysias, *Against Eratosthenes*, 4). Similarly, the orator Lysias and his brother owned a shield production enterprise. So, even though they were metics, through their profits they were able to undertake special expensive *Liturgies* (Lysias, *Against Eratosthenes*, 8, 19). Also, the well-known and rich banker, the metic Pasion and his

[8] An example in this regard is that of freedman Alkias (Lysias, *To fig tree apologia,* 10).

freedman Phormion, directed a shield production enterprise (Demosthenes, *To Phormio*, 4-5).

In conclusion, the city of Athens became the center of expanding manufacturing activities, which aimed at covering local consumption as well as generate exports.

#### 2.1.2.2 Distribution: Agora

In Athens the supply of and demand for goods and services met in a marketplace called agora. Harris (2002, 75) notes that "the market in Athens was so large that it was divided into several different sections. Parts of the agora were named after the goods sold there. Prices cleared the market".[9] In cases of excess demand or inadequate supply, the rate of prices increased and equilibrium was thus restored (Xenophon, *Ways and Means*, iv.36). Moreover, in addition to prices, the number of firms in the market reached equilibrium. When the rate of supply increased, while demand remained at the same level, the rate of prices and profits decreased and thus the factors of production moved to another more profitable employment. As Xenophon claimed: "An increase in the number of coppersmiths, for example, produces a fall in the price of cooper work, and the coppersmiths retire from business. The same thing happens in the iron trade. Again, when corn and wine are abundant, the crops are cheap, and the profit derived from growing them disappears, so that many give up farming and set up as merchants or shopkeepers or money lenders" (Ibid, iv.6).

From the above we may infer that the market in Athens operated quite efficiently. But the price mechanism was aided also by other means. For example, from Xenophon we learn that in the markets for goods buyers and sellers were coming closer and, through the function of the retail merchants (*Cyropaedia*, IV.V.42), the cost of transactions decreased significantly. As he put it: "the city as a whole has ten thousand times as much of everything as we have; and yet you may order any sort of servant to buy something in the market and to bring it home, and he will be at no loss: every one of them is bound to know where he should go to get each article. Now the only reason for this is that everything is kept in a fixed place" (*Oeconomicus,* VIII.22). Moreover, there were no price controls, with the exception of grain and grain products, buyers and sellers came into frequent personal contact, and the city with its various officers monitored closely the quality and the weight of the goods sold. As a result, the circumstances for sellers to practice opportunism were extremely limited and this enhanced further the efficiency of the market.

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[9] Harris (2002, 76) gives many examples of how the prices fluctuated with supply and demand.

Even though the information we have refers mostly to the market in Athens, it is fairly certain that comparable retail markets operated in the port of Piraeus and other decentralized locations. Support for this conjecture is derived from the finding by Isager and Hansen (1975, 51) to the effect that "at least half the population of Attica were engaged in trade." For, if this is the case, the *agora* in Athens could not have been an isolated phenomenon, since the population in Attica lived in widely dispersed villages and many would not be able to travel frequently to the Athenian market to buy their provisions. Moreover, from the same source we get a glimpse why so many people were involved in trading.

They did so because they were motivated by profit. Demosthenes (*Against Eubulides*, 31) mentions that in order for *metics* to participate in the *agora* they ought to have paid the tax *metoikion*, whereas foreigners could trade if they paid the tax *xenika*. Why would anyone in his right mind pay these taxes just to take part in the market? The answer has to be that they expected to cover the tax and in addition to be compensated by getting the best deals possible for their efforts. That this behavior had to do with the pursuit of profit was described eloquently by Xenophon who stated: "In other states [except Sparta], I suppose, all men make as much money as they can. One is a farmer, another a shipowner, another a merchant, and others live by different handicrafts" (*Constitution of the Lacedaemonians*, VII.1; brackets added). Therefore, given that the markets in Attica worked as an exchange mechanism and those that participated behaved so as to get the best value for their money, we are inclined to surmise that Athens had a proto-capitalistic "market economy" which functioned much like the contemporary market economies.

In short, the distribution of goods and services in Athens took place in a voluntary exchange environment where the economic calculations of people were based on market determined prices and their plans on the consumption and on the production side, were driven so as to get the best value for their efforts. From the available evidence it seems that markets worked efficiently and thus contributed significantly to the economy.

#### 2.1.2.3 Money and banking

Silver is a metal with particular advantages as a medium of exchange and store of value. It does not corrode. It is relatively light. By comparison to iron or copper, a small quantity of silver holds considerable exchange value; and, last but not least, while its supply was generally scarce, the mines in Laureion produced it in plentiful quantities.[10] So given that silver money had been already established in the Hellenic classical world by Aegina, Corinth

[10] All these specific qualities of silver in the function of money were adequately discussed by Aristotle (*Nicomachean Ethics,* 1133).

and others states, Athens gained a significant comparative advantage. By having her own currency, the Attic Drachma, she was able to enjoy all the benefits of coinage, particularly when she became the leading city-state of the *Delian League* against Persians.

With respect to banking, the plentiful evidence that exists shows that it functioned much like to day. It was pursued on a profit-making basis (Demosthenes, *Against Stephanus*, 23). Like modern banking, it was involved in the changing of currencies of various city-states. It accepted deposits (Isocrates, *Trapeziticus,* 2, 37). It offered loans with interest (Lycurgus, *Against Leocrates*, 23) both unsecured and after contracts were signed (Lysias, *On The Property of Eraton: Against the Treasur*y, 3). It advanced bottomry loans to grain importers in which the ship and/or the cargo were given as security (Demosthenes, *The Plea of Chrysippus and his Partner against Phormio in the matter of a loan*, 6-7).

Moreover, in some cases, when rich Athenians and metics stopped their productive and trade activities, they became rentiers by offering capital to potential entrepreneurs as well as for the operation of businesses (Karayiannis, 1992, 74-6). Not only free citizens but also some metics started profitable enterprises by borrowing capital from rich rentiers and/or bankers. Ancient Athenians were not opposed to intermediation in the demand and supply of interest paying loans for investment. Specifically, the orators Isocrates (*Areopagiticus*, 31-35) and Demosthenes (*Against Aphobus I*, 61) emphasized that such kinds of loans to potential entrepreneurs were of prime importance for the economic development of the city. Thus, the supply of loanable funds was considered to be a very fruitful economic activity (Aristotle, *Politics*, 1320b, 1-15) as was also the assumption of various risks, mainly in wholesale trade (Demosthenes, *To Pantaineton*, 54; *To Zenotheme*, 2; *To Phormio*, 6-7; *To Lacritus*, 22, 25).

Finally, just to lay the denials to rest, it suffices to note that Athenian bankers had adopted forms of checking accounts and extended even sale credits. That this form of lending did exist is corroborated by the fact that Plato (*Laws*, 915 E) in his scheduled ideal city prohibits credit sales by considering them as illegal.

### 2.1.3 The export-import sector

As was mentioned above, Athens experienced permanent deficits in grain production. By itself these deficits necessitated the importation of large quantities of grain. To secure these imports on a sustained basis, Athens required to have: a) money to pay for them; b) port and warehousing facilities to store and preserve the imported grain; c) banking facilities to extend loans to grain importers and dealers; d) some insurance technology to spread the risks of cargos, which were transported mainly over the sea; e) some sort of mechanism to resolve conflicts that are cus-

tomary in trading, particularly over long distances, and f) the naval power to keep safe the sea routes to the grain producing states. From the available evidence we know that during the 5th century Athens adopted policies by means of which it secured all these prerequisites.

Present in Athens and Piraeus were also offices of *Proxenoi*, who looked after the needs of foreign merchants, much like modern consulates, (Burke, 1992, 205). Trade disputes were resolved through an efficient legal system; and, last but not least, the Athenian money in the form of silver coins was accepted throughout the Greek world and the mines of Laureion produced enough silver and the manufacturing sector produced enough surpluses of goods to pay for grain and other imports. Moreover, by building a strong naval fleet, Athens managed to keep relatively safe the sea routes leading to *Hellespont Straits* and through them to the grain producing countries of Black Sea.

As in the case of manufacturing, export-import activity was a dominating enterprise for Athens. Not only citizens but also metics established and directed wholesale enterprises in importing grain and exporting Athenian products. They were considered as offering a special and valuable service to the city of Athens (Lysias, *Against Andokides*, 49). In particular, ancient Athenians recognized that the importers of grain by assuming various risks deserved special profit and their riches were justified (Isocrates, *To Demonicus*, 19). Aristophanes in his comedy *Ploutos* (900) notices that grain importers in times of war were released from taxes as they offered a valuable service to the city. Similarly, Xenophon (*Ways and Means*, III, 4) proposed to the city to pay special tribute to grain importers (e.g. to give them the front positions in gymnastic games and theatrical performances).

**2.2 The economy of Sparta**

The 5th century was also the period during which Sparta reached its apogee of power. But in contrast to Athens, which had been organized socially and militarily so as to maximize the individual liberties and the material welfare of its citizens by adopting the ideal type model of a market economy, Sparta sought military power for its own sake by subjecting its citizens to a regime of bare biological subsistence in conjunction with complete subjugation of their liberties to the tenets of the state. Following Finley (1981, 25), and given that Sparta did not have a foreign trade sector, a reasonable representation of its economy would allow for three sectors. That is: a) the public sector, including the military, b) the sector of production and distribution of goods and services, and c) the system of *agoge (αγωγή)* for raising young Spartans and molding their character to suit the objectives of the state throughout life. As we did above in the case of Athens, in this section we shall focus on the first two sectors

and leave the third for later.

### 2.2.1 The public sector

Sparta had neither silver mines nor a developed tax system. Thus unlike Athens its public treasury lacked two most important sources of revenues. On the other hand, from numerous sources we know that Sparta had distributed the lands in the old city and the surrounding areas to citizens and *Perioikoi*, respectively. So the view of Thucydides (I, 70-1) that Sparta experienced great difficulty in financing its wars during the 5th century is fully corroborated. But then, how did Sparta manage to establish its hegemony and become during the period 490-404 BC the other most powerful city of Greece?

In retrospect, it is all the more amazing that Sparta managed this achievement drawing essentially on a system of taxation in which its citizens paid public expenditures for the most part directly. This system worked as follows. To retain citizenship every male Spartan citizen had to participate in the gatherings called *Syssitia*. Aside from acting as forums of public debate, conferring honors, molding the character of younger citizens, etc., the *Syssitia* served austere, i.e. Spartan, meals that covered the basic food needs of those who participated.[11] But in order to take part in the *Syssitia,* every citizen had to contribute on a monthly basis "one *Medimnoi* of wheat, eight *Choes* of wine, five *Mnes* cheese, five *semi-mnes* figs and a little money for the purchase of breakfast" (Plutarch, *Lycurgus*, 12). These contributions came from the produce of land lots and public slaves that the city had allocated to citizens. Hence, ultimately this part of public expenditures was passed on mainly to *Helots* and to a lesser degree to *Perioikoi*.

Those citizens who did not manage well their land lots, or had lost ownership for other reasons, and could not pay their contributions to *Syssitia* were demoted to the category of "*Hepomoionoi*". On the one hand, this meant that they lost their political rights and could not be counted upon to provide military services, whereas on the other, it implied that, as the land was concentrated over time in the hands of a few families, the class of citizens shrunk and that of "*Hepomoionoi*" increased. As a result, to pursue its wars the city was forced eventually to draft into the army from the class of *Helots*. But unlike citizens who paid themselves for their arms while serving in the army, *Helots* had to be armed at the expense of the city. These expenses were covered not from permanent sources of revenues, but from one off charges, which were extremely difficult to collect, given that the citizens who were ready to spill their blood for victory in the city's wars, were negative to taxation and when forced they tried to pay as little as possible. In Aristotle's words: "The public fi-

[11] Hodkinson (2000, ch. 6) provides evidence showing that the contributions to *Syssitia* were excessive relative to food they offered to the participating citizens.

nance of Sparta was also badly regulated: when compelled to carry on wars on a large scale she has nothing in the state treasury, and the Spartans pay war taxes badly because, as most of the land is owned by them, they do not scrutinize each other's contributions. And the lawgiver has achieved the opposite result - what is advantageous-he has made the state poor and the individual citizen covetous" (*Politics*, 1271b, 10-20).

In conclusion, public revenues and expenditures in Sparta were kept to an absolute minimum through three arrangements. First, by requiring all those who served in the army to pay for their arms, with the exception of *Helots*; second, by compelling all citizens to participate in *Syssitia* at their own expense; third, by using an all volunteer public service made from citizens. Unfortunately we do not have evidence regarding the expenditures for public administration, infrastructure, welfare subsidies to the poor, etc.

### 2.2.2 The sector of production and distribution

At some point in time before the 6th century BC, about which we do not have precise information, the land in the city of Sparta was distributed among its citizens, called *Homoioi* (*Ομοιοι*), in lots capable of producing foodstuffs valued at a specific value of *Medimnoi*. Even though nothing is known about the mechanism by which the equality of income from the various lots was established, this particular distribution aimed at enabling citizens to meet their basic material needs equally (Aristotle, *Politics*, 1294b, 25-35, Plutarch, *Lycurgus*, 8-10, Mossé, 1992, 132-133).[12] Selling and buying of land was forbidden. But at the end of Peloponnesian War a law adopted that gave citizens the right to donate or bequeath their lots. In turn, this started a process through which land ownership came under the control of few families and the aims of the original distribution were vitiated (Plutarch, *Ages,* 5; Aristotle, *Politics*, 1270a, 15-35, 1307a, 40; Mossé, 1992, 135; Osborne, 1996, 481-182; Hodkinson, 2000, ch. 3). Thus during the 5th century we can assume safely that Spartans were not allowed to engage in land transactions as a means to accumulate wealth or cover their material needs.

#### 2.2.2.1 Production

With the usage of land thus restricted, the only possible avenues left for citizens to earn an income was either to cultivate their lots themselves or to rent them to the distinct

[12] At some later time when Messinea was conquered by Sparta the historical sources indicate that a second distribution of land took place, which favored mainly the class of *Perioikoi*. However, which particular areas were involved, how the land was divided, and what conditions applied to its use are issues which are clouded in much uncertainty.

category of non-citizens called *Perioikoi (Περίοικοι)*. But the citizens of Sparta were not allowed to learn or to practice income earning crafts and professions (Aristotle, *Politics*, 1271b, 5-10). Nor were they permitted to get involved in any business activity or *Chrematismos* (Xenophon, *Hellenica*, III, 1, 28), because their sole role was to prepare for war as well as to carry out the political and social affairs of the city (Plutarch, *Lycurgus*, 8-10).

***Agriculture***

As a result of these restrictions the production of agricultural products was conducted partly under the supervision of Spartan women with the assistance of *Helots*, who were allocated to them by the state (Alcock, 2002), and partly by *Perioikoi*, who either cultivated their own lots or rented them from citizens, including agricultural implements and *Helots*, cultivated them for their own account and shared with the owners of the lots the crops produced (sharecropping). However as with the passage of time land ownership came under the control of a few families, the class of *Perioikoi* dominated this sector.

The type of agricultural production that prevailed was mainly one of autarky. In other words, cultivation aimed at securing the necessary quantities of produce to cover the consumption of Spartan families themselves, including of course the consumption of *Helots*, and leave enough surpluses to undertake the contributions to *Syssitia*. But while this regime represented the rule, Hodkinson (2000, ch. 4) reports that cultivation aimed at surpluses to exchange for other products was not uncommon; because the elite and the rich landowners who employed the system of sharecropping produced quantities of agricultural products that were too large for their self-consumption. In this light, and given that it would be farfetched to assume that those obligated for contributions to *Syssitia* had the right quantities throughout the year, a rather safe conclusion is that there was large scope for exchanges of agricultural and animal products, if not in a market like environment, at least in a person to person and family to family barter setup.

Moreover, the historical sources suggest that animal husbandry in Sparta may have been more developed than in Athens, particularly because of the more suitable soil and climatic conditions. Characteristic of the qualitative differences that may have existed is the following passage: “Not even one of their farms could be compared with ours [i.e. Of Sparta] in scale and quality, nor in the ownership of slaves, particularly in the obedience of *Helots,* nor in the horses and other animals that graze in Messinea” (pseudo-Plato, *Alcibiades,* 122D; brackets added). To be more precise, husbandry in Sparta was a practical necessity since every male citizen had to deliver each month five *Mnai* of cheese to *Syssitia.* But apart from this obligation hus-

bandry made good economic sense both for rich and poor Spartans because of the exceptionally suitable environmental conditions as well as for its complementarity with agriculture.

***Handicraft***

Aside from agriculture and husbandry the production sector of Spartan economy must have comprised also various sorts of handicraft activities ranging from the construction of farm implements to the making of weaponry and clothing for the soldiers of the army and the population more generally. Moreover, drawing on Hodkinson (2000, ch. 5) it is rather safe to infer that Spartan households owned and used in everyday life various utensils, furniture and other more or less precious ornaments and decorations. For example, Plutarch in his *Lycurgus* (9), where he stresses the fabrication of various practical objects, refers to an author of the classical period named *Kritias* whom he quotes in relation to the Spartan cup, called *Kothon*. Hence there must have existed some handicraft making various objects beyond the narrow range of those that were absolutely necessary according to the austere way of life of Spartans. But we have no information either about its importance relative to agriculture or about its structure.

**2.2.2.2 Distribution: Barter trade**

In Sparta the production of agricultural and husbandry products aimed primarily at self-consumption. But the need to have the right quantities of goods for the contributions to *Syssitia* every month implies that some exchanges took place. To the same conclusion leads the evidence that there were large farms that produced surpluses for exchange. In addition, craftsmen who made various useful items for everyday life aimed at exchanging them for food and other products. Hence the issue in question is not whether there were exchanges of goods but how they were carried out. From the available historical evidence it is safe to conclude that exchanges in Sparta took place by exchanging goods directly for goods without the intermediation of some form of money. Irrespective of whether these exchanges took place in isolated person to person and family to family contacts or in a dedicated place where all with surpluses came to exchange them for the goods they wished to have, the nature of exchange was barter. This inference is corroborated further by the fact that the monetary sector of the economy was parochial. A kind of money from iron had been adopted which lacked the necessary ease of use because it was heavy. This money was used exclusively as a measure of value of exchange in domestic transactions (Xenophon, *Constitution of the Lacedaemonians,* VII, 5; Plutarch, *Lycurgus*, 8-10), whereas money of other city-states performed the roles of money as a medium of exchange and store of value.

Moreover, in the absence of export-import activities, with the exception perhaps of some limited exchanges of goods with neighboring city-states, the economy in Sparta operated in a closed economy framework, thus limiting its capability to absorb new knowledge and technical know-how from abroad.

**2.3 A comparative assessment of the two economies.**

The Athenian economy in the 5th century BC functioned much like a modern market economy. Its dominant sector was agriculture and animal husbandry. But mining, manufacturing banking services and export-import activities were also present and contributed significantly to the wealth and economic growth (French, 1964, 156, 166-7). The distribution system comprised retail and wholesale markets. Economic agents acted upon prices determined from the mechanism of demand and supply and aimed at getting the best value for their efforts. Exchanges were facilitated by silver base money and the financial intermediation of banks. The state supervised the good operation of markets through specially assigned officers and mostly without imposing price controls. Trade disputes were resolved through an efficient legal system and arbitration. The tax system entailed direct and indirect taxation as well as the obligation to undertake *liturgies* according to one's wealth. And last but not least, the state introduced all the institutions that were necessary in order to maintain law and order and cultivate the trust among economic agents.

By contrast, during the same period, the economy of Sparta operated in a closed economy context with its main focus on self-sufficiency in agricultural and husbandry products. Its distribution mechanism was based on barter and its money from iron was used solely as a measure of value. Moreover, by implication of these features and the testimony we have from Isocrates (*Bousiris*, 18-20) and Xenophon (*Hellenica*, C, I, 28), we can infer that the citizens of Sparta did no look to their own work for increasing their income. To whatever extent they depended on their property, they were mostly pure rentiers drawing incomes from the work of *Perioikoi* and *Helots*. Their productive effort was very low, not only because they did not have the right incentives, but also because learning and practicing crafts and professions was forbidden. Furthermore, given that the possessions of gold and silver coins as well as *Chrematismos* were prohibited, citizens were deliberately discouraged to undertake entrepreneurial activities. Thus in order to cover their material needs they looked to conquering other cities, to offering their military services as mercenaries, and to receiving the welfare contributions by the state, which guaranteed their economic survival for life. Therefore, it is not an exaggeration to say that this economy operated under a set of legal arrangements that stifled the efforts of citizens for mate-

rial improvement and suppressed all human inclinations for economic progress.

In light of the above fundamental differences between the two ancient economies, the question that arises is which of them performed best in economic terms. In the 5th century Sparta had roughly the same size of population with Athens. But the size of land, the fertility of soils and the climate in Laconia and Messinea were far more favorable for agriculture to those in Attica. Hence, with all other conditions the same, the *geography hypothesis* would lead us to expect that Sparta would grow wealthier than Athens. However, judging from the ancient monuments that we still see all over Athens, the extensive defensive and civilian infrastructure that was built, as well as the life style of Athenians during the period under consideration, all indications are that Athens grew vastly wealthier than Sparta.[13] So the *geography hypothesis* most certainly was not validated. The reasons why it failed have to do with the differences in the organization and the associated institutions that each city-state adopted to confront the main challenges that it faced. To these differences we turn immediately below.

## 3. A theory of endogenous moral norms and institutions

In our view, city-states evolved through the unification of village*s* because they held the prospect of responding successfully to at least two main challenges-objectives. The first of them was to provide more effective defense against attacks from other city-states and the second was to confront in a better way the economic problem, given the available technology and resources. As they faced different geographic conditions, Athens and Sparta took different approaches to meeting these objectives. Athens placed most of the emphasis on attaining the economic objective, whereas Sparta focused on the defensive capabilities of the state. As a result, they adopted different institutions and different systems of morality to secure their efficient operation. Our aim in this section is threefold. First, to describe the main institutions that each city-state put in place; second, to explain the systems of morality that were associated with them, and thirdly to highlight the systems of *agoge,* not simply education*,* through which each city-state molded into the character of its citizens the tenets of morality that were required for the efficient operation of its institutions.

### 3.1 The institutions

A theory why only Athens became the economic power in classical antiquity has its origin in the factor of production in which it was greatly disadvantaged, i.e. the size and fertil-

[13] During 480-425 the Athenians built much more buildings than Corinth and of course Sparta (Salmon, 1999, 149).

ity of land in Attica. As the latter could not produce enough grain to feed the population, the city-state of Athens was obliged to adopt an organization, which on the one hand would provide incentives to farmers to increase the productivity of their farms, and on the other to facilitate the necessary imports from grain producing areas of the Aegean and beyond. On the contrary, Sparta by being rich in grain producing arable and irrigable lands had the luxury to adopt an organization that generated incentives to achieve military supremacy. So the differences in the structure and the performance of the two economies were driven mainly by the differences in the organization they adopted. In the case of Athens the political and economic institutions were optimally selected to alleviate the scarcity in grain, whereas the corresponding arrangements in Sparta were designed to secure the military power of the city-state perhaps for defense purposes, but more likely for the benefit of its ruling oligarchy. .

Seen through the lenses of this analysis, all historical developments appear to fall naturally in place. Since the fundamental question in Athens was how to secure the necessary quantities of grain, simple economic reasoning suggested the adoption of the following institutions. Private property rights, so that farmers had all the incentives to work and invest in their farms to increase productivity; Direct democracy to guarantee that property rights would not be expropriated under any circumstances;[14] A taxation system that imposed moderate taxes and was democratically approved;[15] Courts to uphold the laws of the city-state and punish transgressions.[16] Market driven production and distribution of goods and services to make sure that enough surpluses of mining and manufacturing goods were produced to exchange for the required imports of grain; and last but not least, a strong naval fleet to keep open and safe the routes to grain producing areas.

By contrast, given that, after annexing Messinea, Sparta was self-sufficient in

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[14] The institution that best characterized Athenian economy was private property (Morris, 2004, 734). Through its adoption the middle economic class of citizens grew significantly and this development helped the establishment of democracy (Aristotle*, Politics*, 1295b, 30-40; see also Baeck, 1994, 44) . The majority of writers in Athens supported private property on several grounds. For example, they argued that private property increases the level of care, responsibility and work effort of the individual (Xenophon, *Oeconomicus,* ix.17, *Symposium,* viii, 15) and also that it enhances social cohesiveness (*Harmony*) (Demosthenes, *Philippics,* IV, 45; Aristotle, *Politics*, 1261b, 5-15). In more recent years, private property rights and democracy have been identified theoretically (see e.g. Leblang, 1996) and empirically (see e.g. Leblang, 1997; Barro, 1999; Acemoglu and Johnson and Robinson, 2004) as factors of prime importance for economic growth.

[15] Taxes were partly obligatory and were reckoned according to a citizen's income (Aristotle, *The Athenian Constitution*, VII, 4) and partly voluntary through the undertaking of *liturgies* (see e.g. Demosthenes, *Against Aristogeitonos*, I, 51-2; *Against Phaenippus*, 32). Such a system of taxes was used not only as a source for public revenues, but furthermore as a mechanism for preventing the extreme misdistribution of wealth.

[16] From various sources it turns out that Athenians had recognized that the individual, acting in his own interest, compares benefits and costs and acts accordingly- a behavior widely corroborated by modern economic analysis (Tullock and McKenzie, 1975, 122-4). For this reason, they developed a legal system to prevent unlawful acts that provided for stiff penalties (e.g. Lysias, *Against Ergotelous*, A 15, Demosthenes, *Against Aristogeitonos*, A 17), so as to increase the cost of wrongdoing (Andokides, 73, Thucydides, III, 45).

grain, what it needed primarily was a strong military to keep *Helots* in Laconia and Messinea peaceful, to defend the city-state from external threats, and perhaps to extend its hegemony beyond its borders. For this purpose Sparta adopted the following institutions. Through a series of laws it suppressed the natural urging of human beings to amass wealth in the form of fixed and personal property assets. As a result citizens lost their economic independence and were attached for their survival to the city-state. To mold the minds of citizens so as to think only about their obligations to the city, it instituted the *Syssitia,* which performed many functions ranging from the provision of food and shelter, to the bestowing of honors for heroism in wars, and to the passing of judgment for questionable behavior. By forbidding the holding of gold and silver coins of other city-states and by not issuing its own money Sparta adopted barter in economic transactions, and finally, to insulate the city-state from bad influences from abroad it closed its economy to foreign trade and imposed a regime of isolation and self-sufficiency (autarky) (Xenophon, *Constitution of the Lacedeamonians*, VII, 5-6; Plutarch, *Lycurgus*, 8-10).

Having described the main institutions that each city-state put in place in order to accomplish its objectives, it is no wonder that Sparta failed to reach its economic potential absolutely and relatively to Athens. In Sparta the state usurped all sovereignty from individuals and their families and treated them as instruments of an oligarchic state where those who were appointed to positions of responsibility served for life (*Gerousia*), whereas all the rest were obliged to obey their decisions without any recourse to consultation (Plutarch, *Lycurgus*, 6). On the contrary, in Athens the state chose deliberately to become or it evolved into an instrument of the collective will of its citizens as the latter was effected through the democratic process. Consequently, the difference in their economic performance can be easily explained by reference to the objectives that each state was constituted to attain and, secondly, to the political and economic institutions that were adopted for this purpose. In short, despite advantageous geographical conditions, Sparta failed to reach its economic potential because in its abundance of grain it was set up from the beginning as a military state, whereas in its scarcity for grain Athens was constituted as a direct democracy in the service of the economy.[17]

### 3.2 Moral norms in Athens

The economic system in Athens was individualist, in the sense that it recognized the sovereignty of individuals and invited their contribution to the welfare of the city. But as Pope

[17] According to Cummings and Brocklesby (1993), the sociopolitical structure of Athens was such that it enabled a higher rate of performance in sciences, arts and knowledge production than other city-states.

Benedict XIV suggested to Voltaire in the captioned passage, if individualistic impulses are left unchecked, they can tear society apart. For this reason in its ultimate wisdom the city-state of Athens had enacted a framework of arrangements that prevented an individual from acquiring and exercising undue power on the proper functioning of various institutions. Three such arrangements were, for example, first, that citizens got elected to the various positions of responsibility by lottery and served only for a limited tenure in order to diminish the level of corruption;[18] second, those who deviated from expected behavior became subject to public uproar and denigration, and third, those who failed to observe the law and were found guilty by courts were liable for stiff penalties. However, in as much Athenians believed in the strength of their institutions, they were weary of the adverse influences that unfettered individualism might exert on their integrity. So in addition they adopted a lifelong system of *agoge*, which stressed the importance of virtue and moderation (*παν μέτρον άριστον*). In particular, their system of *agoge* had three pillars. The first was to render young citizens literate through learning reading and writing, mathematics, music, the sciences of the day, as well as to practice a craft. The second was to introduce them to the value of gymnastics for building strong bodies and minds (νους υγιής εν σώματι υγιές). Finally, the third pillar was to mold ethos (ήθος) into their character so that their behavior in the rest of their life would conform to the imperatives set by the integrity and the efficient operation of Athenian institutions (Isocrates, *Areopagiticus*, 37, 40-2; *Antidosis*, 181-192, 251-2; *Panegyricus, 77-82*). The analysis below addresses the third pillar of *agoge*, i.e. that of ethos, which started as a character building process in young ages and continued throughout life by other means.

To infuse ethos into their character, young Athenians were prodded to adopt the views that philosophers, tragedians, comedians and other renowned leaders expounded on the principles of ethical conduct. According to these views ideal ethos required every citizen to love Athens, be proud of its accomplishments, obey in and stand up for its laws, and be ready to sacrifice his life for its defense against foreign aggressors. That they were committed to these principles we know because citizens "freely sacrificed to the city the fairest offering it was in their power to give (meaning their lives)" (Thucydides, II, 43,1-2, brackets added).

Another norm built into their value system was to defend democracy and the way of life in Athens by respecting the political and economic freedoms of citizens. An account of what exactly young Athenians were taught in this respect is given by Aristotle who analyzing the proper conduct in civic affairs argued as follows: "Private transactions are voluntary and

[18] This was a really pioneering institutional arrangement since in our days it is regarded as a truly "robust statistically institution" (Levy, 2002, 135).

involuntary. Voluntary transactions are such as selling, buying, lending with interest, giving security, lending without interest, deposing money, hiring; and they are said to be voluntary because the origin of these transactions is voluntary, i.e. people enter upon them on their own free will. Involuntary transactions again are either secret, as e.g. theft, adultery, poisoning, pandering, enticing slaves away from their masters, assassination, and false witness, or violent, as assault, imprisonment, murder, rape, mutilation, slander, and contumelious treatments" (*Nicomachean Ethics*, 1131a, 1-5). The implication of this analysis being that, since the life in Athens was based on voluntary transactions, all forms of involuntary ones were unethical and ought to be avoided because they violated the basic freedoms of citizens. As we indicated in footnote 16 the Athenian state had enacted laws according to which those who were found guilty of the above and many other involuntary acts paid stiff penalties. But society is better served if the citizens themselves avoid committing them. For this reason, the system of *agoge* in ancient Athens stressed the principles of *justice* (respect for the law) and *aidos* (respect for others) (Lowry, 1987, p. 170).

According to still another ethical norm, young Athenians were asked to be industrious, because *labor is the source of private property and accumulation of wealth*. During Solon's time, work by citizens as a source of wealth was socially applauded and esteemed. Contrary to some "philosophical" voices against vulgar occupations, such as Plato's (see Karayiannis, 1990, 24) and Aristotle's (*Politics*, 1254b, 15-25, 1277a, 40-45), the majority of citizens and other influential persons did not distinguish between noble and menial undertakings. Two examples in point are first that the Athenians were the first Greeks who worshiped the goddess "industrious Athena" ("Athena Ergane") (Pausanias, *Attica*, 24.3), and the second that they regarded as a fruitful work even that of mercenaries (Thucidides. I, 31, IV, 52). In addition, some influential men such as the Sophists (Karayiannis, 2000, 340) and Isocrates (*Areopagiticus*, 24,44) stressed that the labor of free citizens must be regarded a honorable activity. Pericles (Thucydides, II, 40,1), in particular, argued that the Athenians employ wealth "rather as an opportunity for action than as a subject of boasting; and with us it is not a shame for a man to acknowledge poverty, but the greater shame is for him not to do his best to avoid it".

Moreover, Athenians were expected to apply *fairness in economic exchanges*. Under this norm they tried to reduce transaction costs, by emphasizing fair exchange behavior. Following the end of the Peloponnesian War (Thucydides, III, 82), Athens fell into a period of advanced corruption. So most of the Greek philosophers and Orators who observed with sorrow the moral decline of the city, tried to persuade citizens to abandon sheer individualism

and return to their pre-War ethical standards. They suggested and propagated the following principles: [19]

- They considered virtue, not wealth, as the main objective in life (Calhoun, 1926, pp. 59-62). In Plato's words: "the right way is to put the good qualities of the soul in the first and most honorable rank … good qualities of body in the second, and in the third, goods of estate, wealth, as we call them" (*Laws*, 697 B). Virtue and prudence were the corner stones of "ethical living". As Aristotle emphasized, "a man discharges his proper function when he acts in accordance with prudence and moral virtue; for while virtue ensures the correctness of the end which is in view, prudence ensures the correctness of the means to it" (*Nicomachean Ethics,* 1144a, 5-10).
- They linked wealth to the means of its acquisition. For example, in the Platonic dialogues it is stated that: "For neither does wealth bring honor to its possessor if combined with cowardice.... and sundered from justice and the rest of virtue" (Plato, *Menexenus*, 246 E- 247 A). Thus, "Wealth does not bring goodness, but goodness brings wealth and every other blessing, both to the individual and to the state" (Plato, *Apology*, 30 B). And, as Socrates admitted, "So it seems that justice or temperance or piety, or some other part of virtue, must attach to the acquisition (of gold and silver)" (Plato, *Meno*, 78 D-E; brackets added).
- They scorned illegal and unfair profits and used the term *aischrokerdia* (profiteering) to describe these actions. Aristotle stated that profiteering characterizes those who are "trying as they do to get gain from wrong sources" *(Nicomachean Ethics,* 1122a, 10-15) and that it is indicative of the low ethical status both of the individual and of the city. Thus, "where it is a case of unjust gain, there is no vice to which it can be referred except injustice" (Aristotle, *Nicomachean Ethics*, 1130b, 30-35).
- They recommended hue and cry against all who sought profits by not paying what was agreed to in a contract (Hyperides, *Against Athenogenes,* VI, 13, VII, 15), trespassing upon the land of others, (Aristotle, *Art of Rhetoric,* 1374a, 5-20), making profit out of

[19] In principle, the hostility of Athenians toward unfair economic transactions extended beyond the ethical stands stressed here. They strictly recognized that unfair economic transactions raised costs in terms of legal expenses (Isocrates, Antidosis, 37-9). A measure to reduce this cost was through settling of disputes by arbitration (Isocrates, *To Kallimachus*, 10, 13-6; Demosthenes, *Against Meidias*, 94; *Against Apaturius*, 16-9, 28-9). Thus, they were well aware that by undermining fairness in exchanges, the transaction costs would increase and the resources destined for more productive purposes would decrease. Recently a number of economists (see e.g. North, 1990, Platteau, 1994, Tanzi, 2000) have shown that the decline in general morality and the increase in opportunism (Williamson, 1985, 64; Nooteboom, 1998, 172) raise transaction costs, thus reducing the available resources for economic growth.

the weak (Ibid. 1383b, 25-30), and paying lower wages than were deserved. "When taking away the product of the worker's toil they (i.e. some businessmen) maintained they were creating resources for the city, while on the contrary in this manner they were laying the foundations for a lack of economic resources in the future" (Hyperides, *Euxenippus*, 37; brackets added; our translation).

- They condemned unfair profits from monopolistic exploitation of consumers. Lysias criticized the collusion of retail traders who behaved as monopsonists in buying grain at a low price and selling it at a higher price by becoming monopolists, (*Against the Grain-Dealers*, 5, 6-8, 12, 14-5, 17, 21).
- They approved of the various productive and trade activities of entrepreneurs (Demosthenes, *Against Pantaenetus*, 54; *Against Phaenippus*, 20-1; *Against Dionysodorus*, 8-10). But proper entrepreneurial activities had to comply with the principles of *fairness in transactions* and *proper use of wealth*. In this respect, Xenophon advised entrepreneurs to conduct their business according to the commonly accepted ethical and legal codes (*Symposium*, iv.42-3; *Hellenica*, II.iv.40; *Memorabilia,* I.v.3-4), to use their wealth mainly for the undertaking of public expenses, because *liturgies* play a significant role in shaping the image of virtue and social acceptance of the individual, and to be "covetous of gain in a moderate degree" (*Oeconomicus*, xii, 16; see also Karayiannis, 2003).

From the above it follows that for ancient Athenians an end was not ethically and socially acceptable unless the means for its achievement were also ethically and socially acceptable as well.

Furthermore, Athenians were expected to have a *high degree of altruism,* because as Attica "was inhabited by the same people always" (Thucydides, I, 2) all Athenian citizens had a common origin. The introduction of taxation by means of which wealth was indirectly redistributed in favor of poorer citizens was considered a characteristic example in this respect (Veyne, 1976; Ober, 1989, ch. V; Ostwald, 1995). But it was not the only one. Other examples that corroborated the existence of a high degree of altruism among Athenians were the common practice according to which rich citizens offered loans without interest to poor (Xenophon, *Oeconomicus*, XI, 9-11; Isocrates *Areopagiticus*, 31-5; *For Demonicus*, 28; Aristotle, *Politics,* 1263a, 30-5; 1263b, 5-15) and financed voluntarily large public projects, called *liturgies* (Thucydides, VI, 31). With respect to the latter it should be noted that Athenians applauded this type of giving and bestowed special honors to those who demonstrated altruism by contributing to public expenditures voluntarily over and above the taxes they paid (Bitros

and Karayiannis, 2006).[20]

Finally, *honor*, namely the social esteem of someone, was stressed as a moral attitude of paramount importance. A man with honor " is regarded as best endowed with wisdom and is foremost in public esteem" (Thucydides, I, 34,6). This moral norm has two functions: as a motive for behaving according to the prevailing ethos and as a reward. For Thucydides, the citizens are "moved by a high sense of honor" (Thucydides, II, 43,1). On the other hand, the Athenians regarded honor as a reward for someone's contribution. As Thucydides (II, 44,4) mentioned: "the love of honor alone is untouched by age, and when one comes to the ineffectual period of life it is not gain as some say, that gives the greatest satisfaction, but honor". Individual's honor and fame was so important for the Athenians that they had erected statues for modesty and fame (Pausanias, *Attica*, 17.1). And as Thucydides (IV, 18, V, 16,43) explained, the citizens tried very hard to inherit their good fame to their descendants.

In conclusion, Athenians were brought up in a lifelong system of *agoge,* which stressed ethos, based on virtue and justice, not for their own sake but for their consequences to Athenians themselves and to the city. To be virtuous meant to be ready to sacrifice one's life to defend the principles that the Athenian democracy stood for, to live ethically by giving least priority to wealth, to have respect for the other citizens, to be industrious, altruist and live in honor. On the other hand, to be just meant to uphold and stand up for the laws of the city, to avoid committing involuntary transactions in the Aristotelian sense, and to observe the norms of fairness in economic transactions. From them we are led to surmise that the rule of law that prevailed in ancient Athens was to a high degree the outcome of the good *agoge* of citizens.

### 3.3 Moral norms in Sparta

In Sparta children lived with their families until the seventh year of their age. So during this period responsible for their *agoge* were their parents. From the eighth year this task passed onto the hands of the city-state. As it was true with adults and soldiers, youngsters were separated into classes, which were put under the command of a governor (*επίτροπος*). The members of each class ate, slept and exercised together. Their education consisted in learning and writing but generally their intellectual development was not a priority, because the emphasis of their training was to prepare them physically to withstand the hardships of fighting in the city's wars. During the period of this training young Spartans were instructed

[20] It should be stressed that cheating on paying one's taxes was controlled through the institution of *Antidosis,* which provided for forced exchanges of properties between the accuser and the accused in case the latter was found guilty of tax evasion in a court of law.

to obey orders, bear punishments without objections or arguments, sleep in open air, walk barefooted, withstand hunger, etc. In addition, they participated in numerous wrestling competitions during the year, which aimed at perfecting their techniques in wrestling as well as raising their competitive spirit (Xenophon, *Constitution of the Lacedaemonians***,** II).

A good part of the *agoge* of young Spartans involved the finding of food. Those in training were expected to resort to all shorts of machinations to secure their food, because by doing so it was believed that they would become fierce fighters. So stealing of food was not only permitted but it was also encouraged. In particular, the activities of stealing food were under the protection of Artemis, goddess of hunting, and those who distinguished themselves in these activities were honored by inscribing their names in some of the altars (Ibid, II, 7-9; Plutarch, *Lycurgus*, 17-8). Thus it becomes quite obvious why we indicated earlier in the paper that the systems of *agoge* in Athens and Sparta differed fundamentally. Simply they aimed at completely different citizens and adopted completely different moral norms to judge their character. In Athens stealing was prohibited and punished by stiff penalties, whereas in Sparta was honored as an accomplishment blessed by the gods.

Even of more questionable moral standing was the killing of *Helots* as part of their training. Sparta wished to control the number of *Helots* because over time their population increased at a dangerously fast rate. In doing so they adopted an institution, called "*Krypteia*", which aimed on the one hand at the hardening of the character and the preparedness of young Spartans for war, and on the other to forestall any attempt on the part of *helots* to revolt (Plutarch, *Lycurgus*, 28). More specifically, hidden at night and armed with knifes the trainees trapped and murdered *Helots* and in particular those that were most vocal in protesting for their treatment. Thucydides reports that in the Peloponnesian War vanished 2000 helots who had been liberated earlier in recognition of their bravery, "without anybody knowing how each of them disappeared" (Thucydides, IV, 80). It is no wander therefore that Plato criticized this practice by saying that "such an institution could render Spartans brave but not just". To be more precise, Plato so much detested the institution of "*Krypteia*" that he developed a critical attitude not only regarding the constitution of Sparta but also Lycurgus himself (Plutarch, *Lycurgus*, 28).

Another fundamental difference has to do with the regime regarding work. In Sparta working for income earning purposes was illegal. Here is how Xenophon describes the difference with Athens in this respect in his *Constitutions of the Lacedaemonians (*VII, 1-3): "Nor does this exhaust the list of the customs established by Lycurgus at Sparta that are contrary to those of the other Greeks. In other states, I suppose, all men make as much money as they

can. One is a farmer, another is a ship-owner, another is a merchant, and others live by different handicrafts. But at Sparta Lycurgus forbade freeborn citizens to have anything to do with business affairs. He insisted on their regarding as their own concern only those activities that make for civic freedom. Indeed, how should wealth be a serious object there, when he insisted on equal contributions to the food supply and on the same standard of living for all, and thus cut off the attraction of money for indulgence's sake?" From this passage it follows that, after their military service ended at age 30, male Spartans citizens looked forward to long carriers in various government posts without pay. But since they had been trained in stealing their food while in the army, their integrity in safeguarding the efficient operation of Spartan institutions was questionable and that is why the stories about graft and corruption abound (Xenophon, *Constitution of the Lacedaemonians,* XIV, 2-4; Aristotle, *Politics*, 1270b, 10-20).

One main result of the above beliefs and institutions was that "even those who have but little receive a share of all that the country yields whenever they want anything" (Xenophon, *Constitution of the Lacedaemonians*, VI, 4). Therefore, without any motive for life improvement they developed a sterile economy producing and consuming only bare necessaries. Such an economy produced little surplus for investment and or public funds. And here is a paradox: although Spartans, as the rest of the Greeks, were characterized by high patriotism they did not confer from their property the public expenses. As their King Archidamus confessed: "we are still more deficient, neither having money in the treasury of the state nor finding it easy to raise money from our private resources by taxation" (Thucydides, I, 80).

To summarize, Sparta was organized as a military city-state. Citizens did not have private lives. They sacrificed themselves for the well being of their city-state. Hence the moral norms they were trained to follow, both while serving in the army and later on, were compatible with the institutions that had been set up to advance the military objectives of Sparta. As in Athens these moral norms required them to have love and pride for their country, to support its constitution, and be ready to spill their blood for its victory in wars of the city-state These were sufficient to make Sparta the top military power in the period under consideration without much else. No justice and no *aidos*; No work ethic and no altruism; No fairness in economic transactions, because there were none, and no economic progress, because all economy related institutions had been planned centrally to attain self-sufficiency. With this comparison in mind, it is time now to turn to the lessons for today.

**4. Lessons for today**

Both Athens and Sparta achieved their goals in the 5$^{th}$ century BC. Athens secured with

success its deficit in grains and on the way it became the leading economic power, whereas Sparta managed to become the top military power in the Greek world. To attain their objectives, both cities-states had to assume forms of organization that were most efficient in regard to their objectives. Given that the efficiency of an organization depends on the efficiency and the coordination of the systems from which it is constituted, this necessity entailed that both Athens and Sparta had to put in place efficient institutions, which could be coordinated optimally to accomplish the objective(s) of the respective societies. Finally, since the efficiency of institutions depends on their design as well as the integrity of the people who are assigned to operate them, both city-states had to infuse moral norms to their citizens that were compatible with the nature of their institutions. In retrospect, we know that both confronted successfully all these challenges, irrespective of whether on the basis of present day criteria we like or not the approaches they adopted. So the questions that arise are: what are the lessons that we can draw from their experience and why are they important enough to matter for the circumstances in which we live to day?

A first lesson that we can draw is that the nature of social institutions as well as the moral norms that are compatible with their efficient operation are endogenous in the sense that they emerge naturally once the main objective of society is recognized in response to an actual or conceived challenge. In Athens and Sparta it was respectively the deficits in grains and the threat from foreign aggressors. But any other major challenge that would take top priority in the agenda of a nation would induce reshufflings in its institutions and shifts in the moral norms of its citizens to accommodate its achievement. In our view this lesson is very important because it is high time for nations to focus their agenda and then not only allow but also facilitate the necessary institutions and moral norms to take roots in their societies. For if, for example, economic growth and material well-being is at the top of their agenda, it would be futile to pursue it by Sparta like organization, institutions and moral norms, which evolved to achieve military supremacy.

A second lesson is that for economic growth the only suitable arrangements are those that were emulated by Athens and were inherited to future generations as an exemplar paradigm. From this we derive the following main propositions: a) property rights provide the basis for individual liberties, including the freedom of choice on the part of citizens; b) direct democracy constitutes the only institution of political organization that is consistent with the maintenance of property rights and government by the people for the people; c) state institutions that are operated by citizens selected on the basis of merit and only for a limited term; d) an exchange economy organized according to the market system to generate the necessary

signals for the efficient distribution and mobilization of economic resources; e) money, both as a means of exchange and store of value, and e) law and order to guarantee that no citizen or group of citizens may disturb other citizens form pursuing their objective in life under the laws. To be sure some of these propositions are of greater importance than others. For example, no Athenian type organization could be conceived without an emphasis on property rights, whereas civil servants might be appointed with quasi tenure without much damage. However, issues relating to the optimal mix of the institutions that are associated with the above propositions are hard to tackle as to some extent they are path dependent in the sense that their solution is determined by context specific circumstances and initial conditions.

The third, and perhaps most important, lesson we can draw from the comparative evaluation of the economies of ancient Athens and Sparta is that the institutions that emerged in each city-state emerged simultaneously with a set of moral norms that guaranteed their efficient operation. In Athens, for example, where property rights, individual liberties, and freedom of choice in all aspects of social life were the cornerstones of their institutions, the system of *agoge* induced citizens to adopt moral norms, which established an environment of general morality much like the one stressed by Platteau (1994, 761). In particular, an Athenian who did not live ethically was considered "shameful", i.e. a citizen without *aidos*, and became a social outcast (Isaios*, To Xenenaiton-- About the lot of Aristarchos,* 3, 8). That is why it was terribly important for an Athenian to maintain his reputation by avoiding, for example, even an insinuation that he attempted to gain unjustly from other people's money (Isocrates, *Trapeziticus*, 1). However, on the contrary, stealing food in Sparta was considered ethical because it advanced the cause of the state.

In sum, what we can learn from ancient Athens and Sparta is that institutions evolve to serve the needs of a country and with them evolves a compatible set of moral norms that guarantees their efficient operation. So both institutions and moral norms emerge endogenously. If economic growth is the objective of a nation, then the paradigm to emulate is the Athenian one because it is based on institutions and compatible moral norms, which hold great promise. That this is the case we know from the experience of the rich western countries, all of which constitute, in some form or another, variations of this basic model.

## 5. Conclusions

When we decided to embark on this research we believed that the data we had about the economies of ancient Athens and particularly that of Sparta might be limited. In retrospect our view now is that the available data are sufficient to characterize the structure and the perform-

ance of these economies. From their comparative evaluation we were able to show that the economy of Athens grew vastly wealthier than that of Sparta and we attributed this difference to two factors. Namely, the emergence of institutions that were optimally adjusted to accelerated economic growth, and the emergence of moral norms that were adopted by the citizens of Athens not for themselves but because of their consequences to the operating efficiency of their institutions.

As long as coarse individualism was in check by the moral norms and the institutions, Athens progressed materially and was able to finance all the marvelous monuments of antiquity as well the products of culture and civilization we adore to day. However, after the end of the Peloponnesian War in 404 BC, the moral fabric of the Athenian society started to be eroded by extreme individualism and the institutions of this glorious city became corrupt and inefficient. Thus we have come a full circle back from where we begun, i.e. what Pope Benedict XIV stressed to Voltaire. The character and the morality of citizens are important ingredients of economic growth because they go hand in hand with the great institutions of private property, democracy, and free markets.

Therefore, poor countries in search of strategies to rapid economic growth should not just try to emulate the institutions of economically advanced countries. At the same time, they should put the emphasis of their efforts to setting up *agoge* systems so as to infuse into their citizens the required compatible "ethos". For without the latter, no matter how successfully they adapt the institutions of democracy and free markets, their efficiency will be compromised by the lack of a consistent general morality on the part of their citizens. And since we know already what are the main characteristics of morality in a democracy friendly to free markets, a convenient point of departure is how best to design and apply *agoge* systems like the one that emerged in ancient Athens.[21]

[21] The relationship of *agoge* and education as sources of economic growth in ancient Athens will be taken up in a future research endeavor.

## Bibliography


Acemoglu, D., and Johnson, S., and Robinson, J. (2004) "Institutions as the Fundamental Cause of Long-Run Growth", *NBER Working Paper*, No 10481.

Alcock, S. (2002) A simple case of exploitation: The helots of Messenia", in Paul Cartledge, Edward E. Cohen and Lin Foxhall (eds.) *Money, Labour and Land*, Routledge, pp. 185-199.

Amemiya, T. (2006) *Economy and Economics of Ancient Greece*, (mimeo), London: Routledge (forthcoming).

Andokides, *On the Mysteries*, Athens: Papyros, 1961 (in Greek).

Andreades, A. M. (1928) *A History of Greek Public Finance*, vol. A, 2nd ed. Athens: Papademas, 1992.

Aristophanes, *Knights,* Athens: Papyros, 1978, (in Greek).

Aristophanes *Plutus*, Athens: I. Zacharopoulos, 1956 (in Greek).

Aristotle, *Art of Rhetoric*, Athens: Papyros, 1938-9, (in Greek).

Aristotle, *Politics*, Athens: Papyros, 1939, (in Greek). Engl. Trnsl. by H. Rackham, Cambridge, Mass: Harvard University Press, 1944.

Aristotle, *Nicomachean Ethics*, Athens: Papyros, 1949 (in Greek). Engl. Trnsl. by J.E.C. Welldon, London: Macmillan and Co, 1892.

Aristotle, *The Athenian Constitution*, Athens: Papyros, 1938 (in Greek).

Aeschylus, *Persians*, Thessaloniki: Zitros, 2005, (in Greek).

Baeck, L. (1994) *The Mediterranean Tradition in Economic Thought*, London and New York: Routledge.

Barro, R. (1999) "Determinants of Democracy", *Journal of Political Economy*, vol. 107, No 6, pp. S158-S183.

Bitros, G. C. and Karayiannis, A. D. (2006) "The Liberating power of Entrepreneurship in Ancient Athens", in Y. Cassis, I. Pepelasis-Minoglou (eds.) *Country Studies in Entrepreneurship: A Historical Perspective*, London: Palgrave, pp. 11-24.

Blamire, A. (2001) "Athenian Finance, 454-404 BC", *Hesperia*, vol. 70, No 1, pp. 99-126.

Burke, E. (1992) "The Economy of Athens in the Classical Era: Some Adjustments to the Primitivist Model", *Transactions of the American Philological Association*, vol. 122, pp. 199-226.

Calhoun, G. (1926) *The Ancient Greeks and the Evolution of Standards in Business*, Cambridge Mass. Houghton Mifflin Company.

Contos, A. T. and Baloglou, Ch. P. (1995) "The Direct Taxation in Ancient Athens and the Reasons for the Demise of the Public Financial System," Parnassos, vol. 37, pp. 51-61 (in Greek).

Cummings, S., and Brocklesby, J. (1993) "The Classical System- Organizational Insights into What Made Periclean Athens Great," *Systems Practice*, vol. 6, No 4, pp. 335-357.

Demosthenes, *Orations and Speeches*, Athens: Papiros, 1955, 1961-2 (in Greek), Engl. Trnsl. by A. Murray Cambridge, Mass: Loeb Classical Library, Harvard University Press, 1939.

Durant, W. and Durant, A. (1967). *The Story of Civilization: Part IX: The Age of Voltaire*, New York: Simon and Schuster.

Fehr, E. and Schmidt, K. (1999) "A Theory of Fairness, Competition, and Cooperation", *Quarterly Journal of Economics*, vol. 114, No. 3, pp. 817-868.

Feld, L. P. and Savior, M. R. (1997) "Direct Democracy Matters for Economic Performance: An Empirical Investigation", *Kyklos*, vol. 50, No. 4, pp. 507-38.

Finley, M. I. (1981), *Economy and Society in Ancient Greece,* London*:* Chatto and Windus.

Fleck, R. K. and Hansen, F. A. (2006) "The Origins of Democracy: A Model with Application to Ancient Greece", *Journal of Law and Economics*, vol. XLIX, pp. 115-145.

French, A., (1964), *The Growth of the Athenian Economy*, Westport, Connecticut: Greenwood Press.

Fustel de Coulages, N. D. (1866) *La Cité Antique*, 2nd edition, Paris, Hachette, Engl. Trnsl. by W. Small, 1873; John Hopkins Press, 1980.

Glotz, G. (1928) *La Cité Grec, Greek trnsl. Athens:* National Bank of Greece, Athens, 1978.

Gradstein, M., and Milanovic, B. (2002) "Does Liberte'= Egalite? A survey of the empirical links between democracy and inequality with some evidence on the transition economies," *The World Bank,* Policy Research Working Paper No. 2875.

Harris, Edward M. (2002) "Workshop, Marketplace and Household," in Paul Cartledge, Edward E. Cohen and Lin Foxhall (eds.) *Money, Labour and Land*, Routledge, pp. 67-99.

Herodotus, *History*, Athens: Papyros, 1953 (in Greek).

Hodgson, G. (1988) *Economics and Institutions*, *A Manifesto for a Modern Institutional Economics*, Cambridge: Polity Press.

Hodkinson, S. (2000) *Property and Wealth in Classical Sparta,* Wales: Classical Press of Wales.

Hyperides, *Orations*, Athens: Papyros, 1958 (in Greek).

Isaios*, To Xenenaiton-- About the lot of Aristarchos,* Athens: Greek Publishing Organization, 1965 (in Greek).

Isager, S. and Hansen, M. (1975) *Aspects of Athenian Society in the Fourth Century B.C.*, Odense University Press.

Isocrares, *Orations and Speeches*, Athens: Papyros, 1956-7, 1961-2 (in Greek).

Karayiannis, A. D. (1990) "The Platonic ethico-economic structure of society," *Quaderni di Storia dell' Economia Politica*, vol. VIII, No. 1, pp. 3-45.

Karayiannis, A. D. (1992) "Entrepreneurship in Classical Greek Literature" *The South African Journal of Economics*, vol. 60, No. 1, pp. 67-93.

Karayiannis, A. D. (2000) "Economic Ideas of ancient Greek Sophists and Orators", *Essays in Honour of Professor Marios Raphael,* Piraeus: University of Piraeus, pp. 337-346.

Karayiannis, A. D. (2003) "Entrepreneurial functions and characteristics in a proto-capitalist economy: The Xenophonian entrepreneur", *Wirtschaftspolitische Blatter*, No. 4, pp. 553-563.

Kreuger, A. O. (1993) *Political Economy of Policy Reform in Developing Countries***.** Cambridge, Mass.: MIT Press.

Kyriazis, N., and Zouboulakis, M. (2004) "Democracy, Sea Power and Institutional Change: An Economic Analysis of the Athenian Naval Law," *European Journal of Law and Economics*, vol. 17, pp. 117-132.

Leblang, D. (1996) "Property Rights, Democracy and Economic Growth," *Political Research Quarterly*, vol. 49, No. 1, pp. 5-26.

Leblang, D. (1997) "Political Democracy and Economic Growth: Pooled Cross-Sectional and Time-Series Evidence," *British Journal of Political Science*, vol. 27, No. 3, pp. 453-466.

Levy, D. (2002) "Robust Institutions," *The Review of Austrian Economics*, vol. 15, No. 2-3, pp. 131-142.

Lowry, T. (1987) *The Archeology of Economic Ideas*, Durham: Duke University Press.

Lycurgus, *Against Leocrates*, Athens: Papyros, 1962 (in Greek).

Lysias, *Orations and Speeches*, Athens: Papyros, 1958 (in Greek).

Morris, I. (2004) "Economic Growth in Ancient Greece", *Journal of Institutional and Theoretical Economics*, vol. 160, pp. 709-742.

Mossé, C. (1992) *Les institutions greques a l'époque classique,* Greek trnsl. Athens, Metechmio, 2002.

North, D. C. (1990) *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press.

Nooteboom, B. (1998) "Governance of transactions: a strategic process model", in K. Nilsen, B. Johnson (eds.) *Institutions and Economic Change: New Perspectives on Markets, Firms and Technology*, Cheltenham, Edward Elgar, pp. 172-199.

Ober, J. (1989) *Mass and Elite in Democratic Athens*, Princeton: Princeton University Press.

Osborne, R. (1996) *Greece in the Making 1200-479 BC*, Greek trnsl. Athens: Odysseas, 2000.

Ostwald, M. (1995) "Public Expense: Whose Obligation? Athens 600-545 B.C.E.", *Proceedings of the American Philosophical Society*, vol. 139, No 4, pp. 368-379.

Pausanias, *Attica*, Athens: Papyros, 1953 (in Greek).

Platteau, J. P., (1994), "Behind the market stage where real societies exist' *The Journal of Development Studies*, vol. 30, Part I, pp. 533-577, Part II, pp. 753-817.

Plato, *Apology*, Engl. trns. H. Tredennick, in E. Hamilton, H. Cairns (eds.) *The Collected Dialogues, of Plato*, New Jersey: Princeton University Press, 1963.

Plato, *Menexenus*, Engl. trns. R. Bury, Cambridge, Mass: Harvard University Press, 1929.

Plato, *Meno*, Engl. trns. W. K. C. Guthrie, in E. Hamilton, H. Cairns (eds.) *The Collected Dialogues, of Plato*, New Jersey: Princeton University Press, 1963.

Plato, *Laws*, Engl. trns. A. E. Taylor, in E. Hamilton, H. Cairns (eds.) *The Collected Dialogues, of Plato*, New Jersey: Princeton University Press, 1963.

Pseudo-Plato, *Alcibiades*, Athens: Papyros, 1938, (in Greek).

Plutarch, *Lycurgus,* Athens: Papyros, 1939 (in Greek).

Plutarch, *Solon*, Athens: Papyros, 1939 (in Greek).

Plutarch, *Ages,* Athens: Papyros, 1939 (in Greek).

Salmon, J. (1999) "The Economic Role of the Greek City", *Greece & Rome*, vol. 46, No. 2, pp. 147-167.

Stanley, P. (1999) *The Economic Reforms of Solon*, Katharinen: Scripta Mercaturae Verlag.

Tanzi, V. (2000) *Policies, Institutions and the Dark Side of Economics*, Cheltenham: Edward Elgar.

Tullock, G., McKenzie, R. (1975) *The New World of Economics*, Illinois: Richard D. Irwin, Inc.

Thucydides, *History of the Peloponnesian War*, Athens: Papyros, 1953, (in Greek). Engl. Trnsl. C. F. Smith, vol. I-IV, Cambridge, Mass: Harvard University Press, 1928.

Williamson, O. (1985) *The Economic Institutions of Capitalism*, New York: The Free Press.

Xenophon, *Hellenica*, Athens: Papyros, 1954 (in Greek).

Xenophon, *Constitution of the Lacedaemonians*, Athens: Papyros, 1938 (in Greek). Engl. Tnsl. G. W. Bowersock, Cambridge, Mass: Harvard University Press, 1925.

Xenophon, *Cyropaedia,* Engl. trnsl. by W.Miler, Loeb Classical Library, vol. I-II, Cambridge Mass: Harvard University Press, repr. 1961.

Xenophon, *Memorabilia,* English trnsl. by E.C. Marchant, Loeb Classical Library, vol. IV, Cambridge Mass: Harvard University Press, repr. 1968.

Xenophon, *Oeconomicus,* English trnsl. by E.C. Marchant, Loeb Classical Library, vol. IV, Cambridge Mass: Harvard University Press, repr. 1968.

Xenophon, *Symposium*, Athens: Papyros, 1937 (in Greek).

Xenophon, *Ways and Means*, Engl. trnsl. by E. C. Marchant, Loeb Classical Library, vol. VII, Cambridge Mass: Harvard University Press, repr. 1968.

Veyne, P. (1976) L' Evergetisme Grec, Greek trnsl. Athens: Zacharopoulos, 1993.

Yaffey, M. (1998) "Moral standards and transaction costs: long-term effects", in K. Nilsen, and B. Johnson (eds.) *Institutions and Economic Change: New Perspectives on Markets, Firms and Technology*, Cheltenham: Edward Elgar, pp. 258-290.